DRAFT ENVIRONMENTAL IMPACT STATEMENT

Koi Nation of Northern California
Shiloh Resort and Casino Project

Sonoma County, California | May 2024

Lead Agency:

Bureau of Indian Affairs
Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825

Cooperating Agencies:

National Indian Gaming Commission
U.S. Environmental Protection Agency

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ENVIRONMENTAL IMPACT STATEMENT
For the Koi Nation of Northern California Shiloh Resort and Casino Project
Fee-to-Trust Acquisition of 68.6-Acre Property in Sonoma County, California

Lead Agency: U.S. Department of the Interior, Bureau of Indian Affairs

Cooperating Agencies: U.S. Environmental Protection Agency
National Indian Gaming Commission

Document Status: Draft (X) Final ( )

Abstract: This Environmental Impact Statement (EIS) has been prepared pursuant to the National Environmental Policy Act (NEPA) to assess the environmental effects resulting from the Koi Nation of Northern California's (Koi Nation; Tribe) Shiloh Resort and Casino Project, which includes the acquisition by the U.S. Bureau of Indian Affairs (BIA) of a 68.6-acre property in unincorporated Sonoma County, California, into federal trust status for the benefit of the Tribe for gaming purposes (Proposed Action). The EIS identifies potentially significant impacts resulting from the Proposed Action associated with the following issues: groundwater resources, biological resources, cultural resources, public services, traffic noise, traffic circulation, wildfire hazards, and wildfire evacuation. All potentially significant impacts would be minimized or avoided with recommended mitigation measures.

Comments on Draft Environmental Impact Statement are due to the BIA 45 days from the date the EPA publishes its Notice of Availability in the Federal Register.

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ES.1 INTRODUCTION

This Environmental Impact Statement (EIS) has been prepared pursuant to the National Environmental Policy Act of 1969 (NEPA) to assess the environmental effects resulting from the Koi Nation of Northern California's (Koi Nation; Tribe) Shiloh Resort and Casino Project, which includes the acquisition by the U.S. Bureau of Indian Affairs (BIA) of a 68.6-acre property in unincorporated Sonoma County, California, into federal trust status for the benefit of the Tribe for gaming purposes (Proposed Action). For the purpose of this EIS, the BIA serves as the Lead Agency for compliance with NEPA, with the U.S. Environmental Protection Agency (EPA) and the National Indian Gaming Commission (NIGC) serving as Cooperating Agencies.

ES.2 PURPOSE AND NEED FOR PROPOSED ACTION

The purpose of the Proposed Action is to facilitate tribal self-sufficiency, self-determination, and economic development, thus satisfying both the Department of the Interior's (Department) land acquisition policy as articulated in the Department's trust land regulations at 25 CFR Part 151, and the principal goal of the Indian Gaming Regulatory Act as articulated in 25 USC § 2701. The need for the Department to act on the Tribe's application is established by the Department's regulations at 25 CFR § 151.10(h) and 151.12.

ES.3 SUMMARY OF THE PROPOSED ACTION AND ALTERNATIVES

This document describes and analyzes three development alternatives and the No Action/No Development Alternative, which are described in detail in **Section 2** and are summarized below. Other alternatives were considered and rejected; these alternatives are described in in the Scoping Report completed in September 2022, which is available online at https://www.shilohresortenvironmental.com/, and the Supplemental Scoping Report included in Appendix A-2. The alternatives analyzed in this EIS vary in the degree to which they meet the purpose and need of the Tribe and the BIA. The Executive Summary Table (**Table ES-1** below) summarizes potential effects to each environmental issue area from each alternative, mitigation measures to avoid or minimize impacts, and levels of significance for each environmental impact.

Alternative A – Proposed Project

Alternative A, the Proposed Project, includes the transfer of the 68.6-acre Project Site into federal trust status for the benefit of the Tribe for gaming purposes. The Project Site is located southeast of the intersection of Old Redwood Highway and Shiloh Road, adjacent to the southern boundary of the Town of Windsor. Subsequent to the fee-to-trust transfer, the Tribe proposes to develop a casino-resort facility that includes a three-story casino, five-story hotel with spa and pool area, ballroom/meeting space, event

center, and associated parking and infrastructure. The gaming component of the facility would be approximately 538,137 square feet and include 2,750 gaming devices with 105 table games. The hotel component of the facility would be approximately 268,930 square feet and consist of 400 rooms. Approximately 5,119 parking spaces would be provided on the ground floor of the casino, as well as in a four-story parking garage and a overflow surface parking lot on the eastern side of Pruitt Creek. An enclosed clear-span pedestrian bridge would connect the parking garage with the casino-resort approximately 12 feet above Pruitt Creek. Other supporting infrastructure, including the proposed water treatment and wastewater treatment facilities would be located on the southeastern portion of the Project Site.

Alternative B – Reduced Intensity Alternative

Alternative B would involve the same federal action as Alternative A; however, a smaller casino-resort facility would be developed. Specifically, the hotel component would be three stories and contain 200 rooms and the large ballroom, the event center, and the surface parking lot would not be developed.

Alternative C – Non-Gaming Alternative

Alternative C would involve the same federal action as Alternative A; however, the Tribe would develop a 25,000-square-foot winery and visitor's center, a 200-room hotel with spa and pool area, a restaurant, and associated parking and infrastructure. This alternative does not include gaming. Approximately 492 parking spaces would be provided a paved surface parking lot on the western side of Pruitt Creek.

Alternative D – No Action Alternative

Under the No Action Alternative, the BIA would not take any action, and none of the three development alternatives (Alternatives A, B, and C) considered within this EIS would be implemented. The No Action Alternative assumes that no land would be taken into trust and the existing agricultural use of the Project Site as a vineyard would continue for the foreseeable future. Pursuant to 40 CFR § 1502.14(f), Alternative D was determined to be the environmentally preferred alternative.

ES.4 ISSUES AND COMMENTS

The BIA conducted scoping to solicit input from the public and agencies regarding the scope of the NEPA analysis. A Notice of Preparation (NOP) of an Environmental Assessment (EA) announcing a 30-day scoping comment period was circulated for review on May 27, 2022, and the results were made available in a scoping report dated September 2022. An EA was prepared and made available for public comment for a 45-day period, which was then extended for an additional 15-day period that concluded on November 13, 2023. Upon consideration of the comments received on the EA, the BIA decided to prepare an Environmental Impact Statement (EIS) to further analyze the environmental effects of the Proposed Action. Comments received during the EA public comment period are now considered scoping comments for the EIS and are included in **Appendix A-2**, Supplemental Scoping Report.

The BIA published a Notice of Intent (NOI) in the Federal Register on March 8, 2024, describing the Proposed Action, and announcing the BIA's intent to prepare an EIS. A 30-day comment period began on March 8, 2024, and ended on April 8, 2024. Issues raised during scoping, public review of the EA, and scoping comments received in response to the NOI generally fell into the following categories:

- Alternatives and Purpose and Need
- Geology and Soils
- Water Resources
- Air Quality
- Biological Resources
- Cultural and Paleontological Resources
- Socioeconomic and Environmental Justice
- Transportation
- Land Use
- Public Services
- Noise
- Hazardous Materials
- Aesthetics
- Cumulative Impacts
- Procedural and Non-EIS Issues

To the extent required by NEPA, this EIS was prepared in consideration of issues and concerns identified during the scoping process. A summary that identifies all alternatives, information, and analyses submitted during the scoping process is provided in the September 2022 Scoping Report, which is incorporated by reference and available at http://www.shilohresortevironmental.com/, as well as **Appendix A-2**. Through the issuance of this Draft EIS, the BIA invites comments on the summary of the alternatives, issues and analyses raised during scoping.

ES.5 SUMMARY MATRIX

Potential adverse and beneficial effects as well as mitigation measures relevant to each alternative are presented below in **Table ES-1**. For a detailed discussion of environmental consequences and mitigation measures, see **Sections 3** and **4**.

Table ES-1: Summary of Impacts and Mitigation Measures

Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
Section 3.2. Land Resources					
Topography – Development could result in changes to site topography from grading activities	No mitigation required.	LS	LS	LS	NI
Seismic Conditions – Construction near an active fault could yield adverse effects associated with seismic activity	The use of BMPs would minimize impacts related to seismic conditions. No mitigation required.	LS	LS	LS	NI
Soil Characteristics – Construction and grading activities could cause soil erosion	The use of BMPs would minimize impacts related to soil erosion. No mitigation required.	LS	LS	LS	NI
Mineral Resources – No known mineral resources would be impacted	No mitigation required.	NI	NI	NI	NI
Section 3.3. Water Resources					
Surface Water – Impacts related to surface water could include:					
1) **Construction Impacts** – Construction activities could increase the discharge of sediment and pollutants to surface waters	The use of BMPs would minimize impacts related to surface water quality during construction. No mitigation required.	LS	LS	LS	NI
2) **Stormwater Runoff** – Project alternatives could alter stormwater quantity, quality, and/or drainage patterns	The use of BMPs would minimize impacts related to stormwater runoff during operation. No mitigation required.	LS	LS	LS	NI
3) **Floodplain** – Development within a floodplain could cause adverse impacts due to inundation.	Building components intentionally sited outside of regulatory floodway. Any earthwork within floodplain would be balanced to prevent impacts to regulatory floodway. No mitigation required.	LS	LS	LS	NI

NI = No Impact LS = Less than Significant PS = Potentially Significant S = Significant BI = Beneficial Impact

Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
Groundwater – The following characteristics of groundwater resources could be impacted by the project alternatives:					
1) **Groundwater Supply** – The project alternatives could result in the drawdown of groundwater aquifers	The use of BMPs would minimize impacts to groundwater supply. No mitigation required.	LS	LS	LS	NI
2) **Groundwater Recharge** – The project alternatives could impact groundwater recharge through the development of impervious surfaces.	The use of BMPs would minimize impacts to groundwater recharge. No mitigation required.	LS	LS	LS	NI
3) **Groundwater Quality** – Impacts to groundwater quality could occur as a result of polluted stormwater runoff, or irrigation with tertiary treated water.	The use of BMPs would minimize impacts to groundwater quality. No mitigation required.	LS	LS	LS	NI
Wastewater Treatment and Disposal – Wastewater generated by project alternatives would be treated at a proposed onsite wastewater treatment plant (WWTP) and either be reused onsite, discharged to Pruitt Creek under an NPDES permit, or beneficially reused for irrigation of offsite agricultural areas or landscaping.	Compliance with regulatory standards and permits would ensure this impact is less than significant. No mitigation required.	LS	LS	LS	NI
Section 3.4. Air Quality					
Construction Emissions – Construction activities could adversely affect air quality through the emission of particulate matter less than 10 microns in diameter (PM_{10}), nitrogen oxides (NO_x), sulfur oxides (SO_x), carbon monoxide (CO), volatile organic compounds (VOCs), reactive organic gases (ROG), greenhouse gases (GHGs), and hazardous air	The use of BMPs would minimize impacts to air quality caused by construction emissions. No mitigation required.	LS	LS	LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
pollutants (HAPs; primarily in the form of diesel particulate matter [DPM])					
Operational Vehicle and Area Emissions – Project alternatives could adversely affect air quality through the emission of criteria pollutants from vehicles and project facilities	The use of BMPs would minimize impacts to air quality caused by operational vehicle and area emissions. No mitigation required.	LS	LS	LS	NI
Hazardous Air Pollutants – Construction and operational activities associated with project alternatives would result in emissions of diesel particulate matter, however they would not be of a level or distance to sensitive receptors that would result in adverse effects.	No mitigation required.	LS	LS	LS	NI
Odors – Construction equipment could produce odors, but they would disperse rapidly and would not cause significant effects. The WWTP could result in the production of odors even with the inclusion of odor-reducing equipment and indoor facilities.	The use of BMPs to site the WWTP as far as feasible from sensitive receptors will minimize the potential for odor impacts. No mitigation required.	LS	LS	LS	NI
Indoor Air Quality – Low indoor air quality would not occur because the project alternatives would be constructed consistent with the CBC and would be entirely smoke-free.	No mitigation required.	LS	LS	LS	NI
Section 3.5. Biological Resources	**Biological Resources Mitigation**				
Potential Effects to Habitats – Development of project alternatives could disturb the following federally-designated sensitive habitats or aquatic features:					
1) Intermittent Drainage (Pruitt Creek) and its associated Riparian Corridor	The following Mitigation Measures shall be implemented to Alternatives A through C to avoid and/or reduce impacts to the Riparian Corridor: **Mitigation Measure A:** Alterations to riparian vegetation shall be avoided to the maximum extent possible. The project footprint shall be established at the minimum size necessary to complete the work.	PS/LS	PS/LS	PS/LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
	Temporary setback areas shall be marked with fencing to protect the riparian zone and its function. Any disturbed riparian areas shall be replanted with native trees and shrubs. **Mitigation Measure B:** A qualified biologist shall delineate an Environmentally Sensitive Area along Pruitt Creek. The contractor shall install high-visibility fence to prevent accidental incursion on the Environmentally Sensitive Area. **Mitigation Measure C:** Staging areas, access routes, and total area of activity shall be limited to the minimum area necessary to achieve Project goals. Routes and boundaries shall be clearly marked and outside of the riparian area and create a buffer zone wide enough to support sediment and nutrient control and bank stabilization function.				
2) Roadside Drainage Ditches and Seasonal Wetlands	The following measures shall be implemented to minimize or avoid potential impacts to wetlands, Waters of the U.S., and special-status species: **Mitigation Measure D:** Prior to the start of construction, wetlands and jurisdictional features shall be fenced, and excluded from activity. Fencing shall be located as far as feasible from the edge of wetlands and riparian habitats and installed prior to the dry season, after special-status species surveys have been conducted and prior to construction. The fencing shall remain in place until all construction activities on the site have been completed. **Mitigation Measure E:** Ground disturbing activities, such as grading, clearing, and excavation, within 50 feet of any U.S. Army Corps of Engineers (USACE) jurisdictional features identified in the formal delineation process shall be conducted during the dry season (between June 15 and October 15) to minimize erosion. In the event of substantial, unseasonably high flow within Pruitt Creek on or after April 15, work shall be altered or stopped until flow ceases in the creek. Temporary stormwater Best Management Practices such as vegetative stabilization and linear sediment barriers shall be established between disturbed portions of the Project Site and Pruitt Creek to prevent sedimentation in the watercourse.	PS/LS	PS/LS	PS/LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
	Mitigation Measure F: Staging areas shall be located away from the areas of wetland habitat that are fenced off. Temporary stockpiling of excavated or imported material shall occur only in approved construction staging areas. Excess excavated soil shall be used on site or disposed of at a regional landfill or other appropriate facility. Stockpiles that are to remain on the site through the wet season shall be protected to prevent erosion (e.g. with tarps, silt fences, or straw bales). **Mitigation Measure G:** Standard precautions shall be employed by the construction contractor to prevent the accidental release of fuel, oil, lubricant, or other hazardous materials associated with construction activities into jurisdictional features. A contaminant program shall be developed and implemented in the event of release of hazardous materials. **Mitigation Measure H:** If impacts to Waters of the U.S. and wetland habitat are unavoidable, a 404 permit and 401 Certification under the Clean Water Act shall be obtained from the USACE and U.S. Environmental Protection Agency (USEPA). Mitigation measures may include creation or restoration of wetland habitats either on site or at an appropriate off-site location, or the purchase of approved credits in a wetland mitigation bank approved by the USACE. Compensatory mitigation shall occur at a minimum of 1:1 ratio or as required by the USACE and USEPA. **Mitigation Measure I:** Consultation with the National Oceanic and Atmospheric Administration Fisheries for impacts to fish and essential fish habitat shall be conducted in accordance with Section 7 of the federal Endangered Species Act (FESA) and Magnuson-Stevens Act and any requirements resulting from that consultation shall be adhered to.				
Potential Effects to Federally Listed or Protected Special-Status Species – The following special-status species could be impacted by the project alternatives:					
1) Special-status fish species	**Biological Resources Mitigation Measures A through I** shall be implemented for Alternatives A through C.	PS/LS	PS/LS	PS/LS	NI

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Impact		Mitigation Measures	Original Impact / Residual Impact with Mitigation			
			Alternative A	Alternative B	Alternative C	Alternative D
2)	California red-legged frog (CRLF)	The following mitigation measures, consistent with United States Fish and Wildlife Service (USFWS) Framework, shall be implemented for Alternatives A through C to avoid impacts to California red-legged frogs (CRLF): **Mitigation Measure J:** A qualified biologist shall conduct a preconstruction habitat assessment survey for CRLF following Appendix D of the U.S. Fish and Wildlife Service [USFWS (2005)] Revised Guidance of Site Assessments and Field Surveys for the California Red-legged Frog. The survey shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the CRLF. The survey shall be conducted in all potential CRLF habitat on and within 200 feet of ground disturbance. If CRLF is detected within or immediately adjacent to the area of ground disturbance, the USFWS shall be contacted immediately to determine the best course of action. **Mitigation Measure K:** Should CRLF be identified during surveys, additional silt fencing shall be installed after surveys have been completed to further protect this species from construction impacts, should it be present. The fencing shall remain in place until construction activities cease. If identified on site, USFWS shall be contacted for additional consultation. **Mitigation Measure L:** Prior to the start of construction, the Tribe shall retain a qualified biologist to conduct an informational meeting to educate all construction staff on the CRLF. This training shall include a description of the CRLF and habitat needs; an explanation of the status of the species and protection under the FESA; and a list of the measures being taken to reduce effects to the species during project construction and implementation. The training shall include a handout containing training information. The project manager shall use this handout to train any additional construction personnel that were not in attendance at the first meeting, prior to starting work on the project.	PS/LS	PS/LS	PS/LS	NI
3)	Northwestern Pond Turtle (NWPT)	The following measures shall be implemented to avoid impacts to northwestern pond turtle (NWPT):	PS/LS	PS/LS	PS/LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
	Mitigation Measure M: A qualified biologist shall conduct a preconstruction survey for NWPT along Pruitt Creek 24 hours prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the NWPT. The survey shall be conducted within 350 feet of the stretch of Pruitt Creek. If NWPT is detected within or immediately adjacent to the area of ground disturbance, the USFWS shall be contacted immediately to determine the best course of action. **Mitigation Measure N:** Should NWPT be identified during surveys, additional silt fencing shall be installed after surveys have been completed to further protect this species from construction impacts. The fencing shall remain in place until construction activities cease				
Potential Effects to Critical Habitat and Essential Fish Habitat– essential fish habitat could be impacted by the project alternatives	Implement **Biological Resources Mitigation Measures A through I** and follow BMPs.	PS/LS	PS/LS	PS/LS	NI
Potential Effects to Migratory Birds and Other Birds of Prey – The following elements of the project alternatives could impact migratory birds:					
1) **Construction Activities**: Active nests could be disturbed if construction occurred during the nesting season	The following measures shall be implemented for Alternatives A through C to avoid and/or reduce impacts to any potentially nesting migratory, raptor, and/or special-status bird species: **Mitigation Measure O:** Removal of vegetation and trimming or removal of trees shall occur outside the bird nesting season (February 1 to August 30) to the extent feasible. **Mitigation Measure P:** If removal or trimming of vegetation and trees cannot avoid the bird nesting season, a qualified wildlife biologist shall conduct a pre-construction nesting survey within 7 days prior to the start of such activities or after any construction breaks of 14 days or more. Surveys shall be performed for the Project Site and suitable habitat within 250 feet of the Project Site in order to detect any active passerine (perching bird) nests and within 500 feet of the Project Site to identify any active raptor (bird of prey) nests.	PS/LS	PS/LS	PS/LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
	Mitigation Measure Q: If active nests are identified during the pre-construction bird nesting surveys, the wildlife biologist shall place species-and site-specific no-disturbance buffers around each nest. Buffer size would typically be between 50 and 250 feet for passerines and between 300 and 500 feet for raptors (birds of prey). These distances may be adjusted depending on the level of surrounding ambient activity (e.g., if the Project Site is adjacent to a road or community development) and if an obstruction, such as a building structure, is within line-of-sight between the nest and construction. For bird species that are federally and/or State-listed sensitive species (i.e., fully protected, endangered, threatened, species of special concern), a Project representative, supported by the wildlife biologist, shall consult with the USFWS and/or the California Department of Fish and Wildlife (CDFW) regarding modifying nest buffers. The following measures shall be implemented based on their determination: ▪ If construction would occur outside of the no-disturbance buffer and is not likely to affect the active nest, the construction may proceed. However, the biologist shall be consulted to determine if changes in the location or magnitude of construction activities (e.g., blasting) could affect the nest. In this case, the following measure would apply: ▪ If construction may affect the active nest, the biologist and a Project representative shall consult with USFWS and/or CDFW, dependent on regulatory status, to develop alternative actions such as modifying construction, monitoring of the nest during construction, or removing or relocating active nests. **Mitigation Measure R:** Any birds that begin nesting within the Project Site and survey buffers amid construction activities shall be assumed to be habituated to construction-related or similar noise and disturbance levels and minimum work exclusion zones of 25 feet shall be established around active nests in these cases. **Mitigation Measure S:** A qualified wildlife biologist shall conduct pre-construction burrowing owl surveys within 7 days prior to the start of such activities or after any construction breaks of 14 days or more.				

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
	Surveys shall be performed at known mammal burrows or areas with the potential for new mammal burrows, within 250 feet of the Project Site. Surveys shall be conducted between morning civil twilight and 10:00 AM or two hours before sunset until evening civil twilight to provide the highest detection probabilities. **Mitigation Measure T:** If surveys identify evidence of western burrowing owls within 250 feet of the Project Site, the contractor shall: ▪ Establish a 250-foot exclusion zone around the occupied burrow or nest, as directed by the qualified biologist. ▪ Avoid the exclusion zone while the burrow is occupied. ▪ Not resume construction activities within the 250-foot zone until the Project representative provides written Notice to Proceed based on the recommendation of the qualified biologist. **Mitigation Measure U:** If avoidance of occupied burrows is not feasible during the September 1 to January 31 non-breeding season, construction may occur within 250 feet of the overwintering burrows as long as the contractor's qualified biologist monitors the owls for at least 3 days prior to Project construction and during construction and finds no change in owl foraging behavior in response to construction activities. If there is any change in owl foraging behavior as a result of construction activities, activities shall cease within the 250-foot exclusion zone. **Mitigation Measure V:** If destruction of occupied burrows is necessary, burrow exclusion can be conducted in accordance with the Staff Report on Burrowing Owl Mitigation				
2) **Lighting**: Lighting could increase collisions of birds with structures or cause avian disorientation	Design BMPs will minimize the potential impacts of lighting to migratory birds.	LS	LS	LS	NI
Potential Effects to State Listed Special-Status Species – Coho salmon could be impacted by the project alternatives. This was addressed under "Federally Listed Special-Status Fish Species" above.	**Potential Effects to Wetlands and Waters of the U.S. Mitigation Measure I** shall be implemented for Alternatives A through C.	PS/LS	PS/LS	PS/LS	NI
Section 3.6. Cultural and Paleontological Resources					

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
Cultural Resources – Ground-disturbing activities could uncover and/or damage archaeological sites	The following mitigation measures shall be implemented for Alternatives A through C: **Mitigation Measure A**: Any ground-disturbing activities that occur within 150 feet of Pruitt Creek or within 50 feet of areas identified by the Canine Field Survey as having an "alert" shall be monitored by a qualified archaeologist, Native American Tribal Monitor from Koi Nation, and/or a Native American Tribal Monitor or archeologist selected by interested Sonoma County tribes. An archaeological monitoring program shall be established that includes consultation between the consulting archaeologist, lead agency, and the project proponent. The program shall clearly define the authority to temporarily halt/redirect construction should resources be encountered. **Mitigation Measure B**: In the event of any inadvertent discovery of prehistoric or historic archaeological resources during construction-related earth-moving activities, all such finds shall be subject to Section 106 of the National Historic Preservation Act as amended (36 CFR Part 800). Specifically, procedures for post-review discoveries without prior planning pursuant to 36 CFR § 800.13 shall be followed. All work within 50 feet of the find shall be halted until a professional archaeologist meeting the Secretary of the Interior's qualifications (36 CFR Part 61), or paleontologist if the find is of a paleontological nature, can assess the significance of the find in consultation with the BIA and other appropriate agencies. If any find is determined to be significant by the archaeologist or paleontologist and project proponent, a BIA representative shall meet with the archaeologist or paleontologist and project proponent to determine the appropriate course of action, including the development of a Treatment Plan and implementation of appropriate avoidance measures or other mitigation. **Mitigation Measure C**: If human remains are discovered during ground-disturbing activities a BIA representative shall be contacted immediately. No further disturbance shall occur until the BIA representative has made the necessary findings as to the origin and disposition. If the remains are determined to be of Native American origin, the BIA representative shall notify a Most Likely Descendant. The Most Likely Descendant is	PS/LS	PS/LS	PS/LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
	responsible for recommending the appropriate disposition of the remains and any grave goods.				
Paleontological Resources – Paleontological resources could be uncovered and/or damaged by ground-disturbing activities	Implement **Mitigation Measures A** through **C**.	PS/LS	PS/LS	PS/LS	NI
Section 3.7. Socioeconomic Conditions					
Economy and Employment – construction and operation of the project alternatives could impact spending and labor demand in the region. Construction and operation of the project alternatives could impact wages, job availability, and/or employment rates.	No mitigation required	BI	BI	BI	NI
Fiscal Impacts – The project alternatives could adversely impact County and/or City tax revenues and operating budgets	The following mitigation measures shall be implemented for Alternatives A through C to reduce impacts to police and fire services: **Mitigation Measure A:** Prior to operation, the Tribe shall make good faith efforts to enter into a service agreement with the Sonoma County Sheriff's Office (SCSO) to compensate SCSO for quantifiable direct and indirect costs incurred in conjunction with providing law enforcement services to the Project Site. The agreement shall include a provision requiring the Tribe to meet with SCSO at least once a year, if requested, to discuss ways to improve police services and prosecution of crimes associated with the project. **Mitigation Measure B:** Prior to operation, the Tribe shall make good faith efforts to enter into a service agreement with the Sonoma County Fire District (SCFD) to compensate SCFD for quantifiable direct and indirect costs incurred in conjunction with providing fire protection and emergency medical services to the Project Site. The agreement shall address any required conditions and standards for emergency access and fire protection systems. **Mitigation Measure C:** If the Tribe does not enter into a service agreement for law enforcement and/or fire protection services, the Tribe shall establish, equip, and staff a public safety building on the Project Site. The fire department shall follow the certification and	PS/LS	PS/LS	PS/LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
	standards of the BIA, and shall be staffed at all times with a minimum of 3 personnel, each trained as a firefighter and emergency medical technician. The building shall be located in the "treatment area" designated in the eastern portion of the Project Site.				
Housing – Employment-driven in-migration could cause or exacerbate housing supply issues	No mitigation required	LS	LS	LS	NI
Property Values – Development of the project alternatives could cause a reduction in regional property values	No mitigation required	LS	LS	LS	NI
Social Effects – The following social impacts could result from operation of the project alternatives:					
1) **Pathological and Problem Gambling** – Operation of the project alternatives could increase the prevalence of problem or pathological gaming	The use of BMPs would minimize potential impacts due to pathological and problem gambling. No mitigation required.	LS	LS	NI	NI
2) **Crime** – Operation of the project alternatives could increase the incidence of crime in the region	The use of BMPs and implementation of **Socioeconomic Conditions Mitigation Measure A** would minimize impacts related to increased crime.	PS/LS	PS/LS	NI	NI
3) **Drunk Driving** – Operation of the project alternatives could increase the incidence of drunk driving in the region	The use of BMPs and implementation of a "Responsible Alcoholic Beverage Policy" would reduce the likelihood of drunk driving. No mitigation required.	LS	LS	LS	NI
Substitution Effects					
1) **Existing Tribal Casino Gaming Market Substitution Effects** – Operation of the project alternatives could reduce revenues at existing tribal casinos. While review of similar case studies and market data suggests that it is unlikely that competition would cause the closure of any affected gaming facilities,	No mitigation feasible.	PS	PS	NI	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
due to unverifiable allegations that there is a potential for closure, the estimated substitution effect on River Rock Casino (24.24%) is considered a potentially significant impact.					
2) **Non-Gaming Substitution Effects** – Operation of the project alternatives could reduce revenues at existing hotels, restaurants, and retail facilities	No mitigation required.	LS	LS	LS	NI
Environmental Justice: Minority and Low-Income Communities – There are some identified minority and low-income populations in the vicinity of the Project Site that could be affected	Through mitigation and BMPs all environmental impacts of the project alternatives are minimized.	PS/LS	PS/LS	PS/LS	NI
Effects to the Tribe – The project alternatives would allow the Tribe to generate revenues to fund tribal services	No mitigation required.	BI	BI	BI	NI
Section 3.8. Transportation/ Circulation					
Construction Traffic – Vehicle trips associated with project construction would be temporary and not significantly increase traffic on roadways.	No mitigation required.	LS	LS	LS	NI
Project Traffic – Vehicle trips associated with the operation of the project alternatives could significantly increase traffic volume and exceed the designed capacity of regional roadways and intersections	Implementation of the mitigation measures below shall minimize potential impacts related to project traffic. The following mitigation measures shall be implemented for Alternative A: Opening Year 2028: **Mitigation Measure A:** For Intersection 1) Shiloh Rd. & Old Redwood Hwy. (100% fair share contribution) – ▪ Convert split phasing in Eastbound (EB)/Westbound (WB) direction to protected phasing.	S/LS	S/LS	S/LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
	▪ Convert existing WB-through lane to an exclusive left-turn lane (storage length of 200 feet and taper length of 75 feet) and shared through/right turn. ▪ Add one Northbound left-turn lane. ▪ Restripe Eastbound right (EBR) to give 150 ft. storage length. ▪ Restripe Southbound left (SBL) to 190 ft. storage length. ▪ Restripe SBR to 105 ft. storage length. ▪ Construct Traffic Impact Fee (TIF) project to add second Northbound left (NBL) turn lane and second WB receiving lane. **Mitigation Measure B:** For Intersection 2) Shiloh Rd. & Hembree Ln. (100% fair share contribution) - Optimize splits and cycle length. **Mitigation Measure C:** For Intersection 7) Shiloh Rd. & Casino Entrance 1 (100% fair share contribution) – Signalize intersection. **Mitigation Measure D:** For Intersection 8) Old Redwood Hwy. & Casino Entrance 1 (100% fair share contribution) – Signalize intersection. Mitigation Measures for Alternative B and C are less than those listed above for Alternative A and are provided in **Section 4.**				
Transit, Bicycle, and Pedestrian Facilities – Traffic generated by the project alternatives could adversely impact other transportation facilities	No mitigation required	LS	LS	LS	NI
Section 3.9. Land Use					
Land Use Plans – The project alternatives could conflict with County land use plans and ordinances	No mitigation required	LS	LS	LS	NI
Land Use Compatibility – The project alternatives could conflict with neighboring land uses, including residential uses and parks	The use of BMPs and implementation of mitigation measures for noise, air quality, traffic, and aesthetic resources would minimize impacts related to land use compatibility.	PS/LS	PS/LS	PS/LS	NI
Agriculture – The project alternatives could conflict with state and federal farmland designations	No mitigation required.	LS	LS	LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
Section 3.10. Public Services					
Water Supply – The project alternatives would not connect to a municipal water supply and therefore could not exceed the capacity of the municipal water supply or require significant improvements to the existing municipal water distribution infrastructure	No mitigation required.	NI	NI	NI	NI
Wastewater Service – Operation of the project alternatives would not connect to a municipal wastewater treatment facility and therefore could not exceed the capacity of the existing municipal wastewater treatment and disposal infrastructure	No mitigation required.	NI	NI	NI	NI
Solid Waste Service					
1) **Construction** – Construction of the project alternatives could generate quantities or types of waste that cannot be accommodated by regional waste disposal facilities	No mitigation required.	LS	LS	LS	NI
2) **Operation** – Operation of the project alternatives could generate quantities or types of waste that cannot be accommodated by regional waste disposal facilities	The use of BMPs would minimize impacts to solid waste services from project operation. No mitigation required.	LS	LS	LS	NI
Electricity and Natural Gas					
Construction – Construction activities could damage underground utilities	The use of BMPs would minimize impacts to electricity and natural gas from project construction. No mitigation required.	LS	LS	LS	NI
Operation – Operation of the project alternatives could necessitate improvements to electrical and natural gas infrastructure that generate adverse environmental effects	No mitigation required.	LS	LS	LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
Law Enforcement – Service calls to local law enforcement agencies could increase due to the project alternatives.	The use of BMPs and implementation of **Socioeconomic Conditions Mitigation Measure A** would minimize impacts related to increased calls for service to law enforcement agencies.	PS/LS	PS/LS	PS/LS	NI
Fire Protection and Emergency Medical Services					
1) **Construction** – Construction activities could increase the risk of fire	The use of BMPs would minimize impacts to fire protection and emergency services from project construction.	LS	LS	LS	NI
2) **Operation** – The project alternatives could increase the number of service calls to local fire protection/emergency medical service providers	The use of BMPs and implementation of **Socioeconomic Conditions Mitigation Measures B and C** would minimize impacts related to increased calls for service to fire protection/ emergency medical service providers.	PS/LS	PS/LS	PS/LS	NI
Public Schools– Employment-driven in-migration could cause increased demand on public schools	No mitigation required.	LS	LS	LS	NI
Parks and Recreation – Employment-driven in-migration could cause increased demand on parks	No mitigation required.	LS	LS	LS	NI
Section 3.11. Noise					
Construction Noise – Noise associated with construction activities could adversely affect human health and/or the physical environment	The use of BMPs would minimize impacts caused by construction noise. No mitigation required.	LS	LS	LS	NI
Construction Vibration – Vibration associated with construction activities could adversely affect human health and/or the physical environment	The use of BMPs would minimize impacts caused by construction vibration. No mitigation required.	LS	LS	LS	NI
Operational Noise – Noise from the following sources associated with the project alternatives could adversely affect the physical environment:					
1) **Traffic** – Operation of the project alternatives could increase traffic-	No mitigation required.	LS	LS	LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
related noise in the vicinity of roads surrounding the project site					
2) **On-Site Noise Sources** –Vehicle circulation, patron conversations, pool activities, wastewater treatment plant equipment, and doors opening and closing in parking lots could increase ambient noise levels	The use of BMPs would minimize impacts caused by on-site noise sources. No mitigation required.	LS	LS	LS	NI
Operational Vibration – Vibration associated with operation could adversely affect human health and/or the physical environment	No mitigation required.	LS	LS	LS	NI
Section 3.12. Hazardous Materials and Hazards					
Construction – Construction of the project alternatives could disturb existing hazardous materials or introduce new hazardous materials into the environment	The use of BMPs would minimize impacts from hazardous materials during construction. No mitigation required.	LS	LS	LS	NI
Operation – Operation of the project alternatives could introduce hazardous materials into the physical environment	The use of BMPs would minimize impacts from hazardous materials during operation. No mitigation required.	LS	LS	LS	NI
Construction Wildfire Risk – construction of the project alternatives could increase the risk of wildfire	The use of BMPs would minimize impacts to fire protection and emergency services from project construction. No mitigation required.	LS	LS	LS	NI
Evacuation Impacts Due to Wildfire	The following measures shall be implemented for all alternatives: **Mitigation Measure A:** Prior to opening day, the Tribe shall engage a qualified arborist and/or biologist to develop a riparian corridor wildfire management plan to be implemented annually during operation. The goal of the plan shall be to reduce fire hazard on and adjacent to the on-site riparian corridor. At a minimum the plan shall include the procedures and best management practices outlined in **Section 4**. **Mitigation Measure B:** Prior to occupancy, the Tribe shall coordinate with emergency evacuation and traffic experts to develop a project-specific evacuation plan that includes, but is not limited to, the	PS/LS	PS/LS	PS/LS	NI

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		Alternative A	Alternative B	Alternative C	Alternative D
	procedures and best management practices outlined in **Section 4**. Unless a pre-determined evacuation zone specific to the casino-resort is created and/or unless specifically directed otherwise by the lead authority for evacuations, the casino-resort shall initiate a mandatory evacuation of the Project Site as soon as specified evacuation zones within the Trigger Evacuation Zone are issued a voluntary evacuation warning or order. **Mitigation Measure C:** Management and staff at the casino-resort shall be trained on evacuation procedures for guests and visitors as part of their new hire orientation and receive updated evacuation procedures training annually. **Mitigation Measure D**: The Tribe shall coordinate with Sonoma County and the Town of Windsor on their respective emergency operation plans and implement or contribute to the implementation of measures intended to improve early detection of wildfire events, and evacuation times for the Project Site and vicinity. These measures could include, but would not be limited to the measures listed in **Section 4**.				
Section 3.13. Visual Resources					
Operational Impacts – Development of the project alternatives could generate significant adverse aesthetic impacts, including those impacts addressed separately below					
1) Effects on Viewsheds Surrounding the Project	The incorporation of design features would minimize impacts to viewsheds during operation. No mitigation required.	LS	LS	LS	NI
2) Shadow, Light, and Glare	The incorporation of design features and BMPs would minimize impacts caused by shadow, light, and glare. No mitigation required.	LS	LS	LS	NI
Section 3.14. Cumulative Effects					
Land Resources – Future development in combination with the project alternatives may cumulatively impact land resources, including topographic changes, soil loss, and seismic risk.	The incorporation of BMPs would minimize impacts to land resources. No mitigation required.	LS	LS	LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
Surface Water Resources – Construction activities from the project alternatives and cumulative development could affect surface water and flooding while, but wastewater discharge would have a less than significant impacts to water quality.	The incorporation of BMPs would minimize impacts to surface water resources and flooding. No mitigation required.	PS/LS	PS/LS	PS/LS	NI
Groundwater Resources Groundwater pumping in combination with potential operation of new municipal wells in the Town of Windsor during multiple dry years could cause drawdown impacts to domestic wells in the shallow aquifer. The majority of impacts would result from the potential new Town of Windsor stand-by wells, but Alternative A would contribute to the overall drawdown.	The following measures shall be implemented to address cumulative groundwater impacts under a scenario in which the Town of Windsor is operating two new municipal wells under multiple dry year conditions: **Mitigation Measure A**: Should the Town of Windsor determine pursuant to mitigation measure HYD-3 Section 2 in the Town's PEIR for adoption of the 2009 Draft WMP Water Master Plan (Horizon, 2011), or an equivalent mitigation measure adopted in a subsequent CEQA document for these wells, that aquifer connectivity in the vicinity of the Esposti Park and/or Bluebird wells causes their operation to induce a substantial decrease in water levels in the shallow aquifer or in surrounding wells, alterations to surface streamflow, or impacts to natural recharge, then the Tribe shall participate in the development and implementation of an interference drawdown monitoring and mitigation plan, and shall pay a share of the mitigation costs that is proportional to its contribution to the shallow aquifer impact being mitigated. The Tribe's obligation to contribute proportionate fair share funding shall be limited to measures to address impacts to existing domestic water supply wells from groundwater pumping; the Tribe shall have no obligation to participate in or fund other water supply initiatives or infrastructure improvements. **Mitigation Measure B:** The Tribe shall implement an onsite groundwater level monitoring program, including the installation and monitoring of three shallow groundwater monitoring wells and monitoring of at least one of the existing supply wells, which shall be repurposed for monitoring purposes to assess groundwater levels in the pumped aquifer and at the water table beneath the Project site. Monitoring shall begin at least one year prior to initiation of Project pumping and shall continue for a period of least 5 years after pumping	PS/LS	PS/LS	PS/LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
	of the Town of Windsor's Esposti Park well commences in order to help assess the vertical connectivity of the aquifer system and the potential cumulative effects of Town of Windsor and Project pumping on shallow domestic wells and GDEs. Groundwater level measurements shall be collected in the spring and fall of each year using an electronic well sounder to assess the depth to groundwater beneath a designated reference point. In addition, recording pressure transducers shall be deployed to assess short term changes in groundwater levels that can be compared to pumping of the on-site supply well(s) or nearby wells operated by the Town of Windsor and other parties. Observed groundwater levels shall be compared to predicted groundwater levels presented in the GRIA to help guide the implementation of appropriate well interference measures in cooperation with the Town of Windsor under Measure A, if required. **Mitigation Measure C:** Should the Town of Windsor develop and operate two new municipal potable water supply wells during dry years as described in its Urban Water Management Plan, including one at Esposti Park, a Groundwater Dependent Ecosystem (GDE) Verification Monitoring Workplan shall be developed and implemented to verify whether vegetation stress and habitat degradation is occurring along the riparian area of Pruitt Creek through the Project Site. The GDE Monitoring Plan shall describe the program procedures, schedules, responsibilities, documentation requirements. ▪ Baseline resource characterization and data acquisition shall be conducted by a qualified biologist in the on-Site portion of the GDE, including documentation of species composition and habitat condition, and documentation of photo points and reference transects. ▪ Data collection at photo points and transects shall be conducted annually by a qualified biologist. ▪ Satellite data available from the Landsat or Sentinel program shall be assessed annually and compared to a baseline and to shallow groundwater level trends.				

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
	▪ Baseline data shall be analyzed for a period of at least six representative hydrologic years by using the satellite data to calculate a vegetation index such as NDVI or Leaf Area Index (LAI); ▪ Annual data shall be analyzed and compared to the baseline data to assess whether there is quantifiable remote sensing evidence of plant stress or reduced vigor. ▪ The biological and satellite data shall be evaluated, including consideration of groundwater levels in the shallow aquifer, Town of Windsor pumping records and precipitation records in a nearby representative meteorological station to assess whether a loss of vegetation vigor has occurred that may result in habitat degradation and that is attributable to groundwater level changes caused by groundwater pumping. ▪ An annual monitoring report shall be submitted to the BIA by April 1 of the following year. If the program verifies that loss of plant vigor that may lead to habitat degradation is occurring, a meeting shall be convened between BIA, Sonoma County and the Town of Windsor to discuss and agree to appropriate changes in the monitoring procedures, parties responsible for program implementation and cost sharing. See Hazardous Materials and Hazards – Wildfire Hazards mitigation below regarding water quality measures related to the riparian corridor wildfire management plan.				
Air Quality – CO emissions from operational emissions were deemed to be less significant with cumulative development as were hazardous air pollutants and GHG emissions from project operations.	The use of BMPs will minimize air quality and climate change impacts from operations. No mitigation required.	LS	LS	LS	NI
Biological Resources – Project alternatives could impact protected aquatic habitats, wetlands, federally-listed species, and migratory birds.	Implement **Biological Resources Mitigation Measures A** through **V.**	PS/LS	PS/LS	PS/LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
Cultural Resources – Cumulative effects to cultural resources arise from disturbance during development, potentially causing loss of historical connections; while no resources were found, subsurface ones might exist.	Implement **Cultural Resources Mitigation Measures A** through **C**	PS/LS	PS/LS	PS/LS	NI
Socioeconomic Conditions – Cumulative effects associated with economic output, job creation, and fiscal effects would be generally beneficial. While review of similar case studies and market data suggests that it is unlikely that competition would cause the closure of any affected gaming facilities, given the absence of verifiable data, the effects of Alternative A in combination with the expansion of the Graton Resort and Casino to the River Rock Casino, operated by the Dry Creek Band, are considered potentially significant.	No mitigation feasible.	PS	PS	LS	LS
Transportation/Circulation – The Traffic Impact Study evaluated cumulative impacts on roadway operations for project alternatives, identifying intersections and roadway segments that may operate at unacceptable levels of service.	Implement the following **Transportation and Circulation Mitigation Measures** Alternative A for the Cumulative Year 2040: **Mitigation Measure E**: For Intersection 1) Shiloh Rd. & Old Redwood Hwy. (39.4% fair share contribution) ▪ Convert split phasing in EB/WB direction to protected phasing. ▪ Restripe NB approach to include two exclusive left turn lanes, two through lanes, and one exclusive right turn lane. ▪ Restripe SB approach to include one exclusive left turn lane, two through lanes, and one exclusive right turn lane. ▪ Restripe EB approach to include one exclusive left turn lane, two through lanes, and one exclusive right turn lane. ▪ Restripe WB approach to include one exclusive left turn lane, two through lanes, and one exclusive right turn lane. ▪ Restripe EBL to give 385 ft. storage length. ▪ Restripe SBL to 145 ft. storage length. ▪ Restripe SBR to 105 ft. storage length.	S/LS	S/LS	S/LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
	▪ Construct TIF project to add second NBL turn lane and WB receiving lane. ▪ Widen Shiloh Rd. between Hembree Ln. and Gridley Dr. from two lanes to four lanes. **Mitigation Measure F**: For Intersection 2) Shiloh Rd. & Hembree Ln. (36.4% fair share contribution) ▪ Convert split phasing in NB/SB direction to protected phasing. ▪ Restripe NB approach to include one exclusive left turn lane and one shared through-right turn lane. ▪ Restripe SB approach to include one exclusive left turn lane, one through lane, and two exclusive right turn lanes. ▪ Restripe EB approach to include two exclusive left turn lanes, one through lane, and one shared through-right turn lane. ▪ Restripe WB approach to include one exclusive left turn lane, one through lane, and one shared through-right turn lane. **Mitigation Measure G**: For Intersection 5) Shiloh Rd. & Caletti Ave. (5.9% fair share contribution) ▪ Restripe WB approach to include one exclusive left turn lane and two through lanes. **Mitigation Measure H**: For Intersections 2, 3, and 5 (27.4% fair share) – Contribute fair share payment to TIF Project #2 Shiloh Road Interchange. **Mitigation Measure I**: For Intersection 6) Shiloh Rd. & Conde Ln. (6.3% fair share contribution) ▪ Optimize signal timing parameters. ▪ Restripe SBR to give 65 ft. storage length. **Mitigation Measure J**: For Intersection 12) Old Redwood Hwy. & US 101 SB Ramp (5.2% fair share contribution) - Optimize signal timing parameters. Mitigation Measures for Alternative B and C are less than those listed above for Alternative A and are provided in **Section 4.0.**				

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
Land Use – The Project Site would not be subject to local jurisdiction if taken into trust and although the land uses under operation would be inconsistent with existing zoning, cumulatively significant impacts would not occur	The use of BMPs and implementation of mitigation measures for noise, air quality, traffic, and aesthetic resources would minimize impacts related to land use compatibility.	PS/LS	PS/LS	PS/LS	NI
Public Services – The project alternatives wouldn't adversely affect water, wastewater, or public services, but in combination with cumulative development, there might be a requirement for additional police and fire facilities, equipment, and personnel.	The use of BMPs and implementation **of Socioeconomic Conditions Mitigation Measures A, B and C** would minimize impacts related to increased calls for service to law enforcement and fire protection agencies.	PS/LS	PS/LS	PS/LS	NI
Noise – Cumulative increases in roadway traffic volumes could result in significant increases in ambient noise levels at locations along Shiloh Road and Old Redwood Highway.	The following measures shall be implemented to reduce impacts from off-site traffic noise during the cumulative year: **Mitigation Measure A:** The Tribe shall pay a fair share towards repaving the following road segments with noise-reducing pavement: 1) Shiloh Road, between Hembree Lane and Gridley Drive, 2) Old Redwood Highway, between Shiloh Road and the Project Entrance. **Mitigation Measure B**: If repaving is not necessitated by traffic improvements prior to 2040, the Tribe will compensate homeowners adjacent to the identified roadway segments for dual pane exterior windows or other noise reducing measures, such installing window assemblies with higher than 27 STC, that can achieve noise reduction in the interior of the sensitive receptors that meet federal, state, and local standards, at the request of the homeowner.	PS/LS	PS/LS	PS/LS	NI
Hazardous Materials – Development of the project alternatives, in combination with other foreseeable projects, could disturb existing hazardous materials or introduce new hazardous materials to the physical environment. The project alternatives in combination with community growth would	The use of BMPs will minimize impacts from inadvertent hazard material releases and implementation **of Hazardous Materials Mitigation Measures A, B and C** would minimize impacts related to wildfire evacuation.	PS/LS	PS/LS	PS/LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
contribute to increased community wide evacuation timelines.					
Aesthetics – The project alternatives, in combination with other foreseeable alternatives, could be visually incompatible with existing land uses or otherwise adversely impact aesthetic resources, or cumulative increase lighting levels.	The incorporation of design features would minimize cumulative impacts to aesthetics and lighting.	LS	LS	LS	NI
Section 3.15. Indirect and Growth Inducing Effects					
Section 3.15.1. Indirect Effects of Off-Site Traffic Mitigation and Off-site Irrigation – Compliance with applicable federal, State, and local regulations during construction of off-site traffic mitigation and irrigation infrastructure would ensure that indirect impacts would not occur.	No mitigation required	LS	LS	LS	NI
Section 3.15.2. Indirect Effects of On-Site Riparian Corridor Wildfire Management Plan Mitigation - The Riparian Corridor Wildfire Management Plan includes measures that would minimize the potential for impacts to Pruitt Creek. Implementation of the Riparian Corridor Wildfire Management Plan may result in short-term increases to local ambient noise levels from chainsaws and other landscaping equipment; however, with implementation of the BMPs significant adverse effects to the ambient noise environment would not occur. No adverse impacts would occur in relation to other environmental issue areas.	The use of BMPs would minimize indirect impacts associated with noise.	LS	LS	LS	NI
Section 3.15.3. Growth-Inducing Effects – Development of the project alternatives would not promote population growth and/or the	No mitigation required	LS	LS	LS	NI

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Impact	Mitigation Measures	Original Impact / Residual Impact with Mitigation			
		Alternative A	Alternative B	Alternative C	Alternative D
construction of additional housing, which could adversely impact the physical and human environments.					

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Section 1 | Introduction

1.1 SUMMARY OF THE PROPOSED ACTION AND ENVIRONMENTAL REVIEW PROCESS

This Environmental Impact Statement (EIS) has been prepared to assess the environmental impacts resulting from the Koi Nation of Northern California's (Koi Nation; Tribe) Shiloh Resort and Casino Project, which includes the acquisition by the U.S. Bureau of Indian Affairs (BIA) of a 68.6-acre property into federal trust status for the benefit of the Tribe for gaming purposes (Proposed Action). The BIA is the federal agency charged with reviewing and approving tribal applications to take land into federal trust status. The proposed trust parcel, referred to throughout this EIS as the Project Site, consists of 68.6 acres in unincorporated Sonoma County (County), California, adjacent to the Town of Windsor (Town). Following the acquisition of the Project Site into federal trust, the Tribe proposes to develop a resort facility that includes a casino, hotel, ballroom/meeting space, event center, spa, and associated parking and infrastructure on the Project Site (Proposed Project).

The statutory authority for acquiring lands in trust status for Indian tribes is provided in the Indian Reorganization Act of 1934 (25 United States Code [USC] § 5108) with regulations codified as 25 Code of Federal Regulations (CFR) Part 151. The Indian Gaming Regulatory Act (IGRA) was enacted in 1988 to regulate the conduct of Indian gaming and to promote tribal economic development, self-sufficiency, and strong tribal governments. IGRA generally prohibits gaming on lands acquired in trust after 1988, unless certain exceptions found in Section 20 of IGRA, 25 USC § 2719, are met. Here, the requested exception is the restored lands exception that allows gaming on land acquired in trust after 1988 if the lands are taken in trust as part of "the restoration of lands for an Indian tribe that is restored to Federal recognition" (25 USC § 2719 (b)(1)(B)(ii) and (iii)). The Section 20 exceptions are implemented through regulations found in 25 CFR Part 292.

1.1.1 National Environmental Policy Act

This EIS has been completed in accordance with and to satisfy the requirements set out in the National Environmental Policy Act (NEPA) (42 USC § 4321 et seq.); the Council on Environmental Quality Guidelines for Implementing NEPA (40 CFR Parts 1500-1508); and the BIA NEPA guidebook (59 Indian Affairs Manual 3-H). This EIS provides a detailed description of the Proposed Action and analysis of the potential environmental consequences associated with the Proposed Action and the subsequent development of the Proposed Project. **Section 2** of this EIS provides a detailed description of the project alternatives. **Section 3** provides a description of the existing environmental conditions on and in the vicinity of the Project Site, an analysis of the potential environmental consequences associated with the project alternatives including cumulative impacts, and a discussion of indirect and growth-inducing effects. **Section 4** provides mitigation measures for identified adverse impacts. **Section 5** and **Section 6** provide a summary of entities consulted and references utilized within the EIS, respectively.

The BIA serves as the Lead Agency for NEPA compliance with the U.S. Environmental Protection Agency (EPA) and the National Indian Gaming Commission (NIGC) serving as Cooperating Agencies.

1.1.2 Scoping

Preparation of an Environmental Assessment

In accordance with 40 CFR § 1501.5, the BIA prepared an Environmental Assessment (EA) to analyze the potential environmental consequences associated with the Proposed Action and the subsequent development of the project alternatives to assist the BIA in determining whether a Finding of No Significant Impact (FONSI) should be prepared or whether additional environmental analysis will be conducted in the form of an EIS.

Although not required by NEPA for the preparation of an EA, the BIA as Lead Agency elected to conduct a 30-day scoping comment period to solicit input from the public and agencies regarding the scope of the EA. A Notice of Preparation (NOP) describing the Proposed Project and announcing a 30-day scoping period was prepared and circulated for public and agency review on May 27, 2022. The NOP was published in The Press Democrat newspaper, posted on the project website at https://www.shilohresortenvironmental.com/ , filed with the State Clearinghouse for distribution to State agencies, and sent to various federal and local agencies through direct mailings, including but not limited to Sonoma County and the Town of Windsor. The issues that were raised during this initial scoping period were summarized the September 2022 NEPA Scoping Report, which is incorporated by reference and available online at the project website. The EA addressed the relevant issues and concerns as summarized in the scoping report. A copy of the NOP and newspaper publication are provided in **Appendix A-1**.

A Notice of Availability (NOA; **Appendix A-1**) for the EA was submitted to the State Clearinghouse (SCH# 202205059), published in the local paper (The Press Democrat), mailed to interested parties, and posted on the project website. The EA was originally made available for public comment for a 45-day period, from September 12, 2023 to October 27, 2023. However, the BIA extended the public comment period for an additional 15-day period that concluded on November 13, 2023, resulting in a total comment period of 60 days. A virtual public hearing was held on September 27, 2023, that included an overview of the NEPA process, description of Proposed Action and Alternatives, summary of the contents of the EA, and an opportunity for the public to submit verbal comments on the EA. Upon consideration of the public and agency comments received, the BIA decided to prepare an EIS to further analyze the environmental effects which may result from the Proposed Action. Comments received during the EA public comment period are now considered scoping comments for the EIS and are included in **Appendix A-2**, Supplemental Scoping Report.

Notice of Intent

Although a formal public scoping process had been conducted and an EA circulated for the Proposed Action, the BIA published a Notice of Intent (NOI) in the Federal Register (FR) on March 8, 2024, describing the Proposed Action and announcing intent to prepare an EIS. The 30-day public comment period began on March 8, 2024, and ended on April 8, 2024. Comments received in response to the NOI are included in **Appendix A-2**, Supplemental Scoping Report. To the extent required by NEPA, this EIS addresses the issues and concerns raised during the scoping and public review for the EA, as well as scoping comments received in response to the NOI.

1.1.3 EIS Process

This Draft EIS will be distributed to federal, Tribal, State, and local agencies, as well as other interested parties for a review and comment period. The review and comment period begins after the Notice of Filing with the USEPA in the Federal Register. The Notice of Availability (NOA) published by the BIA provides information regarding the public comment period and virtual public hearing on this Draft EIS. The BIA will consider the comments received, and revisions may be made in the Final EIS to reflect the content of these comments. The Final EIS will be filed with the USEPA, and the USEPA will then publish an NOA for the Final EIS in the Federal Register. This marks the beginning of a 30-day period after which the BIA may proceed with a decision. At the time of the decision, the BIA will prepare a public Record of Decision (ROD) pursuant to 40 CFR § 1505.2. As required by the CEQ Regulations for Implementing NEPA, the ROD will state what the decision is, identify alternatives considered in reaching the decision, and discuss preferences among alternatives based on relevant factors including economic and technical considerations as well as the statutory mission of the BIA. The ROD will also discuss whether all practicable mitigation measures have been adopted to mitigate environmental harm. If all practicable measures are not adopted, the BIA must state why such measures were not adopted. The BIA will prepare a monitoring and compliance plan for mitigation consistent with 40 CFR § 1505.3(c), which will be attached to the ROD.

1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the Proposed Action is to facilitate tribal self-sufficiency, self-determination, and economic development, thus satisfying both the Department of the Interior's (Department) land acquisition policy as articulated in the Department's trust land regulations at 25 CFR Part 151, and the principal goal of IGRA as articulated in 25 USC § 2701. The need for the Department to act on the Tribe's application is established by the Department's regulations at 25 CFR § 151.10(h) and 151.12.

1.3 BACKGROUND

The Koi Nation is a federally recognized tribe governed by its Constitution and a three-member Council headquartered in Santa Rosa, California. The Tribe operates programs under the Tribal Self-Governance Act of 1994, programs funded by the Indian Health Service, and the American Rescue Plan of 2021, among others, for its enrolled tribal members; approximately 52% of whom live in Sonoma County and an additional 25% of whom live in Lake County, the remaining 23% live outside of Sonoma and Lake Counties. The Tribe currently has no reservation or land in trust for its benefit but owns approximately 68.6 acres of land in unincorporated Sonoma County knows as the "Shiloh parcel." The Tribe has requested that the BIA accept land into trust for gaming purposes to establish an economic land base in order to strengthen its governmental capacity and institutional framework, promote the general welfare of the Koi Nation and its members, raise governmental revenues, and create jobs for its members.

For most of its history the Koi people traveled throughout the Russian River Valley, primarily living at Clear Lake in what is now Lake County, California. By the middle of the 1800s, the Koi people were displaced as a result of federal policies intended to allow for Euro-American settlement and industrial development of the Clear Lake area. Although treaties between the federal government and the Koi people were negotiated in 1851, they were not ratified by Congress. In 1916, the BIA purchased a 141-acre tract of land (herein referred to as the Lower Lake Rancheria) between the towns of Lower Lake and Clearlake Highlands (now incorporated into the City of Clearlake) in Lake County, California, for use by the Tribe; however, due to the uninhabitable condition of the Lower Lake Rancheria, the Koi tribal leadership and

Koi community relocated to Sonoma County between Sebastopol and Santa Rosa where many worked in the farms and orchards of the Russian River Valley. By 1924, a number of tribal members were engaged in leasing and cultivating land in the Gold Ridge district near Sebastopol, California. Throughout this period of displacement, however, the Tribe maintained its tribal political activities (ultimately organizing under the Indian Reorganization Act of 1934) and pursued its land claims.

In 1956 Congress passed legislation to sell the majority of Lower Lake Rancheria to Lake County. The BIA incorrectly presumed the disposition of the Lower Lake Rancheria in 1956 had terminated its relationship to and responsibilities for the Koi Nation. On December 29, 2000, after decades of effort to assert its rights as an American Indian Tribal government, the Tribe's status as a federally recognized tribe was re-affirmed. In 2019, the United States District Court for the District of Columbia determined that the Koi Nation is a tribe that has been restored to federal recognition for the purposes of IGRA (Koi Nation v. United States Department of the Interior, 361 F. Supp. 3d. 14, 28 [D.D.C. 2019]).

Federally recognized tribes are entitled to receive or benefit from federal programs and services enacted by the Congress. Due to an erroneous termination interpretation that resulted in the Koi being deemed lacking federal recognition status, the Koi Nation was deprived of these benefits for the 44 years between 1956 and 2000. As a result, the Tribe has no reservation, which deprives the Tribe of the ability to build a sustainable economy. The revenue from the Proposed Action will restore the Tribe's ability to exercise its political rights, achieve self-governance, strengthen its institutions of governance, and establish a sustainable economy sufficient to provide governmental services and benefits not only to its citizenry today, but for future generations of tribal citizens as well.

1.4 LOCATION AND SETTING

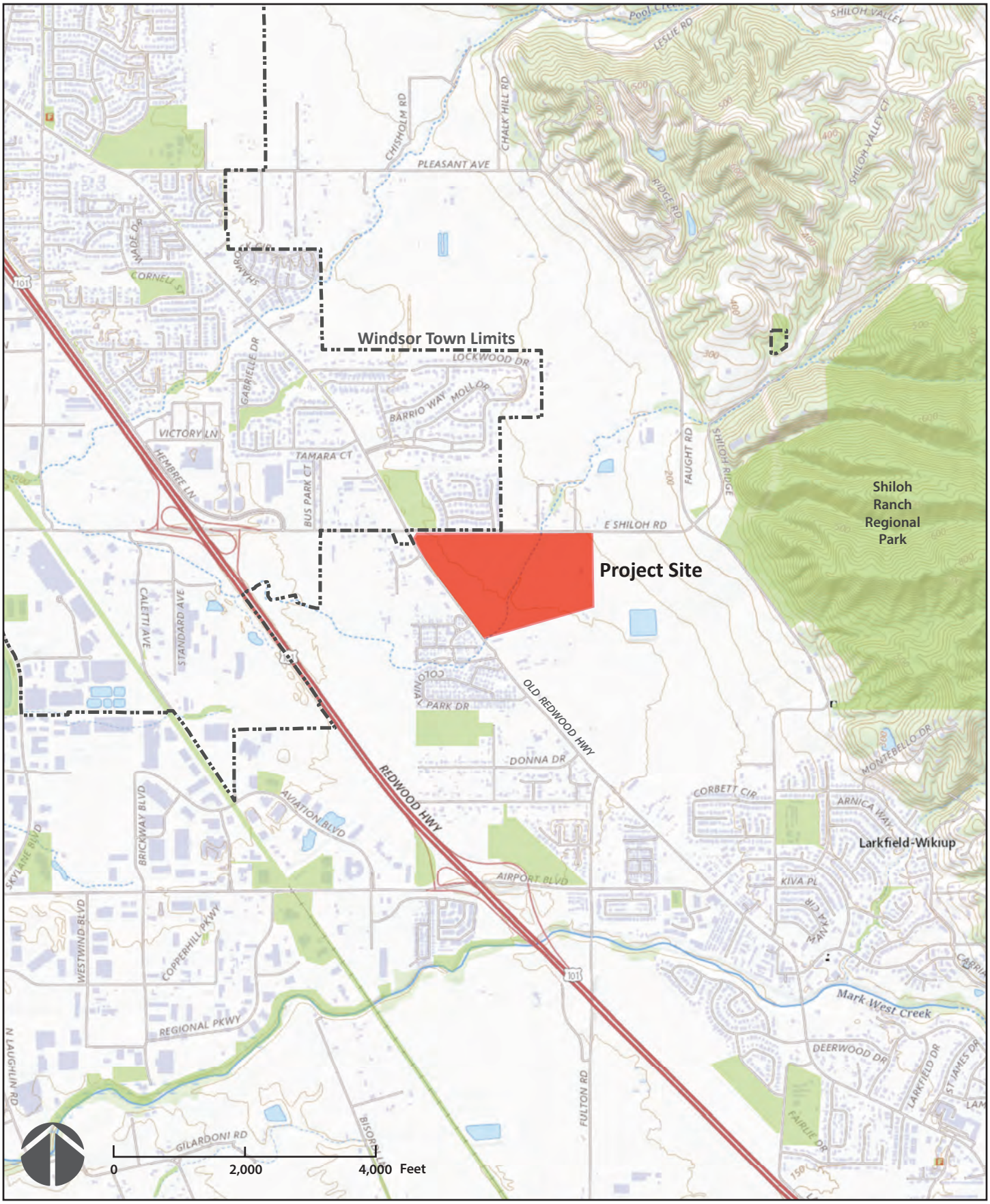
The Project Site consists of one parcel owned in fee by the Tribe (Assessor's Parcel Number 059-300-003) and is located in Section 20, Township 8 North, Range 8 West as depicted on the Mount Diablo Meridian U.S. Geological Survey 7.5' quadrangle map. The Project Site is located outside of, but contiguous to, the Town of Windsor and approximately 12 miles from the Koi Nation's tribal headquarters in Santa Rosa, California. **Figure 1.4-1** and **Figure 1.4-2** show the location of the Project Site, and **Figure 1.4-3** presents an aerial photograph of the Project Site and the immediate vicinity. Existing land uses on the Project Site consist of a residence and operating vineyard, with Pruitt Creek bisecting the central portion of the site. Regional access to the Project Site is provided by Highway 101, which runs in a general north-south direction and is located approximately 0.5 miles west of the Project Site. Local access to the Project Site is currently provided through existing driveways on Shiloh Road and Old Redwood Highway.

The Project Site is bordered by Shiloh Road, residential parcels, and Esposti Park to the north; vineyards to the east; residential to the south; and Old Redwood Highway, residential, commercial, and Shiloh Neighborhood Church, to the west. The Charles M. Schulz Sonoma County Airport is located approximately 2 miles southwest of the Project Site. Shiloh Ranch Regional Park is located approximately 0.3 miles east of the Project Site.

Source: Maxar imagery (4/16/2021)

FIGURE 1.4-1

REGIONAL LOCATION



Source: USGS The National Map (June 2020)

FIGURE 1.4-2

SITE AND VICINITY

Source: Maxar imagery (4/16/2021)

FIGURE 1.4-3

PROJECT SITE AERIAL

1.5 REGULATORY REQUIREMENTS AND APPROVALS

The project alternatives, as described in **Section 2**, may require the federal, State, and local permits and approvals identified in **Table 1.5-1.**

Table 1.5-1: Potential Permits and Approvals

Agency	Permit or Approval	Alternatives
Secretary of the Interior	Transfer of land into trust	A, B, and C
National Indian Gaming Commission	Approval of gaming management contract	A and B
U.S. Environmental Protection Agency	Approval of coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Construction Activities as required by the Clean Water Act. NPDES discharge permit for seasonal discharge of tertiary treated effluent to Pruitt Creek, a tributary to the Russian River. Approval of 401 Water Quality Certification prior to discharge of dredged or fill material into Waters of the U.S.	A, B, and C
State Historic Preservation Office	Consultation under Section 106 of the National Historic Preservation Act	A, B, and C
U.S. Army Corps of Engineers	Approval of a Nationwide 404 Permit prior to discharge of dredged or fill material into Waters of the U.S.	A, B, and C
U.S. Fish and Wildlife Service and/or National Oceanic and Atmosphere Administration, Fisheries Service	Consultation in accordance with Section 7 of the Endangered Species Act	A, B, and C
Regional Water Quality Control Board	Authorization of coverage under State Water Resources Control Board Order for Water Reclamation Requirements for Recycled Water Use	A, B, and C (options for off-site use of recycled water)

Section 2 | Proposed Project and Alternatives

This section describes the alternatives that are analyzed within this EIS. A reasonable range of alternatives has been selected based on consideration of the purpose and need of the Proposed Action and opportunities for potentially reducing environmental effects. These alternatives include the Proposed Project (Alternative A), the Reduced Intensity Alternative (Alternative B), the Non-Gaming Alternative (Alternative C), and the No Action Alternative (Alternative D). These alternatives are described below and analyzed throughout this EIS. Consistent with Council on Environmental Quality guidelines (40 CFR § 1502.14), **Section 2.5** summarizes and compares the potential environmental consequences, benefits, and/or detriments of the project alternatives. **Section 2.6** discusses the alternatives that were considered but are not analyzed in this EIS.

2.1 ALTERNATIVE A – PROPOSED PROJECT

Alternative A consists of the following components: (1) transfer of the 68.6-acre Project Site into federal trust status for the benefit of the Tribe for gaming purposes (Proposed Action); and (2) the subsequent development by the Tribe of a resort facility that includes a casino, hotel, ballroom/meeting space, event center, spa, and associated parking and infrastructure on the Project Site (Proposed Project).

2.1.1 Fee-to-Trust Transfer

The Tribe has submitted an application to the BIA for the transfer of the 68.6-acre Project Site into federal trust for gaming purposes. The proposed trust parcel boundaries are shown in **Figure 1.4-3**. The BIA will make its determination regarding the proposed fee-to-trust acquisition in accordance with the procedures set forth in 25 CFR Part 151. The regulations in 25 CFR Part 151 implement Section 5 of the Indian Reorganization Act (IRA), codified at 25 USC § 5108, which is the general statute that provides the Secretary of the Interior with authority to acquire lands in trust status for tribes and individual Indians. The Tribe and the federal government would exercise civil regulatory jurisdiction over the Project Site once it is taken into trust.

2.1.2 Resort and Casino Facility

The Tribe proposes to develop a resort facility within the western portion of the Project Site that includes a three-story casino, a five-story hotel with spa and pool area, ballrooms/meeting space, and event center. The resort would be designated as entirely non-smoking and open 24 hours a day, 7 days a week. It is anticipated that the event center would host concerts and performances while the ballrooms/meeting space would host banquets, conferences, or other special events. Parking for the resort facility would be provided on the ground floor of the casino, as well as in a four-story parking garage; additionally an overflow surface parking area may be established on the eastern side of Pruitt Creek. An enclosed clear-span pedestrian bridge would connect the parking garage with the casino-resort approximately 12 feet above Pruitt Creek. The pedestrian bridge would be constructed without disturbing the bed and bank of Pruitt Creek. Other supporting infrastructure, including the proposed water treatment and wastewater treatment facilities (see **Section 2.1.3** and **Section 2.1.4**), would be located on the southeastern portion

of the Project Site. A conceptual site plan for Alternative A is shown in **Figure 2.1-1**. A breakdown of the components of Alternative A is provided in **Table 2.1-1**. Alternative A would create an estimated 1,571 full-time equivalent jobs (**Appendix B-1**).

Table 2.1-1: Alternative A Project Components

Component	Approximate Square Footage	Units
Casino	**538,137**	**2,750 gaming devices 105 table games**
Gaming Floor	114,345	-
High Limits Gaming	8,250	-
Sports Book	9,900	-
Food Hall	14,000	465 seats
Restaurants (5)	37,440	1,240 seats
Coffee Shop	2,750	-
Casino Bar	7,855	-
Service Bars (4)	4,080	-
Retail	2,250	-
Event Center	53,380	2,800 seats
Ballrooms (2)	44,900	-
Meeting Rooms	29,285	-
Circulation and Back of House	209,702	-
Hotel	**268,930**	**400 rooms**
Guest Rooms	207,540	-
Spa	13,930	-
Circulation and Back of House	47,460	-
Parking	**1,689,380**	**5,119 spaces**
Casino/Drop-off	286,000	800 spaces
Parking Garage	1,214,080	3,692 spaces
Overflow Surface Parking	183,100	618 spaces
Bus	6,200	9 spaces

Source: Dale Partners, 2022a

Source: Dale Partners

FIGURE 2.1-1

ALTERNATIVE A PROPOSED RESORT AND CASINO SITE PLAN

Architecture, Signage, Lighting, and Landscaping

The architecture of the facility would incorporate natural materials and colors to integrate the buildings with the natural characteristics of the site and surrounding areas, including living rooftops landscaped with fire-resistant plants on both the casino-resort and parking structures. The main facility, including the casino, hotel, and event center, would have a maximum height of approximately 65 feet above ground level. The parking garage would have a maximum height of approximately 60 to 65 feet above ground level and would include a decorative, perforated metal screen around the exterior to provide shade to the interior of the parking garage and visual screening.

The portions of the Project Site outside of the riparian area and building footprint would be landscaped with fire resistant plants, with existing vineyard areas maintained around the perimeter of the site. The Project Site currently contains approximately 59.3 acres of vineyards and development of Alternative A would retain between approximately 12.4 and 17.4 acres of vineyards depending on the size and type of seasonal storage selected for treated effluent (see **Section 2.1.4**). A five-foot non-combustible zone would be maintained around each structure that would remain void of vegetation and landscaping. A short decorative rock wall would be installed along the northern and western perimeter of the Project Site to separate the vineyards from the roadways. Architectural renderings of Alternative A are provided in **Figures 2.1-2a** and **2.1-2b**, and before/after renderings from various viewpoints are included in **Section 3.13**.

A decorative ground-level sign would be incorporated into the rock wall at the northwestern corner of the Project Site near the intersection of Shiloh Road and Old Redwood Highway. Decorative ground-level monument/directional signs would be located at the entryways to the Project Site.

Exterior lighting of Alternative A would be designed to be consistent with the Dark-Sky Association Model Lighting Ordinance, and internal lightening would be designed to be minimize interior spill light (see **Appendix C** and **Table 2.1-3** for details). The exterior lighting of Alternative A would be integrated into components of the architecture and strategically positioned to minimize off-site lighting and any direct site lines to the public. No illumination would be directed towards Pruitt Creek or beyond the Project Site boundaries with the exception of the three access points, where light may extend to the mid-center of the adjacent roadways, Shiloh Road and Old Redwood Highway. The porte-cochere canopy will be made of a solid material to prevent upward illumination and help capture ground-reflected light. Lighting for the signs would be integrated into components of the sign or landscaping and would be strategically positioned to minimize off-site lighting and any direct site lines to the public. A “no lighting” buffer zone will be established around the Project Site perimeter, including the vineyard areas and Pruitt Creek.

Parking

Table 2.1-2 provides a breakdown of the number of parking spaces recommended for Alternative A based on Sonoma County Parking Regulations and reductions for shared and simultaneous use functions.

As shown in **Table 2.1-2**, parking for Alternative A would be provided on the ground floor of the casino (800 spaces), in a four-story parking garage (3,692 spaces), and an overflow surface parking lot (618 spaces). Additionally, nine (9) spaces for bus parking would be provided. Therefore, Alternative A provides 5,119 parking spaces, which is 800 more than the recommended number of parking spaces. The location of the various parking areas is shown on **Figure 2.1-1**. The overflow surface parking lot would be gated and restricted to daytime use only to prevent the need for permanent nighttime lighting.

Source: Dale Partners

FIGURE 2.1-2a

ALTERNATIVE A ARCHITECTURAL RENDERING - DAYTIME

Source: Dale Partners

FIGURE 2.1-2b

ALTERNATIVE A ARCHITECTURAL RENDERING - EVENING

Table 2.1-2: Recommended Parking Spaces under Alternative A

Component	Regulation[1]	Units	Reduction for Shared Use	Parking Spaces Recommended
Casino	1 space/slot machine 2 space per table game	2,750 gaming devices 105 table games	N/A	2,960
Dining	1 space/60 square feet	51,440 square feet	20% (171 spaces)	686
Event Center	1 space/4 seats or 1 space/75 square feet whichever is greater	2,800 seats 53,380 square feet	35% (249 spaces)	463
Hotel	1 space/room plus 1 space/staff	400 rooms 40 managers/staff	75% of rooms (300)	140
Spa	1 space/100 square feet	14,000 square feet	50% (70 spaces)	70
			Total Recommended	**4,319**
			Total Provided	5,119

Source: Dale Partners, 2024; **Appendix I**
Notes: 1) Chapter 26, Article 86 of the Sonoma County Code of Ordinances

2.1.3 Water Supply

The estimated average daily water usage for Alternative A would be approximately 170,000 gallons per day (gpd) of potable water and 108,000 gpd of recycled water. Potable water supply would be provided via on-site wells, and recycled water (tertiary treated effluent) would be provided from the on-site wastewater treatment facilities (see **Section 2.1.4**). Recycled water would be used for toilet and urinal flushing, on-site landscape irrigation, on-site vineyard irrigation, and cooling tower makeup. Fire flow requirements for Alternative A are anticipated to be 2,000 gallons per minute for 4 hours assuming the use of automatic fire sprinklers consistent with applicable requirements of the Tribe's Building and Safety Code of 2023, which are consistent with the California Building Code (CBC, **Appendix D-1**).

Water supply for the existing vineyards and residence on the Project Site is currently provided through four on-site wells; however, additional investigation is needed to determine if the existing wells would be suitable for use as potable water supply sources for Alternative A. As detailed in Section 5 of **Appendix D-1**, the proposed water supply system for Alternative A would consist of the following components:

- **Water production wells**: Up to two water supply wells would be established onsite, depending on whether existing wells can be used, with each well capable of meeting the peak day water demands. The wells would be drilled to a depth of approximately 700 feet below ground surface (bgs) and screened to draw from approximately 400-600 feet bgs (see Section 5.1 of **Appendix D-1**).
- **Water treatment plant**: Based on existing information related to groundwater quality in the region (see **Section 3.3**), it is anticipated that an on-site water treatment plant would be

developed to meet Clean Drinking Water Act requirements, including the removal of arsenic and manganese. The proposed layout of the treatment plant and process flow diagram is provided as Figures 5-1 and 5-2 of **Appendix D-1** (see Section 5.2 of **Appendix D-1**) and would be located within an enclosed building.

- **Storage tank**: A welded steel cylindrical water storage tank would be constructed to store water produced by the water treatment plant to meet fire flow and peak domestic demand requirements (see Section 5.3 of **Appendix D-1**). The tank would provide approximately 1 million gallons of storage, with an approximate diameter of 75 feet and height of 32 feet.
- **Pump station**: A potable water pump station would be used to convey potable water from the storage tank to the resort facilities and would be sized to handle both fire flow and domestic demands. The ultimate pumping capacity would be dependent on fire flow requirements and would be satisfied by two variable-speed high-service pumps that are half the capacity of the projected flow requirement (see Section 5.3 of **Appendix D-1**).

The water treatment plant, storage tank, and pump station would be located within the "treatment area" designated in the eastern portion of the Project Site (**Figure 2.1-1**). The location of the four existing wells and potential location of a new well is shown on Figure 2-3 of **Appendix D-1**.

2.1.4 Wastewater Treatment and Disposal

Alternative A is estimated to generate an average wastewater flow of 232,000 gpd and a peak weekend flow of 335,000 gpd. For the purposes of design, an average daily flow of 300,000 gpd and average weekend flow of 400,000 gpd was assumed (**Appendix D-1**).

Wastewater Collection System

Wastewater from the resort facilities would flow through sewer lines by gravity to a lift station. The gravity sewer main would be laid along planned roadways within the Project Site to facilitate access and maintenance. The gravity sewer main from the resort facility to the proposed lift station and wastewater treatment plant (WWTP) would be installed either beneath Pruitt Creek by horizontal directional drilling or other trenchless construction methods or over Pruitt Creek by attaching it to either the proposed pedestrian or vehicle bridge to avoid impacts to the creek and riparian corridor. Wastewater would then be pumped from the lift station wet well through a sewer pipeline to the headworks of the WWTP. The lift station wet well would also be used to collect surface water runoff from the treatment site (see Section 6.1 of **Appendix D-1**).

Wastewater Treatment Plant

The WWTP would treat wastewater to a tertiary level, as defined by Title 22 of the California Code of Regulations, that would comply with the effluent quality requirements of the National Pollution Discharge Elimination System (NPDES) discharge permit issued by the U.S. Environmental Protection Agency (USEPA). As detailed in Section 6.2 of **Appendix D-1**, the on-site WWTP would be located within the "treatment area" designated in the eastern portion of the Project Site (**Figure 2.1-1**) and would consist of the following components: course screening facility, headworks, immersed membrane bioreactor (MBR) system, ultraviolet (UV) disinfection, chlorine disinfection, effluent pump station, equalization tank, emergency storage tank, and associated operations and storage buildings.

Sewage would travel between the headworks and the MBRs within a covered influent distribution force main, which would pass through headworks to an influent splitter box that would evenly distribute the flow to the two MBR process trains. Each MBR process train is divided into three sections: an anoxic section, an aerobic section with mechanical mixers, and an aerobic section containing the immersed membranes. The membranes are typically backwashed every 15 minutes, and each backwash lasts about two minutes. Sodium hypochlorite and/or citric acid is typically injected into the backpulse flow to facilitate membrane cleaning and prevent regrowth in the membrane modules.

Disinfection to meet discharge and reclamation virus and coliform water quality standards would be provided via a UV disinfection system. Though the UV facilities would be designed to disinfect the treated wastewater, they do not continue to disinfect the wastewater after it leaves the UV channel. In order to prevent regrowth of bacteria in the recycled water distribution system, sodium hypochlorite would be added in small quantities. The introduction of this chemical creates a residual concentration of chlorine that persists in the recycled water and ensures that it is safe to use after it leaves the WWTP. Chlorine would be dosed at a location downstream of the UV disinfection facilities and before recycled water is pumped to the recycled water storage reservoir and/or tanks. Any water discharged to surface waters would be non-chlorinated or fully de-chlorinated prior to discharge.

Wastewater Disposal

Treated effluent would be recycled and used on-site for toilet flushing and cooling tower makeup, as well as for irrigation of approximately 4.4 acres of landscaping and 12.2 to 17.4 acres of on-site vineyards at agronomic rates. In addition to on-site landscaping and vineyard areas, recycled water may be utilized for irrigation of off-site landscaping or agricultural areas in proximity to the Project Site at agronomic rates, subject to federal, State, and local regulations. During the wet season (approximately October 1 through May 14), treated effluent may be discharged on-site to Pruitt Creek, a tributary to the Russian River, subject to a USEPA NPDES discharge permit.

Excess effluent that cannot be immediately reused or discharged to Pruitt Creek would be stored in a lined seasonal storage pond or enclosed tanks. Sludge (biosolids) produced by the WWTP would be dewatered on-site and periodically hauled to a Class III landfill in accordance with federal and State regulatory requirements.

Recycled Water Use

Recycled water from the on-site WWTP would be utilized for toilet/urinal flushing, landscape irrigation, vineyard irrigation, cooling tower make-up and other approved non-potable uses consistent with EPA and California Title 22 regulations[1]. Additionally, recycled water could be utilized to supply water for fire protection, such as the sprinkler systems and fire hydrants. Treated effluent would be conveyed to a 1-MG welded steel recycled water equalization storage tank for on-site recycled water use located within

[1] In California, recycled water is approved for commercial dual-plumbed use where fixtures dedicated to toilet and urinal flushing are separate in accordance with State Water Resource Control Board (SWRCB) requirements which includes regular cross-connection testing to confirm the separation of potable and recycled water plumbing. The limitation for indoor use is restricted for food and beverage processing and production facilities and specifically excludes facilities such as cafeterias and snack bars. Section 60313(c) states: "No recycled water agency shall deliver recycled water for internal use except for fire suppression systems, to any facility that produces or processes food products or beverages. *For purposes of this Subsection, cafeterias or snack bars in a facility whose primary function does not involve the production or processing of foods or beverages are not considered facilities that produce or process foods or beverages*." (*emphasis added*)

the "treatment area" designated in the eastern portion of the Project Site (**Figure 2.1-1**). Water would be pumped from the recycled water storage tank to the recycled water distribution system and seasonal storage reservoir/tank. The on-site recycled water reuse facilities would be designed to comply with California State Water Resources Control Board standards including, but not limited to, marking irrigation facilities in a purple color and installing recycled water pipelines in separate trenches away from other water pipelines. Recycled water would be pumped out of the seasonal storage ponds/tanks to the irrigated areas for re-use. These pumps would operate seasonally, typically between April and October, and would be sized to convey the entire volume of recycled water stored in the seasonal storage ponds/tanks plus a portion of the daily summertime wastewater flows (see Sections 4.2 and 6.3 of **Appendix D-1**). The brine generated as a byproduct of the recycled water treatment would be periodically hauled offsite to a facility which accepts and treats such wastes, such as the East Bay Municipal Utility District WWTP. Under the maximum scenario for recycled water use, where no effluent is discharged to the creek, up to 44.8 acres of turf, or 406 acres of vineyards could be irrigated with recycled water produced as a result of Alternative A (**Appendix D-2**); this level of irrigation would be achieved through both on and off-site irrigation. Treated effluent could also be disposed off-site consistent with existing Title 22 regulations for groundwater replenishment and surface water augmentation, and pending Title 22 regulations for potable reuse.

Seasonal Surface Water Discharge

Any discharge to Pruitt Creek would occur during the wet season (approximately October 1 to May 14) and would be subject to the requirements of an NPDES discharge permit issued by the USEPA, which would allow discharges to surface water in accordance with the federal Clean Water Act (CWA) and applicable provisions of the Water Quality Control Plan for the North Coast Region (Basin Plan). Facilities associated with the seasonal surface water discharge would include a new discharge pipeline and outfall structure. The outfall structure would be designed to prevent erosion of the natural creek banks and erosion downstream. The outfall pipe outlet would include a duckbill check valve or similar component to protect against settlement/silting inside the pipe or nesting of small animals or rodents. The area around the outfall pipe would be covered with riprap or similar material to prevent natural erosion around the pipe from occurring and to protect the banks during periods of discharge. The pipe material would be suitable for permanent exposure to sunlight and creek water quality conditions.

Seasonal Storage Ponds or Tanks

Seasonal storage ponds or tanks would be used to seasonally store treated effluent until it can be 1) reused either on-site or offsite for irrigation of landscaping, turf or vineyard areas, or 2) discharged to Pruitt Creek. The size of the storage facilities would vary depending on the extent of off-site recycled water usage/irrigation and discharge limitations to the Creek. Assuming that all recycled water is reused within the Project Site or discharged to the Creek (no offsite application), on-site seasonal storage would be provided via a 12.1-million-gallon (MG) reservoir (described as Option 1 within **Appendix D-1**), or within enclosed storage tanks capable of storing up to 16 MG (described as Option 2 within **Appendix D-1**). Under the maximum scenario for recycled water use, assuming that no effluent is discharged to the Creek, up to 33 million gallons of seasonal storage would be required. This could be accommodated via a combination of a reservoir and tanks within the site, as described for Options 5 through 8 in **Appendix D-2**.

- Seasonal storage pond(s) would be constructed using semi-buried ponds and berms and would be lined with an impermeable material, such as clay or concrete, to minimize percolation into the groundwater. Seasonal storage ponds would be located outside of the 100-year and 500-year floodplain and downgradient from any water supply well used for Alternative A. Seasonal storage

ponds would be sized according to the volume of disposal via irrigation and surface water discharge, as well as the remaining carry-over volume required from month to month. The maximum storage pond size, described under Options 5 and 7 in **Appendix D-2**, would include a 4.1 acre reservoir with a 15-foot-tall berm capable of storing up to 19.1 MG.

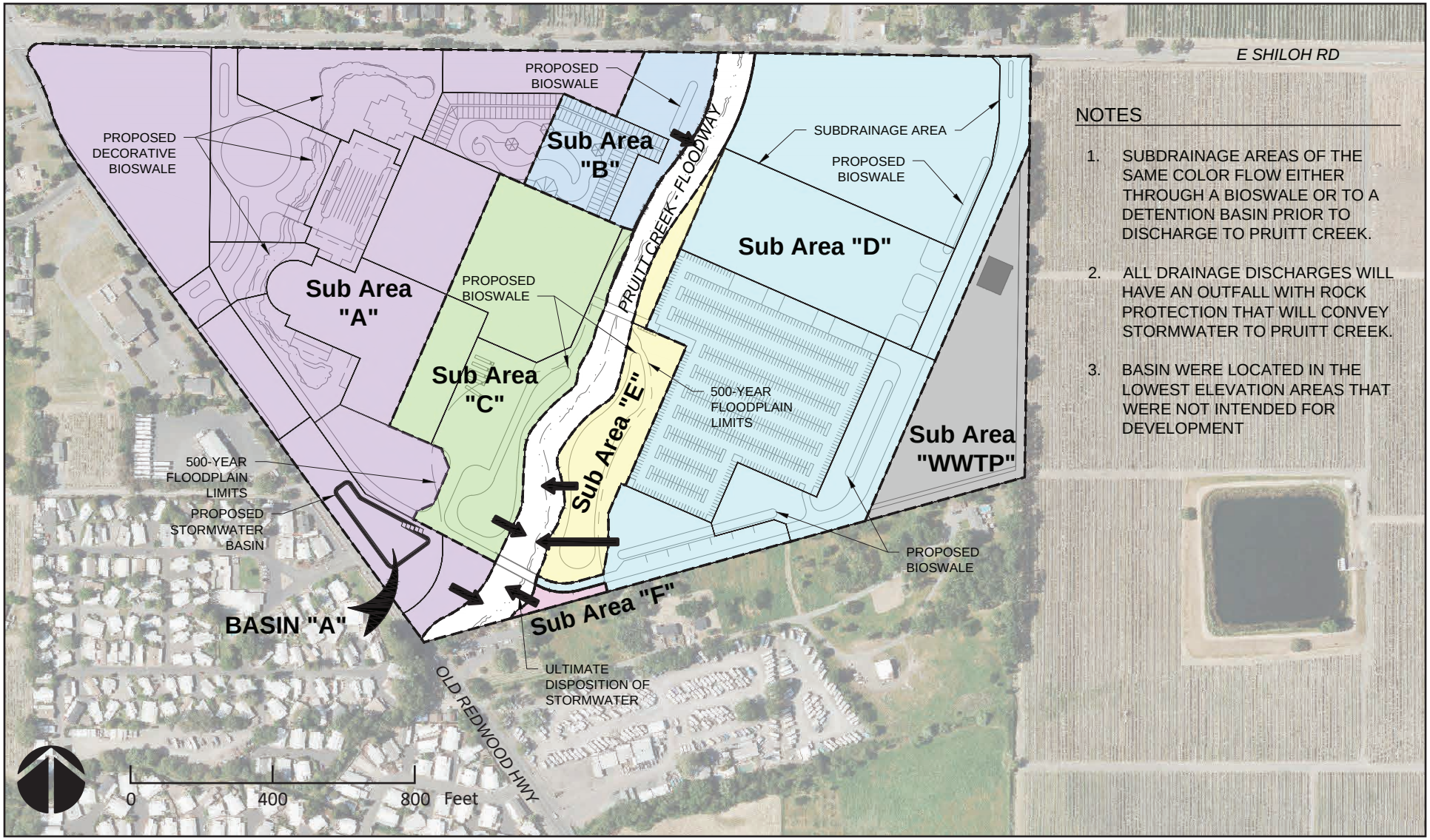
- Seasonal storage tank(s) would be located within the "treatment area" designated in the eastern portion of the Project Site (**Figure 2.1-1**). The maximum seasonal storage tank capacity, described as Options 6 and 8 in **Appendix D-2**, would include three 10-million gallon tanks, each with a diameter of 160 feet, and a height of 65 feet.

2.1.5 Grading and Drainage

The existing topography of the Project Site is relatively flat, ranging in elevation from 135 feet to 160 feet above mean sea level, and generally slopes toward Pruitt Creek, which runs through the site. Construction would involve grading and excavation for building pads and parking lots. A Site Grading and Hydrology Study is included in **Appendix D-3**. As described therein, building finish floors were chosen approximately 1-2 feet above existing 500-year floodplain elevations associated with the creek. These range from 142 feet in elevation for the conference center, to 144 feet for the casino and parking structure, and 146 feet for the hotel. Although some vineyard areas would remain undisturbed, the roadway-adjacent vineyards are intended as decorative landscape areas. These areas are to be graded with slopes not to exceed 4:1. Parking lot and roadways are to be designed between 1 and 5% slope. The proposed grading concept accomplishes a near balanced site with less than 10,000 cubic yards of fill required to be imported. Cut areas include the WWTP and foundations of the structures. Fill would primarily be placed on the southwesterly portion of the Project Site near, and outside of, the 100-year and 500-year floodplain. Earthwork within the 100-year and 500-year floodplain would be balanced. Fill would be transported in accordance with applicable requirements from a source within 20 miles during normal construction hours (7 a.m. to 5 p.m.), and dust suppression Best Management Practices (BMPs) would be used for roadways and trucks as discussed in **Section 2.1.10** below.

Although not required for tribal trust lands, the Sonoma County Water Agency Flood Management Design Manual (FMDM) was used for the design of the stormwater drainage system. Per FMDM standards, the stormwater drainage system under Alternative A would limit the post-development peak flow and stormwater volume to pre-development levels during a 100-year probability, 24-hour duration storm event. As shown on **Figure 2.1-3**, the proposed grading for the portion of the Project Site west of Pruitt Creek consists of three different sub-area watersheds.

The largest shed, Sub Area A, would collect runoff from vineyards, roadways, and building roof drainage and convey the flows to the decorative bioswale in the front entrance of the casino and then to a detention basin on the southwestern portion of the Project Site prior to discharging to Pruitt Creek. Sub Area B would collect runoff from roof drainage and some landscape/vineyards into a bioswale adjacent to Pruitt Creek. Sub Area C would also collect runoff from roof drainage and the loading dock area and convey the flows through a bioswale and then discharge into the creek. The bioswale for Sub Area C is located within the flood zone of Pruitt Creek and therefore would be designed with an elevation at or above the floodplain elevation to allow for treatment of pollutants from the roof drains and service yard during a storm event. The proposed grading for the portion of the Project Site east of Pruitt Creek consists of four different sub-area watersheds. Sub Area D, E, and F would convey all drainage runoff from the parking, roadways, and landscape areas into bioswales and then discharge into the creek.



Source: HydroScience

FIGURE 2.1-3

ALTERNATIVE A STORMWATER DRAINAGE

The bioswales would be sized per Sonoma County low impact development (LID) requirements for pollutant reduction. Storm drain outfalls to the creek would be designed with rock slope protection to prevent erosion of the natural creek banks and erosion downstream. Sub Area WWTP is the fourth sub area of the easterly watershed. Due to potential for sanitary sewer spill contamination of potential overflows, runoff in this area would be captured and conveyed to the WWTP for treatment and disposal as described in **Section 2.1.4**.

2.1.6 Roadway Access and Circulation

Alternative A would be accessible via 1) the existing driveway on Shiloh Road east of Caporale Court, 2) a new driveway on Shiloh Road across from Gridley Drive, and 3) a new driveway on Old Redwood Highway across from the southern driveway for the existing Shiloh Neighborhood Church (**Figure 2.1-1**).

The onsite circulation includes a roundabout connecting the main driveways on the western portion of the site with the front entrance of the resort facility and a loop road to connect to the service yard and parking areas. The parking structure includes a primary speed ramp entrance/exit on the eastern side of the parking structure and a secondary entrance/exit on the southern side of the parking structure. The loop road would be designed with at least one paved shoulder wide enough to handle in-bound traffic during evacuation. The loop road would cross over Pruitt Creek via a clear-span bridge on the southern portion of the Project Site.

2.1.7 Law Enforcement, Fire Protection, and Emergency Medical Services

The Sonoma County Sheriff's Office (SCSO) provides law enforcement services to the County and staffs the Windsor Police Department through a negotiated contract between the Town and County. SCSO would be the public agency responsible for providing law enforcement services to the Project Site in accordance with Public Law 280 as amended in 1968, which gives criminal jurisdiction to State law enforcement of offenses involving Indians in Indian Country if tribal consent is given (for additional information on Public Law 280, refer to **Appendix E**). The Tribe proposes to enter into a contract with SCSO for law enforcement services on the Project Site. Tribe-managed security personnel and security cameras would provide surveillance of proposed structures, parking areas, and ancillary facilities.

The BIA is responsible for fire management on federal trust land. Under the *California Master Cooperative Wildland Fire Management and Stafford Act Response Agreement* signed in 2007, federal agencies and the California Department of Forestry and Fire Protection (now CAL FIRE) agreed to improve efficiency by facilitating the coordination and exchange of personnel, equipment, supplies, services, and funds for wildfires in addition to improving coordination regarding other incidents. Numerous federal agencies signed this agreement, including the BIA. Under this agreement, agencies can enter into agreements of mutual aid and contract for wildfire related services with each other (BIA et al., 2007).

The Tribe proposes to enter into a contract with the Sonoma County Fire District (SCFD) to be the primary provider of fire protection and emergency medical services (EMS). A Letter of Intent between the Tribe and SCFD that specifies the intention of the Tribe and SCFD to enter into a Memorandum of Understanding for the provision of fire response and emergency medical services to the Project Site is included as **Appendix O**. The nearest SCFD station to the Project Site is Station 1, approximately 1.6 miles to the northwest. CAL FIRE provides fire protection services to State Responsibility Areas and mutual aid throughout the County with the nearest station located approximately 5.4 miles south of the Project Site

in the City of Santa Rosa. Building plans and specifications would comply with the California Fire Code, including requirements for sprinkler systems and fire extinguishers.

2.1.8 Electricity and Natural Gas

Pacific Gas and Electric (PG&E) provides electrical services to the Project Site and would provide electricity to Alternative A. There are existing underground and overhead electrical lines on, and adjacent to, the Project Site. Alternative A will use electric boilers and appliances in lieu of natural gas or propane units to the greatest extent practicable as described in **Table 2.1-3**. If natural gas service is needed, PG&E would provide service. Natural gas infrastructure near the Project Site includes a transmission line approximately 0.95 miles west of the Project Site (PG&E, 2022a). PG&E has planned electrical and natural gas infrastructure projects which will increase capacity near the Project Site prior to 2028. For additional information on electrical and gas infrastructure, refer to **Section 3.10.2**.

Emergency on-site generators would be installed to provide power to the development in the event that PG&E is unable to provide electricity due to a planned or unplanned disruption in service. There would be five 1650 electrical kilowatts (2062 kilo-volt-ampere) diesel generators along with four 10,000-gallon aboveground storage tanks (ASTs) to store the diesel fuel for the generators. Only four generators would operate during PG&E outages, with the fifth generator providing redundancy. A potential generator model that could be used is the Cat® 3516C that meets USEPA Tier 4 Final standards. These generators would be able to provide electricity to the facility for up to 72 hours with the aforementioned ASTs. These generators would each be situated on 8-by-12-foot rebar reinforced pads.

2.1.9 Construction

Construction of Alternative A is conservatively assumed to occur in one phase beginning in 2026 and lasting 18 to 24 months, with an anticipated opening day in 2028. Construction of the parking garage and lot, on-site utilities, and landscaping would occur simultaneously with construction of the resort and casino. The proposed facilities would conform to applicable requirements of the Tribe's Building and Safety Code of 2023, which are consistent with the CBC and California Public Safety Code, including building, electrical, energy, mechanical, plumbing, fire protection, and safety. An indoor sprinkler system would be installed to provide fire protection.

2.1.10 Protective Measures and Best Management Practices

Protective measures and BMPs, including regulatory requirements and voluntary measures that would be implemented by the Tribe, have been incorporated into the design of Alternative A. Where applicable, these measures would be incorporated into any design or construction contracts to eliminate or substantially reduce environmental consequences from Alternative A. These measures are discussed below in **Table 2.1-3**.

Table 2.1-3: Protective Measures and Best Management Practices

Resource Area	Protective Measures and Best Management Practices
Land Resources	▪ Erosion control measures will be implemented during construction as described further under the Water Resources BMPs. ▪ A registered design professional will prepare a project-specific design-level geotechnical report conducted in accordance with standards no less stringent than the CBC. The Tribe will adhere to the recommended measures within the report.
Water Resources	▪ The Tribe will apply for coverage under and comply with the NPDES General Construction Permit from the USEPA, for construction site runoff during the construction phase in compliance with the CWA. A Stormwater Pollution Prevention Plan (SWPPP) will be prepared, implemented, and maintained throughout the construction phase of the development, consistent with the General Construction Permit requirements. The SWPPP prepared for the Project Site would include, but would not be limited to, the following BMPs to minimize storm water effects to water quality during construction. o Grading activities will be limited to the immediate area required for construction. o Temporary erosion control measures (such as silt fences, fiber rolls, vegetated swales, a velocity dissipation structure, staked straw bales, temporary re-vegetation, rock bag dams, erosion control blankets, and sediment traps) will be employed for disturbed areas. o Construction activities will be scheduled to minimize land disturbance during peak runoff periods. o Disturbed areas will be paved or re-vegetated following construction activities. o Construction area entrances and exits will be stabilized with large-diameter rock. o A spill prevention and countermeasure plan will be developed that identifies proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used on site. o Petroleum products will be stored, handled, used, and disposed of properly in accordance with provisions of the CWA (33 USC § 1251 to 1387). o Construction materials, including topsoil and chemicals, will be stored, covered, and isolated to prevent runoff losses and contamination of surface and groundwater. o Fuel and vehicle maintenance areas will be designed to control runoff. o Sanitary facilities will be provided for construction workers. o Disposal facilities will be provided for soil wastes, including excess asphalt during construction. Food-related trash will be stored in closed containers and removed from the site daily. o Wheel wash or rumble strips and sweeping of paved surfaces will be used to remove any and all tracked soil.

Resource Area	Protective Measures and Best Management Practices
	○ LID methods (e.g., bioswales) will be implemented that would help store, infiltrate, evaporate, and detain stormwater runoff. ▪ Should dewatering (the process of removing surface or ground water from a particular location) be needed during construction, extracted water would be treated in a proposed or temporary basin and/or be trucked out and disposed of consistent with stormwater regulations. ▪ During operation, internal roadways and parking areas will be subject to trash clean-up daily and swept weekly to prevent debris from entering the stormwater management system.
Biological Resources	▪ Prior to construction, all construction workers will take part in an environmental awareness program conducted by an agency-approved biologist. Special-status species to be covered in the program include, but are not limited to: California red-legged frog, northwestern pond turtle, nesting migratory birds, western burrowing owl, Chinook salmon (CC ESU), coho salmon (CCC ESU), and steelhead (CCC DPS). ▪ This training shall include a description of the special-status species with the potential to occur in the work area, habitat needs, an explanation of the status of the species and protection under federal law, and a list of the measures being taken to avoid or reduce impacts to the species during project construction. The awareness program will be conducted at the start of construction and thereafter as required for new construction personnel. The training shall include a handout containing training information. The project manager shall use this handout to train any additional construction personnel that were not in attendance at the first meeting, prior to starting work on the project. ▪ At the end of each workday, all excavations (e.g., holes, construction pits, and trenches) of a depth of eight inches or greater will be covered with plywood or other hard material, and gaps around the cover will be filled with dirt, rocks, or other appropriate material to prevent entry by wildlife. If excavations cannot be covered, then they will include escape ramps constructed of either dirt fill, wood planking, or other appropriate material installed at a 3:1 grade (i.e., an angle no greater than 30 degrees) to allow wildlife that fall in a means to escape. ▪ If directional drilling is used, pipelines would be installed a minimum of 10 feet below the bottom of Pruitt Creek and during the dry season, to prevent hydrofracture (e.g., frac-out).
Socioeconomic Conditions and Environmental Justice	▪ The Tribe would obtain a license to serve alcohol from the State of California Department of Alcoholic Beverage Control. Casino patrons would be required to be 21 years of age or older in areas where alcohol is served, and a “Responsible Alcoholic Beverage Policy” would be adopted to include provisions related to identification verification and refusal of service to individuals who are visibly intoxicated. ▪ The Tribe will implement operation policies at the resort that will include, but are not limited to, employee training, self-help brochures available onsite, signage near automatic teller machines and cashiers, and self-banning procedures to help those who may be affected by problem

Resource Area	Protective Measures and Best Management Practices
	gaming. The signage and brochures will include problem gambler hotlines and websites. ▪ The Tribe shall develop an anti-human trafficking program that will include training programs to help staff recognize potential victims of trafficking, including understanding the signs of trafficking and knowing how to report suspicious activity. The anti-trafficking program will also include an awareness program that will include visible signage and brochures to educate casino and hotel patrons on what constitutes human trafficking and how to report suspicious activity.
Air Quality	The following dust suppression measures will be implemented during construction to control the production of fugitive dust (particulate matter 10 microns in size [PM_{10}]) and prevent wind erosion of bare and stockpiled soils: ▪ Exposed soil will be sprayed with water or other suppressant twice a day or as needed to suppress dust. ▪ Non-toxic chemical or organic dust suppressants will be used on unpaved roads and traffic areas. ▪ Dust emissions during transport of fill material or soil will be minimized by wetting loads, ensuring adequate freeboard (space from the top of the material to the top of the truck bed) on trucks, cleaning the interior of cargo compartments on emptied haul trucks before leaving a site, and/or covering loads. ▪ Spills of transported fill material on public roads will be promptly cleaned. ▪ Traffic speeds on the Project Site will be restricted to 15 miles per hour to reduce soil disturbance. ▪ Wheel washers will be provided to remove soil that would otherwise be carried offsite by vehicles to decrease deposition of soil on area roadways. ▪ Dirt, gravel, and debris piles will be covered as needed to reduce dust and wind-blown debris. The following measures will be implemented to reduce emissions of criteria air pollutants (CAP), greenhouse gases (GHG), and diesel particulate matter (DPM) from construction: ▪ The Tribe will control CAP and GHG emissions from the facility by requiring all diesel-powered equipment be properly maintained and limiting idling time to five minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required. Since these emissions would be generated primarily by construction equipment, machinery engines will be kept in good mechanical condition to minimize exhaust emissions. The Tribe will employ periodic and unscheduled inspections to accomplish the above measures. ▪ All construction equipment with a horsepower rating of greater than 50 will be equipped with diesel particulate filters, which would reduce approximately 85% of DPM, and be equipped with California Air Resources Board (CARB) rated Tier 3 engines. ▪ The use of low reactive organic gases (150 grams per liter or less) will be required for architectural coatings to the extent practicable.

Resource Area	Protective Measures and Best Management Practices
	▪ Environmentally preferable materials, including recycled materials, will be used to the extent readily available and economically practicable for construction of facilities. The Tribe will reduce emissions of CAPs and GHGs during operation through the following actions: ▪ It is the intent that the project be designed and constructed to a minimum standard of Leadership in Energy and Environmental Design (LEED) Silver. Energy efficient measures may include use of low-emissivity (Low E) glass, and automated lighting controls, motion sensors and timers to reduce average illumination levels. ▪ The Tribe will use clean fuel vehicles (i.e. electric, hybrid, hydrogen, or other fuels with reduced emissions) in the vehicle fleet where practicable, which would reduce CAPs and GHG emissions. ▪ The Tribe will provide preferential parking for employee vanpools, carpools, and or other rideshare vehicles, which would reduce CAPs and GHGs. ▪ Twenty percent of parking spaces will be constructed as electric vehicle (EV) capable spaces. Twenty-five percent of the EV capable spaces will be provided with EV supply equipment (i.e., chargers). ▪ The Tribe will use electric boilers and appliances in lieu of natural gas or propane units to the extent that electric boilers and appliances are commercially available. ▪ Shuttle service to and from select population centers will be provided, which would reduce CAPs and GHGs. ▪ Water consumption will be reduced through low-flow appliances, drought resistant landscaping, and the incorporation of “Save Water” signs near water faucets throughout the development. ▪ The Tribe will control CAPs, GHG, and DPM emissions during operation by requiring that all diesel-powered vehicles and equipment be properly maintained and minimizing idling time to five minutes at loading docks when loading or unloading food, merchandise, etc. or when diesel-powered vehicles or equipment are not in use, unless per engine manufacturer’s specifications or for safety reasons more time is required. ▪ The Tribe will use energy efficient lighting and appliances, which would reduce energy usage, thus reducing indirect CAP and GHG emissions from the project. ▪ The Tribe will install recycling bins throughout the facility for glass, cans, and paper products. Trash and recycling receptacles will be placed strategically outside to encourage people to recycle. In addition, the Tribe will promote the use of non-polystyrene take-out containers and encourage food waste composting programs at all restaurants that serve more than 100 meals per day. ▪ The Tribe will discourage buses from idling for extended periods. ▪ Adequate ingress and egress at entrances will be provided to minimize vehicle idling and traffic congestion.

Resource Area	Protective Measures and Best Management Practices
	The following odor-reducing components and designs will be incorporated into the design of the WWTP: ▪ Activated carbon filter/carbon adsorption. ▪ Biofiltration. ▪ Fine bubble aerator. ▪ Cover or enclose all anaerobic areas. ▪ WWTP area will be designed to maximize distance between odor sources and the sensitive receptors to the north, east, and south of the Project Site. ▪ Exhaust stack and vents will be positioned to limit odor exposure to sensitive receptors.
Public Services and Utilities	BMPs to be implemented during construction: ▪ The Tribe will contact the Utility Notification Center to notify the utility service providers of excavation at the work site. In response, the utility service providers will mark or stake the horizontal path of underground utilities, provide information about the utilities, and/or give clearance to dig. ▪ The site will be cleaned daily of trash and debris to the maximum extent practicable. BMPs to be implemented during operation: ▪ The Tribe will conduct background checks of all gaming employees and ensure that all employees meet licensure requirements established by the Indian Gaming Regulatory Act and the Tribe's Gaming Ordinance. ▪ Parking areas will be well lit and monitored by parking staff and/or roving security guards at all times during operation. This will aid in the prevention of auto theft and other similar criminal activity. ▪ Facilities will have "No Loitering" signs in place, be well lit, and be patrolled regularly by roving security guards. ▪ Security guards patrolling the facilities would carry two-way radios to request and respond to back up or emergency calls. ▪ Security cameras and tribal security personnel would provide surveillance of Project Site to both lessen and apprehend criminal activity onsite. BMPs to be implemented during construction and operation: ▪ A solid waste management plan will be developed and adopted by the Tribe that addresses recycling and solid waste reduction and proper disposal onsite during construction and operation. These measures will include, but not be limited to, the installation of a trash compactor for cardboard and paper products, the installation of ample and visible trash and recycling bins to encourage proper disposal, and periodic waste stream audits.
Visual Resources	▪ Exterior lighting on buildings will be designed so as to not cast significant light or glare into the public right-of-way or any surrounding residentially zoned properties, natural areas, or properties used for activities falling under household living. Lighting equipment at the project entrances will aim downward and backward toward the site to create only indirect illumination that would be visible to adjacent sensitive receptors.

Resource Area	Protective Measures and Best Management Practices
	▪ No direct lighting shall be cast on Pruitt Creek. The riparian line will be used to establish an internal project boundary in which no illumination will be permitted. A no-lighting zone will also be created on either side of the creek riparian lines extending to the building structures and out to the Project Site boundary. ▪ All signage lighting will aim downward and backward toward the Project Site to create only indirect illumination that would be visible to adjacent sensitive receptors. No signage will be internally illuminated. ▪ Outdoor light fixtures will be fully or partially shielded and filtered and oriented downward when possible. ▪ The onsite loop road planned vehicular traffic will be unlit except where there is potential conflict with pedestrians or hazards such as bus parking, sharp curves, and intersections. ▪ Lighting at the front roadways will be concentrated at the points of entry, the roundabout, and intersections. Lighting between these points may be considered where shielded by sufficiently mature landscape. ▪ Marking and lighting necessary to indicate the presence of buildings, structures, or vegetation to operators of aircraft in the vicinity of the airport will be provided if required by the Federal Aviation Administration. ▪ The exterior lighting of will be designed in accordance with the International Dark-Sky Association's Model Lighting Ordinance so as not to cast light or glare off site (e.g. utilize a warm correlated color temperatures (3000K or less) for exterior lighting for reduced likelihood of blue wavelengths which stimulate the photoreceptors of humans and some wildlife). ▪ Lighting will consist of pole-mounted lights up to a maximum height of 16 feet and use high pressure sodium or light-emitting diodes (LEDs) with cut-off lenses and downcast illumination unless an alternative light configuration is needed for security or emergency purposes. Additionally, no strobe lights, spotlights, or flood lights will be used. Shielding will be used in accordance with the International Dark-Sky Association's Model Lighting Ordinance. ▪ Efforts shall be made to "capture" the light emitted upward with built or natural material beyond what is specified in the Dark-Sky Association's Model Lighting Ordinance. ▪ Less reflective materials will be used in uncovered areas to reduce reflected light and glare. ▪ A wall with a gate will be constructed around the service yard to shield Pruitt Creek from work lights which will be automatically controlled-off when not in use. ▪ The foot bridge from the parking garage to the casino will incorporate electrochromic glass which can be automatically shaded when electric pathway lighting is required to contain electric light within the bridge. This will enable the bridge to be transparent during the day but prevent illumination from being cast on Pruitt Creek during the night. ▪ The overflow surface parking lot will be restricted to daytime use only to prevent the need for permanent lighting in this area.

Resource Area	Protective Measures and Best Management Practices
	▪ Interior light will be controlled from spilling onto Pruit Creek or nearby sensitive receptors through the following methods: o Casino/Events windows – glazing will be minimized and primarily facing the main entryway and spill light will be utilized for backlighting of rain screens or contributing to illumination below canopies. o Casino skylights – shading devices will be used to black out interior light that would otherwise be wasted into the night sky. o Hotel – guest room windows facing Shiloh Road and the creek will be minimized, and automated shading and lighting sequences will be employed. A reliable presence detection method such as room-key docking will be used to enable lighting and also lower shades at sunset. The interior room lighting will also be developed with consideration of luminaire placement relative to windows. ▪ Parking structure lighting – Shielding will be used to reduce light reaching sensitive receptors and Pruitt Creek, such as a parapet wall wrapping all other exposures to contain reflected light. Lighting placement and luminaire distribution will be carefully coordinated to contain direct light onto the parking garage footprint. Further, automated controls will reduce light levels when occupants are not detected. On the top level, pole lights will be located interior to the parking surfaces so that all emitted light can be useable on the parking surface. Sight lines will be studied to ensure the lighting equipment is not visible from common angles of adjacent properties, and reflection reducing materials will be used in the parking to reduce reflectance.
Noise	The following BMPs will be implemented during construction: ▪ Construction activities involving noise generating equipment will be limited to daytime hours between 7:00 a.m. and 6:00 p.m., with the exception of federal holidays where no work will occur, and with no construction work occurring between the hours of 10:00 p.m. to 7:00 a.m. ▪ All powered equipment will comply with applicable federal regulations and all such equipment will be fitted with adequate mufflers according to the manufacturer's specifications to minimize construction noise effects. ▪ Noise-generating construction equipment will be located as away far from sensitive receptors as practicable while in usage. ▪ The use of vibratory rollers will be limited to locations beyond 250 feet from an existing sensitive receptor and non-vibratory rollers will be utilized at locations within 250 feet from an existing sensitive receptor. The following BMPs will be implemented during operation: ▪ Heating, ventilation, and air conditioning equipment will be shielded to reduce noise. ▪ Noise generating equipment associated with water and wastewater treatment facilities will be shielded, enclosed, or located within buildings.
Hazardous Materials and Hazards	▪ Personnel will follow BMPs for filling and servicing construction equipment and vehicles. BMPs that are designed to reduce the potential for incidents/spills involving hazardous materials include the following.

Resource Area	Protective Measures and Best Management Practices
	○ Fuel, oil, and hydraulic fluids will be transferred directly from a service truck to construction equipment to reduce the potential for accidental release. ○ Catch-pans will be placed under equipment to catch potential spills during servicing. ○ Refueling will be conducted only with U.S. Department of Labor Occupational Safety and Health Administration approved pumps, hoses, and nozzles. ○ All disconnected hoses will be placed in containers to collect residual fuel from the hose. ○ Vehicle engines will be shut down during refueling. ○ Refueling will be performed away from bodies of water to prevent contamination of water in the event of a leak or spill. ○ Service trucks will be provided spill containment equipment, such as absorbents. ○ Should a spill contaminate soil, the soil will be put into containers and disposed of in accordance with local, State, and federal regulations. ○ All containers used to store hazardous materials will be inspected at least once per week for signs of leaking or failure. ▪ In the event that contaminated soil and/or groundwater is encountered during construction-related earthmoving activities, all work will be halted until a professional hazardous materials specialist or other qualified individual assesses the extent of contamination. If contamination is determined to be hazardous, the Tribe will consult with the USEPA to determine the appropriate course of action, including development of a Sampling and Remediation Plan if necessary. Contaminated soils that are determined to be hazardous will be disposed of in accordance with federal regulations. ▪ Personnel will follow the following BMPs that are designed to reduce the potential for igniting a fire during construction: ○ Construction equipment will contain spark arrestors, as provided by the manufacturer. ○ Staging areas, welding areas, or areas slated for development using spark-producing equipment will be cleared of dried vegetation or other materials that could serve as fire fuel. ○ No smoking, open flames, or welding will be allowed in refueling or service areas. ○ Service trucks will be provided with fire extinguishers. ▪ Diesel fuel storage tanks for on-site emergency generators would comply with the National Fire Protection Association standards for aboveground storage tanks and have secondary containments systems. Materials used for the emergency generators would be handled, stored, and disposed of according to federal and manufacturer's guidelines. ▪ BMPs to be implemented during operation to address fire hazards:

Resource Area	Protective Measures and Best Management Practices
	o Annual maintenance will be conducted to ensure fire resistive materials and construction details are maintained at their highest level to reduce ember impacts. o Fire protection devices including, but not limited to, fire sprinkler systems, alarm systems, commercial kitchens, and fire hydrants will be maintained, inspected, and tested per National Fire Protection Association standards. o The exterior landscape of ignition resistant plants and existing vineyard areas will be maintained, including a five-foot non-combustible zone around each structure that will remain void of vegetation and landscaping.
Transportation and Circulation	▪ The Tribe will construct pedestrian facilities (e.g., sidewalks or trails) on the Project Site to facilitate pedestrian traffic between the casino resort facility and the intersection of Shiloh Road and Old Redwood Highway.

2.2 ALTERNATIVE B – REDUCED INTENSITY ALTERNATIVE

Alternative B consists of the following components: (1) transfer of the 68.6-acre Project Site into federal trust status for the benefit of the Tribe for gaming purposes as described in **Section 2.1.1**; and (2) the subsequent development by the Tribe of a resort facility that includes a three-story casino, a three-story hotel with spa and pool area, ballroom/meeting space, and associated parking and infrastructure on the Project Site. Alternative B is similar to Alternative A, except that the number of hotel rooms is reduced to 200 and the large ballroom, the event center, and the surface parking lot are eliminated. A conceptual site plan for Alternative B is shown in **Figure 2.2-1** and a breakdown of the components of Alternative B is provided in **Table 2.2-1**.

Table 2.2-1: Alternative B Project Components

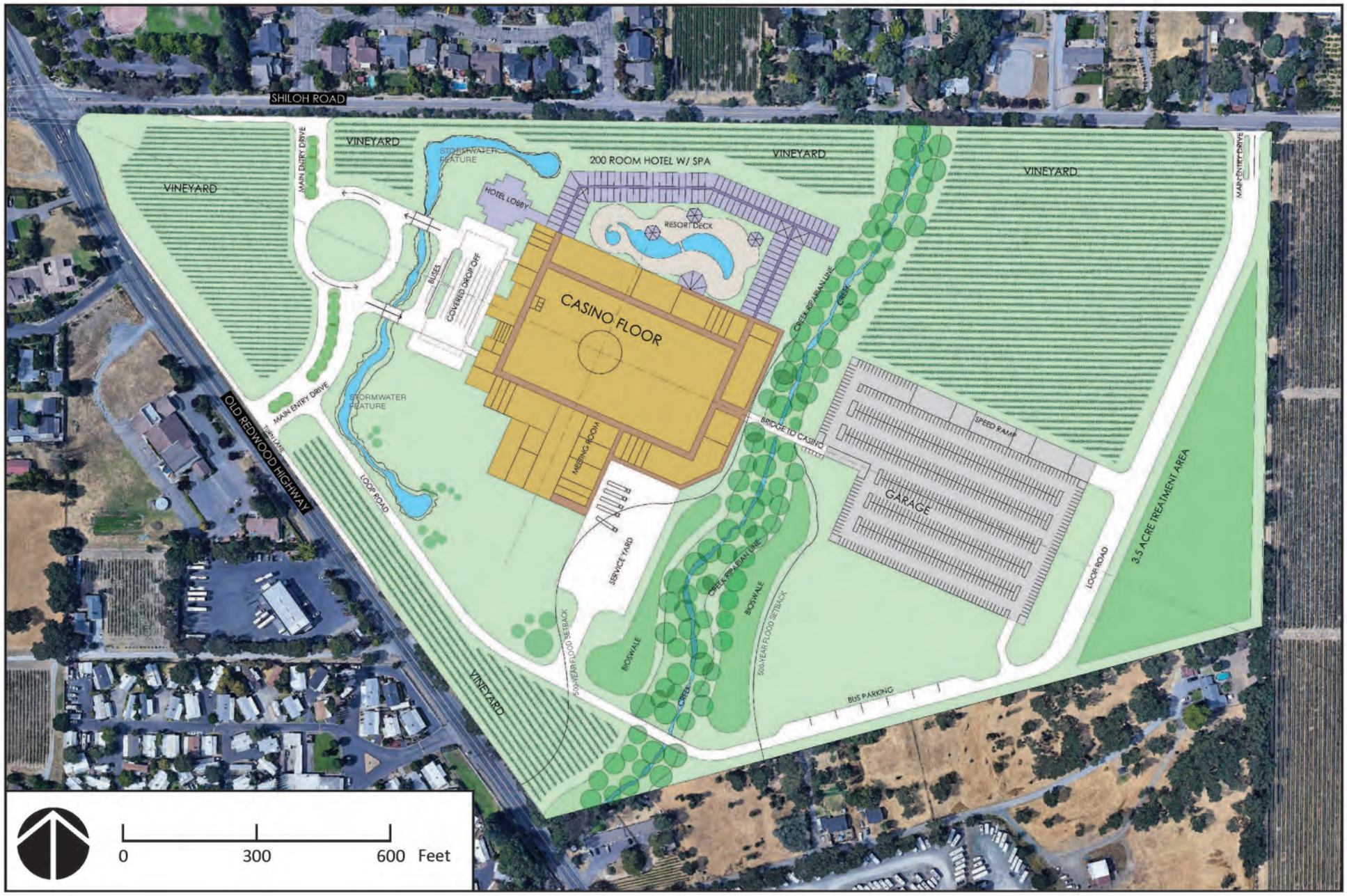
Component	Approximate Square Footage	Units
Casino	**405,882**	**2,750 gaming devices 105 table games**
Gaming Floor	114,345	-
High Limits Gaming	8,250	-
Sports Book	9,900	-
Food Hall	14,000	465 seats
Restaurants (5)	37,440	1,240 seats
Coffee Shop	2,750	-
Casino Bar	7,855	-
Service Bars (4)	4,080	-

Component	Approximate Square Footage	Units
Retail	2,250	-
Ballroom	12,400	-
Meeting Rooms	20,735	-
Circulation and Back of House	171,877	-
Hotel	**147,380**	**200 rooms**
Guest Rooms	103,770	-
Spa	13,930	-
Circulation and Back of House	29,680	-
Parking	**1,506,280**	**4,461 spaces**
Casino/Drop-off	286,000	760 spaces
Parking Garage	1,214,080	3,692 spaces
Bus	6,200	9 spaces

Source: Dale Partners, 2022b

As with Alternative A, Alternative B would be designated as entirely non-smoking and be open 24 hours a day, 7 days a week. Alternative B would employ fewer people and attract fewer patrons than Alternative A. Water supply, wastewater treatment and disposal, grading and drainage, roadway access and circulation, fire protection, law enforcement, emergency services, and electrical and natural gas utilities under Alternative B would be similar to Alternative A (**Section 2.1**) but with a reduced demand for services due to the smaller development size. The estimated average daily water usage for Alternative B would be approximately 117,000 gpd of potable water and 72,000 gpd of recycled water. Alternative B is estimated to generate an average wastewater flow of 158,000 gpd and a peak weekend flow of 215,000 gpd. The construction methods, protective measures, and BMPs for Alternative B would be identical to those described for Alternative A (**Sections 2.1.9** and **2.1.10**).

Architecture, signage, lighting, and landscaping design under Alternative B would be similar to Alternative A (**Section 2.1.2**) except the proposed three-story hotel would have a maximum height of approximately 36 feet above ground level (29 feet shorter than Alternative A). **Table 2.2-2** provides a breakdown for the number of parking spaces recommended for Alternative B under the Sonoma County Parking Regulations and reductions for shared and simultaneous use functions. Parking for Alternative B would be provided on the ground floor of the casino (760 spaces), a four-story parking garage (3,692 spaces). Additionally, nine (9) spaces for bus parking would be provided. Therefore, Alternative B provides 4,461 parking spaces, which is 690 more than the recommended number of parking spaces. The location of the various parking areas is shown on **Figure 2.2-1**.



Source: Dale Partners

FIGURE 2.2-1

ALTERNATIVE B REDUCED INTENSITY ALTERNATIVE SITE PLAN

Table 2.2-2: Recommended Parking Spaces under Alternative B

Component	Regulation[1]	Units	Reduction for Shared Use	Parking Spaces Recommended
Casino	1 space/slot machine 2 space per table game	2,750 gaming devices 105 table games	N/A	2,960
Dining	1 space/60 square feet	51,440 square feet	20% (171 spaces)	686
Hotel	1 space/room plus 1 space/staff	200 rooms 5 managers/staff	75% of rooms (150 spaces)	55
Spa	1 space/100 square feet	14,000 square feet	50% (70 spaces)	70
			Total Recommended	**3,771**
			Total Provided	4,461

Source: Dale Partners, 2024 and **Appendix I**
Notes: 1) Chapter 26, Article 86 of the Sonoma County Code of Ordinances

2.3 ALTERNATIVE C – NON-GAMING ALTERNATIVE

Alternative C consists of the following components: (1) transfer of the 68.6-acre Project Site into federal trust status for the benefit of the Tribe as described in **Section 2.1.1**; and (2) the subsequent development by the Tribe of a winery and hotel that would include a visitor's center, a 200-room hotel with spa and pool area, a restaurant, and associated parking and infrastructure on the Project Site. A conceptual site plan for Alternative C is shown in **Figure 2.3-1** and a breakdown of the components of Alternative C is provided in **Table 2.3-1**.

Table 2.3-1: Alternative C Project Components

Component	Approximate Square Footage	Units
Winery and Visitor Center	**25,000**	**-**
Winery	20,000	-
Visitor Center	5,000	-
Hotel	**161,400**	**200 rooms**
Guest Rooms	130,000	-
Spa	14,000	-
Restaurant	4,700	135 seats
Circulation and Back of House	12,700	-
Parking	**145,800**	**492 spaces**
Surface Parking	145,800	492 spaces

Source: Dale Partners, 2022c

The winery would be used for fermentation, barrel storage, winery production, and support spaces. Regular production hours would be 7 a.m. to 6 p.m., Monday through Friday; while wine production hours during the harvest season (typically late August through mid-October) would be 6 a.m. to 10 p.m., seven days per week. The winery would produce approximately 15,000 cases of wine annually. Fruit for the wine would come from the Project Site vineyards. The visitor's center would include a tasting room, restrooms, and support space for the direct sales of wine and other incidental products from the local area. The proposed tasting room hours would be 11 a.m. to 7 p.m., seven days per week. The hotel would be open 24 hours a day, 7 days a week. As with Alternatives A and B, Alternative C would be designated as entirely non-smoking. Alternative C would employ fewer people and attract fewer patrons than Alternatives A and B.

Water supply, wastewater treatment and disposal, grading and drainage, roadway access and circulation, fire protection, law enforcement, emergency services, and electrical and natural gas utilities under Alternative C would be similar to Alternative A (**Section 2.1**) but with a reduced demand for services due to the smaller development size. The estimated average daily water usage for Alternative C would be approximately 19,000 gpd of potable water and 29,000 gpd of recycled water. Alternative C is estimated to generate an average wastewater flow of 40,100 gpd and a peak weekend flow of 53,400 gpd. The construction methods, protective measures, and BMPs for Alternative C would be identical to those described for Alternative A (**Sections 2.1.9** and **2.1.10**).

Architecture, signage, lighting, and landscaping design under the Alternative C would be similar to Alternatives A and B (**Section 2.1.2**) except the proposed three-story hotel and winery/visitor center would have a maximum height of approximately 40 feet above ground level (25 feet shorter than the resort facility under Alternative A). **Table 2.3-2** provides a breakdown for the number of parking spaces recommended for Alternative C under the Sonoma County Parking Regulations. As shown in **Table 2.3-1**, 492 parking spaces for Alternative C would be provided on surface parking lots (see **Figure 2.3-1**). Therefore, Alternative C provides 38 more parking spaces than recommended.

Table 2.3-2: Recommended Parking Spaces under Alternative C

Component	Regulation[1]	Units	Parking Spaces Recommended
Winery	1 space/2,000 square feet	20,000 square feet	10
Visitor Center	1 space/250 square feet	5,000 square feet	20
Dining	1 space/60 square feet	4,700 square feet	79
Hotel	1 space/room plus 1 space/staff	200 rooms 5 managers/staff	205
Spa	1 space/100 square feet	14,000 square feet	140
		Total Recommended	**454**
		Total Provided	492

Notes: 1) Chapter 26, Article 86 of the Sonoma County Code of Ordinances
Source: Dale Partners, 2022c

2.4 ALTERNATIVE D – NO ACTION ALTERNATIVE

Under Alternative D, none of the development alternatives (Alternatives A, B, and C) would be implemented. No land would be placed in federal trust for the benefit of the Tribe. Alternative D assumes

that the existing agricultural use of the Project Site as a vineyard would continue for the foreseeable future.

2.5 COMPARISON OF THE ALTERNATIVES

- **Alternative A – Proposed Project.** Among the project alternatives considered, Alternative A, which is fully evaluated in **Section 3,** would best meet the Tribe's objectives and provide the greatest socioeconomic benefit to the Tribe and surrounding community.
- **Alternative B – Reduced Intensity Alternative.** This alternative would result in similar effects to the environment as Alternative A, but it would provide the Tribe and the community with less economic benefit than Alternative A. Potential effects associated with most environmental issue areas would be less due to the smaller sized development that would be constructed under Alternative B.
- **Alternative C – Non-Gaming Alternative.** This alternative would result in reduced effects to the environment as Alternative A, it but would provide the Tribe and the community with less economic benefit than Alternative A. Potential effects associated with most environmental issue areas would be less due to the smaller sized development that would be constructed under Alternative C.
- **Alternative D – No Action Alternative.** Under Alternative D, the Project Site would remain in its existing condition and would not be taken into trust. No environmental effects would occur. This alternative would achieve the lowest net greenhouse gas emissions amongst the project alternatives. Under Alternative D, the Tribe would not achieve any of the economic benefit that would be achieved with development of Alternatives A, B or C. Moreover, the Tribe would not be able to utilize its landholdings in a manner that would most benefit its members. This alternative would not meet the stated purpose and need of facilitating tribal self-sufficiency, self-determination, and economic development. Pursuant to 40 CFR § 1502.14(f), Alternative D was determined to be the environmentally preferred alternative.

2.6 ALTERNATIVES ELIMINATED FROM FURTHER ANALYSIS

The intent of the analysis of alternatives in the EIS is to present to decision makers and the public a reasonable range of alternatives that are both feasible and sufficiently different from each other in critical aspects. Alternatives were considered and excluded from full EIS analysis either because these alternatives 1) did not meet the purpose and need for the Proposed Action; 2) were not feasible from a technical or economic standpoint; 3) were not feasible from a regulatory standpoint (including ability to meet the requirements for establishing connections to newly acquired lands for the purposes of the "restored lands" exception set forth in 25 CFR § 292.12); 4) did not avoid or minimize environmental impacts; and/or 5) did not contribute to a reasonable range of alternatives. The alternatives considered but rejected from full analysis and the reason for their elimination is discussed in the Scoping Report completed in September 2022, which is available online at https://www.shilohresortenvironmental.com/, and the Supplemental Scoping Report included in **Appendix A-2**. Additionally, for each alternative which includes a casino, the gaming activity may either be managed directly by employees of the Tribe or by a management contractor pursuant to a gaming management agreement approved by the NIGC. Under either form of management, the environmental impacts of the development of the casino for each alternative are the same. Therefore, analyzing gaming development alternatives that do not include

Source: Dale Partners

FIGURE 2.3-1

ALTERNATIVE C NON-GAMING ALTERNATIVE SITE PLAN

approval of a gaming management agreement by the NIGC would not meaningfully contribute to the reasonable range of alternatives and such alternatives were eliminated.

Section 3 | Affected Environment and Environmental Consequences

3.1 INTRODUCTION

This section describes the existing environment of the area affected by the project alternatives as well as the environmental consequences for each project alternative. The following environmental issue areas are described: Land Resources, Water Resources, Air Quality, Biological Resources, Cultural and Paleontological Resources, Socioeconomic Conditions and Environmental Justice, Transportation and Circulation, Land Use, Public Services and Utilities, Noise, Hazardous Materials and Hazards, and Visual Resources. Additional details on the regulatory setting summarized below are included within **Appendix E**. Although the Tribe and the federal government would exercise civil regulatory jurisdiction over the Project Site if it is taken into trust, State and local regulations are included in the regulatory setting of each issue area and in the Expanded Regulatory Setting (**Appendix E)** in order to provide background and context for the analysis. Cumulative and indirect and growth-inducing effects are identified in **Sections 3.14 and 3.15**, respectively. Measures to mitigate for adverse impacts identified in this section are presented in **Section 4**. Note that, consistent with 40 CFR § 1508.1(i), the term "effects" is used synonymously with the term "impacts."

3.2 LAND RESOURCES

3.2.1 Regulatory Setting

The land resources regulatory setting is summarized in **Table 3.2-1** and additional information on the regulatory setting can be found in **Appendix E**.

3.2.2 Environmental Setting

Geological Setting

The Project Site is located within the central portion of the Coast Range Geomorphic Province of California (California Geological Survey, 2002). The topography of the province is characterized by mountain ranges with intervening valleys trending to the northwest, roughly paralleling the Pacific coastline. The central portion of the Coast Range is underlain by the Franciscan Complex, an assemblage of igneous, sedimentary, and metamorphic rocks.

As described in Appendix D of **Appendix D-1**, the central and southwestern portions of the Project Site are mapped as being underlain by Holocene to Latest Pleistocene aged basin deposits, which generally consist of poorly drained, clay-rich soils. The northern and eastern limits of the Project Site are mapped as being underlain by Holocene aged alluvial fan deposits, which generally consist of varying amounts of sand, gravel, silt, and clay, and are moderately- to poorly-sorted and bedded. Historical stream channel deposits are mapped along Pruitt Creek on the Project Site and include loose, unconsolidated, poorly- to well-sorted sand, gravel, and cobbles, with minor silt and clay.

Table 3.2-1: Regulatory Policies and Plans Related to Land Resources

Regulation	Description
Federal	
Clean Water Act	▪ Prohibits sediment and erosion discharge into navigable waters of the United States and establishes water quality goals.
State	
Alquist-Priolo Earthquake Fault Zoning Act	▪ The Alquist-Priolo Earthquake Fault Zoning Act requires the delineation of zones along active and potentially active faults in California. ▪ The California Geological Survey defines an "active" fault as one that exhibits evidence of activity during the last 11,000 years. ▪ Faults that exhibit evidence of Quaternary activity (within the last 1.6 million years) are considered to be "potentially active."
Seismic Hazards Mapping Act	▪ The Seismic Hazards Mapping Act was enacted to protect the public from the effects of strong ground shaking, liquefaction, landslides, ground failure, or other hazards caused by earthquakes.
Surface Mining and Reclamation Act	▪ The Surface Mining and Reclamation Act requires all jurisdictions to incorporate mapped mineral resources designations approved by the California Mining and Geology Board within their general plans. ▪ The Surface Mining and Reclamation Act was enacted to limit new development in areas with significant mineral deposits.

Topography

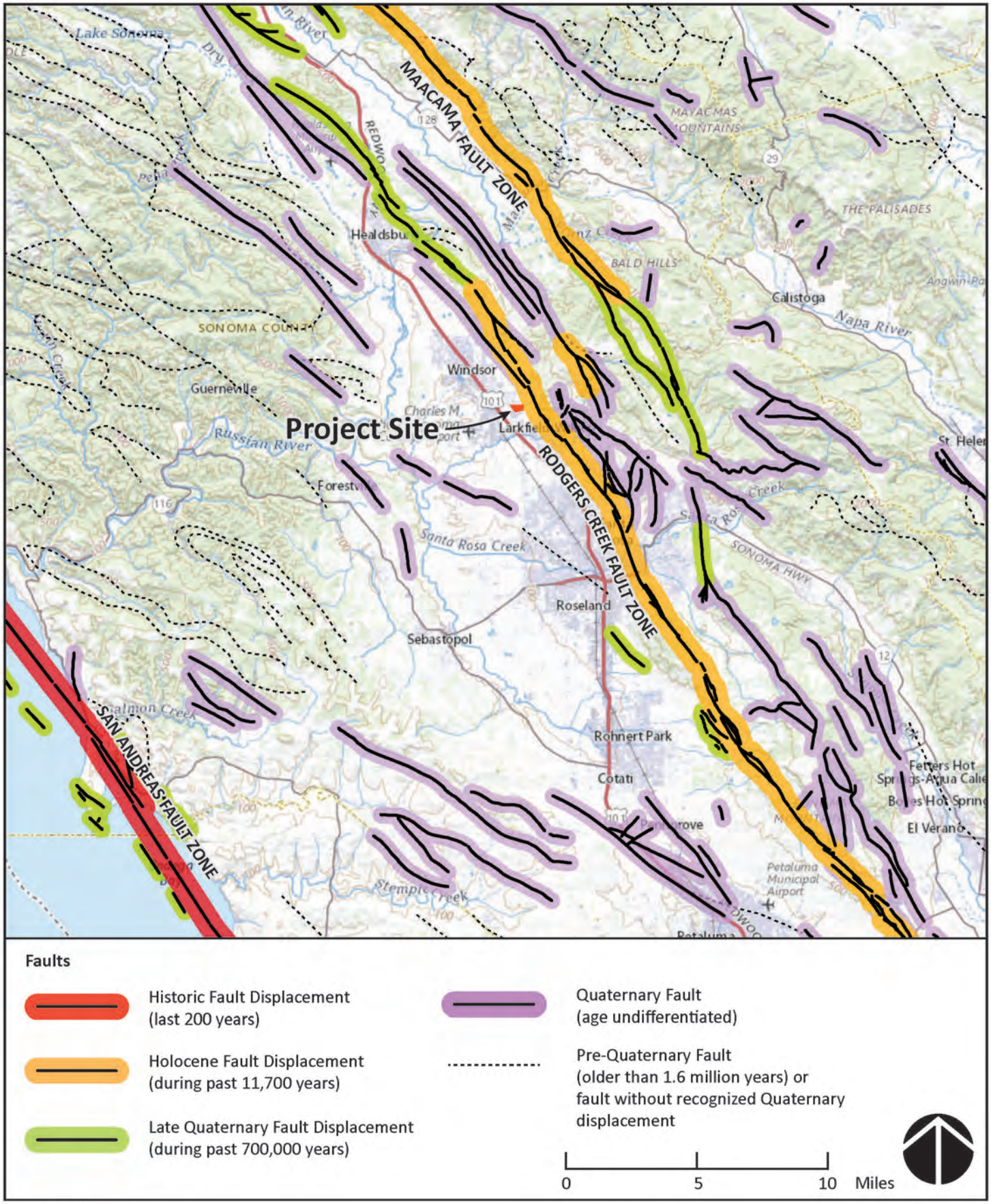
The existing topography of the Project Site is relatively flat ranging in elevation from 135 feet to 160 feet above mean sea level (amsl) and generally slopes toward Pruitt Creek, which runs through the Project Site (**Appendix D-3**).

Seismic Conditions

The Alquist-Priolo Earthquake Fault Zoning Act defines an active fault as a fault that has evidence of fault or rupture in the past 11,000 years. Regional faults are shown on **Figure 3.2-1**. As illustrated therein, the Project Site is not within the zone of an active fault as defined by the Alquist-Priolo Earthquake Fault Zoning Act. The Project Site is approximately 0.5 miles west of the Rodgers Creek Fault and approximately six miles southwest of the Maacama Fault (**Figure 3.2-1**). The Rodgers Creek Fault and the Maacama Fault have both been active during the past 11,700 years (**Figure 3.2-1**).

Soil Types and Characteristics

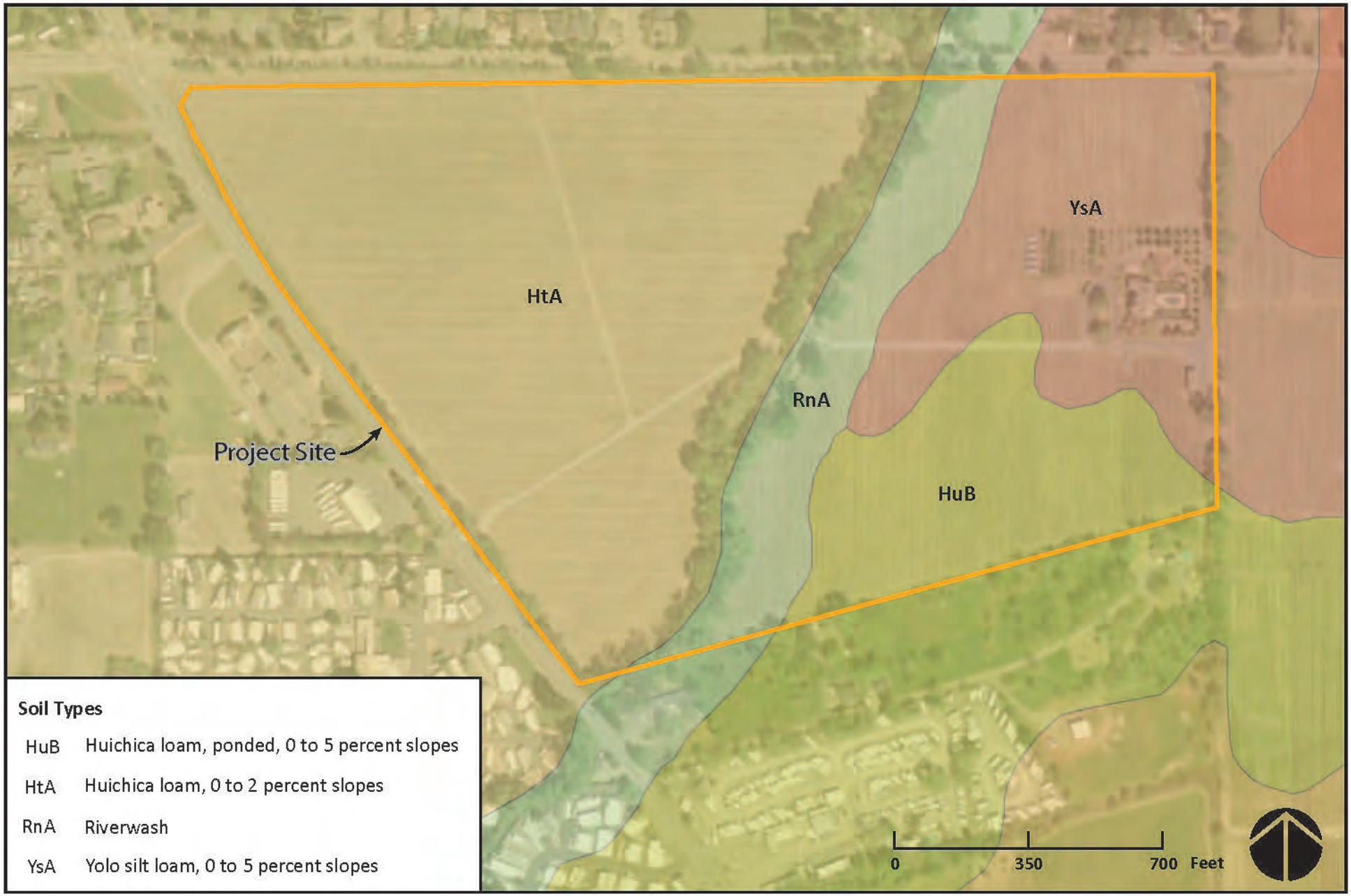
Figure 3.2-2 provides a map of soils on the Project Site. As described in Appendix D of **Appendix D-1**, the Project Site contains four soil types: Huichica loam, Huichica loam ponded, Yolo silt loam, and Riverwash.



Source: CGS, USGS

FIGURE 3.2-1

REGIONAL FAULTS



Source: NRCS

FIGURE 3.2-2
SOIL MAP

Cal Engineering and Geology performed subsurface explorations on the Project Site which included laboratory analysis of soil samples and percolation testing for four test pits (Appendix D of **Appendix D-1**). Alluvial deposits were encountered in each test pit to the maximum depth explored of six feet. The encountered alluvium within the upper four feet of test pit 1, 2, and 3, located along the southern border of the Project Site, primarily consists of lean clays with varying amounts of sand, silt, and gravel and occasional silty sand layers. Shallow soils encountered in test pit 4, located northwest of the existing residence, are more granular and consist of moist to wet silty sand, clayey gravel, and clayey sand from zero to five feet below the ground surface. Sandy lean clay and lean clay with sand was encountered in each of the four test pits from approximately five to six feet below ground surface.

Perched groundwater was encountered at approximately two feet below ground surface in test pit 4. Groundwater was not encountered in the test pits 1, 2, or 3.

Soil Hazards

Soil Erosion

The hydrologic soil group is a classification based on the runoff potential of the soils when thoroughly wet, which is defined by NRCS as being under the conditions of maximum yearly wetness(NRCS, 2007). Soils are grouped into four classes that grade from A to D, with A being coarse-grained soils with high infiltration and low runoff potential and D being mostly fine-grained clays with extremely slow infiltration and high runoff potential. The soils on the Project Site have hydrologic ratings of B, C, and D, indicating the soils have moderate to slow infiltration rates and moderately fine, coarse, and clayey textures (**Table 3.2-2**; NRCS, 2022).

Table 3.2-2: Soil Properties

Soil	Percent of Site	Hydrologic Soil Group	Drainage Class	Ksat (µm/s)	Surface Runoff	Corrosion of Concrete	Corrosion of Steel	Linear Extensibility
Huichica loam	54.9	C	Moderately well drained	Very low to moderately low	High	Moderate	Moderate	Low
Huichica loam ponded	13.9	D	Moderately well drained	Very low to moderately low	High	Moderate	High	Moderate
Riverwash	11	N/A	Excessively drained	High to very high	Negligible	N/A	N/A	Low
Yolo silt loam	20.1	B	Well drained	Moderately high to high	Low	Low	Low	Low

Source: NRCS, 2022

Saturated hydraulic conductivity [Ksat] is a quantitative measurement for the movement of water through saturated soil or the ease with which pores in a saturated soil transmit water. Ksat is a factor in determining the hydrologic soil group and is often used in the design of water and wastewater disposal features such as percolation ponds and septic systems. Ksat measures transport only in a vertical direction under completely saturated conditions. Ksat for Project Site soils is included within **Table 3.2-2**. The following descriptions for the range of measured Ksat are used by the Natural Resource Conservation Service (NRCS):

- very high: >100 micrometers per second (µm/s)
- high: 10–100 µm/s
- moderately high: 1–10 µm/s
- moderately low: 0.1–1 µm/s
- low: 0.01–0.1 µm/s
- very low: µm/s

Soil erosion is the wearing and removal of soil materials from the ground surface and the transportation of these soil materials resulting in deposition elsewhere. Mechanisms of soil erosion include stormwater runoff and wind as well as human activities. Factors that influence erosion include physical properties of the soil, topography (slope), annual rainfall, and peak intensity. As shown in **Table 3.2-2**, soils on the Project Site transmit water at varying rates, including very low to very high rates. This indicates that in some portions of the Project Site water infiltrates at a high rate instead of running off, and in other portions of the Project Site water is more likely to run off rather than infiltrating into the soil. Although NRCS classifies the soil types present on the Project Site as moderately well drained to excessively drained, subsurface testing at the Project Site illustrated that the Project Site is poorly drained with areas of shallow groundwater, which could increase the potential for erosion (Appendix D of **Appendix D-1**). However, the majority of the Project Site is relatively flat, reducing erosion risks.

Corrosivity pertains to a soil-induced electrochemical or chemical reaction that corrodes concrete or steel. The soils on the Project Site have low to high risks of corrosion to concrete and steel (NRCS, 2022).

Expansive soils may increase in volume when water is absorbed and may shrink when dried, as expansive soils are largely comprised of clays. The property of expansion is measured using linear extensibility. Expansive soils are of concern because they can cause building foundations to rise during the rainy season and fall during the dry season, causing structural distortion. As shown in **Table 3.2-2**, the soils on the Project Site have low-to-moderate linear extensibility ratings and therefore are not considered to be expansive soils.

Liquefaction

Liquefaction occurs when loose, saturated, and relatively cohesionless soil deposits temporarily lose strength from seismic shaking. The primary factors controlling the onset of liquefaction include intensity and duration of strong ground motion, characteristics of subsurface soil, on-site stress conditions, and the depth to groundwater. Portions of the Project Site have a shallow groundwater table and are poorly drained, increasing the potential for liquefaction during a seismic event (Appendix D of **Appendix D-1**). The liquefaction susceptibility on the Project Site is very high along Pruitt Creek, low on the southern half of Project Site outside of the creek, and moderate on the northern half of Project Site outside of the creek (USGS, 2006).

Landslides

Areas susceptible to landslides are comprised of weak soils on sloping terrain. Heavy rains or strong seismic shaking events can induce landslides. The Project Site is relatively flat and does not have any features that would increase landslide potential. There are no mapped landslide features on or in the vicinity of the Project Site (USGS, 2022b).

Mineral Resources

A search of the U.S. Geological Survey (USGS) Mineral Resources Data System found no known mineral resources on or in the vicinity of the Project Site (USGS, 2022). The County has established the Mineral Resource Combining District, a zoning designation intended to conserve and protect land necessary for future mineral resource production. The Project Site is not located within this zoning designation, and therefore has not been identified by the County as necessary for future mineral resource production.

3.2.3 Environmental Impacts

3.2.3.1 Assessment Criteria

Impacts to land resources would be significant if the alternative changes topography so that it is noticeable to the casual observer or causes an adverse effect, such as landslides. Seismic conditions would be adversely affected if the alternative substantially increases the occurrence of seismic events or increases the risks from seismic events. Impacts to soils would be significant if the project significantly increases soil erosion. Mineral resources would be significantly affected if the project reduces the regional availability of commercial mineral resources or increases the cost of extracting mineral resources.

3.2.3.2 Alternative A – Proposed Project

Topography

Construction of Alternative A would require grading a significant portion of the Project Site (**Appendix D-3**). The estimated overall earthwork volume under Alternative A is 115,000 cubic yards (CY), and the grading concept accomplishes a near balanced site with less than 10,000 CY of imported fill required. If a seasonal storage pond is used to store treated effluent during the dry season (see **Section 2.1.4**), the overall earthwork volume would increase by 55,000 CY and no import or export of fill would be needed. Cut areas include the wastewater treatment plant and foundations of the structures. Fill would primarily be placed on the southwesterly portion of the Project Site near the floodplain. Proposed facilities would be constructed one to two feet above grade to ensure building protection from the 100-year floodplain. On-site grading would be designed to convey stormwater toward the proposed drainage system (**Figure 2.1-3**). The changes in topography due to the grading activities would not equate to a major or perceptible change to the existing topography. The grading activities proposed during construction would largely preserve the existing site topography, and impacts would be less than significant.

Seismic Conditions

As described above, the Project Site is not within the zone of an active fault as defined by the Alquist-Priolo Earthquake Fault Zoning Act; however, the Project Site is approximately 0.5 miles west of the Rodgers Creek Fault and approximately six miles southwest of the Maacama Fault. The Project Site's vicinity to active faults indicates that the Project Site could potentially be exposed to future seismic shaking and therefore prone to seismic induced hazards such as liquefaction. As described in **Table 3.1-3**,

a project-specific geotechnical report would be prepared prior to construction with standards no less stringent than the California Building Code (CBC). Use of these standards would allow ground shaking-related hazards to be managed from a geologic, geotechnical, and structural standpoint such that risks to the health or safety of workers or members of the public would be reduced. Therefore, impacts from potential seismic conditions and induced hazards would be less than significant.

Soil Characteristics

Land clearing and grading activities during construction would result in exposure of soil, increasing the risk of erosion and associated hazards. The addition of impervious services to the Project Site would increase stormwater run-off volumes and the potential for associated operational erosion to occur. As described in **Section 3.3**, sediment discharge into navigable (surface) waters of the U.S. is regulated by the CWA, which establishes water quality goals for sediment control and erosion prevention for any project that would disturb more than one acre of soil. One of the mechanisms for achieving the goals of the CWA is the NPDES permitting program, administered by the USEPA. As part of the NPDES General Construction Permit, a SWPPP must be prepared and implemented. The SWPPP must make provisions for (1) erosion prevention and sediment control and (2) control of other potential pollutants. Construction of Alternative A would disturb more than one acre of land; therefore, the Tribe is required by the CWA to obtain coverage under, and comply with the terms of, the NPDES General Construction Permit for construction activities. The NPDES General Construction Permit requirements would reduce any potential impacts to less-than-significant levels. With adherence to regulatory requirements and BMPs described in **Table 2.1-3**, erosion impacts from implementation of the Alternative A would be minimal and, therefore, less than significant.

Mineral Resources

As stated in **Section 3.2.2**, there are no known mineral resources within the Project Site. Therefore, Alternative A would have no impact on mineral resources.

3.2.3.3 Alternative B – Reduced Intensity Alternative

Similar to Alternative A, Alternative B would be developed on the Project Site and requires grading and other construction activities on a significant portion of the site; however, in comparison to Alternative A, Alternative B would disturb less of the site and have reduced impacts, due to the reduced building and parking footprint, and reduced size of the on-site wastewater treatment plant and reclaimed water storage facilities. As such, the potential impacts associated with topography, seismic conditions, and soil characteristics would be comparable but less than Alternative A and less than significant with adherence to regulatory requirements and BMPs described **Table 2.1-3**. There would be no impacts to mineral resources.

3.2.3.4 Alternative C – Non-Gaming Alternative

Alternative C would require less grading and other construction activities in comparison to Alternatives A and B as Alternative C has a smaller building and the existing vineyards would be maintained for use by the proposed winery and parking footprint. As such, the potential impacts associated with topography, seismic conditions, and soil characteristics would be less than Alternatives A and B and less than significant with adherence to regulatory requirements and BMPs described **Table 2.1-3**. There would be no impacts to mineral resources.

3.2.3.5 Alternative D – No Action Alternative

Under Alternative D, the land would not be taken into trust and the existing agricultural use of the site as a vineyard would continue. No significant alterations to topography or soils would occur and thus there would be no impacts related to land resources.

3.3 WATER RESOURCES

3.3.1 Regulatory Setting

The water resources regulatory setting is summarized in **Table 3.3-1**, and additional information on the regulatory setting can be found in **Appendix E.**

Table 3.3-1: Federal and State Water Resources Regulations

Regulation	Description
Federal	
Executive Order 11988	▪ Requires federal agencies to evaluate the potential effects of any actions they may take in a floodplain; floodplain is defined as an area that has a 1% or greater chance of flooding in any given year. ▪ Requires agencies proposing that an action be allowed in a floodplain to consider alternatives to avoid adverse effects; if the only practicable alternative action requires siting in a floodplain, Executive Order 11988 requires the agency to minimize potential harm to or within the floodplain.
Clean Water Act	▪ Establishes national water quality goals. ▪ Regulates both point and non-point sources of pollution through the NPDES permit program. ▪ Requires an NPDES permit be obtained to discharge pollutants into Waters of the U.S. ▪ Requires states to establish water quality standards for waters in their jurisdiction and to periodically prepare a list of surface waters where beneficial uses are impaired by pollutants. ▪ An Anti-Degradation Policy is required to be developed for each state to maintain surface water quality to levels permissible for existing uses.
Safe Drinking Water Act	▪ The USEPA sets National Primary Drinking Water Regulations (primary standards) that apply to public water systems and also defines National Secondary Drinking Water Regulations (secondary standards) for contaminants that cause cosmetic and aesthetic effects, but not health effects.
Federal Emergency Management Agency (FEMA)	▪ Responsible for the preparation of Flood Insurance Rate Maps (FIRM) for the National Flood Insurance Program.

Regulation	Description
State	
Porter-Cologne Water Quality Act	▪ Requires the State, through the State Water Resources Control Board and Regional Water Quality Control Boards, to designate beneficial uses of surface and groundwater and to specify water quality objectives for those uses per the water quality objectives described in Regional Water Quality Control Plans.
Sustainable Groundwater Management Act	▪ Establishes a definition of "sustainable groundwater management" based on halting overdraft and balancing levels of pumping from and recharge of groundwater basins. ▪ Requires the adoption of a Groundwater Sustainability Plan (GSP) for the most important groundwater basins in the State. ▪ Encourages local agencies to form or join Groundwater Sustainability Agencies to draft GSPs for their respective groundwater basins.
Title 22 California Code of Regulations	▪ Regulates the sources, uses, and quality standards of recycled water in the State.
State Water Code	▪ Water Code Section 13511, California Legislature declared that a substantial portion of the future water requirements of the state may be economically met by beneficial use of recycled water ▪ Water Code Section 13512, Legislature expressed its intent that the state undertakes all possible steps to encourage development of water recycling facilities so that recycled water may be made available to help meet the growing water requirements of the state
State Water Resources Control Board Order - Water Reclamation Requirements for Recycled Water Use	▪ Authorizes beneficial, non-potable recycled water uses consistent with the Uniform Statewide Recycling Criteria ▪ Intended to streamline the permitting process for recycled water use and delegate the responsibility of administrating water recycling programs to producers and users of recycled water. ▪ Producers and/or users of recycled water are required to apply for coverage under the general order, and receive approval from the applicable Regional Water Quality Control Board ▪ Requires producers and/or users of recycled water to adhere to requirements that are protective of human health and water quality

3.3.2 Environmental Setting

Surface Water

Surface Water Resources

The Project Site is located in the Russian River watershed, which includes 1,485 square miles in Mendocino and Sonoma Counties. The USGS has assigned hydrologic unit codes (HUCs) to define drainage areas in a multi-level, hierarchal system. The Project Site is located within the Windsor Creek Subwatershed (HUC 12: 180101100705), within the Mark West Creek Hydrologic Sub-Area (HUC 10: 1801011007), within the Russian River Hydrologic Unit (HUC 8: 18010110; USGS, 2021).

Surface drainage in the general area of the Project Site flows from the northeast to the southwest, originating from the foothills of the Mayacamas Mountains, flowing southwest through the Santa Rosa Plain, and eventually flowing into the Russian River. A map of major surface water features in the area is provided as **Figure 3.3-1**. The extent of Pruitt Creek which flows through the Project Site is shown on **Figure 3.3-2.**

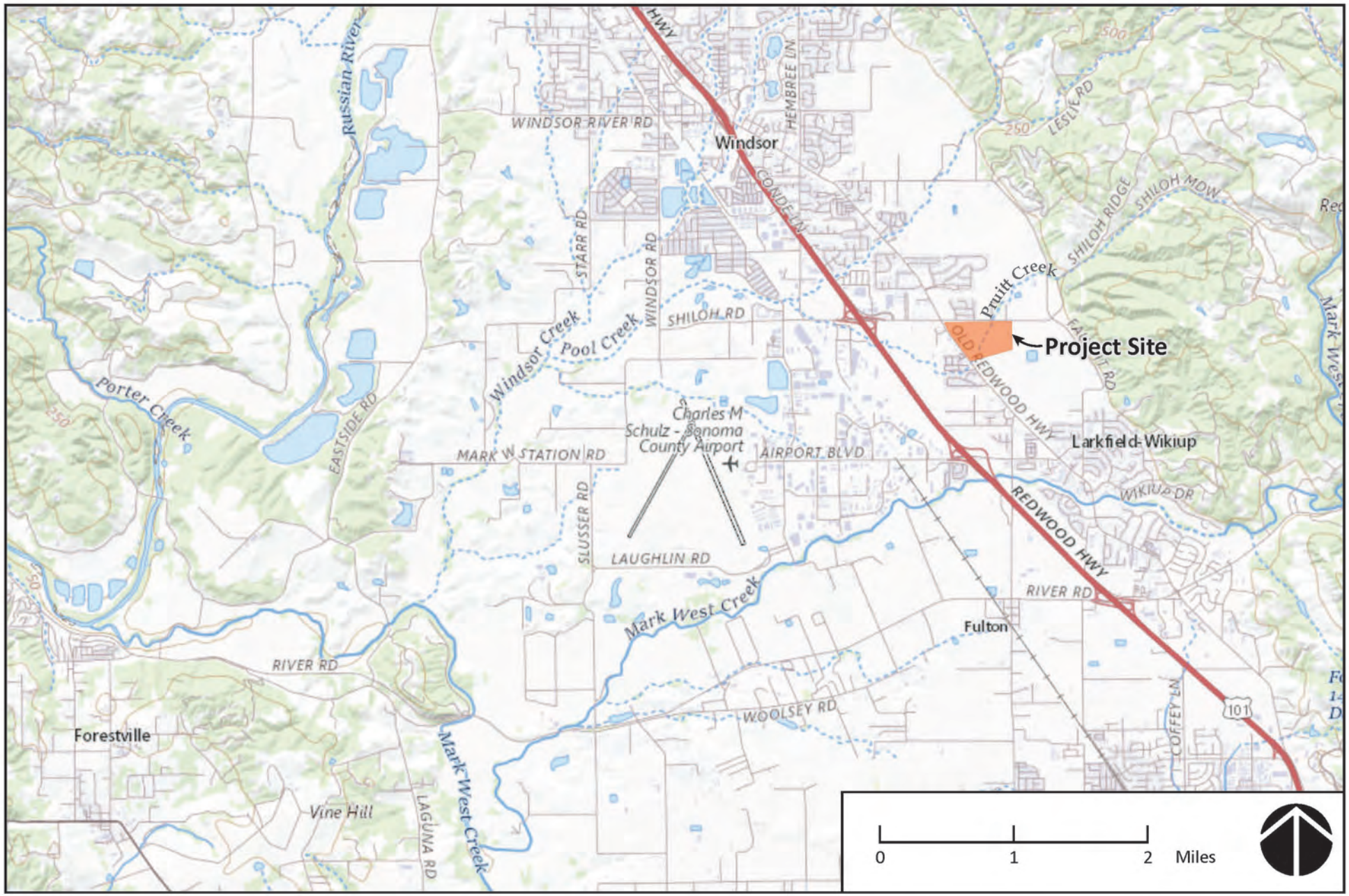
Surface Water Quality

The surface water quality standards for the State of California include both narrative and numerical water quality objectives to keep California's waters swimmable, fishable, drinkable, and suitable for use by industry, agriculture, and the citizens of the State. Beneficial uses for both Mark West Creek and the Russian River are listed in **Table 3.3-2**.

Table 3.3-2: Beneficial Uses of Mark West Creek and the Russian River

Beneficial Use		Category
MUN	Municipal and Domestic Supply	E
AGR	Agricultural Supply	E
IND	Industrial Service Supply	E
PRO	Industrial Process Supply	P
GWR	Groundwater Recharge	E
FRSH	Freshwater Replenishment	E
NAV	Navigation	E
POW	Hydropower Generation	P
REC1	Water Contact Recreation	E
REC2	Non-Water Contact Recreation	E
COMM	Commercial and Sport Fishing	E
WARM	Warm Freshwater Habitat	E
COLD	Cold Freshwater Habitat	E
WILD	Wildlife Habitat	E
RARE	Rare, Threatened, or Endangered Species	E
MIGR	Migration of Aquatic Organisms	E
SPWN	Spawning, Reproduction, and/or Early Development	E
SHELL	Shellfish Harvesting	P
EST	Estuarine Habitat	E
AQUA	Aquaculture	P

Notes: E=Existing Beneficial Use; P=Potential Beneficial Use
Source: North Coast Regional Water Quality Control Board, 2018.



Source: USGS

FIGURE 3.3-1

SURFACE WATER RESOURCES

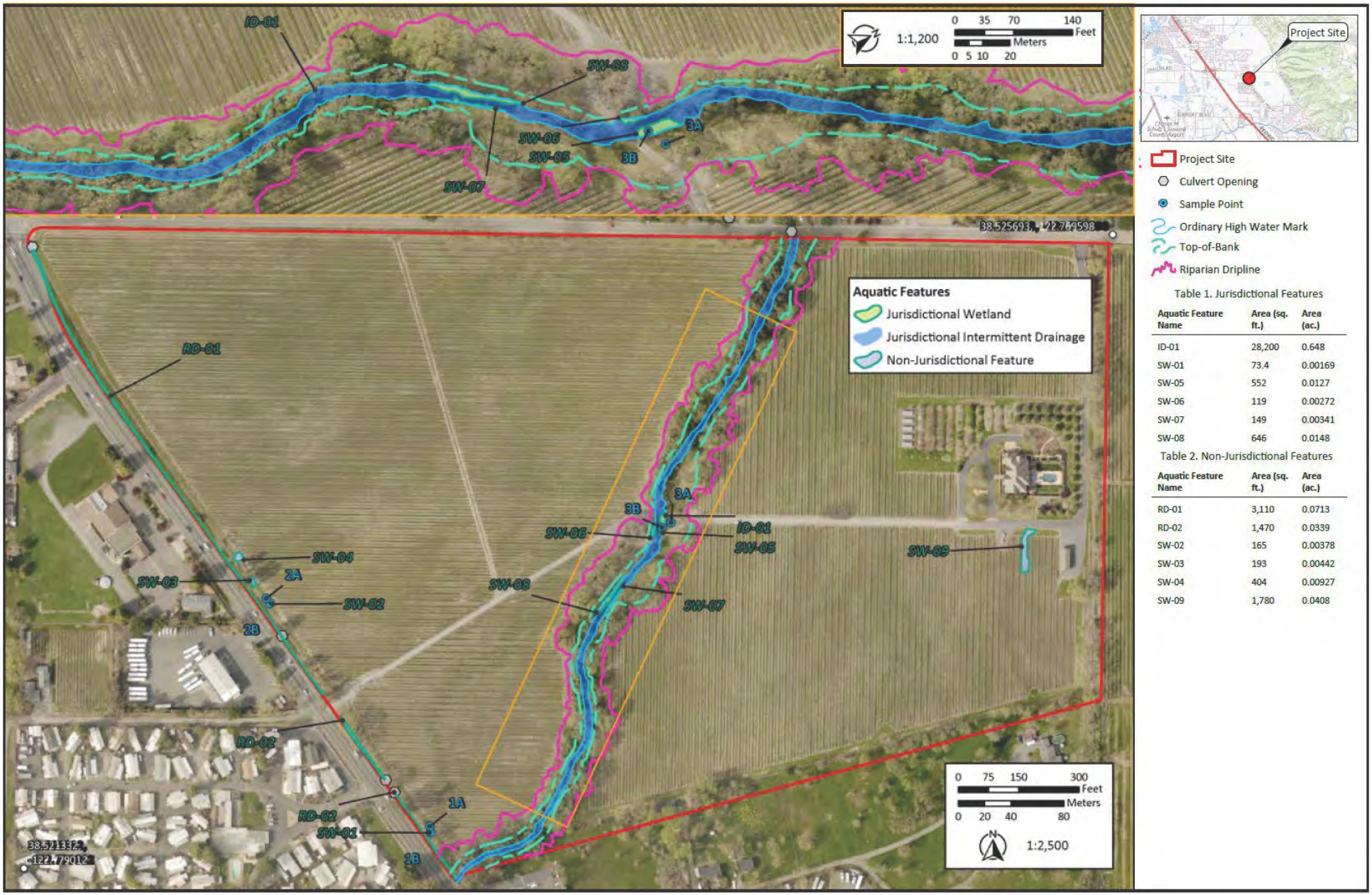


Table 1. Jurisdictional Features

Aquatic Feature Name	Area (sq. ft.)	Area (ac.)
ID-01	28,200	0.648
SW-01	73.4	0.00169
SW-05	552	0.0127
SW-06	119	0.00272
SW-07	149	0.00341
SW-08	646	0.0148

Table 2. Non-Jurisdictional Features

Aquatic Feature Name	Area (sq. ft.)	Area (ac.)
RD-01	3,110	0.0713
RD-02	1,470	0.0339
SW-02	165	0.00378
SW-03	193	0.00442
SW-04	404	0.00927
SW-09	1,780	0.0408

Source: Sequoia Ecological Consulting

FIGURE 3.3-2

PROJECT SITE AQUATIC FEATURES

Relevant water quality objectives for the North Coast Region are summarized in **Table 3.3-3**. Under CWA Section 303(d) states are required to submit to USEPA a list identifying waterbodies not meeting water quality standards and the associated pollutants impairing beneficial uses of the waterbodies. The nearest waterbodies downstream of the Project Site and listed on the California State 303(d) list of impaired waters are Windsor Creek, Mark West Creek, the Laguna de Santa Rosa, and the Russian River. **Table 3.3-4** summarizes the pollutants of concern for the reaches of these waterbodies downstream of the Project Site. The entire Russian River watershed is listed as impaired for sediment and temperature.

Table 3.3-3: North Coast Region Water Quality Objectives

Constituent	Water Quality Objective
Color	Water shall be free of coloration that causes a nuisance or adversely affects beneficial uses.
Taste & Odor	Water shall not contain taste or odor producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that causes nuisance or adversely affect beneficial uses. For waters designated MUN, chemical constituents, radionuclides, and pesticides shall not be present at levels prohibited by the drinking water standards set forth in Title 22 of the California Code of Regulations.
Turbidity	Shall not be increased more than 20% above naturally occurring background levels.
Bacteria	In waters designated REC-1, the median fecal coliform concentration on a minimum of not less than five samples for any 30-day period shall not exceed 50 per 100 milliliters (mL), nor shall more than 10% of the total samples during any 30-day period exceed 400 per 100 mL. In waters designated SHELL, the fecal coliform concentration throughout the water column shall not exceed 43 per 100 mL for a 5-tube serial dilution, or 49 per 100 mL for a 3-tube serial dilution.
Temperature	At no time or place shall the temperature of any waters designated COLD or WARM be increased by more than five degrees Fahrenheit.
Chemical Constituents, Radioactivity, and Pesticides	For waters designated MUN, chemical constituents, radionuclides, and pesticides shall not be present at levels prohibited by the drinking water standards set forth in Title 22 of the California Code of Regulations.
Other Parameters	The following are prohibited in concentrations that cause nuisance to or adversely affect beneficial uses: floating material, suspended material, suspended sediment, settleable material, oil and grease, and biostimulatory substances. Discharges containing toxic substances, pesticides, chemical constituents, or radioactivity in concentrations that impact beneficial uses are prohibited.

Source: North Coast Regional Water Quality Control Board, 2018.

Table 3.3-4: 303(d) List Summary for Downstream Waterbodies

Water Body	Listing Extent	Pollutant
Russian River	Entire watershed	Sediment Temperature
Middle Russian River Hydrologic Area (HA), Laguna Hydrologic Sub-Area (HSA), mainstem Laguna de Santa Rosa	Entire water body	Indicator Bacteria Oxygen, Dissolved Mercury Phosphorus Sedimentation/Siltation Temperature
Middle Russian River HA, Mark West HSA, mainstem Mark West Creek upstream of the confluence with the Laguna de Santa Rosa	Entire water body	Sedimentation/Siltation Temperature
Middle Russian River HA, Mark West HSA, Windsor Creek and its tributaries	Entire water body	Sedimentation/Siltation Temperature

Source: State Water Resources Control Board, 2021.

A total maximum daily load (TMDL) is the maximum amount of a pollutant that a given water body can assimilate daily and still meet State water quality standards. A TMDL for pathogens for the Russian River. is pending approval from State and federal agencies. The North Coast Regional Water Quality Control Board has adopted policies for sediment and temperature which utilize existing permitting and enforcement tools (North Coast Regional Water Quality Control Board, 2022).

TMDLs for the Laguna de Santa Rosa watershed are currently under development for nutrients (nitrogen and phosphorus), dissolved oxygen, temperature, and sedimentation/siltation. A TMDL for ammonia and dissolved oxygen for the Laguna de Santa Rosa watershed was approved in 1995 (North Coast Regional Water Quality Control Board, 2020).

Drainage and Flooding

Project Site Drainage

The Project Site is divided into a western and eastern drainage shed by Pruitt Creek. Surface drainage in both sheds and Pruitt Creek generally sheet flows to the south-southwest (see Appendix B of **Appendix D-1**). The western shed flows south-southwest toward Old Redwood Highway where roadside channels carry stormwater back southeast to meet Pruitt Creek at the southern boundary of the Project Site. The eastern shed also flows south-southwest toward Pruitt Creek at the southern boundary of the Project Site. Once offsite it drains through an adjacent property to the south and into a box culvert below Old Redwood Highway. Pruitt Creek drains to Pool Creek, which flows into Windsor Creek, then into Mark West Creek, and finally into the Russian River.

Flooding

FEMA is responsible for predicting the potential for flooding in most areas. FEMA routinely performs this function through the update and issuance of FIRMs, which depict various levels of predicted inundation. The Project Site is on FIRM map number 06097C0569E (FEMA, 2008). **Figure 3.3-3** shows the regulatory floodway associated with Pruitt Creek and the following zones on the Project Site:

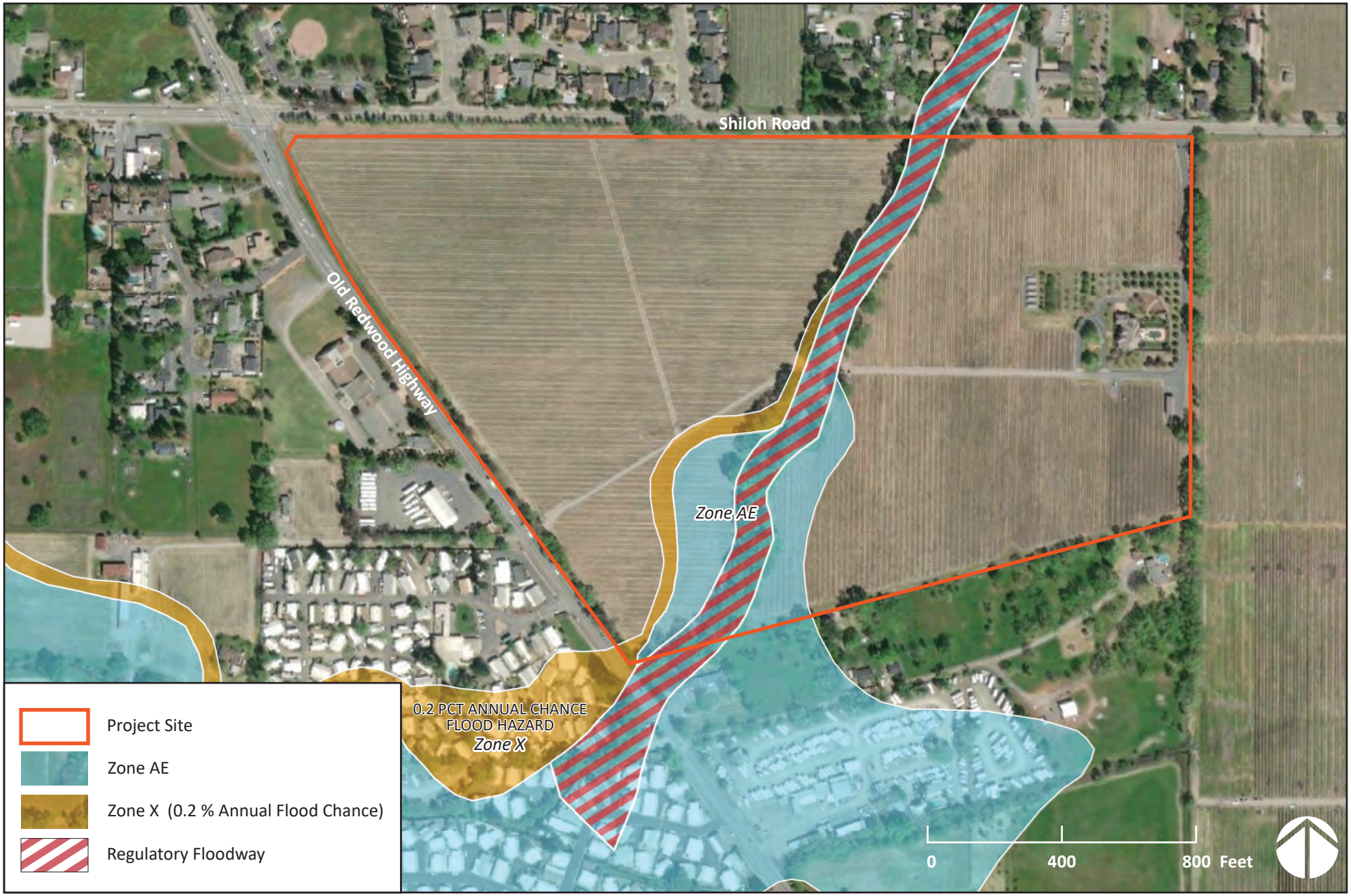
- Zone AE: the known base flood elevation for a 100-year storm event.
- Zone X with shading: area of 100-year storm event with an average flood depth of less than one foot or areas within a 500-year storm event.
- Zone X without shading: area of minimal flood hazard.

Groundwater

The following groundwater information is summarized from the Water and Wastewater Feasibility Study (**Appendix D-1**) and the Supplemental Groundwater Resources Impact Assessment (GRIA, **Appendix D-4**).

The Project Site is located within the Santa Rosa Plain Groundwater Subbasin (Basin No. 1-055.01), the largest subbasin in the Santa Rosa Valley Basin with an estimated groundwater storage capacity of approximately 4,313,000 acre-feet. The three principal water-bearing geologic units present in the vicinity of the Project Site are the Glen Ellen Formation, Petaluma Formation, and Sonoma Volcanics, which are described in Section 4.3.3 of **Appendix D-4**. The following three major hydrostratigraphic units were identified to occur in the vicinity of the Project Site: 1) Shallow Zone (first water to approximately 120 feet bgs); 2) Intermediate Zone (Approximately 113 to 350 bgs); and 3) Deep Zone (greater than 350 feet bgs). The Santa Rosa Plain groundwater basin is monitored by the Sonoma County Groundwater Sustainability Agency, which updated its Groundwater Sustainability Plan (GSP) in January of 2022 (Sonoma County Groundwater Sustainability Agency, 2022). The GSP indicates groundwater is typically a primary source for water supply for irrigated agriculture and a secondary source of supply for many municipal water purveyors (except California American Water Company's Larkfield District). Long-term groundwater monitoring in the Santa Rosa Plain Groundwater Subbasin indicates that groundwater levels are relatively stable to increasing, especially in the northern portion of the subbasin, including the area near the Project Site. Seasonal groundwater level fluctuations near the Project Site range from about 5 to 10 feet and can be as much as 20 feet. Drawdown during drought periods has been offset by groundwater level recovery during normal and wetter years (**Appendix D-4**). The Project Site is not located in an area designated as critically overdrafted, overdrafted, or in an adjudicated area (Department of Water Resources, 2023; City of Santa Rosa, 2021).

The primary source of water supply for the Town of Windsor is surface water from the Russian River, however, the Town also utilizes tertiary-treated recycled water from the local Town wastewater treatment plant and groundwater from a non-potable irrigation well (the Esposti Irrigation Well) that provides raw water to irrigate Esposti Park, located across East Shiloh Road, northwest of the Project Site (Woodard & Curran 2021). The Town also maintains a standby potable water supply well at Esposti Park (the Esposti Park Well), and is in the process of developing this well and the North Windsor well as potable water sources for use during drought periods. Additional small municipal, irrigation and domestic supply wells are located throughout the surrounding area. Well construction details for the wells near the Project Site show water supply wells completed in the shallow, intermediate, and deep zones (see Figure 9 of **Appendix D-4**). In general, the domestic wells in the area tend to draw water from the shallow and intermediate zones, while the municipal and irrigation wells are completed in the intermediate and deep zones. Many of the wells draw water across multiple groundwater zones.



Source: FEMA FIRM 06097C0569E (12/2/2008)

FIGURE 3.3-3

FEMA FLOOD MAP

Historical Project Site uses are summarized in Sections 1 and 3 of **Appendix D-4**. Groundwater has been used at the Project Site to support agricultural uses since the 1950s including orchards and cattle grazing. Based on historical aerial photographs, present-day vineyards appear to have been planted around the late 1990s. There are four existing on-site wells (shown on Figure 1 of **Appendix D-4**) with capacities ranging up to over 600 gpm. Well completion reports confirm that three of the existing wells were drilled between 1996 and 2002 (State of California, 1996; 1998; 2002). Existing groundwater uses on the Project Site result in a groundwater demand of approximately 34 acre-feet per year and include vineyard irrigation, frost protection, and domestic water use at the single-family residence. Based on the reported irrigation water duty for vineyards and timing of irrigation, it was determined that the majority of the vineyard water demand at the Project Site is met through soil water storage derived from local precipitation (approximately 20 inches/year).

Groundwater quality in wells neighboring the Project Site commonly includes higher levels of iron, manganese, and arsenic requiring treatment for elevated levels. Each of these constituents is found in higher-than-normal concentrations in certain areas of Sonoma County.

3.3.3 Impacts

3.3.3.1 Assessment Criteria

Impacts to water resources would be significant if runoff from the Project Site causes localized flooding or introduces additional contaminants to stormwater runoff that leaves the Project Site. Groundwater impacts would be significant if the alternative would impede groundwater recharge or if drawdown caused by pumping the proposed wells at the Project Site would adversely affect local water supply. Additionally, groundwater impacts would be significant if the alternatives would interfere with the implementation of local groundwater management plans by causing or contributing to: chronic lowering of groundwater levels; depletion of groundwater storage; water quality degradation due to induced contaminant migration or interference with cleanup efforts or water quality management plans; depletion of interconnected surface waters, including potential flow in Pruitt Creek or impacts to groundwater-dependent ecosystems (GDEs); and/or land subsidence. Water quality would be significantly affected if wastewater or runoff generated by the alternatives adversely impacts water quality standards of receiving waterbodies or groundwater.

The alternatives would not impact surface water supplies, as the Project Site is a sufficient distance from surface waters, such as the Russian River, used by water suppliers. This issue is not discussed further.

3.3.3.2 Alternative A – Proposed Project

Surface Water

Construction

Construction impacts under Alternative A would include ground-disturbing activities (e.g., grading and excavation) that could lead to erosion of topsoil. Erosion from construction sites can increase sediment discharge to surface waters during storm events, thereby degrading downstream water quality. Construction activities would also include the routine use of potentially hazardous construction materials, such as concrete washings, oil, and grease that could spill onto the ground and dissolve into stormwater. Discharges of pollutants, including grease, oil, fuel, and sediments, to surface waters from construction activities and accidents are a potentially significant impact. Regulated construction activities in excess of

one acre are required to apply for coverage under the NPDES General Construction Permit. The provisions of this permit include preparation of a SWPPP that would be developed prior to any ground disturbance. The SWPPP would include BMPs to reduce potential surface water contamination during storm events. BMPs would include, but not be limited to, those presented in **Table 2.1-3.** The BMPs within the SWPPP would minimize adverse impacts to the local and regional watershed from construction activities associated with Alternative A by reducing detachment of soil particles from bare soil, reducing the risk of soil contamination from construction materials (e.g., fuel, fertilizer, paint), or by preventing movement of loose soil into waterways. Should dewatering be needed during construction, extracted water would be treated in a proposed or temporary basin and/or be trucked out and disposed of consistent with stormwater regulations as described in **Table 2.1-3**. With adherence to the NPDES permitting program and implementation of the SWPPP, impacts to surface water quality from construction activities would be less than significant.

Operation

Stormwater Runoff

Alternative A would increase impervious surfaces on the Project Site by up to 35.51 acres[2] through the construction of buildings, circulation, parking, and infrastructure (**Appendix D-3**). Increased impervious surfaces would result in increased peak flows and increased total discharge from the Project Site during precipitation events. As described in **Section 2.1.5**, Alternative A includes a stormwater drainage system that would limit post-development peak flow and stormwater volume to pre-development levels during a 100-year probability, 24-hour duration storm event. Stormwater treatment and detention would be provided by bioswales, a detention basin, and/or the wastewater treatment plant (WWTP) treatment depending on the location, as more fully described in **Section 2.1.5**. Additionally, BMPs also include weekly sweeping of internal roadways and parking areas to reduce sediment and debris from entering the stormwater drainage system (**Table 2.1-3**). Any stormwater discharge to Pruitt Creek would first be routed through bioswales for treatment. The bioswales would be sized per Sonoma County low impact development requirements for pollutant reduction. Storm drain outfalls to the creek would be designed with rock slope protection to prevent erosion of the natural creek banks and erosion downstream. The stormwater drainage system has been designed to prevent impacts related to drainage patterns and water quality such that impacts during operation of Alternative A would be less than significant.

Floodplain

The building components of Alternative A (**Figure 2.1-1**) would be constructed outside of the regulatory floodway and FEMA-designated 100-year and 500-year floodplains, as illustrated in **Figure 3.3-3**. Facilities within the 100-year floodplain include a service yard, two bioswales (one on either side of Pruitt Creek), and a discharge pipeline/outfall structure. Earthwork within the floodplain would be balanced to prevent changes to the delineated floodplain mapping. As such, floodplain impacts from Alternative A would be less than significant.

Groundwater

Groundwater Recharge

The introduction of impervious surfaces can reduce groundwater recharge in areas where surface percolation accounts for a large percentage of natural recharge. The soils on the Project Site are classified

[2] The grading and drainage analysis conservatively assumed that the overflow surface parking area would paved; however, the surface parking area could be developed to be permeable using grass turf, permeable pavement, or similar methods.

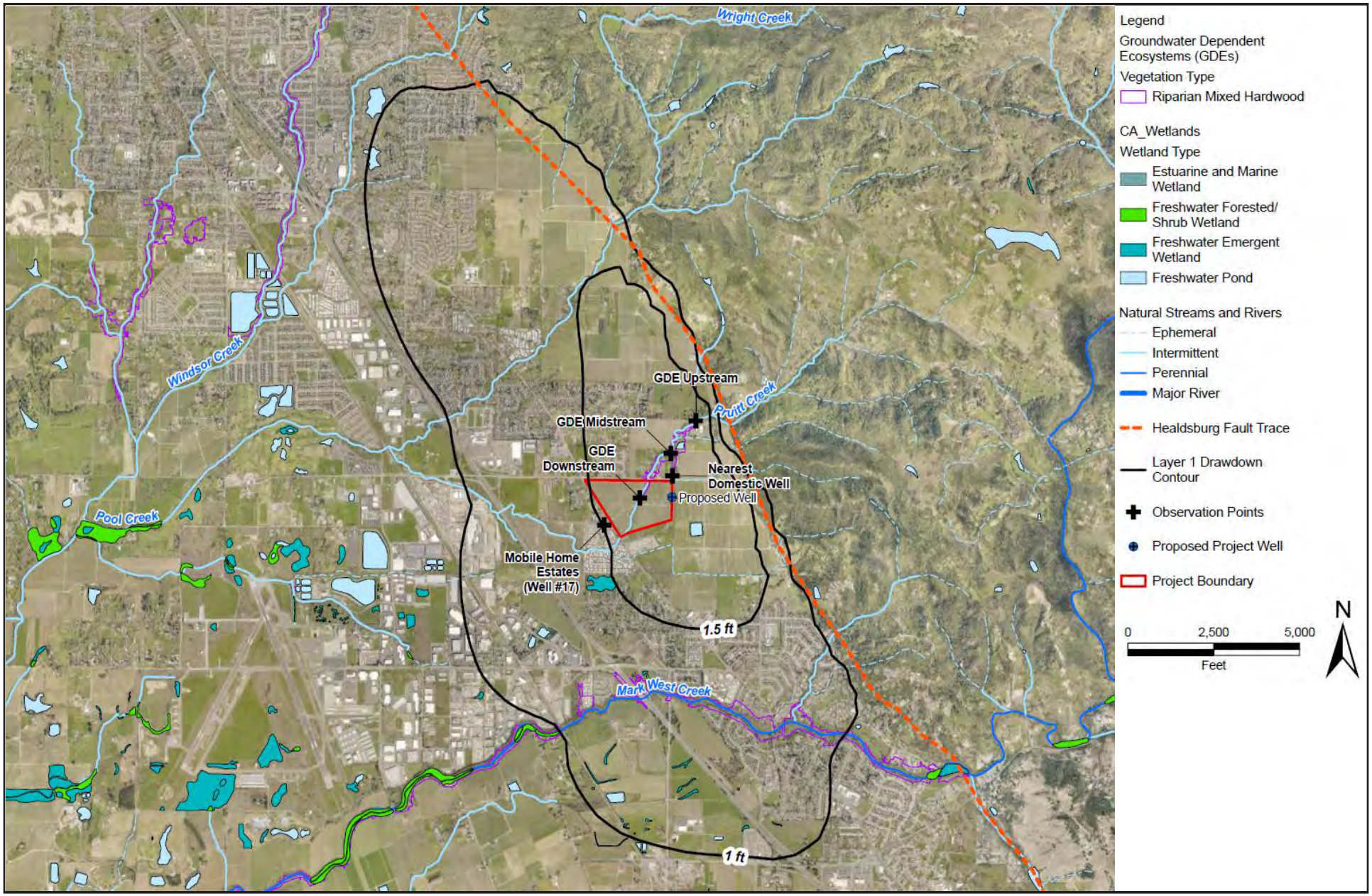
as Hydrologic Group C, which have a slow infiltration rate and moderate to moderately high rate of runoff. Based on these characteristics, the Project Site is not likely a significant source of groundwater recharge. The development of bioswales and a detention basin for capturing stormwater runoff onsite have been designed to maintain the stormwater discharge from impervious surfaces constructed for the Alternative A at rates that are no greater than current levels (**Appendix D-3**). This will result in stormwater percolation similar to historic rates. Additionally, the GRIA (**Appendix D-4**) determined that most of the vineyard water demand on the Project Site is met by soil water storage derived from precipitation; therefore, the reduction in vineyard areas on the Project Site would result in some of the soil moisture that is currently being used by the vineyard percolating downwards and recharging the groundwater table. Therefore, impacts to groundwater recharge would be less than significant.

Groundwater Drawdown

As described in **Section 2.1.3**, potable water would be provided by on-site groundwater wells. Based on information for groundwater wells in the vicinity, it is likely that groundwater treatment would be required to remove arsenic and manganese. Recycled water (tertiary treated effluent) would be provided from on-site wastewater treatment facilities (see **Section 2.1.4**). Use of recycled water for toilet flushing, on-site landscape irrigation, on-site vineyard irrigation, and cooling tower makeup would reduce overall water demands. BMPs also include the use of low-flow appliances and drought tolerant landscaping to further reduce demands (**Table 2.1-3**). Assuming the use of recycled water, Alternative A has an average potable water demand of 170,000 gallons per day (gpd) and a peak potable water demand of 294,000 gpd (**Appendix D-1**). It is expected that groundwater is available within the Project Site and can reliably produce up to 400 gallons per minute (576,000 gpd) based on existing Project Site wells and the investigations conducted by the Town to develop a potable water source at Esposti Park (**Appendix D-1**).

The GRIA (**Appendix D-4**) used a modeling approach based on the Santa Rosa Plain Hydrologic Model (SRPHM) developed by the USGS to estimate groundwater drawdown resulting from Alternative A. The model grid of the SRPHM was locally refined around the area of interest utilizing data from investigations performed for the Town of Windsor wells. To simulate pumping associated with Alternative A, a forecast scenario was run in which the existing on-site wells were replaced by the proposed project pumping conceptualized as a single new well in the eastern side of the Project Site (see **Figure 3.3-4**). The new well was pumped at a constant rate equal to the Alternative A groundwater demand. The simulated pumping was started at the end of the baseline simulation and carried forward for a 50-year forecast period to simulate effects of Alternative A over the planning horizon. For additional information on the methodology for the GRIA, please see **Appendix D-4**.

The wells potentially most vulnerable to adverse effects from interference drawdown are shallow wells, which have less available drawdown. As a result, the same amount of drawdown in a shallow well will potentially have a proportionally greater performance impact than with deeper wells. In this regard, it should be noted that domestic wells are generally often shallower than municipal, industrial, and irrigation wells, but this is not always the case. Based on available well completion data for the site vicinity, most domestic wells in the area extend at least 50 feet below the water table. The GRIA determined that the maximum predicted drawdown from Alternative A at the water table is approximately 1.6 feet within the immediate vicinity of the Project Site (see Table 5 of **Appendix D-4**). The spatial extent of water table drawdowns greater than 1 foot is shown on **Figure 3.3-4**. Domestic wells in the shallow and intermediate zones would be more vulnerable to impacts than municipal, industrial and irrigation wells that are completed to greater depths and have greater pumping capacities. A threshold of 5 feet of drawdown has been widely used to identify the potential for significant interference drawdown in shallow wells in groundwater resources impact assessments (**Appendix D-4**). For wells of intermediate depth, with



Source: Formation Environmental

FIGURE 3.3-4

ALTERNATIVE A DRAWDOWN AT WATER TABLE

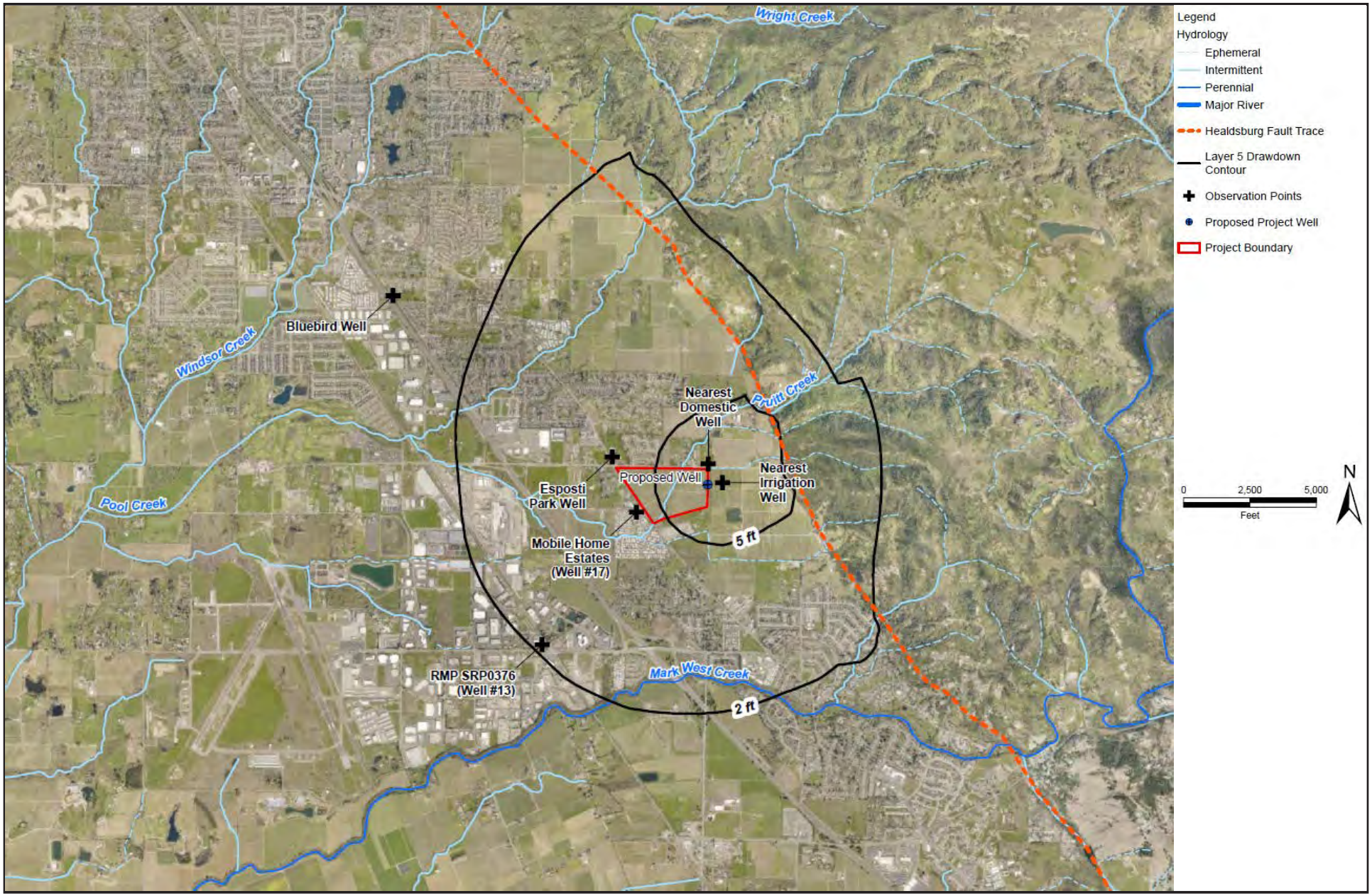
available drawdowns between 50 and 200 feet, a threshold equal to 10% of the available drawdown is often used. At the observation point representing the closest possible location for a nearby domestic well in the shallow aquifer, the predicted drawdown is 1.63 feet for the hypothetical shallowest reported domestic well depth, and 2.89 feet for the hypothetical average domestic well depth. Based on the available data, interference drawdown impacts to nearby domestic wells in the shallow and intermediate aquifer from Alternative A would be less than significant.

Municipal, industrial and irrigation supply wells are generally completed to a significantly greater depth and constructed to support greater production capacities. Many domestic wells are also completed to greater depths below the water table. A threshold of 20 feet of interference drawdown has been widely used to identify the potential for significant interference drawdown to deeper wells in groundwater resources impact assessments (**Appendix D-4**). An increased drawdown of less than 20 feet for these wells is not likely to significantly decrease well yield or result in other adverse effects; whereas, drawdowns greater than 20 feet can noticeably increase the electrical costs of pumping large volumes of water from greater depths. The GRIA determined that the maximum predicted drawdown from Alternative A at the deep pumped aquifer is less than 10 feet. The spatial extent of drawdowns greater than 5 feet is shown on **Figure 3.3-5**. Predicted drawdowns induced by Alternative A at nearby municipal supply wells are 1.43 feet at the Town of Windsor Bluebird Well (bottom of screen interval 745 feet bgs), 2.57 feet at the closest supply well for the Mobile Home Estates small community water system (bottom of screen interval 191 feet bgs), and 3.38 feet at the Town of Windsor Esposti Park Well (bottom of screen interval 655 feet bgs). The nearest irrigation supply well to the Project Site is located within the vineyard immediately east of the Project Site and the reported bottom of the screen interval for this well is 310 feet bgs. The predicted interference drawdown at this well is 9.23 feet. At the observation point representing the closest possible location for a nearby domestic well, the predicted interference drawdown would be 8.01 feet for a hypothetical deep domestic well depth drilled to a depth of 535 feet. These predicted drawdowns to wells drilled in the deep aquifer are much less than 20 feet or 10% of the available drawdown, and unlikely to result in significant adverse effects. Based on this information, impacts to municipal supply wells, nearby irrigation wells, and domestic wells drilled in deep aquifer will be less than significant.

Consistency with the Groundwater Sustainability Plan

The GRIA conducted a detailed evaluation of whether Alternative A would interfere with the implementation of the GSP in Section 6.2 of **Appendix D-4**. The findings of the GRIA are summarized below:

- **Chronic Groundwater Level Decline** – As discussed in **Section 3.3.2**, long-term monitoring of the Santa Rosa Plain sub-basin indicates relatively stable groundwater-level conditions over time in the northern portion of the sub-basin and the Project Site is not located in an area designated as overdrafted. As shown in **Figure 3.3-5**, the predicted response of the deep water-bearing zone aquifer to pumping for Alternative A is a relatively rapid equilibration of groundwater levels to new levels that are roughly 5 feet lower in a relatively small area near the Project Site, and 2 to 5 feet lower in an area that measures about 1.5 by 2.5 miles. Groundwater levels at representative monitoring points in the northern subbasin are currently above minimum thresholds and near the designated measurable objectives. The relatively small amount of drawdown induced by Alternative A predicted to affect these wells will not significantly change this condition. Based on the available information, Alternative A will not cause or contribute to undesirable results related to chronic groundwater level decline.
- **Depletion of Groundwater Storage** – Drawdown of the water table at the Project Site related to Project pumping is predicted to stabilize at about 1.6 feet in normal and wet years, and to recover



Source: Formation Environmental

FIGURE 3.3-5

ALTERNATIVE A DRAWDOWN IN DEEP WATER-BEARING ZONE

quickly after dry years. Assuming the observed historical range of groundwater level variability continues in the future, groundwater levels are predicted to remain well above minimum thresholds. The relatively small amount of predicted drawdown associated with Alternative A would not be distinguishable from ambient seasonal fluctuations in groundwater levels and would not reasonably be expected to interfere with implementation of the GSP. Therefore, implementation of Alternative A will not make the available groundwater in storage significantly less available by causing or contributing to undesirable results related to groundwater storage depletion.

- **Degradation of Groundwater Quality** – Degradation of water quality by groundwater pumping can occur when groundwater extraction changes local groundwater gradients and induces migration and spread of contamination plumes associated with nearby spill or release incidents or interferes with their cleanup. There are two groundwater contamination incidents approximately 0.7 miles west of the Project Site and approximately 1.2 miles south-southeast of the Project Site, respectively, that have impacted groundwater. Based on the limited magnitude of the predicted drawdown, the documented groundwater gradient direction, the limited extent and stability of the existing groundwater contamination plume, and the status of remediation and monitoring activities, it is very unlikely that groundwater pumping for Alternative A would influence the migration of the remaining contamination plume or interfere with cleanup operations. As such, pumping for Alternative A is expected to have no impact on water quality.
- **Adversely Affect Groundwater Dependent Ecosystems** – A potential riparian hardwood groundwater dependent ecosystem (GDE) area has been mapped along Pruitt Creek within and northeast of the Project Site (see Figure 3 of **Appendix D-4**). The GDE is reported to include riparian hardwoods that typically derive their water supply from a combination of precipitation, streamflow and, when present, shallow groundwater. The maximum predicted drawdown at the water table is 1.6 feet beneath this potential GDE area, which is expected to be only a fraction of the seasonal groundwater level fluctuation under which these woodlands have developed. The woodland species present are likely only partially reliant on groundwater for their water needs and have developed around Pruitt Creek, which is an uncontrolled stream with highly variable flow. Additionally, based on historic data, there has been little to no change in vegetation health and leaf density along the Pruitt Creek corridor from 2008 through 2022, during which the on-Site vineyard was developed, likely decreasing groundwater levels to irrigation pumping. Based on the available information, the additional drawdown induced by Alternative A is well within the range of historical hydrologic variability under which these potential GDEs developed and thrived. The GDEs should be capable of readily adapting to the predicted modest change in groundwater levels.
- **Adversely Affect Interconnected Surface Water** – The documented depth to the regional water table indicates it is unlikely that aquatic resources identified in the vicinity of the Site are groundwater connected, except for a possible perennial reach of Pruitt Creek located northeast of the Project Site at the foot of the Mayacamas Mountains. Induced drawdown at the water table in the area could potentially increase vertical groundwater gradients and infiltrations rates from the perennial reaches of the creek. The predicted water table drawdown in this area is approximately 1 foot. While this amount of drawdown may increase vertical gradients somewhat, the extent of perennial water in this reach of Pruitt Creek would be expected to be controlled, order of importance, by (1) the rate of water outflow from the Mayacamas Mountains; (2) the vertical impedance of the streambed; and (3) the gradient driving infiltration. Based on the available information, it is unlikely that the drawdown induced by Alternative A would significantly decrease the extent of perennial water in this portion of the stream in a way that would

significantly decrease the extent of aquatic resources or adversely affect aquatic species through stranding or habitat loss or degradation.

- **Induce Land Subsidence** – From late 2005 to 2019 the nearest subsidence monitoring station in the Santa Rosa Plain has shown a total vertical change of +0.1 inch. From 2015 to 2019 the total vertical change for the station was reported as 0.01 inch, with annual changes of +0.003 inch (SRPGSA 2022). Based on the lack of active subsidence reported in the subbasin, the lack of strongly confined regional aquifers and the fact that drawdown induced by pumping for Alternative A is predicted to be well within the range of annual and year-to-year groundwater level fluctuations, it is very unlikely that pumping for Alternative A would result in subsidence impacts. As such, the Project is expected to have no subsidence impact.

Based on the above, Alternative A would not interfere with the implementation of the local GSP by causing or contributing to: chronic lowering of groundwater levels; depletion of groundwater storage; water quality degradation due to induced contaminant migration or interference with cleanup efforts or water quality management plans; depletion of interconnected surface water, including potential flow in Pruitt Creek or impacts to groundwater-dependent ecosystems (GDEs); and/or land subsidence.

Groundwater Quality

Groundwater quality could be adversely affected if pollutants enter the environment during construction or operation of Alternative A. As shown in **Table 2.1-3**, the Tribe would comply with the NPDES General Construction Permit from the USEPA for construction site runoff during the construction phase in compliance with the CWA. This permit would include the preparation and implementation of a site-specific SWPPP and proper implementation of stormwater BMPs to reduce and/or prevent water quality impacts during construction. Implementation of BMPs would reduce the potential impacts during construction to a less-than-significant level.

During operation and as described in **Section 2.1.5**, an on-site stormwater system would include a detention basin, bioswales, and WWTP treatment to treat pollutants from stormwater runoff such as total suspended solids, hydrocarbons, nutrients, metals, and other common pollutants. With the collection and treatment provided by the proposed stormwater system, impacts would be less than significant during operation.

Wastewater Treatment and Disposal

Alternative A is estimated to generate an average wastewater flow of 232,000 gpd and a peak weekend flow of 335,000 gpd. Wastewater would be collected and transferred to an on-site WWTP which would treat wastewater to a tertiary level as defined by Title 22 of the California Code of Regulations.

As described in **Section 2.1.4** and **Appendix D-1**, treated wastewater effluent would be adequately disposed through a combination of on-site re-use (toilet/urinal flushing, landscape irrigation and vineyard irrigation applied at agronomic rates, and cooling tower make-up), discharge to Pruitt Creek, and/or off-site irrigation. Leach fields were eliminated as an option due to the presence of poorly drained soils and perched groundwater in areas of the Project Site. Seasonal storage ponds or tanks would be used to seasonally store treated effluent until it can be reused or discharged to Pruitt Creek. Effluent discharged to Pruitt Creek would require an NPDES discharge permit. All on-site landscape and vineyard irrigation areas are at least 50 feet from known domestic water supply wells. Assuming no discharge to the creek and maximum use of recycled water, up to 44.8 acres of turf, or 406 acres of vineyards could be irrigated with recycled water produced as a result of Alternative A (**Appendix D-2**). Offsite irrigation with recycled

water would comply with the Statewide General Order for Recycled Water Use – Order WQ 2016-0068-DDW, which outlines extensive requirements for producers and users of recycled water to ensure the protection of public health and water quality. These include compliance with the Uniform Statewide Recycling Criteria outlined in Title 22 of the California Code of Regulations.

The Regional Water Quality Control Board prohibits effluent discharges from wastewater treatment facilities to the Russian River and its tributaries during the dry season (approximately May 15 through September 30) in their Basin Plan due to significant seasonal flow variations for the Russian River tributaries during the summer and winter months. Discharges during the wet season (approximately October 1 through May 14) when flows are higher are typically allowed to be a percentage of the measured streamflow near the point of discharge. The flow monitoring location would be located downstream of the proposed discharge location and specified by the NDPES permit. As required by the NPDES discharge permit, effluent water quality would be monitored and reported at least annually to the USEPA.

As described in **Section 2.1.4**, the outfall structure for discharge to Pruitt Creek would be designed to prevent erosion of the natural creek banks and erosion downstream. The outfall pipe outlet would include a duckbill check valve or similar component to protect against settlement/silting inside the pipe or nesting of small animals or rodents. The area around the outfall pipe would be covered with riprap or similar material to prevent natural erosion around the pipe from occurring and to protect the banks during periods of discharge. The pipe material would be suitable for permanent exposure to sunlight and creek water quality conditions.

As effluent would meet Title 22 standards, no significant reduction in the quality of surface or groundwater is anticipated. The NPDES permit through flow limitation, water quality testing, and other measures, would ensure that effluent disposal does not cause additional impairment of downstream waterbodies and that the beneficial uses of downstream waterbodies is maintained. For these reasons, potential impacts to surface water and groundwater resources from wastewater treatment and disposal activities associated with Alternative A would be less than significant.

3.3.3.3 Alternative B – Reduced Intensity Alternative

Surface Water

Construction and operational impacts would be similar to Alternative A but slightly reduced due to a reduced development footprint. Alternative B would increase impervious surfaces by up to 26.99 acres through the construction of buildings, circulation, parking, and infrastructure (**Appendix D-3**). With adherence to the NPDES permitting program and associated SWPPP, as well as implementation of BMPs in **Table 2.1-3** associated with dewatering, impacts to surface water quality from construction activities would be less than significant. The stormwater treatment system under Alternative B would be substantially similar to Alternative A, with potentially less storage requirements. The stormwater drainage system would provide treatment and limit post-development peak flow and stormwater volume to pre-development levels during a 100-year probability, 24-hour duration storm event. Additionally, BMPs also include weekly sweeping of internal roadways and parking areas to reduce sediment and debris from entering the stormwater drainage system (**Table 2.1-3**). As such, surface water impacts during operation of Alternative B would be less than significant.

As with Alternative A, Alternative B includes the development of a service yard, two bioswales (one on either side of Pruitt Creek), and a discharge pipeline/outfall structure within the floodplain. Earthwork

within the floodplain would be balanced to prevent changes to the delineated floodplain mapping and thus floodplain impacts would be less than significant.

Groundwater

Groundwater supply and water quality impacts would be similar to Alternative A but reduced in nature as Alternative B has a lower potable water demand. Assuming the use of recycled water, Alternative B has an average potable water demand of 117,000 gpd and a peak potable water demand of 186,000 gpd (**Appendix D-1**). Based on the GRIA conducted for Alternative A (**Appendix D-4**), interference drawdown impacts to nearby domestic wells, municipal supply wells, and nearby irrigation wells from Alternative B would be less than significant. Similar to Alternative A, Alternative B would not interfere with the implementation of the local GSP by causing or contributing to: chronic lowering of groundwater levels; depletion of groundwater storage; water quality degradation due to induced contaminant migration or interference with cleanup efforts or water quality management plans; depletion of interconnected surface water, including potential flow in Pruitt Creek or impacts to groundwater-dependent ecosystems (GDEs); and/or land subsidence. Compliance with the NPDES General Construction Permit and the inclusion of stormwater treatment and detention facilities would ensure that groundwater recharge and groundwater quality impacts are less than significant.

Wastewater Treatment and Disposal

Alternative B is estimated to generate an average wastewater flow of 158,000 gpd and a peak weekend flow of 215,000 gpd. Wastewater treatment and disposal options under Alternative B are the same as Alternative A, although facilities may be reduced in size due to reduced wastewater demands. As effluent would meet Title 22 standards, no significant reduction in the quality of surface or groundwater is anticipated. The NPDES permit through flow limitation, water quality testing, and other measures, would ensure that effluent disposal does not cause additional impairment of downstream waterbodies and that the beneficial uses of downstream waterbodies is maintained. For these reasons, potential impacts to surface water and groundwater resources from treated effluent would be less than significant.

3.3.3.4 Alternative C – Non-Gaming Alternative

Surface Water

Construction and operational impacts would be similar to Alternatives A and B but reduced due to a reduced development footprint. Alternative C would increase impervious surfaces by up to 14.48 acres through the construction of buildings, circulation, parking, and infrastructure. With adherence to the NPDES permitting program and associated SWPPP, as well as implementation of BMPs in **Table 2.1-3** associated with dewatering, impacts to surface water quality from construction activities would be less than significant. The stormwater treatment system under Alternative C would be similar to Alternatives A and B, with potentially less storage requirements. Bioswales on the east side of Pruitt Creek would likely not be needed due to a lack of impervious surfaces on the eastern side of the Project Site; stormwater flows from the WWTP area would be treated at the WWTP. The stormwater drainage system would provide treatment and limit post-development peak flow and stormwater volume to pre-development levels during a 100-year probability, 24-hour duration storm event. Additionally, BMPs also include weekly sweeping of internal roadways and parking areas to reduce sediment and debris from entering the stormwater drainage system (**Table 2.1-3**). As such, surface water impacts during operation of Alternative C would be less than significant.

Alternative C includes the development of vineyards and a discharge pipeline/outfall structure within the floodplain. Earthwork within the floodplain would be balanced to prevent changes to the delineated floodplain mapping and thus floodplain impacts would be less than significant.

Groundwater

Groundwater supply and water quality impacts would be similar to Alternatives A and B but reduced in nature as Alternative C has a lower potable water demand. Assuming the use of recycled water, Alternative C has an average potable water demand of 19,000 gpd and a peak potable water demand of 35,000 gpd (**Appendix D-1**). Based on the GRIA conducted for Alternative A (**Appendix D-4**), interference drawdown impacts to nearby domestic wells, municipal supply wells, and nearby irrigation wells from Alternative C would be less than significant. Similar to Alternative A, Alternative C would not interfere with the implementation of the local GSP by causing or contributing to: chronic lowering of groundwater levels; depletion of groundwater storage; water quality degradation due to induced contaminant migration or interference with cleanup efforts or water quality management plans; depletion of interconnected surface water, including potential flow in Pruitt Creek or impacts to groundwater-dependent ecosystems (GDEs); and/or land subsidence. Compliance with the NPDES General Construction Permit and the inclusion of stormwater treatment and detention facilities would ensure that groundwater recharge and groundwater quality impacts are less than significant.

Wastewater Treatment and Disposal

Alternative C is estimated to generate an average wastewater flow of 40,100 gpd and a peak weekend flow of 53,400 gpd. Wastewater treatment and disposal options under Alternative C are the same as Alternatives A and B, although facilities may be reduced in size due to reduced wastewater demands. As effluent would meet Title 22 standards, no significant reduction in the quality of surface or groundwater is anticipated. The NPDES permit through flow limitation, water quality testing, and other measures, would ensure that effluent disposal does not cause additional impairment of downstream waterbodies and that the beneficial uses of downstream waterbodies is maintained. For these reasons, potential impacts to surface water and groundwater resources from treated effluent would be less than significant.

3.3.3.5 Alternative D – No Action Alternative

Under Alternative D, no change in land use would occur, and the Project Site would remain in its current state as a vineyard. Operation of the vineyard would be subject to federal, State, and local regulations protective of water resources and thus no new significant impacts would occur.

3.4 AIR QUALITY

3.4.1 Regulatory Setting

The air quality regulatory setting is summarized in **Table 3.4-1,** and additional information on the regulatory setting can be found in **Appendix E**.

Table 3.4-1: Regulatory Policies and Plans Related to Air Quality

Regulation	Description
Federal	
Clean Air Act (CAA) of 1970	▪ The CAA created the National Ambient Air Quality Standards (NAAQS) for six criteria air pollutants: ozone, carbon monoxide, particulate matter, nitrogen dioxide, sulfur dioxide (SO_2), and lead. ▪ States are required to have State Implementation Plans (SIP) for areas that are not achieving the NAAQS (nonattainment areas). ▪ General Conformity Rule requires demonstration that a proposed federal action will conform to the applicable SIP. ▪ Prevention of Significant Deterioration (PSD) program protects Class I areas. ▪ Tribal minor new source review permits are required if emissions would exceed certain standards.
NEPA Guidance on Consideration of Greenhouse Gas Emissions and Climate Change (2023)	▪ The Council on Environmental Quality (CEQ) issued interim guidance to assist agencies in analyzing greenhouse gas (GHG) and climate change effects under NEPA. ▪ Agencies should consider potential effects of a proposed action on climate change and the effects of climate change on a proposed action and its environmental impacts. ▪ Agencies should provide context for GHG emissions, including using best available social cost of GHG estimates. ▪ Agencies should mitigate GHG emissions associated with their proposed actions to the greatest extent possible, consistent with national, science-based GHG reduction policies established to avoid the worst impacts of climate change.
Secretarial Order 3399	▪ Secretary Order (SO) 3399 was issued to prioritize action on climate change throughout the Department and to restore transparency and integrity in the Department's decision-making processes. SO 3399 specifies that when considering the impact of GHG emissions from a proposed action, Bureaus/Offices should use appropriate tools, methodologies, and resources available to quantify GHG emissions and compare GHG quantities across alternatives.
State	
Global Warming Solutions Act of 2006 (AB 32)	▪ Assembly Bill [AB] 32 is the overarching law that requires the State to set Statewide GHG reduction targets. AB 32 required the California Air Resources Board (CARB) to develop a Climate Change Scoping Plan that describes the approach California will take to reduce GHGs to achieve emission reduction goals and to update the plan every five years.
Senate Bill 375	▪ Provides for the creation of a new regional planning document called a "sustainable communities strategy." This is a blueprint for regional transportation infrastructure and development designed to reduce GHG emission from cars and light trucks to target levels throughout the State.
EO S-3-05	▪ Sets GHG emission reductions targets and created a Climate Action Team.

Regulation	Description
EO S-1-07	▪ Mandates a State-wide goal to reduce carbon intensity of transportation fuels by at least 10% by 2020 from the 2010 baseline level.
EO B-30-15	▪ Sets an interim GHG target of 40% below 1990 levels by 2030.
EO N-79-20	▪ Bans the sale of new gas-powered cars and trucks by 2035.
AB 1279 (California Climate Crisis Act)	▪ Establishes the State policy of achieving net zero greenhouse gas emissions as soon as possible, but no later than 2045.

3.4.2 Environmental Setting

Regional Meteorology

The topography of the Petaluma, Cotati, and Sonoma valleys primarily influences the climate in Sonoma County. Average daily winter temperatures range from cool overnight to moderate during the day while average daily summer temperatures range from moderate overnight to hot during the day. The Petaluma Gap strongly influences the wind patterns in the Petaluma and Cotati valleys while the Cities of Santa Rosa and Petaluma typically experience calm to mild winds. While sunshine is quite regular in the County, fog formation is regular during the late afternoons in summers in the Petaluma and Cotati valleys. This fog can last until late morning the next day. Examples of average rainfall ranges from 24 inches in the City of Petaluma, 29 inches in the City of Sonoma, and 30 inches in City of Santa Rosa (Bay Area Air Quality Management District, 2019).

Regional Air Quality

Ozone and fine particle matter with a diameter of less than 2.5 microns in size ($PM_{2.5}$) are the major regional air pollutants of concern. During summer, ozone is the pollutant of concern primarily while in winter it is $PM_{2.5}$. While the Bay Area is nonattainment for ozone (see discussion below), the County experiences some of the lowest ozone levels despite the temperatures being hot in the summers. $PM_{2.5}$ levels in the Bay Area can become elevated, especially during the holidays when wood burning is occurring, but air monitoring results show that the County experiences some of the lowest levels of $PM_{2.5}$ in the Bay Area (Bay Area Air Quality Management District [BAAQMD], 2019).

The area surrounding the Project Site has few permitted stationary sources of criteria air pollutants, but several major roadways. Within a 1,000 feet radius of the Project Site, the Bay Area Air Quality Management District (BAAQMD) recommended radius for assessing cumulative impacts, there is one permitted stationary source, DeFont Auto Body and two major roads, Shiloh Road/East Shiloh Road and Old Redwood Highway according to the BAAQMD's stationary source screening map. The permitted stationary source has a reported chronic hazard index of 0.004, but no reported numbers for cancer risk and $PM_{2.5}$ (BAAQMD, 2022a).

Attainment Status

The County is within the jurisdictional area of the BAAQMD and the Northern Sonoma County Air Pollution Control District. The BAAQMD regulates air pollutant emissions from stationary sources within the southern portion of County, including the Project Site. However, once the Project Site is taken into trust, air quality would be under the jurisdiction of the USEPA.

Certain air pollutants, either directly or in reaction with other pollutants, have been recognized to cause notable health problems and consequential damage to the environment due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality. The National Ambient Air Quality Standards (NAAQS) sets limits on atmospheric concentration of six pollutants that cause smog, acid rain, and other health hazards. These set levels are considered safe to protect public health, including the health of sensitive populations with a margin of safety, and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. To determine conformance with the NAAQS, states are responsible for providing ambient air monitoring data to the USEPA for critical air pollutants (CAPs) (shown in **Table 3.4-2**). The USEPA then determines, using the violation criteria, if the results of the monitoring data indicate compliance with the NAAQS. The USEPA classifies areas in compliance with the NAAQS as being in "attainment." Areas that do not meet the NAAQS are classified as being in "nonattainment" by the USEPA. As shown in **Table 3.4-2**, the BAAQMD portion of the County has a “marginal” nonattainment status for ozone and attainment or unclassifiable for all other pollutants. The nonattainment status for ozone is classified as marginal (USEPA, 2023). The BAAQMD in April 2017 adopted the multi-pollutant air quality plan *Clean Air Plan: Spare the Air, Cool the Climate*. This plan addresses ground level-zone, ozone precursor pollutants, particulate matter, toxic air contaminants, and greenhouse gases (BAAQMD, 2017a).

The BAAQMD portion of the County is designated by the USEPA as a maintenance area for carbon monoxide (CO) (USEPA, 2023). In 2004, CARB submitted to the USEPA a revision to the SIP, and included a Maintenance Plan, in the *Revision to the California State Implementation Plan for Carbon Monoxide, Updated Maintenance Plan for Ten Federal Planning Areas* (CARB, 2004). The CO Maintenance Plan outlines how the region will continue to comply with the NAAQS.

Table 3.4-2: NAAQS Attainment Status for San Francisco Bay Area portion of Sonoma County

Pollutant	NAAQS
Ozone (8-hour)	Nonattainment (Marginal)
PM_{10} (24-hour, annual)	Attainment
$PM_{2.5}$ (annual)	Attainment
Carbon Monoxide (8-hour, 1-hour)	Attainment (Maintenance)
Nitrogen Dioxide (annual, 1-hour)	Attainment
Sulfur Dioxide (24-hour,1-hour)	Attainment
Lead (30-day average)	Attainment

Source: USEPA, 2022a

PM_{10}: Particulate matter with diameters that are generally 10 micrometers and smaller

$PM_{2.5}$: Particulate matter with diameters that are generally 2.5 micrometers and smaller

Hazardous Air Pollutants

Hazardous air pollutants (HAPs) are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. HAPs are also known as toxic air pollutants or air toxics (USEPA, 2022a). The State of California uses the terminology “toxic air contaminants,” and under section 39655 of the California Health and Safety Code, toxic air contaminants are defined as "an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health." The USEPA has listed 188 HAPs that are considered detrimental to the environment (USEPA, 2022a). For more information on HAPs, see **Appendix E**. Of the 188 HAPs listed, $PM_{2.5}$ is considered the most hazardous CAP to human health in the Bay Area due to its ability to cause short-term and long-term health effects, such as bronchitis and aggravated asthma. $PM_{2.5}$ and other HAPs can be generated from mobile sources and stationary sources; common stationary sources are diesel emergency generators, dry cleaners, and gas stations. Mobile sources, which are far more common, include motor vehicles on freeways and roads and off-road sources, such as construction equipment, ships, and trains (BAAQMD, 2017b).

Odors

Odors can be produced by many substances in the environment, such as animals, human activities, industry processes, natural decomposition of materials, and vehicles. Odors are perceived differently by each individual, with some being sensitive to low concentrations of an odor or a certain type of odor while others are not. Sometimes odors can induce temporary symptoms, which are based on someone’s sensitivity to the odor, concentration in the air, frequency and duration of exposure, and a person’s physical characteristic (e.g., age). Symptoms to odors can include headache, nasal congestion, nausea, facial irrigation (e.g., eyes), coughing, shortness of breath, and more. Symptoms have a higher probability of occurring in more people at higher concentrations. While odors are normally only nuisances, some can be toxic and can cause detrimental health effects. In general, the USEPA does not have regulations for odors per se but does control 188 toxic air pollutants in addition to the air pollutants seen in **Table 3.4-2**. Only sulfur dioxide SO_2 is odorous, and the controlled toxic air pollutants are only monitored for toxicity and not odor (Agency for Toxic Substances and Disease Registry, 2015).

In the County, human related sources that could produce odors include waste processing and heavy industrial facilities such as WWTPs, landfills and composting facilities, chemical manufacturing facilities, and confined animal facilities (e.g., dairies). Alcohol fermentation, such as during wine production, can also be odiferous if outdoors. A potential natural occurring odor during wildfire season is smoke from wildfires (for additional information on wildfire effects, please see **Section 3.12**). Odor would be noticeable if in close proximity to the Project Site, such as within two miles. There are no large-scale odor producing facilities, including confined animal facilities, within two miles of the Project Site. There are nearby agricultural operations that can be a source of periodic odor from application of fertilizers and pesticides, but these are sporadic events. The Project Site itself produces no noticeable odors except possibly from the application of maintenance chemicals for the on-site vineyards, but these events are infrequent and considered minor annoyances that are protected under the County’s Right to Farm Ordinance for unincorporated areas.

Sensitive Receptors

Sensitive receptors are generally defined as land uses that house or attract people who are susceptible to adverse effects from air pollution emissions and, as such, should be given special consideration when evaluating air quality impacts from projects. Sensitive receptors include facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent homes, parks and recreational facilities, and residential areas are examples of sensitive receptors.

Sensitive receptors adjacent to the Project Site include residential areas north and west, Shiloh Neighborhood Church to the west, Esposti Park to the north, and a few households to the south. Sensitive receptors near the Project Site include additional residential development beyond the adjacent residential development: Little School House (preschool) that is approximately 0.45 miles south, and Le Elen Manor (assisted living facility) that is approximately 0.38 miles south.

In addition to sensitive receptors, there are no areas near the Project Site that are within the BAAQMD's Community Air Risk Evaluation Program, which means there are no identified communities experiencing unusually elevated levels of ozone, $PM_{2.5}$, or cumulative area impacts (BAAQMD, 2022b).

Climate Change

Climate change is a global phenomenon. Certain gases in the atmosphere, classified as GHGs, play a critical role in determining the surface temperature of the earth. GHGs include CO_2, methane (CH_4), nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (Health & Safety Code § 38505[g]). In 2018, the primary sources of GHG emissions in the County were transportation (60%), building energy (21%), livestock (11%), solid waste (6%), and water/wastewater (1%). The County emitted approximately 3.41 million metric tons carbon dioxide equivalent (MT CO_2e) in 2018. Compared with 1990 emissions, this equates to an approximate 13% reduction in emissions (Regional Climate Protection Authority, 2022). Climate change has the potential to impact the natural and economic environment of both the State and the BAAQMD. **Appendix E** provides a summary of the potential effects from climate change that could occur in the region.

3.4.3 Impacts

3.4.3.1 Assessment Criteria

Adverse impacts to ambient air quality could result if either construction or operation would result in violations of the CAA provisions, or if emissions would impede the ability of the State to meet NAAQSs. The effects of proposed federal actions on BAAQMD air quality management are assessed below as required under the CAA.

3.4.3.2 Methodology

Construction Analysis

Construction activities would consist of land clearing, vineyard removal, mass earthwork, fine grading, building, road work, and parking lot construction. A fleet mix of trucks, scrapers, excavators, and graders would be used to complete construction of the alternatives. Effects on air quality during construction

were evaluated by estimating the quantity of each CAP emitted over the duration of the construction period. Fine particulate matter 10 microns in diameter (PM_{10}) and $PM_{2.5}$ are the pollutants of concern resulting during earth-moving and fine grading activities. Volatile organic compounds (VOC), nitrogen oxides (NOx), SO_2, carbon monoxide, GHG, and diesel particulate matter (DPM) emissions would be emitted from heavy equipment from the combustion of diesel fuel. Mobile source emissions would result from the use of on-road construction vehicles.

Emissions from construction trucks and heavy equipment were calculated using the USEPA-approved 2020 California Emissions Estimator Model, Version 2020.4.0 (CalEEMod). Emissions were estimated assuming that construction would begin in July 2026 and continue at an average rate of 5 days per week for all project alternatives. The construction duration for Alternatives A, B, and C is estimated to be 18 months. CalEEMod input tables and emissions results are summarized below and included in **Appendix F-1**.

Operation Analysis

Annual operation emissions for the project alternatives were calculated using CalEEMod. **Appendix F-1** includes the assumptions and inputs incorporated into CalEEMod for each alternative, which are summarized below:

- Trip generation rates were provided from **Appendix I** and vehicle type distribution is based on CalEEMod default values. Employee trip lengths are based on CalEEMod default values of 14.7 miles. Delivery trips are based on distance from the Santa Rosa area to Project Site (10 miles). Average trip length for patrons of 55 miles was based on the market analysis (**Appendix B-1**). The delivery and patron trip lengths used in the analysis are longer than the CalEEMod default values.
- Project completion anticipated in January 2028.
- Water/wastewater and solid waste generation model inputs are from **Sections 2.1**, **2.2**, **2.3**, and **3.10**, respectively.
- The emergency generators described in **Section 2.1.8** were assumed to operate for 84 hours per year, which assumes one hour of testing per month for five generators and 72 hours of emergency use for four generators. Although Tier 4 engines are proposed, Tier 2 engines were assumed to operate to provide a conservative analysis of potential emissions.

Hazardous Air Pollutants Health Screening

HAPs were assessed using screening methods and resources developed by the BAAQMD and CARB, which provide region-specific emissions estimates. Specifically, the BAAQMD's "Recommended Methods for Screening and Modeling Local Risks and Hazards" (BAAQMD, 2022d) was used to address mobile sources of DPM, and CARB's "Hot Spots" Stationary Diesel Engine Screening Risk Assessment Tables (CARB, 2022a) were used to address DPM generated by proposed emergency generators.

Federal General Conformity

Conformity regulations apply to federal actions that would cause emissions of CAPs above certain levels to occur in locations designated as nonattainment or maintenance areas for the emitted pollutants. As discussed in **Section 3.4.2**, the Project Site is located in an area that is classified as being in attainment for all NAAQS with the exceptions of ozone (8-hour). The Project Site is located in a maintenance area for CO. If project emissions are equal to or exceed applicable levels for any CAP provided in 40 Code of Federal Regulations (CFR) §93.153 (b)(1) and (2), then a federal general conformity determination analysis would be required. Stationary sources are exempt under conformity regulations and therefore not subject to de

minimis levels. The requirements for a conformity determination for each project alternative are discussed below.

Carbon Monoxide Hot Spot Analysis

Development on the Project Site would result in emissions of CO. Because CO disperses rapidly with increased distance from the source, emissions of CO are considered localized pollutants of concern rather than regional pollutants and can be evaluated by Hot Spot Analysis. Most CO generated from the Proposed Action is associated with mobile emissions. To address the potential for increased traffic associated with the Proposed Action to significantly increase CO emissions, CO concentrations at one representative intersection were modeled using AERSCREEN, the screening version of AERMOD, a dispersion modeling program. Mobile emissions rates were sourced from CARB's EMFAC project-level web tool (CARB, 2022b). Fleet mix estimates were sourced from CalEEMod. Intersection level of service (LOS), peak-hour vehicle volumes and queuing lengths were sourced from the Traffic Impact Study (TIS) prepared by TJKM (**Appendix I**). The intersection of Shiloh Road and the US 101 north-bound off-ramp was chosen to provide a conservative estimate of potential CO concentrations. Of the intersections analyzed in the TIS, this intersection has relatively high traffic volumes, low LOS, and long queue lengths. This intersection is also near US 101, a source of CO emissions. CO emissions from US 101 were also modeled to provide a conservative estimate of potential maximum CO emissions. An estimate of background CO levels in the area is based on monitoring data from Sebastopol and provided through USEPA's AirData Air Quality Monitors website (USEPA, 2022b). The representative background level selected is 1.2 ppm (1 hour average) from January 2019. This data point was selected as it represents peak CO emissions during winter when mobile CO emissions are higher. Higher CO emissions have been recorded in summer and fall months but are influenced by wildfires. The 2019 data also captures higher pre-COVID19 pandemic traffic volumes than other more recent data. A persistence factor of 0.7 is used to convert 1-hour concentrations to 8-hour concentrations, consistent with USEPA guidelines (USEPA, 1992).

Climate Change

This EIS considers whether project emissions have individual or cumulative effects on climate change. Given the global nature of climate change impacts, individual project impacts are most appropriately addressed in terms of the incremental contribution to a global cumulative impact; therefore, refer to the discussion of cumulative air quality effects in **Section 3.14.3** for the analysis of impacts related to climate change. GHG emissions were calculated using CalEEMod. The social cost of GHG emissions was estimated using cost estimates provided by the Interagency Working Group on Social Cost of Greenhouse Gases (IWG, 2021), consistent with CEQ Guidance on Consideration of Greenhouse Gas Emissions and Climate Change (2023).

Federal Class I Areas

If a project alternative emits greater than the prevention of significant deterioration (PSD) threshold of 250 tons per year (tpy) of any one CAP from stationary sources during construction or operation, then a best available control technology analysis would be conducted. Point Reyes National Seashore is within the preconstruction review distance of the Project Site and analysis would be required.

Tribal New Source Review

New Source Review (NSR) is a preconstruction permitting program for stationary sources under the Clean Air Act. The Tribe would be required to apply for coverage under the NSR program for the operation of the proposed diesel backup generators.

3.4.3.3 Alternative A – Proposed Project

Construction Emissions

Construction of Alternative A would result in emissions of PM_{10}, NO_X, SO_X, CO, VOCs, GHGs, and HAPs (primarily in the form of DPM) from the use of construction equipment, vineyard removal and hauling, grading activities, and fill soil importation. Construction is anticipated to begin in 2026 and last approximately 18 months. Construction is assumed to occur for eight hours a day, five days a week. Neighboring areas could be impacted by dust generated during construction and potentially other construction-related emissions if not properly managed. Effects on air quality during construction were evaluated by estimating the quantity of CAPs that would be emitted over the duration of the construction period for each year. The construction emission totals for Alternative A are shown in **Table 3.4-3** (see **Appendix F-1** model input and output files).

Table 3.4-3: Construction Emissions of Criteria Pollutants (tons per year) – Alternative A

Construction Year	NOx	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$
2026	2.14	0.27	2.41	0.01	0.78	0.31
2027	4.51	4.96	6.51	0.02	1.56	0.50
Maximum Year Emissions	**4.51**	**4.96**	**6.51**	**0.02**	**1.56**	**0.5**
De minimis Level	100	100	100	N/A	N/A	N/A
Exceed Level?	No	No	No	No	No	No

Source: **Appendix F-1**

Notes: N/A = Not Applicable. *De minimis* levels are not applicable for projects in attainment areas (refer to **Appendix E**)

Emissions estimates assume the implementation of construction BMPs described in **Table 2.1-3.** Implementation of construction BMPs is expected to control the production of fugitive dust (PM_{10} and $PM_{2.5}$) and to reduce emissions of criteria pollutants and DPM. This would reduce the overall quantity of these emissions and dust that could disperse off-site and negatively affect neighboring areas. As shown in **Table 3.4-3**, emissions of individual criteria pollutants from the construction of Alternative A would not exceed applicable de minimis levels; therefore, a conformity determination is not required for these pollutants during construction. Construction of Alternative A would not result in significant adverse effects associated with the regional air quality environment.

Operation Emissions

Buildout and operation of Alternative A would result in the generation of mobile emissions from patron, employee, and delivery vehicles. Alternative A assumes the use of electric boilers and appliances to the greatest extent practicable as described in **Table 2.1-3**; however, to provide a conservative analysis in the event that natural gas is utilized, modeling assumes the generation of stationary-source emissions from combustion of natural gas in stoves, heating units, emergency diesel generators, and other equipment. Estimated mobile-source and stationary-source emissions from operation of Alternative A are provided in **Table 3.4-4**. Emissions estimates assumed the implementation of the BMPs described in **Table 2.1-3**, including the use of energy efficient lighting, recycled water, and clean fuel vehicles. Detailed calculations of vehicle and area emissions are included in **Appendix F-1**.

Table 3.4-4: Operation Emissions of Criteria Pollutants (tons per year) – Alternative A

Source	NOx	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$
Stationary	3.66	0.82	4.49	0.02	0.31	0.31
Total Exempt Emissions	*3.66*	*0.82*	*4.49*	*0.02*	*0.31*	*0.31*
Energy	4.71	0.52	3.96	0.03	0.36	0.36
Area	0.0	3.44	0.02	0.00	0.00	0.00
Mobile	37.46	20.16	255.16	0.63	73.66	20.08
Total Non-Exempt Emissions	**42.17**	**24.12**	**259.14**	**0.66**	**74.02**	**20.44**
De minimis Levels	100	100	100	N/A	N/A	N/A
Exceed Level?	No	No	Yes	No	No	No

Source: **Appendix F-1**

Notes: N/A = Not Applicable. *De minimis* levels are not applicable for projects in attainment areas (refer to **Appendix E**).

The Tribe would be required to apply for coverage under the NSR program for the operation of stationary sources, including the proposed diesel backup generators. Compliance with the NSR program would require emission limitations and monitoring and reporting requirements. As noted above, because stationary source emissions are subject to the NSR permitting program, they are exempt from the conformity determination. The area, energy use, and mobile are not exempt from a conformity determination and are thereby considered the total annual emissions that must be compared to the de minimis thresholds.

As shown in **Table 3.4-4**, emissions of all criteria pollutants except CO are below de minimis levels and therefore are considered to be less than significant. Because CO emissions would exceed the de minimis levels, a Draft General Conformity Determination was prepared (**Appendix F-2**). CO concentrations were modeled to determine whether increased traffic associated with Alternative A would result in CO emissions that could exceed the NAAQS for CO. **Table 3.4-5** summarizes the results of the AERSCREEN dispersion modeling conducted for Alternative A. As shown in **Table 3.4-5**, Alternative A would not cause or contribute to new violations of the standards or increase the frequency or severity of any existing violations of the standards. The Draft General Conformity Determination concludes that approval of the Proposed Action would conform to the SIP and CO Maintenance Plan implemented pursuant to the CAA. Impacts to the regional air quality environment resulting from Alternative A would be less than significant.

Table 3.4-5: Estimated Maximum Carbon Monoxide Concentrations – Alternative A

Averaging Time (hours)	Concentrations (ppm)						
	Shiloh Road/US 101 NB Off-Ramp No Action	Shiloh Road/US 101 NB Off-Ramp with Alternative A	Project Contribution	Background	US 101 Contribution	Maximum Concentration	NAAQS
1	0.6	0.8	0.2	1.2	3.9	5.9	35
8	0.4	0.6	0.2	0.9	2.7	4.2	9

Source: Draft General Conformity Determination (**Appendix F-2**)

Notes: Modeled location is the intersection of Shiloh Road and northbound US 101 off-ramp based on 2040 traffic volumes and 2028 EMFAC emission factors. Highest concentrations for intersection and US 101 are combined to provide maximum concentrations.

Hazardous Air Pollutants

Construction activities would result in short-term emissions of diesel particulate matter (DPM) from off-road heavy-duty diesel equipment exhaust and diesel-fueled haul trucks. Health risks associated with exposure of sensitive receptors to HAP emissions are typically based on the concentration of a substance or substances in the environment (dose) and the duration of exposure to the substance(s). Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximally exposed individual.

Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the California Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to DPM emissions, should be based on a 70-year exposure period. Project construction, however, would occur over a much shorter period of time, approximately 18 months, with most emissions occurring during grading, which is estimated to occur over 40 work-days. During this period, the use of off-road heavy-duty diesel equipment would be limited to a typical 8-hour workday, and DPM emissions would disperse rapidly with distance from the source.

The highest daily emissions of diesel exhaust $PM_{2.5}$ during construction would be approximately 12.30 lb./day during the grading phase for Alternative A (**Appendix F-1**). Emissions of $PM_{2.5}$ (which includes equipment emissions of DPM) would be well below the 54 lbs./day significance level threshold set by the BAAQMD (BAAQMD, 2017b). These significance level thresholds were developed with the purpose of attaining the national and State standards, which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. Accordingly, considering the relatively low level of diesel $PM_{2.5}$ emissions that would be generated by construction, the short duration of heavy-duty diesel equipment uses, and the highly dispersive properties of diesel exhaust, project-related HAP emission impacts during construction would be less than significant.

Operational Phase

Operation of Alternative A would generate emissions of $PM_{2.5}$ and diesel exhaust from mobile and stationary sources. Mobile sources include diesel-powered buses, delivery trucks and other vehicles accessing the Project Site. Stationary sources include the periodic testing and use of emergency generators.

The analysis of operational $PM_{2.5}$ and DPM is based on the BAAQMD's Recommended Methods for Screening and Modeling Local Risks and Hazards (BAAQMD, 2022d). To assess the potential for health impacts from roadway-generated $PM_{2.5}$ and DPM, the BAAQMD modeled emissions and created roadway screening maps estimating cancer risk, chronic hazard index and $PM_{2.5}$ concentrations from roadways (BAAQMD, 2022e). The maps for the project area are provided in **Appendix F-1,** Figures F-1.1, F1.2, and 1.3. As shown in Figure F-1.1**,** the estimated cancer risk in the project area from background sources is generally well below BAAQMD's cumulative threshold, which is an increased cancer risk of greater than 100 cases in a million (from all sources). The only area with elevated cancer risk (over 80 cases in a million) is along Highway 101 between Shiloh Road and Airport Boulevard. This portion of Highway 101 has approximately 94,500 average daily trips (2017 data, Caltrans 2024). Estimated daily trips from Alternative A range from 11,213 on weekdays to 15,779 on Saturdays (**Appendix I**). Based on Saturday daily trip generation and estimated trip distribution, Alternative A would contribute to up to 7,100 daily trips to this highway segment. This would represent an approximate increase of 7.5% over 2017 traffic volumes. The small increase in daily trips along this highway segment would not significantly increase the estimated

cancer risk along this segment. Additionally, there are no sensitive receptors residing on the highway. The nearest homes are set back at least 80 feet from the highway, and have lower estimated cancer risk. Project traffic would increase emissions along Shiloh Road, Old Redwood Highway and other local roads, but the existing estimated cancer risk is well below BAAQMD's cumulative threshold and is expected to remain well below the threshold based on the amount of increased traffic. Existing daily trips on Shiloh Road and Old Redwood Highway at the project site are approximately 9,900 and 10,710 respectively (**Appendix I**). Alternative A would increase traffic on Shiloh Road west of Old Redwood Highway more than Old Redwood Highway or other local roads due to the expected use of Shiloh Road to access the project site from Highway 101. Daily trips on Shiloh Road are estimated to increase by approximately 8,410 on weekdays and 11,834 on Saturdays. While daily trips along this segment would approximately double, because the existing estimated cancer risk is well below BAAQMD's cumulative threshold, the addition of traffic from Alternative A is not expected to increase the overall cancer risk enough to exceed the BAAQMD threshold or result in a significant impact.

As shown in Figure F-1.2 of **Appendix F-1,** the estimated chronic hazard index in the project area is well below the BAAQMD's cumulative threshold, which is an increased noncancer risk of greater than 10.0 Hazard Index (from all sources). The estimated traffic from Alternative A does not have the potential to significantly increase the chronic hazard index within the project area.

As shown in Figure F-1.3 of **Appendix F-1,** the estimated average concentrations of $PM_{2.5}$ are well below the BAAQMD's cumulative threshold, which is an increased concentration of $PM_{2.5}$ above 0.8 ug/m3 (from all local sources), except for along Highway 101 where existing concentrations exceed the threshold. Alternative A would increase traffic along Highway 101 by as much as 7.5% over estimated 2017 traffic volumes. However, there are no sensitive receptors residing on the highway. The nearest homes are set back at least 80 feet from the highway, and have lower estimated $PM_{2.5}$ concentrations, which are below BAAQMD's thresholds. As a result, the additional traffic generated by Alternative A is not expected to significantly increase $PM_{2.5}$ concentrations at sensitive receptors. **Table 2.1-3** has BMPs to further limit $PM_{2.5}$ and DPM emissions by reducing idling of trucks, buses, and passenger vehicles.

CARB has provided stationary diesel engine screening risk assessment tables to estimate health risks from generators and other diesel engines (CARB, 2022a). USEPA regulations for standby/emergency generators require Tier 2 diesel engines or higher. Tier 2 standards include limitations on PM emissions, which necessitate emission control devices. The proposed emergency generators consist of four[3] Caterpillar 3516C generator units, providing 1650 kilowatts/2,447 horsepower (HP) each. Tier 2 3516C generator units emit up to 0.05 grams per HP/hour (g/hp-hr). The generators would be located near the loading dock of the facility. Based on an annual non-emergency use of 12 hours and combined emissions of 0.2 g/hp-hr, and a setback distance of approximately 650 feet, the potential cancer risk in a million would not approach the significance threshold of 10 in a million increased cancer risk (**Appendix F-1**).

Based on a review of BAAQMD's Stationary Source Screening Map (BAAQMD, 2022a), there are no significant industrial or other stationary sources in the vicinity of the Project Site that could significantly combine with on-site and mobile emissions. Project-related HAP emission impacts during operation would be less than significant.

[3] Five generators are proposed, but only four would operate on an emergency basis. The fifth would serve as a backup.

Odors

Odor related impacts from Alternative A during construction would primarily originate from the SO_2 generated from heavy construction equipment. SO_2 would be localized onsite when heavy equipment is operated. Odors would disperse rapidly with distance from the source and are not expected to be noticeable off-site. Therefore, odor related effects during construction are considered less-than-significant.

Alternative A would not generate significant odors during operation of the proposed facilities with the exception of the on-site WWTP (further discussed below) and continued operation of vineyards around the perimeter of the Project Site, which would require the occasional application of maintenance chemicals that may result in infrequent and minor odors that would be less than any odors that may be currently occurring from maintenance of the existing vineyards. Common types of facilities known to produce odors, such as landfills, chemical manufacturing, auto body shops and coffee roasters, would not be developed at part of Alternative A. Under Alterative A, the proposed hotel and event center would include kitchens that would occasionally generate odors from cooking and baking. Impacts would be less than significant.

All wastewater generated by Alternative A would be treated at an on-site wastewater treatment plant (WWTP) that would be located in the southeastern corner of the Project Site. Anaerobic decomposition of organic matter containing sulfur and nitrogen accounts for the majority of odor-producing substances found in domestic wastewater. Furthermore, decomposition of domestic wastewater can produce inorganic gases, which commonly include hydrogen sulfide, ammonia, CO_2 and CH_4 (Jeon et al, 2009). These odors would not be detrimental to health, but could cause annoyances or mild symptoms (e.g., headache) if the exposure duration was long and the concentrations high enough. However, the WWTP would be entirely enclosed in buildings and would include odor-reducing equipment to reduce the potential for nuisance odors. With proper operating procedures and maintenance, the WWTP would be generally odor free. While the WWTP has been sited to occur within the southeast corner of the site, which is the furthest away from the proposed residential neighborhoods to the north and west, the nearest sensitive odor receptor to the WWTP includes a single rural residential home located directly adjacent to the southern boundary of the Project Site, across from the proposed general location of the WWTP. As noted in **Table 2.1-3**, the WWTP facilities themselves would be sited within this area to be located as far from sensitive receptors as possible. The on-site WWTP would not cause significant adverse odor impacts given the proposed enclosed design, and relatively low volume of wastewater to be treated. Odor impacts would be less than significant.

Indoor Air Quality

As discussed in **Section 2.1**, the resort facility under Alternative A would be constructed consistent with the CBC and would be entirely smoke-free; there would be no other factors that could adversely impact indoor air quality. Subsequently, patrons and employees would not be exposed to low indoor air quality. This impact is less than significant.

3.4.3.4 Alternative B – Reduced Intensity Alternative

Construction Emissions

The construction activities under Alternative B would be similar to those under Alternative A with a similar timeframe and schedule. Thus, the emission sources and the impacts of Alternative B would be similar to Alternative A, but less due to the reduced amount of development. Effects on air quality during

construction were evaluated by estimating the quantity of CAPs that would be emitted over the duration of the construction period for each year. The construction emission totals for Alternative B are shown in **Table 3.4-6** (see **Appendix F-1** model input and output files).

Table 3.4-6: Construction Emissions of Criteria Pollutants (ton per year) – Alternative B

Construction Year	NOx	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$
2026	2.02	0.25	2.26	0.01	0.71	0.30
2027	4.14	3.80	5.94	0.02	1.33	0.43
Maximum Year Emissions	**4.14**	**3.80**	**5.94**	**0.02**	**1.33**	**0.43**
De minimis Level	100	100	100	N/A	N/A	N/A
Exceed Level?	No	No	No	No	No	No

Source: **Appendix F-1**

Notes: N/A = Not Applicable. *De minimis* levels are not applicable for projects in attainment areas (refer to **Appendix E**).

Emissions estimates of Alternative B assume the implementation of construction BMPs described in **Table 2.1-3** that would reduce fugitive dust and emissions of criteria pollutants and DPM. This would thus reduce impacts to nearby sensitive receptors. As shown in **Table 3.4-6**, emissions of individual criteria pollutants from the construction of Alternative B would be less than Alternative A. Therefore, construction of Alternative B would not result in significant adverse effects associated with the regional air quality environment.

Operation Emissions

Estimated mobile-source and stationary-source emissions from operation of Alternative B are shown in **Table 3.4-7**, and assume the implementation of the BMPs described in **Table 2.1-3** similar to Alternative A. Detailed calculations of vehicle and area emissions are included in **Appendix F-1**. As shown, the estimated emissions of individual criteria pollutants from actual predicted operations of stationary sources would not exceed the Tribal NSR threshold of 2 tpy for VOC and 5 tpy for NOx. While this EIS estimates the actual emissions from stationary sources, including emergency diesel generators, the Tribe will be required by the Clean Air Act to consult with the USEPA to determine whether NSR permits may be needed based on regulatory procedures for hypothetical usage and associated emissions.

Table 3.4-7: Operation Emissions of Criteria Pollutants (tons per year) – Alternative B

Source	NOx	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$
Stationary	2.63	0.59	2.86	0.01	0.20	0.20
Total Exempt Emissions	*2.63*	*0.59*	*2.86*	*0.01*	*0.20*	*0.20*
Energy	3.78	0.42	3.17	0.02	0.29	0.29
Area	0.00	2.58	0.04	0.00	0.00	0.00
Mobile	30.42	16.36	207.20	0.51	59.84	16.31
Total Non-Exempt Emissions	**34.20**	**19.36**	**210.41**	**0.53**	**60.13**	**16.60**
De minimis Levels	100	100	100	N/A	N/A	N/A
Exceed Level?	No	No	Yes	No	No	No

Source: **Appendix F-1**

Notes: N/A = Not Applicable. *De minimis* levels are not applicable for projects in attainment areas (refer to **Appendix E**).

As shown in **Table 3.4-7**, emissions of all criteria pollutants for Alternative B, except CO, are below de minimis levels and therefore are considered to be less than significant. The CO emissions from Alternative B are estimated to exceed the de minimis level. Because CO emissions from Alternative B are estimated to exceed the de minimis level, a Draft General Conformity Determination was prepared (**Appendix F-2**). CO concentrations were modeled to determine whether increased traffic associated with Alternative A would result in CO emissions that could exceed the NAAQS for CO. As shown in **Table 3.4-5,** Alternative A would not cause or contribute to new violations of the standards or increase the frequency or severity of any existing violations of the standards. Under Alternative B, CO emissions would be less than those generated under Alternative A due to the reduced amount of proposed development; therefore, maximum concentrations of CO under Alternative B would not exceed the 1-hour and 8-hour NAAAQS. Based on the analysis in the Draft General Conformity Determination prepared for Alternative A, approval of Alternative B would likewise conform to the SIP and CO Maintenance Plan implemented pursuant to the CAA. Consequently, impacts to the regional air quality environment resulting from Alternative B would be less than significant.

Hazardous Air Pollutants

Construction Phase

HAPs generated under Alternative B would be of a similar nature as Alternative A since the similar construction equipment would be utilized over the same timeframe and schedule, but in reduced quantities with the highest emissions of $PM_{2.5}$ being 12.26 lb./day (**Appendix F-1**). Thus, the potential adverse effects would be less and below the 54 lbs./day significance level threshold set by the BAAQMD (BAAQMD, 2017b). Similar to Alternative A, project-related HAP emissions impacts under Alternative B during construction would be less than significant.

Operational Phase

Operation of Alternative B will generate emissions of diesel exhaust from mobile and stationary sources similar to Alternative A, such as from mobile sources and the use of emergency generators, and similar assessment methodology was utilized to assess the health effects. Alternative B, because of its smaller development size, will emit less $PM_{2.5}$ and diesel exhaust than Alternative A. Therefore, Alternative B will have reduced adverse health implications from $PM_{2.5}$ and DPM concentrations on roadways and from emergency generators. Furthermore, as mentioned for Alternative A, there are no significant industrial or other stationary sources in the vicinity of the Project Site that could significantly combine with on-site and mobile emissions. Project-related HAP emission impacts during operation would be less than significant.

Odors

Odor related impacts from the construction and operation of Alternative B would be similar to, but less than, Alternative A due to the smaller development size and reduced wastewater flows. Therefore, odor-related effects during construction and operation are considered a less-than-significant impact.

Indoor Air Quality

As discussed in **Section 2.2**, the resort facility under Alternative B would be constructed consistent with the CBC and would be entirely smoke-free; there would be no other factors that could adversely impact indoor air quality. Subsequently, patrons and employees would not be exposed to low indoor air quality. This impact is less than significant.

3.4.3.5 Alternative C – Non-Gaming Alternative

Construction Emissions

The construction emission totals for Alternative C are shown in **Table 3.4-8** (see **Appendix F-1** model input and output files). Similar to Alternatives A and B, emissions estimates assume the implementation of construction BMPs described in **Table 2.1-3** that would reduce fugitive dust (PM_{10} and $PM_{2.5}$) and emissions of criteria pollutants and DPM, and thus reduce the overall quantity of these that could disperse off-site and negatively affect neighboring areas. As shown in **Table 3.4-8**, similar to Alternatives A and B, emissions of individual criteria pollutants from the construction of Alternative C would not exceed applicable de minimis levels and not require a conformity determination. Therefore, construction of Alternatives C would not result in significant adverse effects associated with the regional air quality environment.

Table 3.4-8: Construction Emissions of Criteria Pollutants (tons per year) – Alternatives C

Construction Year	NOx	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$
2026	1.50	0.16	1.55	0.00	0.25	0.14
2027	2.44	1.30	3.43	0.01	0.30	0.15
Total Emissions	**3.94**	**1.46**	**4.98**	**0.01**	**0.55**	**0.29**
De minimis Level	100	100	100	N/A	N/A	N/A
Exceed Level?	No	No	No	No	No	No

Source: **Appendix F-1**

Notes: N/A = Not Applicable. *De minimis* levels are not applicable for projects in attainment areas (refer to **Appendix E**).

Operation Emissions

Buildout and operation of Alternative C will have similar mobile and stationary emissions as Alternatives A and B. Estimated mobile-source and stationary-source emissions from operation of Alternative C are provided in **Table 3.4-9**. Emission estimates assumed the implementation of the BMPs described in **Table 2.1-3**, including the use of energy efficient lighting, recycled water, and clean fuel vehicles. Detailed calculations of vehicle and area emissions are included in **Appendix F-1**.

Table 3.4-9: Operation Emissions of Criteria Pollutants – Alternative C

Source	NOx	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$
Stationary	1.69	0.38	1.56	0.01	0.10	0.10
Total Exempt Emissions	*1.69*	*0.38*	*1.56*	*0.01*	*0.10*	*0.10*
Energy	0.42	0.05	0.36	0.00	0.03	0.03
Area	0.00	0.83	0.01	0.00	0.00	0.00
Mobile	3.62	2.12	24.83	0.06	6.90	1.88
Total Non-Exempt Emissions	**4.04**	**3.00**	**25.20**	**0.06**	**6.93**	**1.91**
De minimis Levels	100	100	100	N/A	N/A	N/A
Exceed Level?	No	No	No	No	No	No

Source: **Appendix F-1**

Notes: N/A = Not Applicable. *De minimis* levels are not applicable for projects in attainment areas (refer to **Appendix E**).

Similar to Alternatives A and B, as shown in **Table 3.4-9**, the estimated emissions of individual criteria pollutants from actual predicted operations of stationary sources would not exceed the Tribal NSR threshold of 2 tpy for VOC and 5 tpy for NOx. While this EIS estimates the actual emissions from stationary sources, including emergency diesel generators, the Tribe will be required by the Clean Air Act to consult with the USEPA to determine whether NSR permits may be needed based on regulatory procedures for hypothetical usage and associated emissions.

Unlike Alternatives A and B, emissions of CO from the operation of Alternative C would not exceed *the de minimis* level. Therefore, no conformity determination is required and the impact to the regional air quality environment is considered less than significant.

Hazardous Air Pollutants

Construction Phase

HAPs generated under Alternative C would be of a similar nature as Alternatives A and B, but at a reduced scale due to the smaller development size. The highest emissions of $PM_{2.5}$ during construction would be 12.10 lb./day (**Appendix F-1**). Thus, $PM_{2.5}$ emissions would be below the 54 lbs./day significance level threshold set by the BAAQMD like Alternatives A and B (BAAQMD, 2017b). Similar to Alternatives A and B, project-related HAP emissions impacts under Alternative C during construction would be less than significant.

Operation Phase

Operation of Alternative C would generate emissions of diesel exhaust from mobile and stationary sources similar to Alternatives A and B, for which similar assessment methodology was utilized to assess the health effects. Alternative C would emit less $PM_{2.5}$ and diesel exhaust in total than Alternatives A or B due to being smaller in scale. Therefore, Alternative C will have reduced adverse health implications from $PM_{2.5}$ and DPM concentrations on roadways and from emergency generators. Furthermore, as mentioned for Alternatives A and B, there are no significant industrial or other stationary sources in the vicinity of the Project Site that could significantly combine with on-site and mobile emissions. Project-related HAP emission impacts during operation would be less than significant.

Odor

The odor impacts from the operation of Alternative C would be similar as Alternatives A and B during construction and operation, but on a smaller scale due to the smaller development size. Similar to Alternatives A and B, Alternative C will incorporate BMPs from **Table 2.1-3** to reduce the potential odor impacts from the on-site WWTP. However, Alternative C includes an additional component that could produce odors that is not present in Alternatives A and B: the wine production activities at the on-site winery. Wine production at the winery would rarely produce odors in sufficient enough quantities or frequently enough to be noticeable by on-site patrons or employees or disperse to the surrounding area. Activities that could produce odors are improperly managed pomace that has developed odor-producing mold (e.g., *Candida mycoderma*) (Ageyeva et al., 2021), and the fermentation of wine can sometimes produce small quantities of hydrogen sulfide that would only be noticeable to those in the immediate vicinity of the wine barrels/containers while uncovered. The pomace would be managed properly as to not develop mold as a component of the specific waste management plan development for Alternative C. The BMP specifying the creation of this waste management plan can be seen in **Table 2.1-3.** Therefore, the impacts related to odor from the WWTP and winery would be less than significant.

Indoor Air Quality

As discussed in **Section 2.3**, Alternative C would be constructed consistent with the CBC and would be entirely smoke-free; there would be no other factors that could adversely impact indoor air quality. Subsequently, patrons and employees would not be exposed to low indoor air quality. This impact is less than significant.

3.4.3.6 Alternative D – No Action Alternative

Under the No Action Alternative, the Project Site would remain undeveloped and none of the construction or operational air quality impacts identified for the development alternatives would occur.

3.5 BIOLOGICAL RESOURCES

3.5.1 Regulatory Setting

The regulatory setting concerning biological resources is summarized in **Table 3.5-1**, and additional information on the regulatory setting can be found in **Appendix E**.

Table 3.5-1: Regulatory Policies and Plans Related to Biological Resources

Regulation	Description
Federal	
Federal Endangered Species Act (FESA)	▪ Protects federally listed wildlife and their habitat from take (as defined by the FESA "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct"). ▪ Requires consultation under Section 7 of the FESA for federal agencies and tribes if take of a listed species is necessary to complete an otherwise lawful activity. ▪ Considers habitat loss an impact to the species. ▪ Defines critical habitat as specific geographic areas within a listed species range that contain features considered essential for the conservation of the listed species.
Magnuson Stevens Act and Sustainable Fisheries Act	▪ Governs marine fisheries management in U.S. federal waters. ▪ Establishes requirements for fishery management councils to identify and describe Essential Fish Habitat (EFH) and Habitat Areas of Particular Concern to protect, conserve, and enhance habitat for the benefit of fisheries. ▪ Defines EFH as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. ▪ Establishes a federal EFH consultation process that advises federal agencies to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH.
Migratory Bird Treaty Act (MBTA)	▪ Protects migratory birds and requires project-related disturbances to be reduced or eliminated during the nesting season (generally February 1 through August 30).

Regulation	Description
	▪ U.S. Fish and Wildlife Service (USFWS) Birds of Conservation Concern includes species protected under MBTA that without additional conservation action are likely to become candidates for listing under FESA.
Bald and Golden Eagle Protection Act	▪ Prohibits take, possession, and commerce of bald and golden eagles and associated parts, feathers, nests, or eggs with limited exceptions.
Clean Water Act (Sections 404 and 401)	▪ Defines Wetlands and Waters of the United States subject to jurisdiction of the U.S. Army Corps of Engineers (USACE) and/or the State. ▪ Guides the permitting and mitigation of filling or dredging of Waters of the U.S. under the authority of Section 404 of the CWA by USACE or the USEPA.
State	
California Endangered Species Act (CESA)	▪ Provisions protect species of wildlife designated by the California Fish and Game Commission as endangered, threatened, or candidate species and their habitat from take.
California Fish and Game Code	▪ Prohibits take of a species listed under the CESA or otherwise special status. ▪ Allows the California Department of Fish and Wildlife (CDFW) to issue an incidental take permit for a State-listed species if specific criteria outlined in Title 14 California Code of Regulations (CCR) § 783.4(a), (b) and CDFW Code Section 2081(b) are met.
Native Plant Protection Act of 1977	▪ Administered by the CDFW. ▪ Designates special-status plant species and provides protection measures for identified populations.
Local	
Sonoma County General Plan	▪ Identifies objectives and policies regarding biotic resources, including biotic habitat areas (e.g., special status species habitat, marshes and wetlands, and sensitive natural communities), riparian corridors, and marine fishery and harbor resources.
Sonoma County Zoning Ordinance	▪ Identifies protections and designations for agricultural and resource zones, including protections for lands needed for watershed, fish and wildlife habitat, and biotic resources.

3.5.2 Environmental Setting

This section summarizes findings from the following technical studies which are included in **Appendix G**:

- A Biological Assessment (BA) prepared to facilitate consultation with the U.S. Fish and Wildlife Service (USFWS) pursuant to the Section 7 of the federal Endangered Species Act (FESA) (**Appendix G-1**).
- A Biological Assessment (BA) and Essential Fish Habitat (EFH) Assessment for the National Oceanic and Atmospheric Administration, Fisheries Service (NOAA Fisheries) addressing federally listed

anadromous fish, Critical Habitat designated by NOAA Fisheries, and EFH protected by the Magnuson-Stevens Fisheries Conservation Act (**Appendix G-2**).

- A Technical Memorandum addressing the potential for species protected under California State law to be present on the Project Site (**Appendix G-3**).
- An Aquatic Resource Delineation (ARD) Report which presents the results of the delineation of potential jurisdictional wetlands and waters of the United States (**Appendix G-4**). The ARD was submitted to USACE in April 2022 as part of a request for USACE preliminary Jurisdictional Determination.
- A Jurisdictional Determination Technical Memorandum (**Appendix G-6**) was prepared following a USACE field verification site visit in October 27, 2023. The memorandum includes a revised ARD map, which will be used for permitting purposes at a future date.

Methodology

Preliminary Research and Data Gathering

The following information was utilized in determining the environmental setting of the Project Site:

- USFWS Information for Planning and Conservation database and National Wetlands Inventory (NWI)
- Calfish website
- NOAA Fisheries website
- CDFW California Natural Diversity Database (CNDDB) and RareFind 5
- California Native Plant Society's (CNPS) database
- USGS topographic maps, geologic data, and National Hydrography Dataset (NHD)
- NRCS Web Soil Survey and hydric soils lists

Site Assessment

Surveys of the Project Site for the BA, BA/EFH Assessment, CESA Technical Memo, and ARD were conducted by Sequoia Ecological Consulting (Sequoia) biologists on February 23 and 24, 2022. The surveys involved searching all habitats on the site and recording all plant and wildlife species observed. Sequoia cross-referenced the habitats occurring on the Project Site with the habitat requirements of regional special-status species to determine if the proposed development could directly or indirectly impact these species. Any special-status species or suitable habitat was documented. (**Appendix G-1**). The BA/EFH Assessment survey involved assessing habitat within Pruitt Creek on the Project Site and a visual survey for federally listed fish species. The habitat assessment was guided by the habitat requirements defined by the EFH and the habitat features known to be used by the listed Pacific salmonids expected to occur on the Project Site (**Appendix G-2**). The survey for State-listed species involved searching all habitats on the site and recording all plant and animal species observed (**Appendix G-3**). The ARD survey was conducted according to the USACE Wetlands Delineation Manual (USACE, 1987) in conjunction with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE, 2008) and the State Water Resources Control Board's State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (2019). The Project Site was field checked for indicators of hydrophytic vegetation, wetland hydrology, and hydric soils. During the aquatic resource delineation, six sample points (three pairs) were taken on the Project Site and recorded on USACE data forms (**Appendix G-4**). The ARD was submitted to USACE and a field verification was conducted with Sequoia, Acorn, and USACE on October 27, 2023 (**Appendix G-6**).

Terrestrial Habitat Types

Terrestrial habitat types identified during the field surveys are described in Section 5.2 of **Appendix G-1**, Section 3.2 of **Appendix G-3**, and Section 3.3 of **Appendix G-4** and summarized below. Figure 3 of **Appendix G-1** shows the land cover types within the Project Site. Figure 7 of **Appendix G-3** shows the habitat types within the Project Site. A list of plant species observed on the Project Site is provided in Table 3 of **Appendix G-3**.

Vineyards

The Project Site is predominately an active vineyard with ruderal (weedy) vegetation growing in between the grape rows. Vineyard infrastructure is also present including dirt roads, piping, propane tanks, a wash station, and electrical power poles. While the grape rows themselves are weeded and maintained, ruderal and annual vegetation grows between rows and around the vineyard perimeter; ruderal species are adapted to endure intense and/or long-term disturbance. Ruderal species observed within the Project Site include non-native annual grasses such as slender wild oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), and soft chess (*Bromus hordeaceous*), as well as stinking chamomile (*Anthemis cotula*), English plantain (*Plantago lanceolata*), California burclover (*Medicago polymorpha*), common vetch (*Vicia sativa*), and filaree species (*Erodium botrys, E. cicutarium*). This habitat type occupies approximately 59.3 acres of the Project Site.

Ornamental Landscaping

Landscaped vegetation consisting of ornamental trees and shrubs surround the private residence and other structures on the Project Site. There are olive trees and a variety of fruit trees on the north side of the private residence. Ruderal species occur between the landscape and orchard plantings. Large trees (primarily valley oaks [*Quercus lobata*]) line the property boundary. This habitat type occupies approximately 6.9 acres of the Project Site.

Riparian Corridor

The extent of the riparian corridor along Pruitt Creek is shown on **Figure 3.3-2** (see "Riparian Dripline"). Valley oaks dominate the riparian corridor with some smaller eucalyptus (*Eucalyptus* sp.) trees also present. Understory vegetation is composed of both native and non-native species of grasses and shrubs. The understory communities observed had distinct segments heavily dominated by native species alternating with areas dominated by non-native species. Some native species observed include California buckeye (*Aesculus californica*), California bay laurel (*Umbellularia californica*), willow (*Salix* sp.), poison oak (*Toxicodendron diversilobum*), valley oak, and coast live oak (*Quercus agrifolia*). Non-native species observed include Himalayan blackberry (*Rubus armeniacus*), eucalyptus, and black mustard (*Brassica nigra*), among others. There is a narrow buffer of non-native annual grassland between the riparian corridor and the vineyards. This Riparian Corridor has the potential to serve as a wildlife corridor to species in the area. This habitat type occupies approximately 5.2 acres of the Project Site.

Aquatic Resources

The following is a summary of the three types of aquatic resources that were identified in the ARD Report (**Appendix G-4**) and supplemental memorandum (**Appendix G-6**), as well as the potential for these resources to be found jurisdictional by USACE. The final determination about the location and extent of wetlands and other waters on the Project Site and their regulatory jurisdiction would ultimately be determined by USACE. A map showing the location of the aquatic resources is provided as **Figure 3.3-2**.

Photographs of representative aquatic resources and delineation sample points are included in Appendix C of **Appendix G-4**. A list of plant species observed on the Project Site, and their wetland indicator status, is included in Appendix D of **Appendix G-4**.

Intermittent Drainage (Pruitt Creek)

Pruitt Creek enters the Project Site from the north via a box culvert underneath East Shiloh Road and flows approximately 1,790 feet to the southwest through the center of the Project Site, where it is bisected by a dirt low flow crossing (**Figure 3.3-2**). The creek encompasses approximately 0.644 acres of the Project Site. Pruitt Creek continues to the southwestern corner of the Project Site where it flows offsite through an adjacent property to the south and into a box culvert below Old Redwood Highway. Once offsite, Pruitt Creek eventually drains into Pool Creek, which flows into Windsor Creek, then into Mark West Creek, and finally into the Russian River. Pruitt Creek is mapped as "Riverine, Intermittent, Streambed, Seasonally Flooded (R4SBC)" and "Palustrine, Forested, Emergent, Persistent, Seasonally Flooded (PFO/EM1C) Freshwater Forested/Shrub Wetland" in the NWI. A detailed description of Pruitt Creek is provided in Section 4.2 of **Appendix G-4**.

Intermittent drainages are natural tributaries to downstream traditional navigable water (either through direct discharge or culvert/storm drain networks) and support a bed, bank, and ordinary high-water mark (OHWM) but lack one or more wetland parameters. The ARD delineated Pruitt Creek as an intermittent drainage because: (1) the channel had pooled and flowing water that appeared to be the result of seasonal and recent rains and not perennial hydrology; (2) the channel had significant OHWM indicators such as natural line impressed on the bank, shelving, changes in soil character, presence of litter and debris, and matted and bent vegetation to indicate seasonal flow; and/or (3) background sources (the NWI, NHD, USGS topographic maps, and other sources) indicated seasonal flow.

Based on current guidance, Pruitt Creek would presumably qualify as "non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (typically three months)" and therefore fall under USACE jurisdiction.

Roadside Drainage Ditches

Roadside drainage ditches are man-made features that catch sheet flow or convey stormwater flows. Two Roadside drainage ditches were delineated on the western edge of the Project Site, along Old Redwood Highway (**Figure 3.3-2**). The northern roadside drainage ditch (RD-01) is approximately 1,305 feet long and the southern roadside drainage ditch (RD-02) is approximately 444 feet long. These ditches appeared to be excavated in uplands (rather than wetlands) and are not replacing any natural drainages or wetlands, nor did they appear to be fed by seeps or hydrologic sources other than direct precipitation and runoff from the roadside and seasonal wetlands. A detailed description of RD-01 and RD-02 is provided in Section 4.3 of **Appendix G-4**. Based on conditions observed in the field and a review of the NWI, NHD, USGS topographic maps, and other sources, the ditches are not natural tributaries to downstream traditionally navigable waters. The roadside drainage ditches were dry during the delineation and support a marginal bed and bank in some areas but are generally swale-like, as well as OHWM, including presence of leaf litter, matted or absent vegetation, and scour. Vegetation found in the ditches were characterized by a mix of hydrophytic species and ruderal and non-native annual species consistent with the adjacent uplands. These features are unlikely to be considered waters of the U.S. as they appear to fall within the category of "Ditches (including roadside ditches) excavated wholly in and draining only uplands and that

do not carry a relatively permanent flow of water," which are specifically excluded from USACE jurisdiction under current guidance.

Seasonal Wetlands

Seasonal wetlands are habitats that dry down in the summer and fall months, but generally in the rainy, winter months become saturated and inundated for several weeks to months. These areas often become dominated by hydrophytic plant species that are reliant and/or dependent on regular saturation or inundation. Four seasonal wetlands were delineated on the western edge of the Project Site, between the perimeter fencing along Old Redwood Highway and the grape arbors (**Figure 3.3-2**). The acreage of each seasonal wetland is provided in **Table 3.5-2** along with an anticipated level of jurisdiction based on in-field verification with USACE (**Appendix G-6**). While cover within these seasonal wetlands was dominated by bare ground and algal matting, the vegetation present consisted almost exclusively of hydrophytic species. Topographical trends and patterns in the land cover/vegetation indicate the seasonal wetlands are hydrologically connected to, if not a direct water source for the RD-02 that flows along Old Redwood Highway into Pruitt Creek. Additionally, evaluation of upland soils indicates that the hydrology of the seasonal wetlands is at least partially influenced by irrigation associated with agricultural activities.

Plants and Wildlife

Plant and wildlife species observed on the Project Site during are listed in Tables 3 and 4 of **Appendix G-3**, respectively. No special-status species were observed on the Project Site.

Table 3.5-2: Seasonal Wetlands

Feature Name	Area (Acres)	Anticipated Status
SW-01	0.002	Jurisdictional
SW-02	0.004	Non-Jurisdictional
SW-03	0.004	Non-Jurisdictional
SW-04	0.009	Non-Jurisdictional
SW-05	0.013	Jurisdictional
SW-06	0.003	Jurisdictional
SW-07	0.003	Jurisdictional
SW-08	0.015	Jurisdictional
SW-09	0.041	Non-Jurisdictional

Source: **Appendix G-6**

Federally Listed Special Status Species

For the purposes of this assessment, "federally listed species" has been defined to include those species that are listed as Endangered or Threatened under FESA or formally proposed candidates for listing. A BA was prepared to assess the potential for federally listed species to be present on the Project Site (**Appendix G-1**). Based on the analysis therein (see Table 1 and Table 2 of **Appendix G-1**), and the subsequent proposal for listing of northwestern pond turtle, the following federally listed species have the potential to occur within the Project Site:

- Fish
  - Chinook salmon (*Oncorhynchus tshawytcha*), California Coastal Evolutionary Significant Unit (CC ESU), Federally Threatened
  - Coho salmon (*Oncorhynchus kisutch*), Central California Coast Evolutionary Significant Unit (CCC ESU), Federally Endangered
  - Steelhead (*Oncorhynchus mykiss irideus*), Central California Coastal Distinct Population Segment (CCC DPS), Federally Threatened
- Amphibians
  - California red-legged frog (CRLF; *Rana daytonii*), Federally Threatened
- Reptiles
  - Northwestern pond turtle (NWPT; Actinemys marmorata), Proposed Federally Threatened

See Section 5.0 of **Appendix G-2** for a detailed discussion of the status of federally listed fish species with the potential to occur on the Project Site. See Section 6.2.1 of **Appendix G-1** for a discussion of habitat requirements for CRLF.

NWPT, as subspecies of the western pond turtle, is currently federally proposed for listing as threatened and is found from sea level up to 4,700 feet amsl. The species has been on a decline largely due to habitat destruction and competition with invasive species such as red-eared slider (*Trachemys scripta elegans*), painted turtle (*Chrysemys picta*), and predation by American bullfrog (*Rana catesbeiana).* NWPT inhabits a variety of aquatic habitats provided there is permanent, year-round water, aquatic vegetation, adequate basking sites consisting of rocks, vegetation mats, logs, debris, or mud banks, and suitable upland habitat for egg laying with high sun exposure, abundant vegetation, and either rocky or muddy bottoms in woodlands and grasslands. NWPT breeds in early spring and predominantly nests in moist soil. Females in the Bay Area were found to prefer to lay their eggs in sunny areas with grass about a foot and a half high covering about 85% of the ground (California Herps, 2024). In cases of colder temperatures, NWPT hibernate in underwater mud. NWPT are primarily active during the day, although twilight and nighttime activity have been rarely observed. The home range size for males averages 2.5 acres, with female and juvenile home ranges being much smaller (Natomas Basin Conservancy, 2024). Females may travel up to 330 feet in the spring to find nest sites. The drying out of aquatic habitat may also result in overland movement.

State-Listed Special Status Species

For the purposes of this assessment, “State-listed species” has been defined to include: 1) fish and wildlife species listed as Threatened or Endangered under CESA or formerly proposed candidates for listing; 2) Fully Protected species, as designated by the CDFW; 3) plant species listed as Threatened or Endangered under CESA or formerly proposed candidates for listing; and 4) plant species meeting the definition of ‘Rare’ or ‘Endangered’ under California Environmental Quality Act Guidelines 14 CCR § 15125 (c) and/or 14 CCR § 15380, including plants listed on CNPS Lists 1A (presumed extinct in California), 1B (rare, threatened, or endangered in California and elsewhere), 2A (presumed extirpated in California, but more common elsewhere), and 2B (rare, threatened, or endangered in California, but more common elsewhere). A Technical Memorandum was prepared to assess the potential for State-listed species to be present on the Project Site (**Appendix G-3**). Based on the analysis therein (see Tables 1 and 2 of **Appendix G-3**), the only State-listed species that has the potential to occur within the Project Site is Coho salmon (*Oncorhynchus kisutch*) CCC ESU which is listed by the State as Endangered. As described above, this species is also listed as federally endangered.

Critical Habitat and Essential Fish Habitat

Critical Habitat in the vicinity of the Project Site is shown on Figure 4 of **Appendix G-2**. The Project Site falls within Critical Habitat for Steelhead CCC DPS. Critical Habitat for coho salmon CCC ESU and Chinook salmon CC ESU is located near the Project Site within the Russian River Basin. Critical Habitat for coho salmon CCC ESU is approximately 0.85 miles northwest of the Project Site. Critical Habitat for Chinook salmon CC ESU is approximately 4.35 miles west of the Project Site.

The Project Site falls within EFH for Pacific salmon, specifically for Chinook and coho salmon within the Russian River watershed (**Appendix G-2**).

Migratory Birds and other Birds of Prey

Migratory birds and other birds of prey, protected under 50 CFR Part 10 of the MBTA, have the potential to nest on and near the Project Site. The nesting season for raptors and other migratory birds occurs generally between February 1 and August 30. The riparian corridor provides high value nesting and foraging habitat for numerous bird species. No active bird nests were noted in the Project Site, but numerous bird activity was observed. **Appendix G-1** identifies the following species listed as USFWS Bird of Conservation Concern, which includes species protected under MBTA that without additional conservation action are likely to become candidates for listing under FESA, as having a potential to occur on the Project Site: Burrowing Owl (*Athene cunicularia*), Oak titmouse (*Baeolophus inornatus),* Lawrence's goldfinch (*Carduelis [+Spinus] lawrencei*), Wrentit (*Chamaea fasciata*), Lewis's woodpecker (*Melanerpes lewis*), Song sparrow (*Melospiza melodia*), Nuttall's woodpecker (*Picoides nuttaillii*), Rufous hummingbird (*Selasphorus rufus*), and Allen's hummingbird (*Selasphorus sasin*). Bald eagles and golden eagles do not have the potential to occur on the Project Site (see Table 2 of **Appendix G-3**).

3.5.3 Impacts

3.5.3.1 Assessment Criteria

Each alternative is analyzed to determine if construction or operation would result in direct significant impacts to biological resources. A project would have a significant adverse impact if the development or operation would result in the loss of sensitive or critical habitat; have a substantial adverse effect on species with special status under the FESA; have a substantial adverse effect on habitat necessary for the future survival of such species, including areas designated as critical habitat by the USFWS and areas designated as EFH by NOAA Fisheries; result in a take of migratory bird species as defined by the MBTA; and/or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means. Consideration is also given to State-listed special-status species, wildlife corridors, and nursery sites.

3.5.3.2 Methodology

The analysis of potential impacts is based on the existing biological setting, which is discussed in **Section 3.5.2**. The evaluation of adverse effects to biological resources is based on a comprehensive examination of the existing Project Site and the anticipated extent of habitats, wetland features, and the presence, absence, or potential occurrence of special status species that would be impacted by the project alternatives. There are no approved habitat conservation plans or natural community conservation plans applicable to the Project Site and thus this issue is not discussed further.

3.5.3.3 Alternative A – Proposed Project

Potential Effects to Terrestrial Habitats and Aquatic Features

Vineyards and Ornamental Landscaping

Development of Alternative A would impact between approximately 42 and 47 acres of vineyards and ornamental landscaping depending on the size and type of seasonal storage selected for treated effluent (see **Section 2.1.4**). Vineyards and ornamental landscaping are not considered critical or sensitive habitats; therefore, no significant impacts would occur to biological resources as a result of a reduction in vineyards and ornamental landscaping. Ornamental trees around the perimeter of the Project Site would be left in place, except for where the new accesses on Old Redwood Highway and Shiloh Road would be installed.

Intermittent Drainage (Pruitt Creek) and Riparian Corridor

As shown in **Figure 2.1-1**, the majority of the development would occur outside of the riparian corridor, with the exception of the enclosed clear-span pedestrian bridge connecting the parking garage with the casino approximately 12 feet above Pruitt Creek and a clear-span vehicle bridge on the southern portion of the Project Site. The two bridges would be constructed outside of the OHWM of Pruitt Creek and, therefore, would have no direct impacts to the intermittent drainage. The pedestrian bridge would not impact the riparian corridor at ground level but may involve cutting tree branches in the canopy. Depending on the final alignment, the clear-span vehicle bridge may require some tree removal and ground clearing within the riparian corridor. Additionally, the pipelines and outfall structures for treated effluent discharge and stormwater drainage (see **Sections 2.1.4** and **2.1.5**) would be developed within approximately 600 square feet of the riparian corridor and bed, bank, and channel of Pruitt Creek. The gravity sewer main from the resort facility to the proposed lift station and WWTP would be installed either beneath Pruitt Creek by horizontal directional drilling or other trenchless construction methods or over Pruitt Creek by attaching it to either the proposed pedestrian or vehicle bridge to avoid impacts to the creek and riparian corridor. As described in **Table 2.1-3**, if directional drilling is used, pipelines would be installed a minimum of 10 feet below the bottom of creek and during the dry season, to prevent hydrofracture (e.g., frac-out).

The removal or alteration of riparian vegetation may lead to a loss of instream cover, loss of temperature regulation capacity, and a reduction of bank stabilization. A loss or reduction of instream cover could result in an increase in predation of salmonids. Removing shade along the riparian corridor may increase the temperature of the water. However, salmonids are anticipated to only occur in Pruitt Creek during the late fall, winter, and early spring when temperature stress is low and canopy cover has less effect on the temperature of the creek, during appropriate flow conditions. Once constructed, the clear-span bridges would provide additional shade to the creek and cover from predation. In addition to providing shade and protection from predation, vegetation plays an important role in stabilizing the banks of a creek, and alteration to this vegetation could increase erosion and change the course of a stream. These effects have the potential to affect individual listed Pacific salmonids by degrading water quality and reducing the habitat suitability of Pruitt Creek. Wildlife movement would not be restricted, as the riparian corridor would remain unimpeded under the bridges and around the outfalls.

As described in **Sections 2.1.4** and **2.1.5**, the outfall structures would be designed to prevent erosion of the natural creek banks and erosion downstream. The outfall pipe outlet would include a duckbill check valve or similar component to protect against settlement/silting inside the pipe or nesting of small animals or rodents. The area around the outfall pipe would be covered with riprap or similar material to prevent

natural erosion around the pipe from occurring and to protect the banks during periods of discharge. The pipe material would be suitable for permanent exposure to sunlight and creek water quality conditions. Effects to water quality and fish habitat are further addressed under the heading of Special-Status Fish Species below.

As described in **Table 2.1-3**, the Tribe would comply with the NPDES General Construction Permit from the USEPA, for construction site runoff during the construction phase in compliance with the CWA. Mitigation measures included in **Section 4** would minimize construction impacts to Pruitt Creek by limiting ground disturbing activities, such as grading, clearing, and excavation to between June 15 and October 15 when Pruitt Creek has little to no water flow, as well as requiring consultation with the USACE and USEPA regarding the need to obtain permits under Sections 404 and 401 of the CWA. Further, mitigation measures included in **Section 4** would minimize potential impacts to the riparian corridor through minimizing the project footprint in those areas, installation of high-visibility fence to prevent incursion in the riparian corridor, and replanting of native trees and shrubs in any temporarily disturbed riparian areas. With adherence to the conditions of applicable permits and implementation of BMPs in **Table 2.1-3** and mitigation measures in **Section 4**, Alternative A would have a less-than-significant effect on Pruitt Creek and the riparian corridor.

Roadside Drainage Ditches and Seasonal Wetlands

Alternative A avoids development in the vicinity of the roadside drainage ditches and seasonal wetlands, with the exception of the proposed access driveway on Old Redwood Highway, which would cross over RD-01 via a culvert. Based on the field verification with USACE, it is not anticipated that the roadside drainage ditch or seasonal wetlands affected by the proposed access driveway would be jurisdictional; however, a final determination must be made via an Approved Jurisdictional Determination. Potential impacts to wetlands and Waters of the U.S. would be reduced to less-than-significant levels with implementation of the mitigation measures in **Section 4**, which include consultation with the USACE and USEPA regarding the need to obtain permits under Section 404 and 401 of the CWA, implementation of a SWPPP, silt fencing, and avoidance buffers. These measures would ensure that aquatic features proposed for avoidance are protected by fencing and that work in or near Pruitt Creek occurs during the dry season to avoid erosion and impacts to special-status species.

Federally Listed or Protected Special-Status Species

Special-Status Fish Species

As described in Section 6.0 of **Appendix G-2**, effects of Alternative A are anticipated to be similar for the three federally listed Pacific salmonids and would come from potential changes in water quality and associated changes in downstream habitat suitability, as the reach of Pruitt Creek is generally poor-quality habitat for all salmonids due to hydrological period and water quality parameters. Salmonids are sensitive to changes in water quality and temperature. They prefer a range from 7.2 to 14.4°C with adequate dissolved oxygen levels and low turbidity. Water quality can adversely affect salmonid growth and survival at all stages of their lifecycle. Water quality along with the hydroperiod can determine migration timing and spawning location, and the success of incubation, rearing and out-migration. Their resilience is highly limited by the quality and availability of their habitat.

The potential for Pacific salmonids to occur and use habitat in this far east portion of the Russian River Basin is temporally and physically limited. There is a low potential that CC ESU Chinook salmon would occur in Pruitt Creek based on their current distribution and their patterns of migration. There is a moderate potential for CCC coho salmon and steelhead to occur in Pruitt Creek; however, large consistent

normal annual rainfall events and associated increases in water flow and decreases in water temperature need to align with their migration event, particularly for steelhead which have a historical presence. Historic records exist (2001-2016) of anadromous adult steelhead occurring regularly within Pruitt Creek upstream of the Project site in years with adequate rainfall, and not during an extensive drought period; however, no evidence of breeding has been observed. Additionally, all higher-order tributaries to the Russian River connected to Pruitt Creek would need to have sufficient flow and provide uninhibited access to Pruitt Creek particularly to the upstream perennial reach adjacent to Faught Road.

As described above, direct impacts to Pruitt Creek and associated riparian corridor from construction of the proposed clear-span bridges and outfalls would be reduced to less than significant with adherence to the conditions of applicable permits and implementation of BMPs in **Table 2.1-3** and mitigation measures in **Section 4**. Impacts to surface water quality from stormwater and treated effluent discharge is discussed in more detail in **Section 3.3**. As stated therein, Alternative A would adhere to the NPDES General Construction Permit during construction and NPDES discharge permit for seasonal discharge of tertiary treated effluent to Pruitt Creek during operation. The limitations in the NPDES discharge permits would be developed to be protective of the beneficial uses of Pruitt Creek and the Russian River in accordance with Basin Plan objectives, including requirements for water quality for a designated cold freshwater habitat and spawning, reproduction, and/or early development.

Given the conditions discussed above, with implementation of mitigation measures in **Section 4**, including the requirement to consult with NOAA Fisheries, Alternative A would have a less-than-significant effect on special-status fish species.

California Red-Legged Frog

The reach of Pruitt Creek within the Project Site does not provide suitable breeding habitat for federally listed CRLF because the creek goes dry in the summer and is not expected to support egg maturation, larval development, and metamorphosis before the stream dries. Pruitt Creek may provide dispersal habitat for CRLF during periods of wet weather. Given the surrounding urban habitat and vineyards, CRLF upland dispersal is unlikely. The Project Site is not within designated critical habitat for this species and there are no recorded CNDDB occurrences of CRLF within 3 miles of the Project Site (**Appendix G-1**).

Although unlikely, if CRLF were to be present at the time of construction of Alternative A, construction-related activities have the potential to cause CRLF mortality, which would be a potentially significant adverse effect. Potential adverse effects to CRLF would be avoided or minimized to less-than-significant levels with implementation of BMPs in **Table 2.1-3** and mitigation measures identified in **Section 4**, which include a preconstruction survey, silt fencing, and worker awareness training. Worker awareness training would ensure that construction workers are aware of the potential for impacts and that workers know proper notification and avoidance procedures. Pre-construction surveys would ensure that any CRLF onsite are identified and, if present, further measures are taken in cooperation with resource agencies to avoid take.

Northwestern Pond Turtle

The reach of Pruitt Creek within the Project Site has a very low potential to support NWPT as the creek goes dry in the summer, is surrounded by vineyard disturbance, and generally lacks ideal basking sites (rocks, vegetation mats, logs, debris, or mud banks). The Project Site does not contain suitable breeding/upland habitat for NWPT as it consists of vineyard and lacks woodlands and grasslands, with the exception that muddy banks along Pruitt Creek may allow for limited hibernation.

Although NWPT are unlikely to occur, if northwestern pond turtle were to be present at the time of construction of Alternative A, construction related activities have the potential to cause northwestern pond turtle mortality, which would be a potentially significant adverse effect. BMPs listed in **Table 2.1-3** include educating on-site workers about potentially occurring special-species, including NWPT, through an environmental awareness program so that proper avoidance of the species can occur in the unlikely event it is observed. Mitigation measures are included in **Section 4** to reduce potential impacts to NWPT through a pre-construction survey along Pruitt Creek, conducting activities within 50 feet of Pruitt Creek during the dry season, and the installation of protective fencing to avoid potential disturbance to the species if identified on-site. Potential adverse effects to NWPT would be avoided or minimized to less-than-significant levels with implementation of the mitigation measures identified in **Section 4**.

Critical Habitat and Essential Fish Habitat

Development and operation of Alternative A may have short term and localized effects on designated Steelhead CCC DPS, Critical Habitat for coho salmon CCC ESU and Chinook Salmon CC ESU downstream of the Project Site, and EFH for Pacific Salmon. As described above, direct impacts to Pruitt Creek and associated riparian corridor from construction of the proposed clear-span bridges and outfalls would be reduced to less-than-significant with adherence to the conditions of applicable permits and implementation of BMPs in **Table 2.1-3** and mitigation measures in **Section 4**. Additionally, water quality in Pruitt Creek has the potential to be impacted by erosion and sedimentation from construction activities, as well as discharge of treated effluent from the on-site WWTP during wet months. This is a potentially significant impact. Impacts to surface water quality from stormwater and treated effluent discharge is discussed in more detail in **Section 3.3**. As stated therein, Alternative A would adhere to the NPDES General Construction Permit during construction and an NPDES discharge permit for seasonal discharge of tertiary treated effluent to Pruitt Creek during operation. The limitations in these discharge permits would be developed to be protective of the beneficial uses of Pruitt Creek and the Russian River in accordance with Basin Plan objectives, including requirements for water quality for a designated cold freshwater habitat and spawning, reproduction, and/or early development. Therefore, with adherence to the conditions of applicable permits and implementation of BMPs in **Table 2.1-3** and mitigation measures in **Section 4**, impacts to designated Critical Habitat and EFH would be reduced to less-than-significant levels. As stated in **Appendix G-2**, the direct and indirect effects of Alternative A would not significantly reduce the available breeding and rearing habitat for Pacific salmonids and would not significantly reduce their likelihood of survival in the wild by reducing their population size, distribution, or reproduction.

Migratory Birds and Other Birds of Prey

The Project Site and vicinity provides potential nesting habitat for migratory birds and other birds of prey. If active nests are present in these areas, tree removal and other construction activities associated with development of Alternative A could adversely affect these species. During construction of Alternative A, actions that cause direct injury or death of a migratory bird, removal of an active nest with eggs or nestling during the breeding season, or any disturbance that results in nest abandonment or forced fledging of nestlings is considered take under the MBTA. BMPs in **Table 2.1-3** include worker awareness training for protected species, including nesting migratory birds, to ensure that construction workers are aware of the potential for impacts and that workers know the proper notification and avoidance procedures. Upon implementation of the mitigation measures identified in **Section 4**, which includes pre-construction surveys, potential adverse effects to nesting birds during construction would be reduced to a less-than-significant level. Pre-construction surveys would ensure that any nesting migratory birds are identified and, if present, buffers are established in cooperation with resource agencies to prevent nest abandonment.

Increased lighting could increase bird collisions with structures and could also cause disorientation effects for avian species. Thus, nighttime lighting from the operation of Alternative A could have a potentially significant effect on both migrating and local bird populations. With the incorporation of design features in **Table 2.1-3**, including orientating exterior lighting so as not to cast significant light or glare into natural areas, potential adverse effects to migratory birds and other birds of prey would be less than significant.

State-Listed Special-Status Species

Potential impacts to CC ESU coho salmon are discussed above under Federally Listed Special-Status Fish Species.

3.5.3.4 Alternative B – Reduced Intensity Alternative

Development of Alternative B would result in similar impacts to Biological Resources as described for Alternative A above; however, the conversion of vineyard and ornamental landscaping would be reduced compared to Alternative A due to the reduced building footprint of Alternative B. As with Alternative A, with adherence to the conditions of applicable permits and implementation of BMPs in **Table 2.1-3** and mitigation measures in **Section 4**, impacts to biological resources under Alternative B would be reduced to less-than-significant levels.

3.5.3.5 Alternative C – Non-Gaming Alternative

Development of Alternative C would result in similar impacts to Biological Resources as described for Alternatives A and B; however, the conversion of vineyard and ornamental landscaping would be reduced compared to Alternatives A and B due to the reduced building footprint of Alternative C and impacts to the riparian corridor would be reduced compared to Alternatives A and B due to the elimination of the clear-span pedestrian and vehicle bridges under Alternative C. As with Alternatives A and B, with adherence to the conditions of applicable permits and implementation of BMPs in **Table 2.1-3** and mitigation measures in **Section 4**, impacts to biological resources under Alternative C would be reduced to less-than-significant levels.

3.5.3.6 Alternative D – No-Action Alternative

Alternative D would not result in any construction on the Project Site and would, therefore, not result in any significant adverse effects to biological resources.

3.6 CULTURAL AND PALEONTOLOGICAL RESOURCES

3.6.1 Regulatory Setting

The cultural resources regulatory setting information is summarized in **Table 3.6-1**, and additional information on the regulatory setting can be found in **Appendix E.**

Table 3.6-1: Regulatory Policies and Plans Related to Cultural and Paleontological Resources

Regulation	Description
Federal	
Section 106 of the National Historic Preservation Act (NHPA)	▪ Federal agencies must identify cultural resources that may be affected by actions involving federal lands, funds, or permitting actions. ▪ Significance of the resources must be evaluated for National Register of Historic Places (NRHP) eligibility. ▪ If an NRHP-eligible resource would be adversely affected, measures to avoid or reduce adverse effects must be taken.
Native American Graves Protection and Repatriation Act	▪ Includes provisions governing the repatriation of Native American remains and cultural items under the control of federal agencies and institutions that receive federal funding ("museums"), as well as the ownership or control of cultural items and human remains discovered on federal or tribal lands.
Archaeological Resources Protection Act	▪ Archaeological resources and sites on public and Indian lands are protected resources.
Paleontological Resources Preservation Act	▪ Paleontological resources on federal lands are protected resources.

3.6.2 Environmental Setting

This section summarizes findings from the following technical studies which are included in confidential **Appendix H**:

- Historic Property Survey Report of the Project Site (**Appendix H-1**).
- Cultural Resources Study of the Project Site (**Appendix H-2**).
- Archaeological Monitoring of Soil Test Trenches (**Appendix H-3**).
- Obsidian Hydration Results (**Appendix H-4**).
- Canine Field Survey (**Appendix H-5**)
- Archaeological Testing of Forensic Dog Locations (**Appendix H-6**)

Prehistoric Overview

Human occupation of the region began long before the end of the Ice Age between 11,000 and 8,000 years ago. Early occupants appear to have had an economy based largely on hunting, with limited exchange, and social structures based on the extended family unit. Later, circa 6,000 years ago, milling technology and an inferred acorn economy were introduced, as evidenced by the presence of mortar and pestles in archaeological sites. This diversification of economy appears to be coeval with the development of sedentism and population growth and expansion. Sociopolitical complexity and status distinctions based on wealth are also observable in the archaeological record, as evidenced by an increased range and distribution of trade goods (e.g., shell beads, obsidian tool stone), which are possible indicators of both status and increasingly complex exchange systems. The locations of major settlements in the area do not

change from 6,000 years before the present (BP) to the time of European arrival. This suggests that a system of permanent territorial boundaries had been established. (**Appendices H-1** and **H-2**)

Around 3,500 BP, rapid population growth in the Clear Lake Basin to the northeast along with environmental factors, force many Clear Lake Pomo to move west into the less populated Russian River drainage. Clear Lake people married into the existing Yukian speaking tribes in this area and took with them their language, culture, and technology. Eventually the Clear Lake Pomo culture spread throughout Sonoma and Mendocino Counties. (**Appendix H-1**)

Ethnographic Overview

At the time of Euro-American settlement, people inhabiting this area spoke Southern Pomo, one of seven Pomoan languages belonging to the Hokan language stock. The Southern Pomo's aboriginal territory falls within present-day Sonoma County. To the north, it reaches the divide between Rock Pile Creek and the Gualala River, and to the south, it extends to near the Town of Cotati. The eastern boundary primarily runs along the western flanks of Sonoma Mountain until it reaches Healdsburg, where it crosses to the west side of the Russian River. Within the larger area that constitutes the Southern Pomo homeland, there were bands or tribelets that occupied distinct areas. Primary village sites of the Southern Pomo were occupied continually, while temporary sites were visited to procure resources that were especially abundant or available only during certain seasons. Sites often were situated near freshwater sources and in ecotones where plant life and animal life were diverse and abundant. (**Appendix H-2**)

European diseases spread through the area before the 1800's through tribal interaction with the first Europeans to arrive in the Americas. By the mid 1800's, Spanish missions brought another wave of disease and forced resettlement. When Mexico gained independence from Spain, the new Mexican landowners regularly raided Native American villages to secure slaves to work on their ranchos. Early California Statehood further impacted the tribal communities by issuing land patents to tribal territories and allowing population settlement that further cut off access to traditional resource areas. (**Appendix H-1**).

Historical Overview

Historically, the study area is outside of the original Windsor town limits. Windsor began when in 1855 Hiram Lewis, mail carrier for Sonoma County, constructed a house at Windsor and named it such. Within five years, several businesses were established at Windsor, including multiple stores, hotels, and saloons, and a blacksmith. In the 1870s when the railroad was constructed, it was built west of Windsor. Windsor was part of unincorporated Sonoma County until 1992. (**Appendix H-2**)

In 1867, the project area was patented to German Buchanan who served as a Private in Colonel Markham's Company, Utah Militia during the Utah Indian Disturbance. Mr. Buchanan assigned the property to M.W. Barney. Mr. Barney is listed in the Russian River Township as having moved from Illinois to California in 1852. He moved to Sonoma County in 1860 and is listed as a farmer on 80 acres. There is no mention of Mr. Barney in the other published histories of Sonoma County. The 1920 map shows part of the project area fenced and what may be a house along the fence line fronting the old Redwood Highway. The 1940 map shows a single structure on the project area fronting the Old Redwood Highway. A 1993 satellite image shows a small portion of the project area in orchard as well as the house fronting the Old Redwood Highway. The 2004 satellite image shows the full vineyard development currently operating on the Project Site, the 1994 house and orchard are gone, and a new single-family residence has been built along the

eastern property boundary. Sometime before 2003, the 1994 house was demolished and the concrete foundations pushed to the bank of Pruitt Creek. (**Appendix H-1**)

Native American Consultation

The California Native American Heritage Commission (NAHC) conducted a review of the Sacred Lands File and found that there are records of sacred lands on or in the vicinity of the Area of Potential Effects (APE). The NAHC also supplied a list of Native American individuals who may have information regarding the sacred lands or other cultural resources in the vicinity of the APE. Letters were sent requesting information regarding the presence of cultural resources on or in the immediate vicinity of the APE. To date, only the Federated Indians of Graton Rancheria have responded to the request for information. In its letter, the Federated Indians of Graton Rancheria indicated that the APE is within the ancestral territory of the Southern Pomo people, which today includes a number of federally recognized tribes, including Graton Rancheria. Additionally, its initial review indicates that Southern Pomo ancestors were likely on the Project Site and that religious and culturally significant tribal cultural resources are present. The Federated Indians of Graton Rancheria, Kashia Band of Pomo Indians of the Stewarts Point Rancheria, and Dry Creek Rancheria Band of Pomo Indians have requested to be formerly consulted by the BIA under Section 106 of the NHPA. Copies of relevant correspondence are provided in **Appendix H-7**.

Paleontological Resources

Paleontological resources are the fossilized remains of plants and animals, including vertebrates, invertebrates, and fossils of microscopic plants and animals (microfossils). The age and abundance of fossils depends on the location, topographic setting, and particular geologic formation in which they are found. The central and southwestern portions of the Project Site are mapped as being underlain by Holocene to Latest Pleistocene aged basin deposits, which generally consist of poorly drained, clay-rich soils. The northern and eastern limits of the Project Site are mapped as being underlain by Holocene aged alluvial fan deposits, which generally consist of varying amounts of sand, gravel, silt, and clay, and are moderately- to poorly-sorted and bedded. Historical stream channel deposits are mapped along the on-site Pruitt Creek area and are described as “loose, unconsolidated, poorly- to well sorted sand, gravel, and cobbles, with minor silt and clay” (see Appendix D of **Appendix D-1**). The University of California Museum of Paleontology Database was accessed and reviewed for any paleontological resources within the same formation as the Project Site. According to the database, 554 paleontological resources have been identified within Sonoma County; however, only 26 of these resources date to the Holocene and Pleistocene epoch (UCMP, 2022).

3.6.3 Impact

3.6.3.1 Assessment Criteria

A significant effect would occur if the implementation of a project alternative resulted in physical destruction, alteration, removal, neglect, or change in characteristics or reduction of integrity of historic features of a cultural resource. A significant effect to paleontological resources would occur if a project alternative resulted in damage or destruction of fossils that provide significant nonrenewable taphonomic, taxonomic, phylogenic, ecologic, or stratigraphic information.

3.6.3.2 Methodology

Background research and archaeological surveys of the Project Site were independently conducted by Archaeological Research and Tom Origer & Associates in February 2022 and May 2022, respectively, to identify and evaluate any prehistoric and historic-period resources within or adjacent to the Project Site that may be impacted by the project alternatives. Additionally, archaeological monitoring was done during excavation for percolation testing on the Project Site in April 2022. Reports documenting the results of these efforts are included in **Appendix H**.

Area of Potential Effects

Construction, staging, and material stockpiles would occur within the Project Site, and any access improvements would occur within previously disturbed soils. The footprint of these activities constitutes the APE.

Records and Literature Search

A review of all recorded historic resources and resource inventory reports was conducted at the Northwest Information Center of the California Historical Resources Inventory System, which found that no portions of the APE had been previously subjected to surveys and no cultural resources or historic properties were recorded on the Project Site (**Appendices H-1** and **H-2**). Cultural resource studies within one mile of the project APE had discovered 12 cultural sites outside the APE (**Appendix H-1**). The latest listings of the NRHP and California Registry of Historic Resources were also checked with negative results within or adjacent to the APE (**Appendix H-1**). There are no ethnographic villages or camp sites reported within one mile of the APE (**Appendix H-2**). A review of 19th and 20th-century maps and aerial photos shows a building/residence within the APE in 1933 but not in in 1920 (**Appendix H-2**).

Field Surveys

February 17 – 20, 2022

The APE was surveyed by Archaeological Research between February 17 and 20, 2022. The field work consisted of a complete walking inspection of the entire APE. The inspection was conducted in transect sweeps across the area in intervals spaced 8 to 10 meters apart. Ground visibility within the vineyard areas were excellent due to the cleared ground beneath the vineyard rows; however, some dense grasses, shrubs, and trees obstructed the ground visibility in other portions of the APE. Whenever possible, rodent backdirt piles were carefully examined for evidence of surface and subsurface cultural material. All cut banks, drainage channels and tree root balls were examined for buried cultural material. All rock outcrops were examined for rock art and technological use. In some areas a trowel was used to clear to the mineral soil. The field inspection discovered a single historic cultural site consisting of a moderate scatter of recent and historic glass, metal, and ceramics. It is anticipated that this scatter of historic materials represents the remains of the residence seen on historic maps. The field inspection also discovered widely scattered isolated prehistoric materials including one broken bowl mortar, obsidian and chert flakes, one obsidian point fragment, and one chert core; as well as widely scattered isolated historic materials, including brick, metal, and glass. Archaeological Research recommended that neither the historic home site nor the isolated artifacts met the criteria for inclusion on the NRHP. (**Appendix H-1**).

April 11, 2022

On April 11, 2022, Archaeological Research conducted archaeological monitoring during the excavation of four test pits within the APE that were to be used for soil percolation testing and then subsequently refilled. Also present during the excavation was a Koi Tribal Monitor. During the trench excavation process, the Archaeological Research observed the ground and backdirt piles, as well as examined the trench sidewalls to detect evidence of buried soil surfaces and cultural materials. The monitoring discovered areas of buried stream gravels and clay layers that are likely attributable to over-bank flood deposits and meander channels created by Pruitt Creek. The only evidence of cultural use found during the excavation was a single horseshoe that was discovered approximately 20 centimeters bgs in one of the test pits. Archaeological Research recommended that the horseshoe does not meet the criteria for inclusion on the NRHP. (**Appendix H-3**)

May 3, 2022

The APE was surveyed by Tom Origer & Associates on May 3, 2022. Surface examination consisted of walking in approximately 12-meter transects (every 4 to 5 vineyard rows). Hoes were used to clear grasses and forbs as needed; however, every other vineyard row was disced so that ground visibility was excellent there; although around the existing buildings the ground surface was obscured by asphalt, gravel, landscaping, and the buildings. A four-inch diameter hand-auger was used at four locations along the creek, two on each side of the creek. Two bifacial tool fragments, one chert and one obsidian, were found during the survey, as well as approximately two dozen pieces of obsidian. The obsidian pieces consisted of both whole and broken ("modified") pieces. It was determined to be possible that some of the "modified" obsidian pieces were the result agricultural activities (e.g., discing) while others may have been from actual knapping to create chipped-stone tools such as knives and projectile tips. Tom Origer & Associates recommended that the existing residence on the eastern portion of the APE does not meet the criteria for inclusion on the NRHP and that, although some obsidian pieces could date to prehistoric times, they were widely scattered and do not meet the criteria for classification as an archaeological site. (**Appendix H-2**)

January 23 – 24, 2024

In response to requests the BIA received during Native American Consultation conducted under Section 106 of the NHPA, the development area for the Proposed Project was surveyed by the Institute for Canine Forensics (ICF) on January 23 and 24, 2024. ICF specializes in training, certifying, and providing Historic Human Remains Detection (HHRD) dog teams. HHRD dogs have unique and specialized training in locating historic and prehistoric human remains and are specifically trained to give an "alert" when they detect the scent of human remains. The alert is at the strongest source of the scent they have located. Each alert is given an interpretation number, 1-3, which are described in **Table 3.6-2**. ICF identified five areas within the development area for the Proposed Project where there was interpretation number 3 alert. No alerts within the development area qualified as interpretation number 1 or 2. Based on this and other research, ICF believes the remains may be severely fragmented, grave soil, and/or located in a different area than the accessible scent; this may mean that finding visible identifiable remains may not be possible. Additionally, ICF reported scent areas and interpretation number 3 alerts outside of the development area, along Pruitt Creek and a segment of Old Redwood Highway. (**Appendix H-5**)

Table 3.6-2: Canine Survey Alert Interpretations

Alert	Description
1	**Possible Intact Burial**: To ICF's knowledge the ground has been undisturbed. The dog is strongly committed to a single location. Based on this, ICF believes the burial is most likely intact and may be historic or shallow.
2	**Compromised Burial**: Some ground disturbance may have occurred to the area, either naturally or man-made. The dog is committed to the location, but it may not be as strong of an alert as an intact burial. Based on this and other research, ICF believe the remains may be an older burial, cremains, reinterned or partial burial, deep, and/or in dense soil.
3	**Scattered or Dissipated Remains**: This category contains several possible conditions: ▪ The ground has been greatly disturbed, either naturally or man-made. Most common reasons for disturbed burials are construction or farming, especially plowing. Older burials can become so degraded that the remaining bones are small fragments or only grave soil remains. When a body has decomposed in the ground the "grave soil" contains the scent that the dogs recognize as human remains. ▪ Included in this category is the conduit effect where scent travels along underground conduits. Items like pipes, cables, tree roots, utility boxes and poles and/or rodent holes passing through remains can act as a channel for scent, bringing it to the surface. An alert on this sort of item does not necessarily mean there are human remains at that location. ▪ In some cases, the dog cannot access the exact location of the source. Or the level of scent available to the dog may be below their target threshold (scent strong enough to elicit an alert.) The handler observes the dog is clearly working an area of the target odor and is searching for stronger scent. The dog indicates there is scent, but their reaction to this category varies from having a hard time pinpointing an exact location, to giving several alerts in close proximity, or not alerting. Based on this and other research, the remains may be severely fragmented, grave soil, and/or located in a different area than the accessible scent. This may mean that finding visible identifiable remains may not be possible.

Source: **Appendix H-5**

April 2, 2024

On April 2, 2024, archaeological testing was conducted at the five areas where ICF had identified an interpretation number 3 alert, as well as three additional areas where there was a potential for project-related ground disturbance near the riparian corridor within the Project Site. During the testing, the ground and backdirt piles were observed during each pass of the excavation bucket. The excavator was instructed to dig in 2-to-4-inch increments and used a flat plate bucket to avoid the bucket teeth disturbing the subsoil. In addition, careful examination of the trench sidewalls was conducted to detect evidence of buried soil surfaces and cultural materials. The Regional Archaeologist of the BIA monitored the testing, as well as tribal monitors from the Koi Nation of Northern California, Federated Indians of Graton Rancheria, and Dry Creek Band of Pomo Indians. No historic or prehistoric cultural materials, features, or human remains were encountered in 7 of the test trenches. The only cultural item discovered was a single piece of chipped obsidian. Although the single obsidian flake appeared to be the result of stone tool manufacture, this isolated item does not meet the criteria to be considered a "significant" historic resource as defined in the criteria for the NRHP (**Appendix H-6**).

Obsidian Hydration Analysis

Obsidian hydration is the natural process of obsidian decomposition. Moisture from the air gradually seeps into the outer layers of the rock creating a water or hydration rind or rim that is visible under a pectrographic microscope. The width of the hydration rim is a function of how long the obsidian surface has been exposed to the atmosphere. A newly chipped piece of obsidian will have no hydration rim. After ~1,000 years, the hydration rim will be ~1 micron (µm) in thickness. The rate of hydration is affected by the chemical composition of the obsidian as well as heat and pressure over time. The process of measuring hydration involves cutting a thin section out of the edge of the obsidian specimen. The thin-section is polished down to a thin piece and mounted on a slide which is placed under a microscope. A calibrated micrometer eye piece is used to measure the width of the hydration rim. (**Appendix H-4**).

An obsidian hydration analysis was performed on 17 samples that were collected on the Project Site on August 3, 2022. The hydration results indicated that 7 of the samples had hydration rims that were too large to represent human interaction (28 to 124 µm). These rim sizes suggest that the specimens dated to the original volcanic obsidian flow and/or the time period that they were transported downstream by Pruitt Creek. Three samples had hydration rims that were so poor that accurate measurement was not possible (one chunk and 2 possible flakes). Two samples had no measurable hydration (hydration so thin that they were likely chipped by recent agricultural activities). Five of the samples had measurable hydration that could indicate human tool manufacture. The hydration rims of these 5 samples indicated at least 3 different periods of obsidian breakage. One time period was represented by 1.4 and 1.7 µm rims, a second time period was represented by a single 4.9 µm rim, and a third time period was represented by a 6.4 µm rim. The widely dispersed locations of samples that could indicate human tool manufacture and the fact that three completely different time periods of chipping were found support the conclusion that these were isolated pieces and do not represent an intact cultural feature or site. These items were most likely dropped during general resource procurement activities in the area over the millennia. (**Appendix H-4**)

3.6.3.3 Alternative A – Proposed Project

Archeological Resources

As described above, the literature reviews, records searches, and pedestrian surveys conducted within the APE did not identify any resources that met the criteria for inclusion on the NRHP. Therefore, development of Alternative A would not result in direct adverse effects to known historic properties.

The presence of Pruitt Creek within the Project Site, presence of scattered obsidian, and results of the Canine Field Survey and Native American consultation conducted to date indicate there is a potential for subsurface cultural resources to be buried beneath the Project Site with no surface manifestation. As with any project, there is a possibility that unknown subsurface prehistoric or historic archaeological resources, including human remains, could be encountered and impacted during project related construction and excavation activities. This is a potentially significant impact.

Mitigation measures for the protection and treatment of unanticipated discoveries of archaeological resources and/or human remains are presented in **Section 4**, including monitoring of grading activities within 150 feet of Pruitt Creek or within 50 feet of areas identified by the Canine Field Survey as having an “alert” and compliance with Section 106 of the NHPA. Implementation of these mitigation measures would ensure that the inadvertent discovery of historic archaeological resources during construction-

related earth-moving activities is handled in compliance with federal regulations and would reduce potential impacts to cultural resources to a less-than-significant level.

Paleontological Resources

As described above, indicators of paleontological resources within the Project Site are absent, however resources have been identified within similar geologic formations in Sonoma County. Therefore, the potential for such resources to be uncovered is considered to be moderate.

Mitigation measures are presented in **Section 4** for the protection and preservation of discoveries of paleontological resources. Implementation of these mitigation measures would ensure that the inadvertent discovery of prehistoric resources during construction-related earth-moving activities is handled in compliance with federal regulations and would reduce impacts to paleontological resources to a less-than-significant level.

3.6.3.4 Alternative B – Reduced Intensity Alternative

As with Alternative A, development of Alternative B would not result in direct adverse effects to known historic properties. However, Alternative B may adversely affect previously unknown subsurface prehistoric or historic archaeological resources, including human remains or paleontological resources. If archaeological features are discovered, this could be a potentially significant impact. Mitigation measures for the protection and treatment of unanticipated discoveries of archaeological resources, human remains, and/or paleontological resources are presented in **Section 4**, including monitoring of grading activities within 150 feet of Pruitt Creek or within 50 feet of areas identified by the Canine Field Survey as having an "alert" and compliance with Section 106 of the NHPA. Implementation of these mitigation measures would reduce potential impacts to cultural resources and paleontological resources to a less-than-significant level.

3.6.3.5 Alternative C – Non-Gaming Alternative

As with Alternatives A and B, development of Alternative C would not result in direct adverse effects to known historic properties. However, Alternative C may adversely affect previously unknown subsurface prehistoric or historic archaeological resources, including human remains or paleontological resources. If archaeological features are discovered, this could be a potentially significant impact. Mitigation measures for the protection and treatment of unanticipated discoveries of archaeological resources, human remains and/or paleontological resources are presented in **Section 4**, including monitoring of grading activities within 150 feet of Pruitt Creek or within 50 feet of areas identified by the Canine Field Survey as having an "alert" and compliance with Section 106 of the NHPA. Implementation of these mitigation measures would reduce potential impacts to cultural resources and paleontological resources to a less-than-significant level.

3.6.3.6 Alternative D – No Action Alternative

Under Alternative D, the Project Site would not be placed in trust for the benefit of the Tribe and no development would occur. Therefore, there would be no adverse impacts to any unknown archaeological or paleontological resources.

3.7 SOCIOECONOMIC CONDITIONS AND ENVIRONMENTAL JUSTICE

3.7.1 Regulatory Setting

The socioeconomic regulatory setting is summarized in **Table 3.7-1,** and additional information on the regulatory setting can be found in **Appendix E**.

Table 3.7-1: Regulatory Policies and Plans Related to Socioeconomics

Regulation	Description
Federal	
Executive Order 12898	▪ Disproportionately high impacts to minority or low-income populations should be considered. ▪ A minority population is defined as a census tract containing greater than 50% minorities, or a census tract with a meaningfully greater percentage of minorities than the surrounding tracts.[1] ▪ A low-income population is defined as a census tract with a median household income lower than the poverty threshold, which varies depending on the number of persons in a household, or where other indications are present that indicate a low-income community is present within the census tract (e.g. the presence of households whose income is less than or equal to 200% of the poverty level).
Executive Order 14096	▪ Provides a broader definition of potentially disadvantaged communities. ▪ Explicitly expands definition of potentially disadvantaged communities to include persons with a Tribal affiliation and disabled persons. ▪ Requires federal agencies to fulfill environmental justice reporting requirements and prepare strategic plans. ▪ Describes additional reporting and notification requirements related to toxic spills.

1. Although not specified in EO 12898, for purposes of the social justice analysis, minority races include American Indian or Alaskan Native, Asian or Pacific Islander, Black (not of Hispanic origin), and Hispanic. Populations of two or more races and populations classified as "Other" were also considered to be minority races.

3.7.2 Environmental Setting

Koi Nation of Northern California

The Koi Nation is a federally recognized tribe governed by its Constitution and a three-member Council headquartered in Santa Rosa, California. As of September 2021, the Tribe has 89 Tribal members. The Tribe operates programs under the Tribal Self-Governance Act of 1994, programs funded by the Indian Health Service, and the American Rescue Plan of 2021, among others, for its enrolled tribal members; approximately 52% of which live in Sonoma County and an additional 25% of which live in Lake County.

Economy and Employment

The Project Site is located in unincorporated Sonoma County, California, immediately south of the Town of Windsor. The 2022 unemployment rate was 2.6% for the County and 3.9% Statewide in July 0f 2022 (Employee Development Department, 2022; **Table 3.7-2**). The largest industries in the County are healthcare and social assistance (13.1%), retail (11.8%), and manufacturing (10%) (Statistical Atlas, 2022).

According to U.S. Census Bureau data, the annual mean household income in inflation-adjusted 2020 dollars was $117,533 in the Town of Windsor and $86,173 in the County compared to $78,672 Statewide (U.S. Census Bureau, 2021; **Table 3.7-2**). The average household size in the Town of Windsor, Sonoma County, and Statewide for 2021 was 2.94 people, 2.58 people, and 2.94 people, respectively (Department of Finance, 2022; **Table 3.7-2**).

Demographics

The U.S. Census Bureau estimates the 2020 population of the Town of Windsor, Sonoma County, and the State of California to be 26,344 people, 488,863 people, and 39,538,223 people, respectively. Between 2020 and 2021, the Town of Windsor, Sonoma County, and the State of California experienced population decreases of 1%, 0.6%, and 0.8%, respectively (U.S. Census Bureau, 2021; **Table 3.7-2**).

Housing

In 2021, the State of California was estimated to have approximately 14,471,112 housing units, of which approximately 964,251 units (6.7%) were vacant (Department of Finance, 2022; **Table 3.7-2**). Sonoma County had approximately 205,236 housing units, of which approximately 17,163 (8.4%) were vacant, and the Town of Windsor had approximately 9,691 housing units, of which approximately 506 units (5.2%) were vacant (Department of Finance, 2022; **Table 3.7-2**).

Property Taxes

A total of $99,089.92 in property taxes and special assessments were due for the Project Site during Fiscal Year 2022 (Sonoma County, 2021). During Fiscal Year 2021, Sonoma County collected over $1 billion in property taxes (Sonoma County, 2022). Consequently, the property taxes collected on the Project Site comprise less than 0.01% of annual Sonoma County property tax collections.

Gaming Market

Appendix B-1 describes existing gaming facilities with market areas that overlap with the potential market area of the Project Site. As described therein, four gaming operations are located within the primary market area of the Project Site: Graton Resort and Casino; Cache Creek Casino Resort; River Rock Casino; and San Pablo Lytton Casino.

Additionally, five gaming operations are located within the secondary market area of the Project Site: Twin Pine Casino and Hotel; Coyote Valley Casino and Hotel; Robinson Rancheria Resort and Casino; Konocti Vista Casino Resort; and Sherwood Valley Casino.

Table 3.7-2: Socioeconomic Data

Census Data	Town of Windsor	Sonoma County	State of California
Population			
Population April 1, 2010	26,801	438,878	37,253,956
Population April 1, 2020	26,344	488,863	39,538,223
Population, 1-year growth (April 2020 to July 2021)	-1.0%	-0.6%	-0.8%
Employment			
Civilian Labor Force, July 2022	-	249,500	-
Civilian Employment, July 2022	-	243,100	-
Civilian Unemployment, 2022	-	6,400	-
Unemployment Rate, July 2022	-	2.6%	3.9%
Housing			
Housing units, 2021	9,691	205,236	14,471,112
Vacant units, 2021	506	17,163	964,251
Vacancy rate, 2021	5.2%	8.4%	6.7%
Persons Per Household	2.94	2.58	2.94
Income and Poverty			
Median household income (2020 dollars), 2016-2020	$117,533	$86,173	$78,672

Source: U.S. Census Bureau, 2021; Department of Finance, 2022; Employee Development Department, 2022; Office of the Assistant Secretary, 2020

Environmental Justice

Census tracts are designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions. Therefore, statistics of census tracts provide a more accurate representation of the racial and economic composition of a community than other geographic areas. Block groups are a further division of census tracts; however, at this scale less data is available, and data can have a very high margin of error (e.g., exceeding 50%). The census tracts that were analyzed include Census Tract 1527.01, which includes the Project Site, and all six adjacent tracts.

Minority Populations

Table 3.7-3 displays the population of each minority group by census tract. The State has a 65.3% minority population, the County has a 41.5% minority population, and the population in the census tract containing the Project Site has a 36.6% minority population. Of the adjacent census tracts, Census Tract 1538.08 has a minority population of 52.3%, which exceeds the 50% threshold for minority populations. Members of the Tribe are also considered a minority population.

Table 3.7-3: Race and Ethnicity Data

Geographic Boundary	Total Population	White*	Black or African American*	American Indian and Alaskan Native*	Asian*	Native Hawaiian and Other Pacific Islander*	Other Race*	Two or More Races*	Hispanic or Latino	Total Minority Population	Minority Percent (%)
State	39,538,223	13,714,587	2,119,286	156,085	5,978,795	138,167	223,929	1,627,722	15,579,652	25,823,636	65.3%
Sonoma County	488,863	285,792	7,125	3,053	22,239	1,708	2,909	24,599	141,438	203,071	41.5%
Project Site											
Census Tract 1527.01	5,122	3,247	48	41	142	24	22	283	1,315	1,875	36.6
Surrounding											
Census Tract 1524.02	3,418	2,431	47	19	257	4	16	204	440	987	28.9
Census Tract 1526.01	6,554	4,868	49	17	582	11	20	347	660	1,686	25.7
Census Tract 1527.02	5,007	2,919	68	41	235	22	33	248	1,441	2,088	41.7
Census Tract 1538.07	3,957	2,867	16	23	103	3	0	190	755	1,090	27.5
Census Tract 1538.08	4,313	2,056	48	29	87	0	18	211	1,864	2,257	52.3
Census Tract 1538.09	4,510	2,552	37	31	112	5	13	225	1,535	1,958	43.4

* Not Hispanic or Latino
Source: U.S. Census Bureau, 2020a

Low-Income Populations

Table 3.7-4 provides household median income and household mean income data for the State, County, and analyzed census tracts. All of the evaluated census tracts have a household median income above the State average of $78,672 and all but two census tracts (1527.01 and 1538.08) have a household median income above the County average of $86,173. Additionally, all of the evaluated census tracts have a household mean income above $100,000. **Table 3.7-4** also provides a summary of the number of individuals living below 200% of the poverty level. Approximately 29.4% of individuals in the State and 21.3% of the County live below 200% of the poverty level. Within the evaluated census tracts, the percentage of individuals living below 200% of the poverty level is the same or less than that of the State and County. While these numbers suggest that the area does not contain low-income populations, a mobile home community is located across Old Redwood Highway from the Project Site and is conservatively assumed to have a low-income population.

EJ Screen Tools

The EPA's Environmental Justice Screening and Mapping Tool (EJScreen, version 2.2) and the Climate and Economic Justice Screening Tool (Version 1.0) were used to identify disadvantaged communities and other demographics near the Project Site (**Appendix B-4**). According to Climate and Economic Justice Screening Tool and EJScreen Tool, the Project Site is well below the thresholds for disadvantaged consideration in all aspects of energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development except for agricultural loss rate under the climate change category. The Project Site is within a census tract designated 99th percentile for expected agricultural loss rate, above the significance thresholds of 90th percentile to be considered disadvantaged. However, the Project Site block-group was compared to the rest of the US and was found within the 36th percentile for low income and the 57th percentile for people of color demographics, both below the percentiles to be considered disadvantaged.

3.7.3 Impacts

3.7.3.1 Assessment Criteria

Socioeconomic Impacts

To determine the potential effects of the alternatives associated with socioeconomic conditions, the economic effects of temporary construction and ongoing operational activities of each alternative were evaluated. Because socioeconomic effects would be most pronounced in the vicinity of the Project Site, the scope of analysis focuses on impacts surrounding areas within Sonoma County. Impacts resulting from operation of an alternative would occur continuously after opening. An adverse economic, fiscal, or social impact would occur if the effect of the project were to negatively alter the ability of governments to perform at existing levels or alter the ability of people to obtain public health and safety services. Much of the analysis presented herein relies on data presented in **Appendix B-1**, Economic Impact Study for the Shiloh Resort & Casino prepared by Global Market Advisors (GMA).

Environmental Justice Impacts

An adverse environmental justice impact would result if any adverse impact to human health or the environment as identified within this document disproportionately affected an identified minority or low-income community or Native American tribe.

Table 3.7-4: Income and Poverty Level Data

Geographic Boundary	Household Median Income	Household Mean Income	Individuals Living Below 200% of the Poverty Level	Population For Whom Poverty Status Is Determined	Percentage of Individuals Living Below 200% of the Poverty Level
State	$78,672	$111,622	11,344,790	38,589,882	29.4%
Sonoma County	$86,173	$113,067	104,177	489,796	21.3%
Project Site					
Census Tract 1527.01	$79,052	$116,915	993	4,714	21.1%
Surrounding					
Census Tract 1524.02	$118,355	$128,918	230	2,981	7.7%
Census Tract 1526.01	$123,654	$172,327	820	6,833	12.0%
Census Tract 1527.02	$89,572	$106,151	956	4,493	21.3%
Census Tract 1538.07	$133,036	$143,403	174	3,941	4.4%
Census Tract 1538.08	$82,826	$101,769	889	4,351	20.4%
Census Tract 1538.09	$116,019	$118,180	764	4,758	16.1%

Source: U.S. Census Bureau, 2020b; U.S. Census Bureau, 2020c

3.7.3.2 Alternative A – Proposed Project

Economy and Employment

Alternative A would result in a variety of benefits to the regional economy, including residents of the Town of Windsor and Sonoma County. These effects include increases in overall economic output and employment opportunities.

Direct output measures the total spending by the gaming facility patrons, including labor income from gratuities, less expenditures that occur outside of the study area. As described in **Appendix B-1**, the net direct economic output from operation of Alternative A is estimated at $185.6 million. The indirect output resulting from operation, which emanates from economic activities of suppliers and vendors and has a ripple effect in the regional economy, is estimated at $57.5 million. The induced spending, reflecting increased consumption attributable to the direct and indirect earnings, is projected to result in $48.9 million of output. Overall, it is projected that approximately $292.0 million in economic output would be generated within the County on an annual basis once Alternative A is operational. This represents the majority of Proposed Project annual revenue of approximately $575 million. A portion of these revenues translate into net profits and would facilitate the ability of the Tribe to satisfy its unmet needs by funding tribal governmental expenditures and providing important services to tribal members.

Construction and operation of Alternative A would generate temporary and ongoing employment opportunities and wages that would be primarily filled by the available labor force in the Town of Windsor and Sonoma County. During construction, this would include an estimated 1,098 direct full-time equivalent jobs, 135 indirect jobs, and 376 induced jobs, for a total of approximately 1,609 full-time equivalent jobs that would accrue to the residents of the region (**Appendix B-1**). Operation of the Proposed Project Alternative would generate a total of approximately 1,571 new full time equivalents positions, with an additional 364 indirect and 285 induced jobs also created, for a total of 2,220 jobs that would be created in the region. Total labor income is estimated to exceed $96 million annually. Employment opportunities generated at the proposed casino would include entry-level, mid-level, and management positions. Average salaries offered are expected to be consistent with those of other tribal gaming facilities and competitive with other opportunities in the local labor market.

The anticipated increase in employment opportunities within the Town of Windsor and Sonoma County could result in employment and wages for persons previously unemployed, would increase the ability of the population to obtain health and safety services, and would contribute to the alleviation of poverty among lower income households. Overall, operation of Alternative A would result in the direct, indirect, and induced employment of 2,220 individuals, which comprises approximately 34.7% of the County's unemployed individuals (**Table 3.7-2**). However, substitution effects (see below) would reduce the overall positive effect on employment. Nonetheless, overall, Alternative A would result in beneficial impacts to local employment.

Fiscal Impacts

There would be fiscal impacts resulting from the construction and operation of the gaming facility at the local, State, and federal levels from a variety of taxes. As detailed in **Appendix B-1**, the total federal tax contribution during the construction phase is projected at $51.4 million, primarily consisting of social insurance and personal income taxes. The State and local taxes during the construction phase are projected at $18.1 million, the majority of which would be taxes on construction materials and property taxes. These effects would be one-time in nature.

During the operations phase, tax revenues would be generated for local, State, and federal governments from activities including secondary economic activity generated by tribal gaming (i.e., the indirect and induced effects of the economic impact analysis). The taxes on secondary economic activity include corporate profits tax, income tax, sales tax, excise tax, property tax, and personal non-taxes, such as motor vehicle licensing fees, fishing/hunting license fees, other fees, and fines. Operation of the Project is expected to generate $21.8 million in federal taxes, $10.7 million in State taxes, and $2.5 million in local taxes annually.

The Tribe would no longer pay approximately $99,089 in property taxes for the Project Site once it goes into federal trust. However, this constitutes less than 0.01% of the total property taxes anticipated to be collected by the County. Additionally, Alternative A would result in $2.5 million in County taxes annually, which fully offsets the removal of property taxes for the Project Site. Therefore, the loss of property taxes would be less than significant.

As described in **Section 4.0**, Alternative A would result in an increase in demand for public services that would result in increased costs for public service providers, namely fire protection and law enforcement (refer to **Section 3.10** for additional discussion). This is a potentially significant fiscal impact. Mitigation in **Section 4.0** requires that the Tribe compensate service providers, specifically the Sonoma County Sheriff's Office (SCSO) and Sonoma County Fire District (SCFD), for quantifiable direct and indirect costs incurred

in conjunction with providing public services to the Project Site. After mitigation, the fiscal impacts of Alternative A would be less than significant impacts.

Housing

As described in **Appendix B-1**, Alternative A would directly employ 1,859 individuals (with 1,571 stemming from Sonoma County), which represents approximately 0.25% of the combined Marin County and Sonoma County total population (**Table 3.7-2**). A change in the local population is not anticipated as Sonoma County is a highly populated area that has a sufficient labor force focused on the hospitality industry. With several other casino resorts in the market area, as well as other hospitality developments, the population already includes people who are seeking casino and/or hospitality-based employment. Therefore, it is assumed that employment for Alternative A would be filled primarily by the local populace and would not generate significant housing demand. The only potential increase in population that could occur would stem from senior level management needs. These individuals may not live in the region and may require a move to the region. However, the total impact associated with these positions would not total more than 10 families. As described in **Section 3.7.2**, in 2021, the County had approximately 205,236 housing units, of which approximately 17,163 (8.4%) were vacant. It should be noted that the housing vacancy rate in the County of 8.4% is greater than the State average of 6.7%. Therefore, it is anticipated that the small number of housing needs from Alternative A would be filled by existing vacant units.

As Alternative A would not require a large influx of residents to fill positions and the new positions will have a small impact on the amount of unemployed, the housing market will not experience a large demand for new homes. A significant impact to the housing market would not occur.

Property Values

As described in **Appendix B-1**, between 2000 and 2021, housing prices within a five-mile radius of select casinos in California have shown minimal, if any, deviation from the market average. Three of the studied casinos are located adjacent to single-family residential developments; these include San Pablo Lytton Casino, Pechanga Resort Casino, and Yaamava' Resort and Casino (formerly San Manuel Casino and Resort). Property values for the areas surrounding the studied casinos show 5-year increases between 2000 and 2015 and a 6-year increase between 2015 and 2021. In particular, the openings of Valley View Casino in 2001 and Pechanga in 2002 did not appear to have a material impact on housing values. These examples provide evidence that opening or operating a Tribal gaming facility has a minimal impact on nearby property values, including residential property values. Therefore, the Proposed Project likely would not have a significant impact on property values.

Social Effects

Pathological and Problem Gambling

The American Psychiatric Association describes a pathological gambler as a person who features a continuous loss of control over gambling. Furthermore, this gambler illustrates a progression in the following areas: gambling frequency and the amounts wagered, preoccupation with gambling, and obtaining monies with which to gamble.

Residents of the Town of Windsor and Sonoma County have already been exposed to many forms of gambling, including from the existing casinos described in **Section 3.7.2**. Prevention and treatment programs, including programs through the California Office of Problem Gambling, exist throughout the State. The Proposed Project would not substantially increase the prevalence of problem gamblers as several existing gaming facilities are already established within relatively short driving distances from the

Project Site; therefore, the Proposed Project would not be expected to increase costs to the surrounding community of treatment programs for compulsive gambling. Problem gambling prevalence is not anticipated to increase as a result of the Proposed Project given the availability of casino gaming already present throughout the area and State and other readily accessible forms of gambling.

Consequently, the potential impacts to problem gambling as a result of Alternative A would be less than significant. However, BMPs regarding problem gambling to be implemented during the operation of the casino resort described in **Table 2.1-3.** would further reduce the likelihood of problem gambling at the casino resort.

Crime

As described in **Appendix B-1**, there is a general belief that the introduction of legalized gambling into a community would increase crime. However, this argument is based more on anecdotal evidence than empirical evidence. Whenever large volumes of people are introduced into an area, the volume of crime would also be expected to increase. This is true of any large-scale development. As described in **Appendix B-1**, given the availability of gaming in the region, the addition of the Proposed Project is not expected to lead to a material increase in crime rates in the area.

Alternative A would result in an increased number of patrons and employees traveling/commuting into the area on a daily basis. As a result, under Alternative A, criminal incidents would increase in the vicinity of the Project Site. This may result in an increase in the calls for law enforcement services. See **Section 3.10.3** for an analysis of effects to law enforcement services. Mitigation measures are provided in **Section 4** to avoid potential fiscal impacts to the County that would offset the increased cost of law enforcement services to the Proposed Project. Therefore, with mitigation, the Proposed Project would not result in significant adverse effects associated with crime.

Drunk Driving

The State has the authority to grant or deny a liquor license on trust land. The Proposed Project intends to serve alcohol consistent with a liquor license, which could result in an increase in drunk driving incidents. Drunk driving prevalence is not anticipated to increase significantly as a result of the proposed casino resort given the availability of alcohol throughout the area and State. BMPs described in **Table 2.1-3,** including the implementation of a "Responsible Alcoholic Beverage Policy," would be implemented during the operation of the casino resort to reduce the likelihood of drunk driving resulting from Alternative A. Consequently, the potential impacts to drunk driving as a result of Alternative A would be less than significant.

Gaming Substitution Effects

Appendix B-1 provides a detailed review of competitive gaming facilities based on identification of local and regional gaming facilities, and an assessment of how those facilities are projected to be impacted as a result of Alternative A based on the results of a gravity model analysis. Local market revenue for the Proposed Project is anticipated to stem from two primary sources: new market growth and a substitution effect on regional competitors. Substitution effects were estimated for calendar year 2033, representing a full year of fully stabilized operations of the Alternative A. In 2033, Alternative A is anticipated to achieve a gross revenue level of $575.3 million. The 2033 baseline local market revenue for each gaming facility within the market area of Alternative A was estimated assuming a 2.3% growth rate from assumed 2021 conditions. It should be noted that revenues from tribal gaming facilities are not publicly reported, therefore GMA utilized its proprietary knowledge of market gaming factors in conjunction with available

data in the public domain and other sources to estimate revenues for each gaming facility. As described in **Appendix B-1**, tribal gaming facilities that are anticipated to experience a substitution effect on local market gaming revenue of greater than 10% of projected 2033 revenues include the River Rock Casino (-24.24%), Sherwood Valley Casino (-14.77%), and Graton Resort and Casino (-11.45%). Since preparation of **Appendix B-1**, River Rock Casino, owned and operated by the Dry Creek Rancheria Band of Pomo Indians, has announced plans for an expansion of its facility to 1,500 slot machines. This expansion is expected to include upgrades and renovations aimed to increase the quality of casino and non-gaming amenities. GMA prepared an additional impact scenario assuming that River Rock expands with these amenities, the results of which are summarized in **Appendix B-2**. As stated therein, as a result of this analysis, it is anticipated if River Rock were to expand before the opening of Alternative A, it would experience a -17.6% impact to projected future local market gaming revenue in comparison to 2033 baseline conditions. It should be noted that the overall revenue potential of the River Rock Casino would be projected to increase with the proposed expansion, and therefore even with the estimated -17.6% impact, future revenues may be similar to or greater than current day revenues.

As upheld by the United States District Court for the Eastern District of California, "competition…is not sufficient, in and of itself, to conclude [there would be] a detrimental impact on" a tribe (*Citizens for a Better Way, et al. v. United States Department of the Interior*, E.D. Cal., 2015). However, should competition effects be so severe as to cause closure of a facility, it could result in environmental effects associated with abandoned buildings and vacant lots, referred to as "urban blight". Additionally, in the case of tribal casinos, facility closure could result in socioeconomic effects to tribal communities from decreased availability and/or quality of governmental services. To determine the potential for the projected declines in revenue to result in closure and associated environmental effects, research of markets where casinos have experienced impacts to their gaming revenues by more than 20% was conducted and is summarized in **Appendix B-2**. The analysis focused on commercial gaming markets, as information was readily and publicly available (whereas such data is not available in tribal gaming markets). The researched gaming revenue disruptions were caused by various factors beyond gaming expansion, including the economic recession, regulatory factors, and increased competition from new entrants into the market. **Appendix B-2** describes several instances of properties facing significant challenges due to the emergence of new competitors and/or macro-economic market factors (example, the recession), resulting in substantial impacts to gaming revenues. However, in all researched case studies, these casinos were able to adapt and regrow revenue via strategic initiatives, operational changes, and/or product improvement/expansion. Of the analyzed markets considered in **Appendix B-2**, there were no casino closures as a result of the measured gaming revenue impacts. This suggests that it is likely that the gaming facilities experiencing substitution effects from Alternative A can remain open and operational with management strategies and adaptation. It should also be noted that substitution effects tend to dissipate over time in a growing economy. The Dry Creek Band has indicated that the level of impact to the River Rock Casino from operation of Alternative A in combination with historical declines in revenue from the opening of the Graton Resort and Casino in 2013 would likely cause its facility to close and would prevent its ability to move forward with its expansion plans. While review of similar case studies and market data as reported in **Appendix B-2** suggests that it is unlikely that the River Rock Casino and associated expansion plans would no longer be economically viable, the Dry Creek Band has not provided the BIA with the financial data necessary to verify the ability of the River Rock Casino to remain open or to expand. Therefore, in the absence of this data, the potential for competitive effects resulting from Alternative A to the River Rock Casino is considered a potentially significant impact.

Non-Gaming Substitution Effects

Potential substitution effects (the loss of customers at existing businesses to the new business) of a gaming facility are considered when estimating economic impacts. The magnitude of the substitution effect can generally be expected to vary greatly by specific location and according to a number of variables, that is, how much of a new gaming facility's revenue comes at the expense of other business establishments in the area depends on how many and what type of other establishments are within the same market area, as well as other economic and psychological factors affecting the consumption decisions of local residents. The Proposed Project is anticipated to have a positive effect on most local businesses due to the gaming customers visiting the Proposed Project who would be expected to patronize local businesses.

The majority of hotel room stays at the Proposed Project would result from persons who would patronize the gaming element of the Proposed Project. Consequently, these hotel stays would have no substitution or competitive effects on local hotels. Regarding effects from other patrons, these would have both positive and negative substitution effects. Positive effects would occur because of both the stimulative effect of the project on hotel stays in the local market, and due to overflow effects. These overflow effects would occur from gaming patrons who elect to stay at other local hotel venues rather than at the Proposed Project. Negative substitution effects would occur due to the patronage of hotel guests who would, in the absence of the project, stay at an existing local hotel. The net result of these effects would be less than significant.

Therefore, the Proposed Project would result in a less-than-significant impact related to non-gaming substitution effects.

Environmental Justice for Minority and Low-Income Populations

This environmental justice analysis was prepared using guidance from the CEQ for compliance with Executive Order (EO) 12898. The intent of this evaluation is to determine whether Alternative A would impose disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.

There is a minority population and potential low-income population in the vicinity of the Project Site. As shown in **Table 3.7-3,** Census Tract 1538.08 has a minority population exceeding 50%. Census Tract 1538.08 is located approximately 0.5 miles west of the Project Site and is generally located north of Shiloh Road and west of Hembree Lane. Additionally, the mobile home park located just west of the Project Site, across Old Redwood Highway, is considered a potential low-income community.

There are no adverse project impacts that would disproportionately affect Census Tract 1538.08 or the mobile home community, in comparison to effects on the surrounding area. After mitigation, all environmental impacts of the Proposed Project would be reduced to a less-than-significant level. Furthermore, the Proposed Project would not displace any residential populations in the vicinity of the Project Site. Effects to minority and low-income populations would include positive impacts from the Proposed Project's beneficial impacts to the local economy (including the creation of permanent jobs) and the Tribe, which is considered a minority population. Impacts include an increased revenue base for strengthening the Tribe's government and tribal services, as discussed further below. Therefore, the Proposed Project would not result in disproportionately high and adverse environmental effects to minority or low-income communities, including the Tribe.

Effects to the Tribe

The Proposed Project would provide important economic and social benefits to the Tribe by generating the revenues needed to fund tribal services. The Tribe has indicated that revenues from the Proposed Project would restore its ability to exercise its rights to self-governance and independence and provide a long-term income source to support the needs of current and future generations of tribal citizens. Revenue from Alternative A would have a long-term beneficial impact on the Tribe.

3.7.3.3 Alternative B – Reduced Intensity Alternative

As described in **Section 2.2**, the gaming component of the Reduced Intensity Alternative is identical to the Proposed Project; refer to **Section 3.7.3.1** and **Appendix B-1** for socioeconomic impacts related to the Reduced Intensity Alternative gaming facility. However, as a result of the smaller non-gaming component, the Reduced Intensity Alternative would generate fewer employment opportunities, less revenue, less off-site tax revenue, and would entail lower construction costs than the Proposed Project. Socioeconomic effects, such as social effects and effects to the tribal casino gaming market, would be reduced proportionately to the size of the development. Therefore, the Reduced Intensity Alternative would still have beneficial socioeconomic effects; however, these effects would be less than those resulting from the Proposed Project.

The net fiscal impact to the County would be reduced under the Reduced Intensity Alternative. Due to the positive net fiscal impacts of the Reduced Intensity Alternative, the fiscal impacts would be less than significant. In addition, fiscal effects would be reduced further through the negotiation of mitigation service agreements with the County, as summarized in **Section 4**.

3.7.3.4 Alternative C – Non-Gaming Alternative

The Non-Gaming Alternative does not include a gaming component and has a lesser number of rooms and commercial facilities when compared to Alternative A (refer to **Section 2.3**). Compared with the gaming facility under the Proposed Project, the decrease in number of rooms and in size of the commercial facilities would create less economic and employment benefits because the lack of a gaming component would result in fewer new jobs and less economic activity. Certain socioeconomic effects, such as social effects and effects to the tribal casino gaming market would not occur. As described in **Appendix B-2**, construction of the Non-Gaming Alternative would result in approximately $301 million in economic output, and operation of the Non-Gaming Alternative would result in approximately $63.9 million in economic output annually. Construction would result in approximately $11.1 million in State and local taxes, and operation would result in approximately $5.1 million in federal taxes, $2.5 million in State taxes, and $0.6 million in local taxes annually. Construction would result in approximately 978 direct, indirect, and induced full-time equivalent jobs, and operation would result in 512 direct, indirect, and induced jobs. The Non-Gaming Alternative would still have beneficial socioeconomic effects; however, these effects would be less than those of Alternative A. Fiscal effects associated with an increase in calls for law enforcement and fire protection would be reduced further through the negotiation of mitigation service agreements with the County, as summarized in **Section 4**.

3.7.3.5 Alternative D – No Action Alternative

Under the No Action Alternative, the Tribe would not receive any of the benefits associated with development on the Project Site. The Project Site would not be brought into trust and would remain on the County's property tax rolls. No development would occur on the Project Site.

3.8 TRANSPORTATION AND CIRCULATION

Information in this section is summarized from the Traffic Impact Study (TIS) prepared by TJKM (**Appendix I**). A discussion of traffic evacuation as it relates to Wildfire is located in **Section 3.12**.

3.8.1 Environmental Setting

Transportation Networks

Regional access to the Project Site is provided by Highway 101, which runs in a general north-south direction and is located approximately 0.5 miles west of the Project Site. Local access to the Project Site is currently provided through existing driveways on Shiloh Road and Old Redwood Highway.

Study Intersections and Roadway Segments

Study intersections and roadway segments were selected based on their proximity to the Project Site and major thoroughfares in the area. The study intersections and associated traffic controls are as follows:

1. Shiloh Road & Old Redwood Highway (Signal)
2. Shiloh Road & Hembree Lane (Signal)
3. Shiloh Road & US 101 Northbound Off-ramp (Signal)
4. Shiloh Road & US 101 Southbound Off-ramp (Signal)
5. Shiloh Road & Caletti Avenue (One-Way Stop)
6. Shiloh Road & Conde Lane (Signal)
7. Shiloh Road & Casino Entrance 1 (Two-Way Stop)
8. Old Redwood Highway & Casino Entrance 1 (Two-Way Stop)
9. Shiloh Road & Casino Entrance 2 (One–Way Stop)
10. Old Redwood Highway & US 101 Northbound Off-ramp/Lakewood Drive (Signal)
11. Old Redwood Highway & US 101 Northbound On-ramp (N/A)
12. Old Redwood Highway & US 101 Southbound Ramps (Signal)

The following roadway segments were evaluated:

1. Old Redwood Highway from Merner Drive to Shiloh Road
2. Old Redwood Highway from Shiloh Road to Casino Entrance 1
3. Shiloh Road from Conde Lane to Caletti Avenue
4. Shiloh Road from US 101 Southbound Ramps to US 101 Northbound Ramps
5. Shiloh Road from Hembree Lane to Old Redwood Highway

Methodology

Level of Service

Level of Service (LOS) is a qualitative measure reflecting the traffic operation of the intersection, with LOS A representing best performance, and LOS F the worst. LOS describes the traffic conditions in terms of such factors as speed, travel time, delays, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. **Table 3.8-1** shows the corresponding average total delay per vehicle and a description of vehicular conditions at signalized and unsignalized intersections for each LOS category from A to F.

Table 3.8-1: Level of Service Descriptions

Level of Service	Average Control Delay (seconds/vehicle)		Description
	Unsignalized Intersection	Signalized Intersection	
A	≤10	≤10	Little of no traffic delays
B	>10 – 15	>10 – 20	Short traffic delays
C	>15 – 25	>20 – 35	Average traffic delays
D	>25 – 35	>35 – 55	Long traffic delays
E	>35 – 50	>55 – 80	Very long traffic delays
F	>50	>80	Extreme traffic delays

Source: Transportation Research Board, 2010 (**Appendix I**)

Existing Traffic Conditions

The TIS evaluated existing traffic conditions at study intersections and study segments during the a.m. and p.m. peak hours on a typical weekday, and during the midday peak hours on a typical Saturday. Intersection turning movement counts of vehicles, bicycles, and pedestrians were collected during the weekday a.m. peak period (7:00-9:00 a.m.) and the weekday p.m. peak period (4:00-6:00 p.m.) on January 28, 2022. Similar turning movement counts were collected during the Saturday midday peak hours (10:00 a.m.-4:00 p.m.) on January 30, 2022. The average daily traffic (ADT) volumes of vehicles were also collected for each study segment on July 28, 2022.

This scenario evaluates the study intersections based on adjusted existing traffic volumes, and existing lane geometry and traffic controls, as described above. The peak hour factors calculated from the existing turning movement counts were used for the study intersections for the Existing Conditions analysis. The results of the LOS analysis using the HCM 6th Ed. methodology and Synchro 11 software program for Existing Conditions are summarized in Table 3 of **Appendix I**. Under this scenario, all of the study intersections operate within applicable jurisdictional standards during all three peak periods. Under Existing Conditions, the roadway segment of Shiloh Road between the US 101 NB ramps and SB ramps operates at an unacceptable LOS E. All other study roadway segments operate at an acceptable LOS.

Existing Bicycle, Pedestrian, and Transit System

With some exceptions, the areas near the Project Site are generally lacking sidewalks. The exceptions are the residential area on the north side of Shiloh Road opposite the Project Site, sections of the east side of

Old Redwood Highway north of Shiloh Road, and areas on the north side of Shiloh Road near Hembree Lane. There are no existing bicycle lanes adjacent to the Project Site. The nearest existing Class II Bicycle Lanes are located along Old Redwood Highway and Shiloh Road, north and west of the Project Site respectively. Sonoma County Transit (SCT) provides transit services to the area. Route 60 mostly travels along Old Redwood Highway between Cloverdale and Santa Rosa on headways varying between one to two hours. There is an existing stop along the western Project Site boundary.

3.8.2 Impacts

3.8.2.1 Assessment Criteria

Impacts to the transportation system would be significant if the project alternative increases traffic volumes to the point where traffic exceeds the LOS standard of the applicable local jurisdiction. The Town of Windsor General Plan defines LOS D as the minimum acceptable level of congestion during the peak periods of weekday mornings and evenings for "high-volume facilities such as freeways, crosstown streets, and signalized or all-way stop-controlled intersections." The Sonoma County General Plan establishes LOS C as the minimum acceptable operating condition on roadway segments and LOS D as the minimum acceptable operating condition at roadway intersections. Thus, this analysis utilizes LOS D as a threshold for determining whether the project alternatives would result in significant impacts.

3.8.2.2 Methodology

To evaluate the effects on the transportation infrastructure due to the addition of traffic from the proposed project, an LOS analysis was conducted to determine consistency with Town of Windsor and Sonoma County plans and standards. All study segments were evaluated for changes in weekday ADT due to the project alternatives. Intersection queuing was evaluated in tandem with the LOS analysis. Queueing operations were calculated for all dedicated left-turn lane and right-turn lane groups at the study intersections.

Data collection efforts included measuring existing traffic counts and utilizing material in the Town of Windsor General Plan 2040 and associated Environmental Impact Report. The peak periods observed were between 7:00-9:00 a.m. and 4:00-6:00 p.m. on weekdays, and 10:00 a.m.-4:00 p.m. on Saturdays.

The roadway operations analysis addresses the following traffic scenarios for the project alternatives. Scenarios for Cumulative 2040 Conditions are discussed in **Section 3.13.7**:

- **Opening Year 2028 No Project Conditions** – This scenario includes Existing Conditions, but with the addition of traffic from approved projects that are in the development pipeline in the Town of Windsor and Sonoma County, as well as effects from planned roadway improvements that would be in place by 2028. A compounding annual growth rate of 2.189% was applied to existing traffic up to the opening year of 2028.
- **Opening Year 2028 plus Alternative A, B, or C Conditions** – This scenario is identical to Opening Year 2028 Conditions, but with the addition of traffic from either Alternative A, B, or C.

3.8.2.3 Alternatives A – Proposed Project

Construction Traffic

Impacts related to construction traffic would be temporary in nature and would cease upon completion of the project. As described in **Table 2.1-3**, construction activities would be conducted between the hours of 7:00 a.m. to 6:00 p.m, and this time schedule would therefore cause most construction commuter trips to occur outside of peak hour times. During construction, there would be a maximum of 978 daily construction trips to and from the Project Site due to commuting workers. This estimate was developed based on trips rates for project construction as calculated by the California Emissions Estimator Model (CalEEMod) (**Appendix F-1**). Additionally, there would be vendor trips and material hauling trips, but these would not occur during the peak traffic times and would be dispersed throughout the day. The majority of construction traffic would utilize US 101 as the regional access route and Shiloh Road or Old Redwood Highway for local access. During the traffic counts conducted as part of the TIS on weekdays, the Shiloh Road segment from the Project Site to US 101 on/off- ramp experiences approximately 10,569 average daily trips while the Old Redwood Highway segment from the Project Site to Highway 101 on/off-ramp experiences approximately 10,710 average daily trips (Figure 5 of **Appendix I**). If conservatively all construction trips occurred on the same road segment, the increase in daily traffic would be less than 10% for both Shiloh Road and Old Redwood Highway. Given the increase would be relatively small, dispersed throughout the day, would primarily occur outside of peak traffic times, and be temporary in nature, the impact from construction traffic on local transportation/circulation would be less than significant.

Operational Traffic

Trip Generation

The trip generation estimates for Alternative A were developed using a combination of published trip generation rates from the Institute of Transportation Engineers (ITE) publication Trip Generation (11th Edition) and prior traffic studies for similar tribal casino resorts in Northern California. Hotel trips were reduced by 75% to represent the large proportion of hotel guests who would also be casino guests and captured under the casino trip generation estimate. Alternative A is expected to generate 11,213 total daily weekday trips and 15,779 total daily Saturday trips, including 473 weekday a.m. peak hour trips (279 in, 194 out), 1,205 weekday p.m. peak hour trips (710 in, 495 out), and 1,340 midday Saturday peak hour trips (657 in, 683 out). A breakdown of the trip generation is provided in Table 8 of **Appendix I**.

Trip Distribution

Trip distribution assumptions were developed based on the existing travel patterns and the locations of regional destinations and complementary land uses. The distribution assumptions for Alternative A are as follows: 45% to/from US 101 to the south, 25% to/from US 101 to the north, 10% to/from Old Redwood Highway to the southeast, 10% to/from Old Redwood Highway to the northwest, 5% to/from Shiloh Road to the east, 5% to/from Shiloh Road to the west. The trip distribution and associated trip assignment are shown on Figures 8 and 9 of **Appendix I**.

Study Intersections

As discussed in **Section 3.8.1**, under Existing No Project Conditions, all of the study intersections operate within applicable jurisdictional standards during all three peak periods. All of the study intersections also operate at an acceptable LOS under Opening Year 2028 No Project Conditions as discussed in Section 7.1 of **Appendix I**. The intersection LOS analysis results for Opening Year 2028 plus Alternative A Conditions

are summarized in Table 23 of **Appendix I**. The following intersections would operate at an unacceptable LOS due to the addition of traffic from Alternative A, which is considered a significant impact:

1) Shiloh Rd. & Old Redwood Hwy. (Weekday PM and Saturday midday peak hours)
2) Shiloh Rd. & Hembree Ln. (Weekday PM and Saturday midday peak hours)
3) Shiloh Rd. & US 101 NB Off-ramp (Saturday midday peak hour)
7) Shiloh Rd. & Casino Entrance 1 (Weekday PM and Saturday midday peak hours)
8) Old Redwood Hwy. & Casino Entrance 1 (Weekday PM peak hour)

Mitigation measures are detailed in **Section 4** and include conversion of split phasing and restriping at Intersection #1, optimizing splits and cycle length at Intersection #2, restriping at Intersection #3, and signalization of Intersections #7 and #8. With mitigation, the impacted intersections would operate at an acceptable LOS. Thus, mitigation would reduce impacts to a less-than-significant level.

Roadway Segment Analysis

The roadway segment analysis is discussed in Section 15.1 of **Appendix I**. Under Opening Year 2028 No Project Conditions, all study segments operate at an acceptable LOS except the portion of Shiloh Road between the US 101 NB ramps and SB ramps which has an LOS of F. With the addition of Alternative A project traffic, all three Shiloh Road segments degrade to an unacceptable LOS with all other study segments operating at an acceptable LOS. Mitigation measures detailed in **Section 4** would collectively increase the amount of green time allocated to through movements and thus increase lane capacities. With mitigation, Alternative A would consistently improve v/c ratios and segment LOS compared to Opening Year 2028 No Project Conditions consistent with the Town of Windsor and Sonoma County standards and plans. As such, impacts to roadway segments would be less than significant.

Queue Lengths

Under all project alternative scenarios, project-related trips would be added to some dedicated left-turn lane and right-turn lane groups. As discussed in **Appendix I**, both Opening Year 2028 No Project and Opening Year 2028 with each of Alternatives A, B and C experience 95th percentile queue lengths that exceed local standards. The implementation of mitigation measures identified in **Section 4** and planned improvements by the Town of Windsor and County of Sonoma would mitigate queue lengths to acceptable levels. As such, impacts with respect to queue lengths would be less than significant.

Bicycle, Pedestrian, and Transit Networks

An increase in transit ridership may be experienced as a result of Alternative A. Potential impacts associated with transit capacity would be offset by a proportional increase in fare revenue. Alternative A would not adversely impact existing local bicycle and pedestrian facilities, which are generally lacking adjacent to the Project Site. BMPs identified in **Table 2.1-3** include the development of on-site pedestrian facilities connecting to the two proposed signalized entrances to the Project Site. Therefore, impacts to transit, bicycle, and pedestrian facilities would be less than significant.

3.8.2.4 Alternative B – Reduced Intensity Alternative

Construction Traffic

Effects resulting from construction traffic under Alternative B would be similar to Alternative A but slightly reduced due to a reduced development footprint. Given the increase would be relatively small, dispersed throughout the day, would primarily occur outside of peak traffic times, and be temporary in nature, the impact from construction traffic on local transportation/circulation would be less than significant.

Operational Traffic

Trip Generation

The trip generation estimates for Alternative B were developed similarly to Alternative A. Alternative B is expected to generate 8,763 total daily weekday trips and 13,319 total daily Saturday trips, including 473 weekday a.m. peak hour trips (279 in, 194 out), 863 weekday p.m. peak hour trips (448 in, 415 out), and 1,272 midday Saturday peak hour trips (607 in, 665 out). A breakdown of the trip generation is provided in Table 13 of **Appendix I**.

Trip Distribution

The trip distribution assumptions for Alternative B are identical to Alternative A. The trip assignment for Alternative B is shown on Figure 12 of **Appendix I**.

Study Intersections

As discussed under Alternative A, under Existing No Project Conditions and Opening Year 2028 No Project Conditions, all of the study intersections operate at an acceptable LOS. The intersection LOS analysis results for Opening Year 2028 plus Alternative B Conditions are summarized in Table 25 of **Appendix I**. The following intersections would operate at an unacceptable LOS due to the addition of traffic from Alternative B, which is considered a significant impact:

1) Shiloh Rd. & Old Redwood Hwy. (Saturday midday peak hours)
2) Shiloh Rd. & Hembree Ln. (Saturday midday peak hours)
3) Shiloh Rd. & US 101 NB Off-ramp (Saturday midday peak hour)
7) Shiloh Rd. & Casino Entrance 1 (Saturday midday peak hours)

Mitigation measures are detailed in **Section 4** and include conversion of split phasing and restriping at Intersection #1, optimizing splits and cycle length at Intersection #2, restriping at Intersection #3, and signalization of Intersection #7. With mitigation, the impacted intersections would operate at an acceptable LOS. Thus, mitigation would reduce impacts to a less-than-significant level.

Queue Lengths

As described under Alternative A, the implementation of mitigation measures identified in **Section 4** and planned improvements by the Town of Windsor and County of Sonoma would mitigate queue lengths for all project alternatives to acceptable levels. As such, impacts with respect to queue lengths would be less than significant.

Roadway Segment Analysis

With the addition of Alternative B project traffic, the segment of Shiloh Road between Hembree Lane and Old Redwood Highway operates at an acceptable LOS D while the remaining Shiloh Road segments operate an unacceptable LOS. With mitigation measures detailed in **Section 4,** Alternative B would

consistently improve v/c ratios and segment LOS compared to Opening Year 2028 No Project Conditions consistent with the Town of Windsor and Sonoma County standards and plans. As such, impacts to roadway segments would be less than significant.

Bicycle, Pedestrian, and Transit Networks

Impacts to bicycle, pedestrian and transit networks would be similar to those described for Alternative A. BMPs identified in **Table 2.1-3** include the development of on-site pedestrian facilities connecting to the two proposed signalized entrances to the Project Site. Therefore, impacts to transit, bicycle, and pedestrian facilities would be less than significant.

3.8.2.5 Alternative C – Non-Gaming Alternative

Construction Traffic

Effects resulting from construction traffic under Alternative C would be similar to Alternative A but reduced due to a reduced development footprint. Given the increase would be relatively small, dispersed throughout the day, would primarily occur outside of peak traffic times, and be temporary in nature, the impact from construction traffic on local transportation/circulation would be less than significant.

Operational Traffic

Trip Generation

The trip generation estimates for Alternative C were developed using published ITE trip rates, information from local governments, and other factors, including the anticipated number of employees, gallons of wine production and tons of grape haul. Internal capture rates were applied to the spa, dining and visitor center to account for patrons of the hotel utilizing multiple facilities. Alternative C is expected to generate 2,078 total daily weekday trips and 2,704 total daily Saturday trips, including 153 weekday a.m. peak hour trips (92 in, 61 out), 197 weekday p.m. peak hour trips (102 in, 95 out), and 361 midday Saturday peak hour trips (170 in, 191 out). A breakdown of the trip generation is provided in Table 18 of **Appendix I**.

Trip Distribution

The trip distribution assumptions for Alternative C are identical to Alternatives A and B with the exception that trips would not be distributed to Intersection #9 (Shiloh Road & Casino Entrance 2) because no entrance/exit is proposed at this location. The trip assignment for Alternative C is shown on Figure 15 of **Appendix I**.

Study Intersections

As discussed under Alternative A, under Existing No Project Conditions and Opening Year 2028 No Project Conditions, all of the study intersections operate at an acceptable LOS. The intersection LOS analysis results for Opening Year 2028 plus Alternative C Conditions are summarized in Table 27 of **Appendix I**. With the addition of Alternative C, all study intersections would continue to operate at an acceptable LOS, which is considered to be a less-than-significant impact.

Roadway Segment Analysis

With the addition of Alternative C project traffic, the segment of Shiloh Road between the US 101 SB ramps and the US 101 NB ramps operates at an unacceptable LOS F, with all other segments operating at an acceptable LOS. With mitigation measures detailed in **Section 4,** Alternative C would consistently improve v/c ratios and segment LOS compared to Opening Year 2028 No Project Conditions consistent

with the Town of Windsor and Sonoma County standards and plans. As such, impacts to roadway segments would be less than significant.

Queue Lengths

As described under Alternatives A and B, the implementation of mitigation measures identified in **Section 4** and planned improvements by the Town of Windsor and County of Sonoma would mitigate queue lengths for all project alternatives to acceptable levels. As such, impacts with respect to queue lengths would be less than significant.

Bicycle, Pedestrian, and Transit Networks

Impacts to bicycle, pedestrian and transit networks would be similar to those described for Alternatives A and B. BMPs identified in **Table 2.1-3** include the development of on-site pedestrian facilities connecting to the two project entrances. Therefore, impacts to transit, bicycle, and pedestrian facilities would be less than significant.

3.8.2.6 Alternative D – No Action Alternative

Under the No Action Alternative, there would be no development constructed on the Project Site, and consequently no increase in vehicular traffic on roadways in the vicinity of the Project Site. There would be no change in pedestrian, bicycle, or transit circumstances.

3.9 LAND USE

3.9.1 Regulatory Setting

The land use regulatory setting is summarized in **Table 3.9-1,** and additional information on the regulatory setting can be found in **Appendix E**.

Table 3.9-1: Regulatory Policies and Plans Related to Land Use

Regulation	Description
Federal	
Farmland Protection Policy Act	▪ Intended to minimize the impact that federal programs have on unnecessary and irreversible conversion of farmland to non-agricultural uses. ▪ Assures that federal programs are administered in a manner that is compatible with state and local units of government, private programs, and policies to protect farmland.
Federal Aviation Regulation	▪ Provides requirements, standards, and processes for determining obstructions to air navigation.
State and Local	
Sonoma County General Plan 2020	▪ The Sonoma County General Plan contains goals, objectives, and policies to guide development within the County. ▪ The Land Use Element provides the distribution, location, and extent of uses for each land use category.

Regulation	Description
	▪ The Agricultural Resources Element defines agriculture as an industry that produces and processes food, fiber, plant materials, and which includes the raising and maintaining of farm animals including horses, donkeys, mules, and similar livestock. ▪ Additionally, the Project Site is within multiple combining districts as defined by the County's zoning ordinance, including the Floodway Combining District, Floodplain Combining District, Scenic Resources Combining District, Riparian Corridor Combining Zone, and Valley Oak Habitat Combining District. ▪ The Project Site is within the Windsor-Larkfield-Santa Rosa Community Separator.
Sonoma County Zoning Ordinance	▪ The Sonoma County Zoning Ordinance regulates development in the unincorporated areas of the County by establishing districts and designating lawful permitted uses and uses that may be approved through the use permit process.
Shiloh Road Vision Plan	▪ The Shiloh Road Vision Plan, implemented by the Town of Windsor General Plan, is a planning document that provides guiding principles to ensure that the Shiloh Road Vision area conveys an image that is both unique and consistent with regional architecture and one that evokes a strong sense of place and promotes walking and bicycling. The Project Site is not within the jurisdiction of the Town of Windsor General Plan or the Shiloh Road Vision Plan.
Williamson Act	▪ Designed to preserve farmlands and open space lands by discouraging premature and unnecessary conversion to urban uses. ▪ Landowners contract with the County to maintain agricultural or open space use of their lands in return for a reduced property tax assessment. ▪ The Project Site is actively cultivated for the production of wine grapes; however, it is not under a Williamson Act contract.
Right to Farm Act	▪ California Civil Code Section 3482.5, also known as the Right to Farm Act, contains provisions to ensure that agricultural operations are not considered nuisances, so long as they do not obstruct navigable waterways or public areas. This ordinance supersedes any conflicting local regulations but does not prohibit local jurisdictions from adopting ordinances that allow notification to those in close proximity to an agricultural activity that they are subject to the provisions of the Right to Farm Act.
Sonoma County Right to Farm Ordinance	▪ The Sonoma County Right to Farm Ordinance, codified in the Municipal Code as Ord. No. 5203 § 5, 1999, is the declared policy of the County to conserve, protect, enhance, and encourage agricultural operations on agricultural land within the unincorporated area of the County by ensuring that agricultural operations are not considered nuisances.

3.9.2 Environmental Setting

Surrounding Land Uses and Zoning

The Project Site is located within unincorporated Sonoma County (County), directly adjacent to the Town of Windsor boundary to the north. Existing land uses on the Project Site consist of a residence and operating vineyard; Pruitt Creek bisects the central portion of the site. The Project Site is zoned and designated Land Intensive Agriculture (LIA), in the Sonoma County Zoning code and the County's General Plan. The LIA designation enhances and protects lands best suited for permanent agricultural use and capable of relatively high production per acre of land. Additionally, the Project Site is within multiple combining districts as defined by the County's zoning ordinance, including the Floodway Combining District, Floodplain Combining District, Scenic Resources Combining District, Riparian Corridor Combining Zone, and Valley Oak Habitat Combining District. These combining district designations apply land use regulations to the Project Site in addition to the land use regulations associated with its main zoning designation, LIA. Surrounding land use and zoning designations are illustrated in **Figure 3.9-1** and **Figure 3.9-2.**

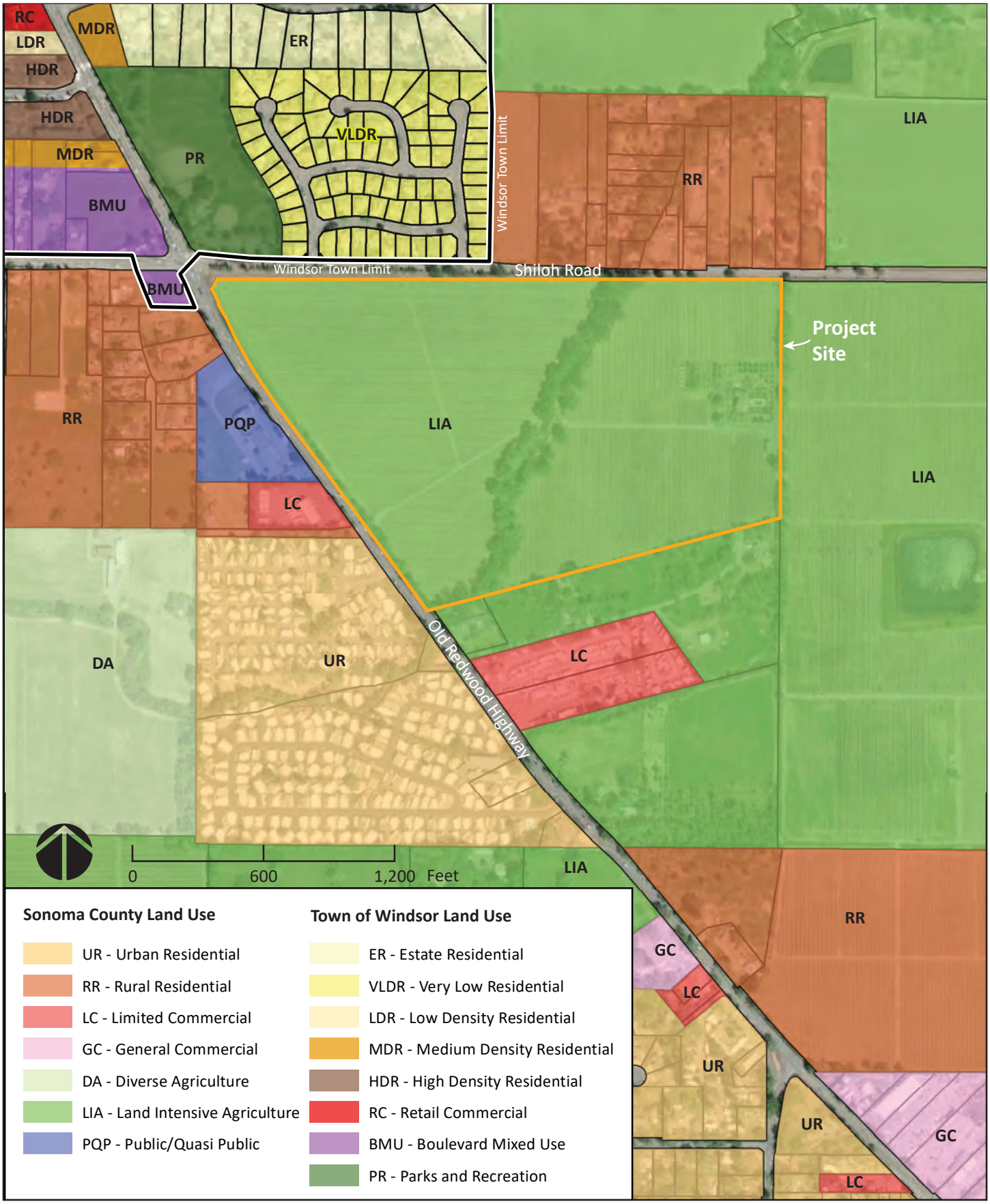
Regional access to the Project Site is provided by Highway 101, which runs in a general north-south direction and is located approximately 0.5 miles west of the Project Site. Local access to the Project Site is currently provided through existing driveways on Shiloh Road and Old Redwood Highway.

The Project Site is bordered by Shiloh Road, Esposti Park, the Oak Park residential subdivision, and rural residential parcels and agriculture to the north; Old Redwood Highway, single family residential uses, the Shiloh Neighborhood Church, a business, and mobile home community to the west; and agricultural and commercial parcels in unincorporated Sonoma County to the south and east. General land uses in the vicinity are a mix of recreation, residential, agriculture, and commercial, with a large-scale commercial center located approximately 0.3 miles to the northwest.

The Charles M. Schulz Sonoma County Airport is located approximately two miles southwest of the Project Site. The Project Site is located outside of the Airport Safety Zone for this airport (County, 2016). Shiloh Neighborhood Church is located immediately to the west of the Project Site, and Christ Evangelical Church is located approximately 0.1 miles to the northwest of the Project Site. The nearest schools to the Project Site are Little School House and San Miguel Elementary School, both located over a half-mile from the Project Site. The nearest library to the Project Site is the Windsor Regional Library, located approximately three miles to the northwest. Shiloh Ranch Regional Park is located approximately 0.3 miles east of the Project Site.

Agriculture

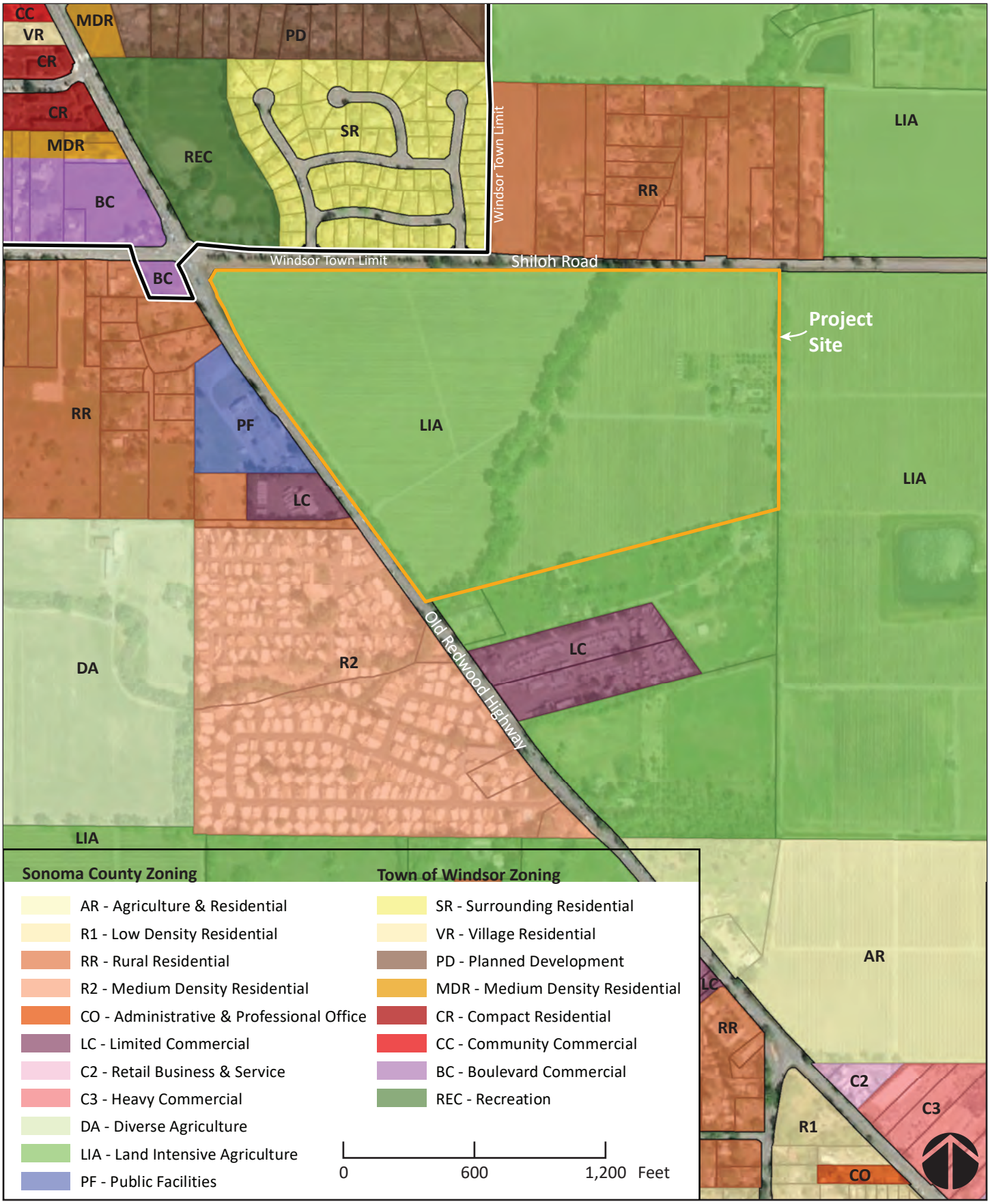
The U.S. Department of Agriculture (USDA) conducts a state-by-state census of agriculture every five years. The National Agriculture Statistical Service collects census data from a list of all known potential agriculture operators. The census reports on various statistics relating to crop yields, farm acreage, and farm economics. According to the 2017 Census of Agriculture, a total of 567,284 acres in the County are used for farming purposes, 63,979 acres of which are used for grape production (USDA, 2017).



Source: Sonoma County, Town of Windsor

FIGURE 3.9-1

LAND USE



Source: Sonoma County, Town of Windsor

FIGURE 3.9-2

ZONING MAP

The State of California developed the Farmland Mapping and Monitoring Program (FMMP) to provide data to decision makers for use in planning for the present and future of California's agricultural land resources. Prime farmland is a designation applied to lands with the best combination of physical and chemical features able to sustain long-term agriculture. Farmland of Statewide Importance is a designation applied to lands that are similar to Prime Farmland but with minor shortcomings, such as large slopes or the diminished ability to store soil moisture. Unique farmland is comprised of lesser quality soils used for the production of the State's leading agricultural crops (DOC, 2016). As shown in **Figure 3.9-3**, according to the FMMP, approximately 7-acres of the Project Site are unique farmland, 45-acres are farmland of Statewide importance, and approximately 13-acres are prime farmland as designated by the California Department of Conservation (DOC, 2016). The Project Site is actively cultivated for the production of wine grapes; however, it is not under a Williamson Act contract.

3.9.3 Impacts

3.9.3.1 Assessment Criteria

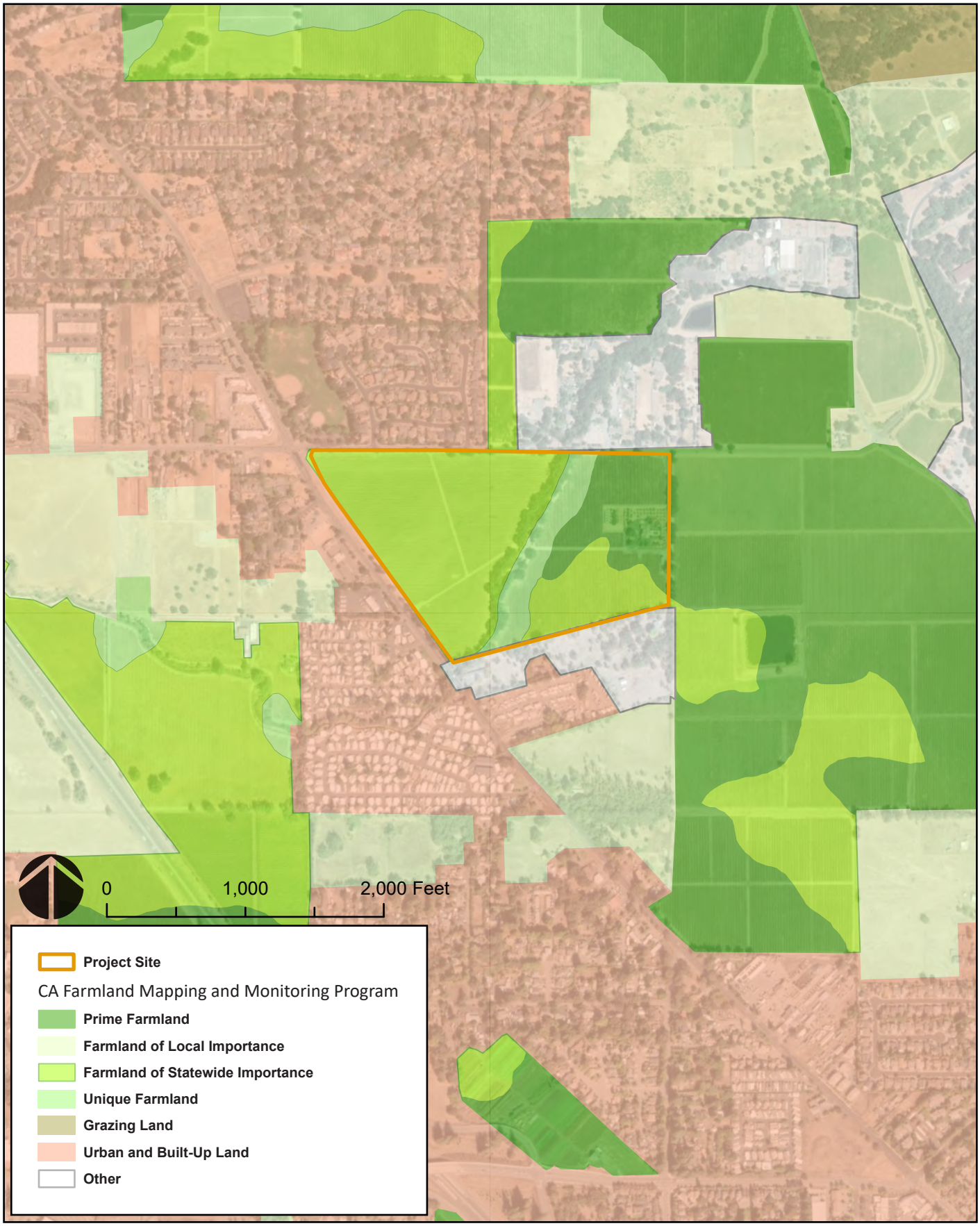
Land use impacts would be significant if the alternative results in conflicts with surrounding land uses or would inhibit the implementation of regional, State, and local land use plans for surrounding properties. Significant land use impacts may also occur if the alternative would convert a significant amount of Prime Farmland or Farmland of Statewide/Local/Unique Importance to other uses, as determined by the Farmland Protection Policy Act (FPPA).

3.9.3.2 Alternative A – Proposed Project

Land Use Conflicts

Alternative A would result in the conversion of agricultural uses and the construction and operation of a casino-resort and associated facilities within the Project Site. The proposed land uses under Alternative A are not consistent with the County's underlying land use and zoning designations for the Project Site. However, Alternative A would result in the transfer of the Project Site into federal trust status for the benefit of the Tribe, thereby removing the property from County land use jurisdiction. Only federal and tribal land use regulations would apply to the Project Site once the land is taken into trust.

The areas immediately adjacent to the Project Site are developed with residential, recreational, commercial, and agricultural uses. The Project Site is surrounded by a mobile home park, residential subdivisions, rural residential housing and agriculture, a church, commercial buildings, and RV storage yard. Alternative A would not physically disrupt neighboring land uses or prohibit access to neighboring parcels. While the proposed uses within the Project Site are not similar in nature to the uses immediately surrounding the site, they are consistent with large scale commercial uses approximately 0.3 miles to the northwest, including big box stores and other high intensity commercial uses near the Highway 101 and Shiloh Road interchange. Alternative A has been designed to preserve and maintain the existing vineyards and trees around the perimeter of the site to serve as a buffer from adjacent land uses and to be more visually cohesive with the rural/wine country character of the surrounding community. These vineyard buffer areas would range from 100 feet to 500 feet wide around the northern and western site boundaries closest to the majority of nearby residential uses.



Source: CAS Safety, Sonoma County, Evacuation Area, EOC

FIGURE 3.9-3

FARMLAND MAPPING AND MONITORING PROGRAM

However, the increase in intensity of development within the site as a result of Alternative A could result in impacts to nearby sensitive land uses, including the adjacent residential areas and church; potential conflicts may include air quality and noise impacts from construction activities (**Sections 3.4** and **3.11**, respectively), an increase in traffic (**Section 3.8**), visual effects and an increase in lighting (**Section 3.13**). Implementation of protective measures and BMPs identified in **Table 2.1-3** for air quality, noise, traffic, and visual resources, as well as mitigation measures identified in **Section 4,** would reduce potential adverse impacts to less-than-significant levels.

Additionally, the proposed water treatment facilities, WWTP, and associated storage facilities would be located within the eastern portion of the site, furthest away from the residential neighborhoods to the north and west. Land uses within the eastern portion of the site consist of parking areas and water/wastewater infrastructure. These uses would be compatible with on-going agricultural uses to the east. Further, the Sonoma County Right to Farm Ordinance (Sonoma County Code, Chapter 30, Article II) allows for agricultural operations surrounding the Project Site to continue as normal even if they cause a nuisance to the uses proposed under Alternative A.

The Project Site is located outside of the Airport Safety Zone for the Charles M. Schulz Sonoma County Airport. A Federal Aviation Administration (FAA) Form 7460-1, Notice of Proposed Construction or Alteration was submitted for Alternative A on February 2, 2022, which conservatively assumed an 80-foot tall structure. A Determination of No Hazard to Air Navigation was issued by the FAA on March 8, 2022.

The corresponding aeronautical study found that buildings associated with Alternative A, which have a maximum height of 65 feet tall (**Section 2.1.2**), would not exceed obstruction standards, would not be a hazard to air navigation, and that marking and lighting would not be necessary for aviation safety (**Appendix J**). Therefore, Alternative A would not result in land use conflicts with the nearby airport.

In summary, Alternative A would result in less-than-significant impacts associated with land use conflicts.

Agriculture

The Project Site contains unique farmland and farmland of Statewide importance as designated by the California Department of Conservation (DOC, 2016). Alternative A would result in the conversion of up to approximately 47 acres of agricultural land to non-agricultural uses, assuming the maximum size of the reclaimed water storage reservoir is developed. A Farmland Conversion Impact Rating (FCIR) form was been submitted to the USDA to determine value of the agricultural land to be converted under Alternative A in accordance with the FPPA. Per FPPA guidelines, if a site receives an FCIR combined score of 160 or more, alternative sites should be considered to determine if an alternative site would serve the proposed purpose and have a lower combined score or convert fewer acres of farmland (7 CFR § 658.4 (c)). The farmland conversion areas under Alternative A received a combined land evaluation and site assessment score of 144 (**Appendix K**).

The development and operation of Alternative A would not preclude agricultural uses on adjacent parcels. Because Alternative A received an FCIR combined score below 160, and because Alternative A includes continued vineyard operations on a portion of the Project Site and the Project Site comprises a relatively small percentage (<0.01%) of the available farmland in the County, effects to agricultural resources would be less than significant.

3.9.3.3 Alternative B – Reduced Intensity Alternative

Alternative B would include the same land uses as Alternative A but with decreased intensities. Alternative B would include the conversion of approximately 45 acres of agricultural land to non-agricultural uses. Therefore, Alternative B would result in decreased impacts as compared to Alternative A. Specifically, Alternative B would preserve more vineyard areas within the Project Site, which would reduce impacts to agricultural uses and would provide larger buffers between the proposed development and adjacent land uses that could further reduce impacts associated with noise and visual resources. Additionally, because less patronage would be expected under Alternative B, fewer vehicle trips would occur and associated effects. As described above for Alternative A, land use conflicts would be less than significant with the implementation of BMPs in **Table 2.1-3** and mitigation measures in **Section 4**.

3.9.3.4 Alternative C – Non-Gaming Alternative

Alternative C would result in a reduced development footprint on the Project Site as compared with Alternatives A and B, and no casino would be developed. Alternative C would include the conversion of approximately 24 acres of agricultural land to non-agricultural uses, less than would occur under Alternatives A and B. A hotel and retail uses would still be developed which would result in impacts similar in nature to those that would occur with Alternatives A and B, but at a reduced scale. As discussed throughout **Section 3**, all impacts would be reduced to less-than-significant levels with implementation of the BMPs described in **Table 2.1-3** and the mitigation measures included in **Section 4**.

3.9.3.5 Alternative D – No Action Alternative

Under Alternative D, the Project Site would remain under County jurisdiction and no development would occur on the Project Site. Therefore, land use consistency or compatibility impacts would not occur under this alternative.

3.10 PUBLIC SERVICES AND UTILITIES

3.10.1 Regulatory Setting

The public services regulatory setting is summarized in **Table 3.10-1**, and additional information on the regulatory setting can be found in **Appendix E**.

3.10.2 Environmental Setting

Water Supply and Wastewater Services

As described in **Sections 2.1.3** and **2.1.4**, water and wastewater on the Project Site would be provided via on-site wells and wastewater system. There is currently no municipal water supplied or wastewater services provided to the Project Site. Additional information regarding surface water and groundwater resources as they relate to water supply and wastewater services is provided in **Section 3.3**.

Table 3.10-1: Regulatory Policies and Plans Related to Public Services and Utilities

Regulation	Description
Federal	
Safe Drinking Water Act	▪ Establishes protective drinking water standards for protection of public health.
Clean Water Act	▪ Establishes environmental discharge requirements for wastewater treatment.
Public Law 280	▪ Changed criminal jurisdiction from the federal government to certain states, including California, for offenses involving tribal members in Indian Country.
State	
Assembly Bill 939	▪ Requires jurisdictions to conduct a solid waste disposal needs assessment that estimates the disposal capacity needed to accommodate projected solid waste generated within the jurisdiction. ▪ All local jurisdictions are required to divert 50% of their total waste stream from landfill disposal.

Solid Waste

The Sonoma County Environmental Health and Safety Division, under the authority of CalRecycle, permits and inspects landfills, transfer stations, and other facilities that handle solid waste for Sonoma County in addition to monitoring waste tire sites and haulers. The division also responds to solid waste storage complaints or illegal accumulation (Sonoma County Environmental Health and Safety Division, 2022). Sonoma County Resource Recovery provides solid waste collection services throughout the County, including the Town and the Project Site, in addition to recycling and organic waste collection. Integrated Waste, a division of the Sonoma County Department of Transportation and Public Works Department, owns Sonoma County Central Landfill and five refuse transfer stations, manages two commercial hauling companies, and maintains a closed landfill (Sonoma County Transportation and Public Works, 2022). The nearest transfer station, Healdsburg Transfer Station, is approximately 9.8 miles north of the Project Site, and serves the central to north part of County (Zero Waste Sonoma, 2022). It is permitted to accept up to 720 tons per day and 540 vehicles per day, and in 2019 the average daily throughput was approximately 374 tons with a peak of 617 tons per day (Republic Services of Sonoma County, 2019). The waste collected is transferred either to Central Landfill or another facility depending on the waste type (Zero Waste Sonoma, 2022). Central Landfill is located approximately 15.3 miles south of the Project Site and it has facilities for recycling and material reuse in addition to natural gas and electrical generation. It is permitted to have a maximum capacity of 32,650,000 CY with a remaining capacity of 9,181,519 CY as of February 10, 2020, and the permitted maximum throughput is 2,500 tons per day. Central Landfill is permitted to accept several different types of waste: wood waste, tires, mixed municipal, construction/demolition, industrial, agricultural, biosolids, and other designated. The cease operation date for the landfill is June 1, 2043 (CalRecycle, 2022a).

Electricity, Natural Gas, and Telecommunications

As described in **Section 2.1.8**, Pacific Gas and Electric (PG&E) is the primary electric and natural gas provider in northern and central California and serves 16 million people within a 70,000-square-mile service. There are 106,681 circuit miles of electric distribution lines, 18,466 miles of circuit interconnected transmission lines, 42,141 miles of natural gas distribution pipelines, and 6,438 miles of transmission pipelines (PG&E, 2022b). In 2019, electricity generation and purchases were from 100% greenhouse gas-free sources: 44% nuclear, 29% renewable, and 27% large hydro (PG&E, 2020). As of December 2021, the net operating electrical capacity of PG&E owned facilities consisted of approximately 3,360 megawatts (MW) in hydroelectric, 2,240 MW in nuclear, 1,400 MW in fossil fuel, and 152 MW in photovoltaic (Statista, 2022). Approximately 0.6 miles and 1.75 miles southwest of the Project Site, respectively, there is a 230 kilovolt (kV) and 60 kV distribution line and the Fulton electrical substation with a maximum voltage of 230 (California Energy Commission, 2022). Furthermore, as discussed in **Section 2.1.8**, there are underground and overhead electrical lines on and adjacent to the Project Site. The nearest natural gas transmission line is approximately 0.95 miles west of the Project Site (PG&E, 2022a). The Tribe would contract with PG&E to provide services to the Project Site. Preliminary discussions between the Tribe and PG&E related to the provision of electric and natural gas services to the Project Site are on-going.

There are many private companies that provide telephone, internet, and cable services to properties within the vicinity of the Project Site. Companies such as Xfinity, T-Mobile, AT&T, Earthlink, Hughsnet, Viasat, Sonic, and DigitalPath, Inc, offer a host of telecommunication services in the region.

Law Enforcement

As described in **Section 2.1.7**, Sonoma County Sheriff's Office (SCSO) provides law enforcement services within the County, including to the Project Site. The SCSO in 2020-2021 reported to have a total of approximately 695 employees, which includes 223 sworn sheriff officers, six sworn correctional officers, and approximately 466 civilians. In the same year, dispatch received approximately 153,295 calls and 30,415 calls for 9-1-1 services. Calls for services amounted to approximately 65,379 calls with a total of 2,377 arrests, 11,062 bookings, and 431 death investigations. Average response time for a priority one call was 10 minutes and 28 seconds. In addition to law enforcement services, the SCSO manages and implements evacuations within the County from wildfire events, including the Walbridge Fire and the Glass Fire in 2020 which involved the evacuation of approximately 81,000 people. The SCSO is also responsible for staffing the Windsor Police Department through an agreement with the Town. Approximately 24 full-time SCSO employees staffed the Windsor Police Department in 2020-2021, which includes one chief, three sergeants, one K9 officer, and 14 patrol officers. The Windsor Police Department received approximately 7,438 calls for service within the Town with an average response time of one minute and 22 seconds, and there were approximately 158 arrests/bookings (Sonoma County Sheriff's Office, 2021).

Fire Protection and Emergency Medical Services

The County is served by the SCFD for fire protection and emergency services, and the Project Site is within the jurisdiction of SCFD. SCFD services over 75,000 residents and over approximately 20,000 visitors during the peak tourist season (Sonoma County Fire District, 2021). There are total of 10 fire stations throughout the County, and the SCFD consists of both full-times staff and volunteer firefighters. There are one fire chief, three deputy fire chiefs, four division chiefs, three battalion chiefs, 24 captains, 24 engineers, nine firefighters, 25 firefighters/paramedics, five apprentice firefighters, and 41 volunteer

firefighters in addition to prevention, finance, and administration staff (Sonoma County Fire District, 2022). The SCFD provides Advanced Life Support (ALS) services through its ALS ambulance and paramedics on the engines that constitute ASL engine companies (Sonoma County Fire District, 2021). In addition to the ALS ambulance, the SCFD fleet consists of 20 engines with water tanks ranging from 500 to 800 gallons and pumping capabilities from 500 to 1,500 gallons per minute (gpm), five water tenders with water tanks ranging from 1,000 to 2,000 gallons and pumping capabilities from 500 to 1,250 gpm, one truck, and two Office of Emergency apparatuses (Sonoma County Fire District, 2022).

CAL FIRE provides fire protection services to State Responsibility Areas and mutual aid throughout the County with the nearest station located approximately 5.4 miles south of the Project Site in the City of Santa Rosa. The station is staffed nine months a year, typically April through December corresponding with the wildfire season (Glaeser, 2023).

The nearest hospital center to the Project Site is Sutter Santa Rosa Regional Hospital, located at 30 Mark West Springs Rd, Santa Rosa, CA, about 2.2 miles southeast of the Project Site. This hospital provides walk-in care, urgent care, and emergency services (Sutter Health, 2022).

Public Schools

The Project Site is located within the Mark West Union School District (MWUSD) and the Santa Rosa City High School District (SRCSD). MWUSD currently provides educational services through four elementary schools and SRCSD provides educations services through four middle schools and six high schools (Sonoma County Office of Education, 2022). The nearest public school to the Project Site is approximately 0.83 miles southeast, San Miguel Elementary School, while the nearest school is Little School House (preschool) that is approximately 0.45 miles south.

Parks and Recreation

There are over 54 recreational facilities operated by the County that include trails, parks, river access, beaches, boat launches, a marina, preserves, a sports field, and a community center (Sonoma County Regional Parks, 2022). There are 11 State parks (Sonoma County Tourism, 2022), and the Town operates 17 parks (Town of Windsor, 2022). The closest park area to the Project Site is the Town-operated Esposti Park, which is adjacent to the Project Site on its northern border. Shiloh Ranch Regional Park is approximately 0.4 miles to the east of the Project Site.

3.10.3 Impacts

3.10.3.1 Assessment Criteria

An adverse effect would occur if project-related demands on public services would cause an exceedance of system capacities that result in significant effects to the physical environment.

3.10.3.2 Alternatives A – Proposed Project

Water Supply

As described in **Section 2.1.3**, water supply for Alternative A would be provided via an on-site well system. No additions or modifications to the public water supply infrastructure would be required. Because Alternative A would not require services from the public water supply infrastructure, there would be no effect to water supply infrastructure. A discussion of potential effects to groundwater resources and supply is provided in **Section 3.3**.

Wastewater

As described in **Section 2.1.4**, wastewater treatment for Alternative A would be provided via an on-site WWTP. No additions or modifications to the public wastewater collection or treatment infrastructure would be required. Because Alternative A would not require services from public wastewater treatment infrastructure, there would be no effect. A discussion of potential impacts to water quality from operation of the proposed wastewater treatment infrastructure is provided in **Section 3.3**.

Solid Waste Service

Solid waste from construction may include vegetation removal (e.g., grapevines), packing material (e.g., paper, wood, glass, aluminum, and plastics), waste lumber, insulation, empty non-hazardous chemical containers, concrete, metal, and electrical wiring. These solid waste materials are typical of construction sites and would most likely be collected by Sonoma County Resource Recovery's service trucks after being contracted for services prior to construction. Central Landfill is permitted to accept waste from construction and, therefore, the solid waste could be deposited there for processing. Solid waste generated from the construction of Alternative A would be temporary, and therefore would not impact Central Landfill's long-term capacity to serve its current customers.

Solid waste would be generated from Alternative A once operation begins. The estimated solid waste generated by Alternative A is shown in **Table 3.10-2**. As seen in **Table 3.10-2**, Alternative A at maximum would produce approximately 10,516 pounds (lb.) of solid waste per day (approximately 5.3 tons per day). This estimate is conservative as it assumes maximum occupancy of proposed facilities and includes recycling. This would equate to approximately 0.7% of the permitted daily quantity accepted at the Healdsburg Transfer Station. Utilizing the average daily stream of waste, Alternative A would increase the average daily stream by approximately 1.4%. At the Central Landfill, the daily solid waste generation from Alternative A would equate to approximately 0.2% of the permitted throughput. These increases at the Healdsburg Transfer Station and Central Landfill represent a negligible addition to the landfill. Furthermore, a BMP has been incorporated to ensure that maximum recycling and compaction is done during construction and operation in addition to proper disposal to reduce littering (see **Table 2.1-3**). Therefore, construction and operation of Alternative A would not result in a significant adverse effect to the solid waste stream.

Electricity, Natural Gas, and Telecommunications

As described in **Section 2.1.9**, all buildings would be built to meet or exceed the standards set forth in the CBC. Construction on the Project Site could damage underground utilities and lead to outages and/or serious injury, which would be a potentially significant impact. However, a BMP is included in **Table 2.1-3** that would reduce these potential impacts to less than significant.

Table 3.10-2: Solid Waste Generation from Alternative A

Waste Generation Source	Waste Generation Rate	Units	Alternative A Values	Alternative A Waste Generation (lb./day)*
Hotel	2	lb./room/day	400	800.0
Casino and Other	3.12	lb./100 square foot (sf)/day	132,495	4,133.8
Food and Beverage	0.005	lb./sf/day	66,125	330.6
Retail	0.006	lb./sf/day	2,250	13.5
Event Center	3.12	lb./100 sf/day	53,380	1,665.5
Ballroom and Meetings Rooms	3.12	lb./100 sf/day	74,185	2,314.6
Circulation and Back of House	0.006	lb./sf/day	209,702	1,258.2
			Total	**10,516.2**

Source: CalRecycle, 2022b

* The solid waste numbers estimated predict the worst-case scenario because they assume maximum occupancy of the hotel; events occurring in the event center, ballrooms, and meetings rooms simultaneously; and that maximum casino patronage is occurring.

PG&E would provide electrical services to Alternative A. If natural gas is ultimately needed PG&E would provide this service as well. As discussed in **Section 3.10-2**, the Tribe and PG&E are already in preliminary discussions concerning increasing services to the Project Site. PG&E has specified it does not have capacity for Alternative A as of 2022 but has electrical infrastructure projects underway that would be completed in 2024/2025 with feeder related infrastructure needing potentially another two years. These projects would be completed before the 2028 opening date for Alternative A. Therefore, by the opening date for the Alternative A, there would adequate electrical capacity for PG&E to supply the needs of the project components (Miller, 2022). These extensions and services to the Project Site would be made in accordance with approved tariffs with the California Public Utilities Commission, and the Tribe would be responsible for paying the infrastructure improvements deemed required by PG&E. The public would not be responsible for the costs associated with the extension and new infrastructure required for Alternative A. Should there be interruptions in electrical services, Alternative A would utilize the on-site generator systems described in **Section 2.1.8** to power its facilities. There would be no effect to off-site electrical resources during those events.

Natural gas infrastructure is planned to be reinforced in the area surrounding the Project Site within one to two years (Miller, 2022) and is expected to be sufficient to serve the needs of Alternative A. Similar to the electrical supply, the Tribe would be responsible for the fees associated with extending services to the Project Site with no cost accruing to the public. If natural gas is infeasible, then Alternative A would utilize electric appliances and/or propane gas. Consequently, the electrical and natural gas related impacts related to Alternative A would be less than significant.

Local telecommunication utility companies of the Tribe's choosing would extend connections from adjacent infrastructure to provide telecommunication services. The Tribe would pay the cost associated with extending services to the Project Site per the telecommunication company's specifications. Construction requirements, such as trenching and laying service lines, would result in minor temporary impacts and bare earth would be re-seeded. There would be a less-than-significant impact.

Law Enforcement

An analysis of the impact of casino gambling on local crime rates is included in **Section 3.7.3** and **Appendix B-1**. While there is no definitive link between casinos and crime, as with any commercial development, it is anticipated that the increased concentration of people due to Alternative A would lead to an increase in the number of service calls to local law enforcement.

Under Alternative A, BMPs have been incorporated into the project design to enhance security on the Project Site during operation. This includes security cameras and tribal security personnel that would provide surveillance of proposed developments. Criminal and civil incidents would be reduced by security guards patrolling the facilities who would carry two-way radios to request and respond to back up or emergency calls in addition to other measures (see **Table 2.1-3**). As described in **Section 3.10.2**, per Public Law 280, the Project Site once taken into trust would fall under the criminal jurisdiction of the SCSO after tribal consent. The Tribe proposes to contract for law enforcement services to the Project Site from SCSO in order to provide compensation for the services provided.

While SCSO currently provides law enforcement services to the existing residence on the Project Site, based on review of service rates at other tribal gaming facilities in the County, operation of Alternative A is estimated to increase the number of calls for service placed to SCSO by approximately 1,433 calls per year and result in 33 arrests during the first year of operations (**Appendix B-1**). This would constitute an approximate 2.2% increase in total service calls and 1.4% of arrests by SCSO, but this increase is not anticipated to require SCSO to build new or expand facilities to continue to provide services as a consequence of expanded development on the Project Site. Furthermore, it is not anticipated that additional staff would be required in SCSO to service the new development on the Project Site based on current conditions at SCSO (for additional information on this, see **Appendix B-1**). Although the increase in service calls would not require building new facilities, the Tribe's commitment to entering into a services agreement with the SCSO is included as a mitigation measure in **Section 4**. With the inclusion of this mitigation measure that would ensure compensation for the law enforcement services received from the SCSO, this impact would be less than significant.

Fire Protection and Emergency Medical Services

Under Alternative A during construction, construction vehicles and equipment, such as welders, torches, and grinders, may accidentally spark and ignite vegetation or building materials. The increased risks of fire during construction would be similar to that found at other construction sites and would not be considered abnormal. Fire incidents on the Project Site would primarily be responded to by SCFD with mutual aid provide by CAL FIRE and other fire agencies. Construction related BMPs in **Table 2.1-3** are provided to further minimize potential adverse effects related to fire risks. Thus, potentially adverse impacts to fire protection agencies during construction would be less than significant.

An indoor sprinkler system would be installed to provide fire protection. As described in **Section 2.1.3**, fire flow requirements for Alternative A are anticipated to be 2,000 gallons per minute for 4 hours based on the use of automatic fire sprinklers consistent with applicable building code requirements and would

be provided via on-site wells, storage tank, and pump station that would be designed to meet fire flow requirements. BMPs to maintain, inspect, and test fire protection devices including, but not limited to, fire sprinkler systems, alarm systems, commercial kitchens, and fire hydrants per National Fire Protection Association standards are included in **Table 2.1-3**. Regardless, operation of Alternative A would create additional demand for fire protection and emergency services. As described in **Appendix B-1**, Alternative A would result in an estimated increase of 291 fire or emergency medical incidents annually. Calls for service would not be disproportionate to other large commercial developments in the County. While the minimal increase in fire protection services is not anticipated to trigger the need to construct new facilities, this would nonetheless constitute a potentially significant impact. The Tribe proposes to enter into a service agreement with the SCFD for fire protection and emergency medical services to the Project Site prior to development. As described in **Section 2.1.7**, the nearest SCFD fire station to the Project Site is Station 1, which is less than two miles northwest. The mitigation measure described in **Section 4** would ensure the Tribe negotiates a service agreement with SCFD to compensate for the increased service calls that would result from development on the Project Site. This intent is further demonstrated in the Letter of Intent between the Tribe and SCFD to negotiate a service agreement that is discussed in **Section 2.1.7** (see **Appendix O** for further information). If the Tribe does not enter into a service agreement with a fire district/department, the Tribe will establish, equip, and staff a fire department and station on the Project Site, within the "treatment area" designated in the eastern portion of the Project Site (**Figure 2.1-1**). Mitigation would reduce potential impacts to fire protection and emergency medical services to less than significant.

Public Schools

Effects to area schools could occur if the employees or patrons of Alternative A significantly increase the demand on these resources. As described in **Appendix B-1**, the economic activity of Alternative A represents only a small percentage of the Sonoma County economy; therefore, Alternative A would be expected to have at most, a nominal impact on the housing market. For a housing market to experience changes, a change in population must occur, and/or existing residents need to have large increases or decreases in wages. These factors generally result in residents seeking improved housing options or a forced downsize. As the subject development would not require a large influx of residents to fill positions, and as the new positions would only have a small impact on the amount of unemployed, the housing market would not experience a large increase in home values or demand for new homes, and there would be only a nominal impact on the school system.

Additionally, given that any anticipated new students would be distributed across all grade levels, any new students that may enroll in area school districts as a result of the project would be considered a nominal impact. Furthermore, if Alternative A were to result in the relocation of any families to the area, the schools would likely collect additional tax revenue from the families of new students and would use these taxes to hire additional teachers to meet additional demand if necessary. Therefore, any potential increased enrollment would have a nominal effect on the ability of regional schools to provide education services at existing levels. Alternative A would not result in significant adverse impacts to schools.

Parks and Recreation

Effects to local parks would occur if Alternative A induced population growth that would subsequently increase demand on parks. Esposti Park is adjacent to the Project Site on its northern border and Shiloh Ranch Regional Park is approximately 0.4 miles to the east. The casino and associated facilities are not expected to significantly increase visitation to these parks because they would not significantly increase the population in the Town or unincorporated County. Patrons to Alternative A could visit attractions in

the surrounding areas that could include parks and other recreational areas including libraries, but this is not expected to be significant enough to require the expansion of park or recreational facilities. Therefore, a less-than-significant impact would occur.

3.10.3.3 Alternatives B – Reduced Intensity Alternative

Alternative B would result in similar impacts to Public Services and Utilities as described for Alternative A above; however, at a reduced scale due to the reduced intensity of Alternative B. No impact to public water and wastewater services would occur because those services would be provided on-site. A discussion of potential effects to water resources from the on-site utilities is provided in **Section 3.3.** Solid waste generated from construction of Alternative B would be similar to that generated under Alternative A and would be disposed of similar to this alternative as well. Solid waste generated from the construction of Alternative B would be temporary, and therefore would not impact Central Landfill's long-term capacity to serve its current customers. The estimated solid waste generated by operation of Alternative B is shown in **Table 3.10-3**. This estimate is conservative as it assumes maximum occupancy of proposed facilities and includes recycling. Similar to Alternative A, these increases would be negligible with similar BMPs in place to reduce solid waste; therefore, construction and operation of Alternative B would not result in a significant effect to the solid waste stream.

Table 3.10-3: Solid Waste Generation from Alternatives B

Waste Generation Source	Waste Generation Rate	Units	Alternative B Values	Alternative B Waste Generation (lb./day)*
Hotel	2	lb./room/day	200	400.0
Casino and Other	3.12	lb./100 sf/day	132,495	4,133.8
Food and Beverage	0.005	lb./sf/day	66,125	330.6
Retail	0.006	lb./sf/day	2,250	13.5
Event Center	3.12	lb./100 sf/day	-	-
Ballroom and Meetings Rooms	3.12	lb./100 sf/day	33,135	1,033.8
Circulation and Back of House	0.006	lb./sf/day	171,877	1,031.3
			Totals	**6,943.0**

Source: CalRecycle, 2022b

* The solid waste numbers estimated predict the worst-case scenario because they assume maximum occupancy of the hotel; events occurring in the event center, ballrooms, and meetings rooms simultaneously; and that maximum casino patronage is occurring.

The impacts of Alternative B on telecommunication, electrical, and gas services would be similar to Alternative A except the impacts would be less due to the smaller demand. A BMP is included in **Table 2.1-3** that would reduce these potential impacts to less than significant. Alternative B would have similar impact to police and fire protection services as to Alternative A, but less due to the smaller scale of the development. BMPs in **Table 2.1-3** and mitigation measures in **Section 4** would ensure impacts to police

and fire services are less than significant. Similar to Alternative A, Alternative B would not induce growth in the area nor significantly increase the usage of public schools, parks, or other recreational facilities enough to require new facilities or expansion of existing ones; therefore, a less-than-significant impact would occur.

3.10.3.4 Alternative C – Non-Gaming Alternative

Alternative C would result in similar impacts to Public Services and Utilities as described for Alternatives A and B above, however, at a reduced scale due to the reduced intensity of Alternative C. No impact to public water and wastewater services would occur because those services would be provided on-site. A discussion of potential effects to water resources from the on-site utilities is provided in **Section 3.3.** Solid waste generated from construction of Alternative C would be similar to that generated under Alternatives A and B and would be disposed of similar to this alternative as well. Solid waste generated from the construction of Alternative C would be temporary, and therefore would not impact Central Landfill's long-term capacity to serve its current customers. The estimated solid waste generation from operation of Alternative C are shown in **Table 3.10-4**. This estimate is conservative as it assumes maximum occupancy of proposed facilities and includes recycling. Similar to Alternatives A and B, these increases would be negligible with similar BMPs in place to reduce solid waste; therefore, construction and operation of Alternative C would not result in a significant effect to the solid waste stream. The impacts of Alternative C on telecommunication, electrical, and gas services would be similar to Alternatives A and B except the impacts would be less due to the smaller demand. A BMP is included in **Table 2.1-3** that would reduce these potential impacts to less than significant. Alternative C would have similar impact to police and fire protection services as to Alternatives A and B, but less due to the smaller scale of the development. BMPs in **Table 2.1-3** and mitigation measures in **Section 4** would ensure impacts to police and fire services are less than significant. Similar to Alternatives A and B, Alternative C would not induce growth in the area nor significantly increase the usage of public schools, parks, or other recreational facilities enough to require new facilities or expansion of existing ones; therefore, a less-than-significant impact would occur.

Table 3.10-4: Solid Waste Generation from Alternative C

Waste Generation Source	Waste Generation Rate	Units	Alternative C Values	Alternative C Waste Generation (lb./day)*
Hotel	2	lb./room/day	200	400
Winery and Visitor Center	0.006	lb./sf/day	51,000	306
Restaurant	0.005	lb./sf/day	4,700	23.5
				729.5

Source: CalRecycle, 2022b

* The solid waste numbers estimated predict the worst-case scenario because they assume maximum occupancy of the hotel; Normally, full occupancy of the hotel would not occur frequently.

3.10.3.5 Alternative D – No Action Alternative

Alternative D would not increase demands on public services and no new utility extensions would be required.

3.11 NOISE

3.11.1 Regulatory Setting

The noise regulatory setting is summarized in **Table 3.11-1**, and additional information on the regulatory setting can be found in **Appendix E**.

Table 3.11-1: Regulatory Policies and Plans Related to Noise

Regulation	Description
Federal	
Federal Highway Administration (FHWA) Construction Noise Abatement Criteria (NAC)	▪ Provides construction noise level thresholds in its Construction Noise Handbook, 2006, which depends on noise receptor locations, land uses, and time of day.
FHWA NAC	▪ Sets noise standards for the assessment of noise consequences related to surface traffic and other project-related noise sources.
Local	
Sonoma County General Plan 2020, Noise Element	▪ A planning document that provides a policy framework for addressing potential noise impacts encountered in the planning process that is intended to provide ways to reduce existing and future noise conflicts. This includes policies and measures to achieve noise compatibility between land uses and identifies noise sources and sensitive land uses.
Town of Windsor 2040 General Plan, Public Health and Safety Element	▪ A planning document that provides a policy framework for the Town of Windsor. The Public Health and Safety Element, specifically the Noise Goal, is designed to minimize exposure to excessive noise by establishing development standards and implementing practices that reduce the potential for excessive noise exposure.

3.11.2 Environmental Setting

For the fundamentals of sounds, effects of noise on people, and characteristics of vibrations, please refer to **Appendix E**.

Sensitive Receptors

Some land uses are considered more sensitive to noise than others due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, and parks and other outdoor recreation areas generally are more sensitive to noise than commercial or industrial land uses. A sensitive receptor is defined as any living entity or aggregate of entities whose comfort, health, or well-being could be impaired or endangered by noise. The sensitive receptors for noise in the vicinity of the Project Site were determined to be the same as those identified

for air quality in **Section 3.4.2** and include residential areas to the north and west, Shiloh Neighborhood Church to the west, Esposti Park to the north, and a few residences to the south**.**

Existing Noise Sources and Ambient Noise Levels

Noise Sources

The existing ambient noise environment in the immediate Project Site vicinity is defined primarily by traffic on Shiloh Road to the north and Old Redwood Highway to the west. Agricultural operations to the east and south also periodically affect the ambient noise environment on a localized basis. Aircraft operations at the Sonoma County Airport do not appreciably affect the ambient noise environment within the immediate Project Site vicinity due to the distance between the airport and Project Site as well as the orientation of the airport runways.

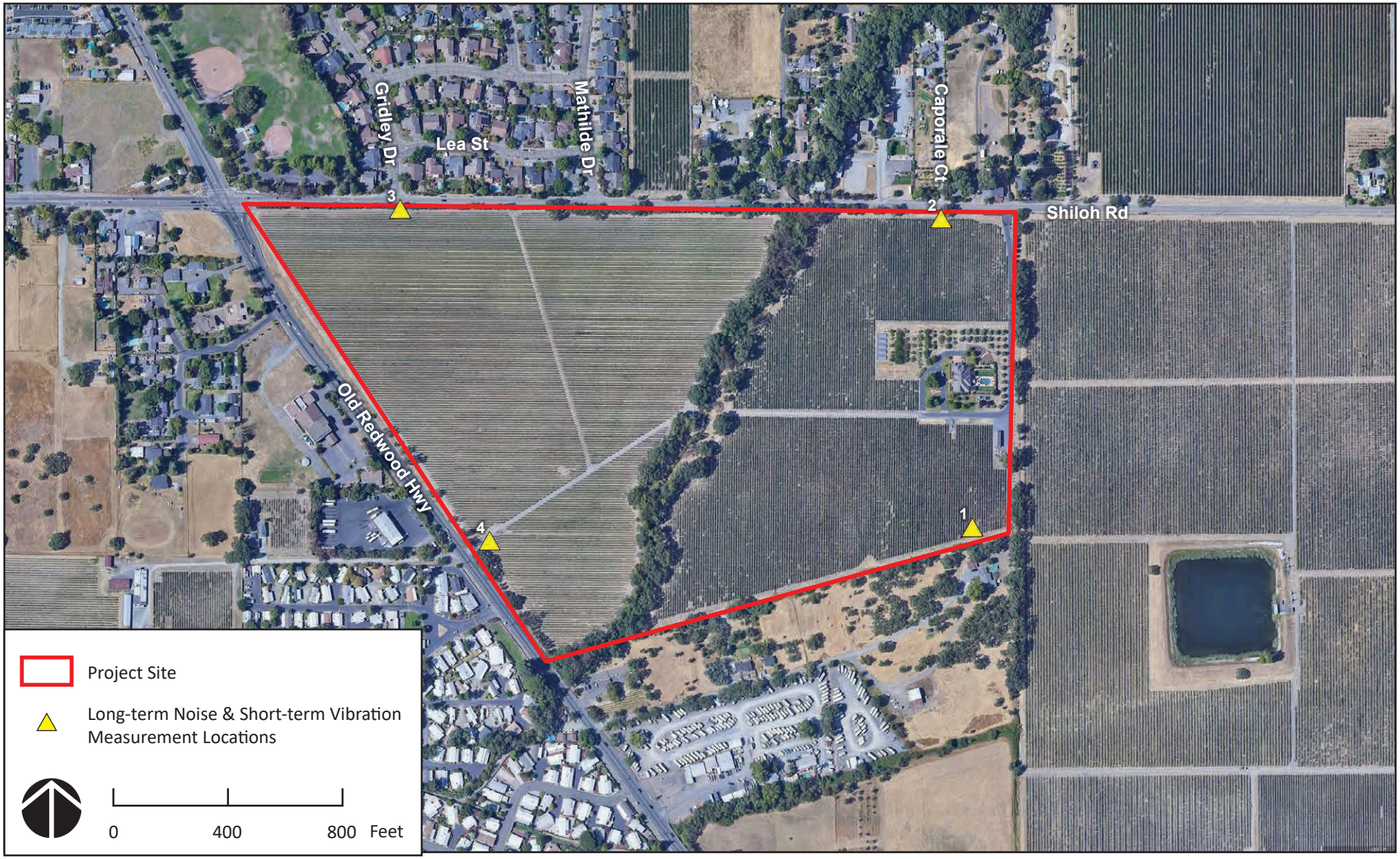
Ambient Noise Levels

To quantify existing ambient noise environment within the vicinity of the Project Site, Bollard Acoustical Consultants, Inc. (BAC), conducted long-term (continuous) ambient noise level measurements at four locations over the five-day period from April 29 to May 3, 2022. The noise measurement site locations are shown on **Figure 3.11-1.** Larson Davis Laboratories (LDL) precision integrating sound level meters were used to complete the noise level measurements. The meters were calibrated before and after use with an LDL Model CA200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all specifications of the American National Standards Institute requirements for Type 1 sound level meters (ANSI S1.4). There were no atypical weather conditions present during the noise survey period that would have adversely affected the accuracy of the survey results. The long-term noise level measurement survey results are summarized in **Table 3.11-2**.

The detailed results of the long-term ambient noise survey can be seen in tabular format and graphical format in Appendices C and D of **Appendix L**, respectively. Data in **Table 3.11-2** indicate that measured day-night average noise levels (DNL) did not vary appreciably from day to day at each measurement site but did vary by location within the vicinity of the Project Site as expected. For example, Site 1 measured day-night average noise levels were the lowest due to the greater distance of the monitoring site to local roadways.

The FHWA Traffic Noise Model (FHWA-RD-77-108) was used to quantify existing traffic noise levels at the existing sensitive land uses on the roadway networks nearest to the Project Site, and to quantify the 60, 65 and 70 decibel (dB) DNL traffic noise contours generated by these roadways. The model predicts hourly L_{eq} values for free-flowing traffic conditions and develops DNL values from L_{eq} values from the estimates for the traffic hourly distribution for a typical 24-hour period. Traffic data for the model was obtained from **Appendix I**. Peak hour turning movement volumes were converted to average daily segment volumes by averaging AM and PM peak hour volumes and multiplying by a factor of five (model inputs can be found in Appendix E of **Appendix L**).

Table 3.11-3 summarizes the existing traffic noise levels and the existing 60 dB, 65 dB and 70 dB DNL contours at roadways networks nearest to the Project Site. Note, the actual noise level contours may vary from the distances predicted by the model because factors, such as roadway elevation, curvature, topography, or structures, may affect actual sound propagation.



Source: Bollard Acoustical Consultants, 2022

FIGURE 3.11-1

NOISE AND VIBRATION MEASUREMENT LOCATIONS

Table 3.11-2: Summary of the Average Measured Hourly Long-Term Ambient Noise Levels (dBA)

			Daytime[1]	Daytime[1]	Nighttime[2]	Nighttime[2]
Site	**Date**	**DNL [dBA]**	**L_{50}**	**L_{max}**	**L_{50}**	**L_{max}**
1	Friday, April 29	53	44	65	40	56
	Saturday, April 30	52	46	63	41	53
	Sunday, May 1	55	44	63	42	57
	Monday, May 2	52	47	64	41	54
	Tuesday, May 3	51	43	62	38	50
	Average	**53**	**45**	**64**	**40**	**54**
2	Friday, April 29	63	50	78	39	72
	Saturday, April 30	61	49	79	39	72
	Sunday, May 1	59	46	78	38	71
	Monday, May 2	63	50	79	41	67
	Tuesday, May 3	62	48	77	38	66
	Average	**62**	**49**	**78**	**39**	**70**
3	Friday, April 29	66	52	80	41	75
	Saturday, April 30	64	52	80	43	76
	Sunday, May 1	63	49	80	40	76
	Monday, May 2	66	54	81	43	72
	Tuesday, May 3	65	52	78	40	71
	Average	**65**	**52**	**80**	**41**	**74**
4	Friday, April 29	65	61	78	45	73
	Saturday, April 30	64	60	80	45	71
	Sunday, May 1	63	57	77	42	73
	Monday, May 2	65	60	78	45	73
	Tuesday, May 3	65	60	81	42	71
	Average	**64**	**60**	**79**	**44**	**72**

Source: **Appendix L**

[1] Daytime hours: 7:00 a.m. to 10:00 p.m.

[2] Nighttime hours: 10:00 p.m. to 7:00 a.m.

Table 3.11-3: Existing Traffic Noise Levels at Nearest Receptors and Distances to DNL Contours

#	Roadway	From	To	DNL at Nearest Sensitive Receptor [dB]	Distance to Contour [ft]		
					70 dB DNL	65 dB DNL	60 dB DNL
1	Shiloh Rd	Conde Ln	Caletti Ave	56	48	104	224
2	Shiloh Rd	Caletti Ave	US-101 SB Ramps	66	55	118	254
3	Shiloh Rd	US-101 SB Ramps	US-101 NB Ramps	66	52	113	242
4	Shiloh Rd	US-101 NB Ramps	Hembree Ln	66	54	117	252
5	Shiloh Rd	Hembree Ln	Old Redwood Hwy	68	36	78	169
6	Shiloh Rd	Old Redwood Hwy	Gridley Dr	62	14	30	64
7	Shiloh Rd	Gridley Dr	Project Entrance East	61	13	29	62
8	Shiloh Rd	Project Entrance East	East of Project Entrance	61	12	27	58
9	Old Redwood Hwy	North of Shiloh Rd	Shiloh Rd	69	43	93	200
10	Old Redwood Hwy	Shiloh Rd	Project Entrance	66	32	69	149
11	Old Redwood Hwy	Project Entrance	South of Project Entrance	65	31	67	143

Source: **Appendix L**

Existing Ambient Vibration Environment

To generally quantify existing vibration levels at representative locations within the vicinity of the Project Site, BAC conducted short-term (five-minute) vibration measurements at the same four locations used for long-term ambient noise monitoring. The vibration measurement locations are shown on **Figure 3.11-1**. A Larson-Davis Laboratories Model LxT precision integrating sound level meter equipped with a vibration transducer was used to complete the measurements. The system was calibrated in the field prior to use to ensure the accuracy of the measurements. The ambient vibration monitoring results are summarized in **Table 3.11-4**.

Table 3.11-4: Summary of Ambient Vibration Monitoring Results

Site[1]	Time (May 4, 2022)	Average Measured Vibration Level [VdB]
1	9:53 a.m.	46
2	10:13 a.m.	40
3	10:34 a.m.	33
4	10:50 a.m.	42

Source: **Appendix L**

3.11.3 Impacts

3.11.3.1 Assessment Criteria

The assessment of project effects is based on federal NAC standards used by the FHWA, on Federal Transit Administration (FTA) thresholds for perceptible vibration, and on the noise standards of Sonoma County and the Town of Windsor. Specifically, adverse noise and vibration effects are identified at existing sensitive receptor locations if the following were to occur as a result of the project:

- Project construction noise levels exceed the FHWA construction noise thresholds (see Table 6 of **Appendix E**).
- Project construction vibration levels exceed 65 VdB (FTA threshold of perception).
- Project-generated traffic would cause traffic noise levels to exceed the FHWA noise abatement criteria (e.g., 67 dBA for exterior residential uses) where the criteria is not currently being exceeded (see Table 7 of **Appendix E**).
- Project-related traffic noise level increases would exceed 5 dB at residences located within the Town of Windsor (Windsor General Plan Policy PHS-8.1).
- Project-related traffic noise level increases would exceed 3 dB at residences located within Sonoma County. 3 dB is a just-perceivable difference (see **Appendix E**) and a threshold commonly applied in Sonoma County.
- On-site noise sources associated with ongoing project operations exceed the standards set forth in Sonoma County General Plan Noise Element Table NE-2 at residences within Sonoma County (see Table 8 of **Appendix E**).
- On-site noise sources associated with ongoing project operations exceed the standards set forth in Town of Windsor 2040 General Plan Table PHS-4 at residences within the Town of Windsor (see Table 9 of **Appendix E**).

3.11.3.2 Methodology

Project Construction Noise & Vibration

Project construction noise was evaluated using the FHWA Roadway Construction Noise Model (RCNM). The types of heavy equipment to be utilized during project construction along with the distances from that equipment to the nearby residences were used as inputs to the RCNM to predict construction noise generation at existing sensitive receptors.

To evaluate vibration generation during project construction, the data and methodology contained within the 2018 FTA Transit Noise and Vibration Impact Assessment Manual were used.

Off-Site Traffic Noise and Project Traffic Noise Increases

The FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to predict existing and future traffic noise levels, both with and without Alternatives A, B, and C, at the nearest existing sensitive receptors located along the local roadway network that would be utilized by project-generated traffic. Two conditions were evaluated based on the data and scenarios analyzed in **Appendix I**: Opening Year 2028 (Baseline) and Cumulative Year 2040. The FHWA Model predicts hourly L_{eq} values for free-flowing traffic conditions. Estimates of the hourly distribution of traffic for a typical 24-hour period were used to develop DNL values from L_{eq} values. The model inputs for each scenario are provided in Appendix E of **Appendix L**.

On-Site Operational Noise

To predict noise generated by on-site operations (on-site circulation, parking lot operations, truck deliveries, and pool area activities) at the nearest sensitive receptor locations, a combination of BAC file data and published acoustical reference data were utilized with the SoundPlan Version 8.2 noise-prediction and propagation model. Inputs to the SoundPlan model consisted of local topographic data, existing structures, proposed on-site structures, atmospheric data, and operational data obtained from the project description, traffic impact analysis, and BAC reference file data for parking lot, swimming pool, and truck delivery noise. The SoundPlan noise inputs are provided in Appendix F of **Appendix L**.

3.11.3.3 Alternatives A – Proposed Project

Construction Noise - Equipment

During the construction of Alternative A, noise from construction activities would add to the noise environment in the immediate vicinity of the Project Site. Activities involved in typical construction would generate maximum noise levels, as indicated in **Table 3.11-5**, ranging from 76 to 85 dBA L_{max} at a distance of 50 feet. The worst-case on-site project construction equipment maximum noise levels at the nearest existing noise-sensitive uses, located approximately 200 feet or more away, are expected to range from approximately 64 to 73 dBA L_{max}.

As shown in **Table 3.11-2**, median baseline noise levels (L_{50}) in the immediate Project Site vicinity ranged from 45 to 60 dBA during daytime hours. According to FHWA construction noise thresholds (see Table 6 of **Appendix E**), construction noise impacts would be significant where daytime construction activities would generate noise levels exceeding 90 dBA L_{max}. Therefore, a construction noise threshold of 90 dBA L_{max} was used. Because daytime construction activities are predicted to generate maximum noise levels ranging from approximately 64 to 73 dBA L_{max}, which are below the 90 dBA L_{max} threshold, a less-than-significant impact would occur during daytime hours.

BMPs listed in **Table 2.1-3** include limiting construction activities involving noise generating equipment to daytime hours between 7:00 a.m. and 6:00 p.m., with the exception of federal holidays where no work will occur, and with no construction work occurring between the hours of 10:00 p.m. to 7:00 a.m. With the implementation of this BMP, construction noise generated by Alternative A would not exceed FHWA construction noise thresholds (see Table 6 of **Appendix E**) during the evening (6:00 p.m. to 10:00 p.m.) or nighttime (10:00 p.m. to 7:00 a.m.); therefore, a less-than-significant impact would occur. Further, the limitation of construction activities to daytime hours is generally consistent with the Town of Windsor municipal code that authorizes construction activities between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday and between the hours of 8:00 a.m. and 7:00 p.m. on Saturday.

Construction Vibration

During construction, heavy equipment would be used for grading, excavation, paving, and building construction, which would generate localized vibration in the immediate vicinity of the construction. The nearest identified existing sensitive receptors are located approximately 200 feet or more from where construction activities would occur within the Project Site. **Table 3.11-6** includes the range of vibration levels for equipment commonly used in general construction projects at a reference distance of 25 feet from the equipment. The data in **Table 3.11-6** also includes predicted equipment vibration levels at a distance of 200 feet from the proposed construction activities.

Table 3.11-5: Construction Equipment Reference Noise Levels

Equipment Description	Maximum Noise Level at 50 feet [dBA]
Air compressor	80
Backhoe	80
Compactor	82
Concrete mixer	85
Concrete pump	82
Concrete vibrator	76
Crane, mobile	83
Dozer	85
Generator	82
Grader	85
Impact wrench	85
Loader	80
Paver	85
Pneumatic tool	85
Pump	77
Saw	76
Scarifier	83
Scraper	85
Shovel	82
Truck	84

Source: **Appendix L**

Table 3.11-6: Vibration Source Levels for Construction Equipment

Equipment	Maximum Vibration Level at 25 feet [VdB (rms)]	Predicted Maximum Vibration Level at 200 feet [VdB (rms)]
Vibratory Roller	94	67
Hoe Ram	87	60
Large bulldozer	87	60
Loaded trucks	86	61
Jackhammer	79	52
Small bulldozer	58	31

Source**: Appendix L**

As shown in **Table 3.11-6**, with the exception of vibratory roller operations, vibration levels generated from on-site construction activities are predicted to be below the 65 VdB threshold of perception at the nearest existing sensitive receptors located approximately over 200 feet from construction activities. As

a result, with the exception of vibratory roller operations, project-generated construction vibration is predicted to result in a less than significant impact at nearby sensitive receptors. Additionally, a BMP has been included for vibratory and non-vibratory rollers within **Table 2.1-3** that will reduce potential impacts by setting minimum distances from sensitive receptors when the equipment is utilized.

Operation Noise

Off-Site Traffic Noise

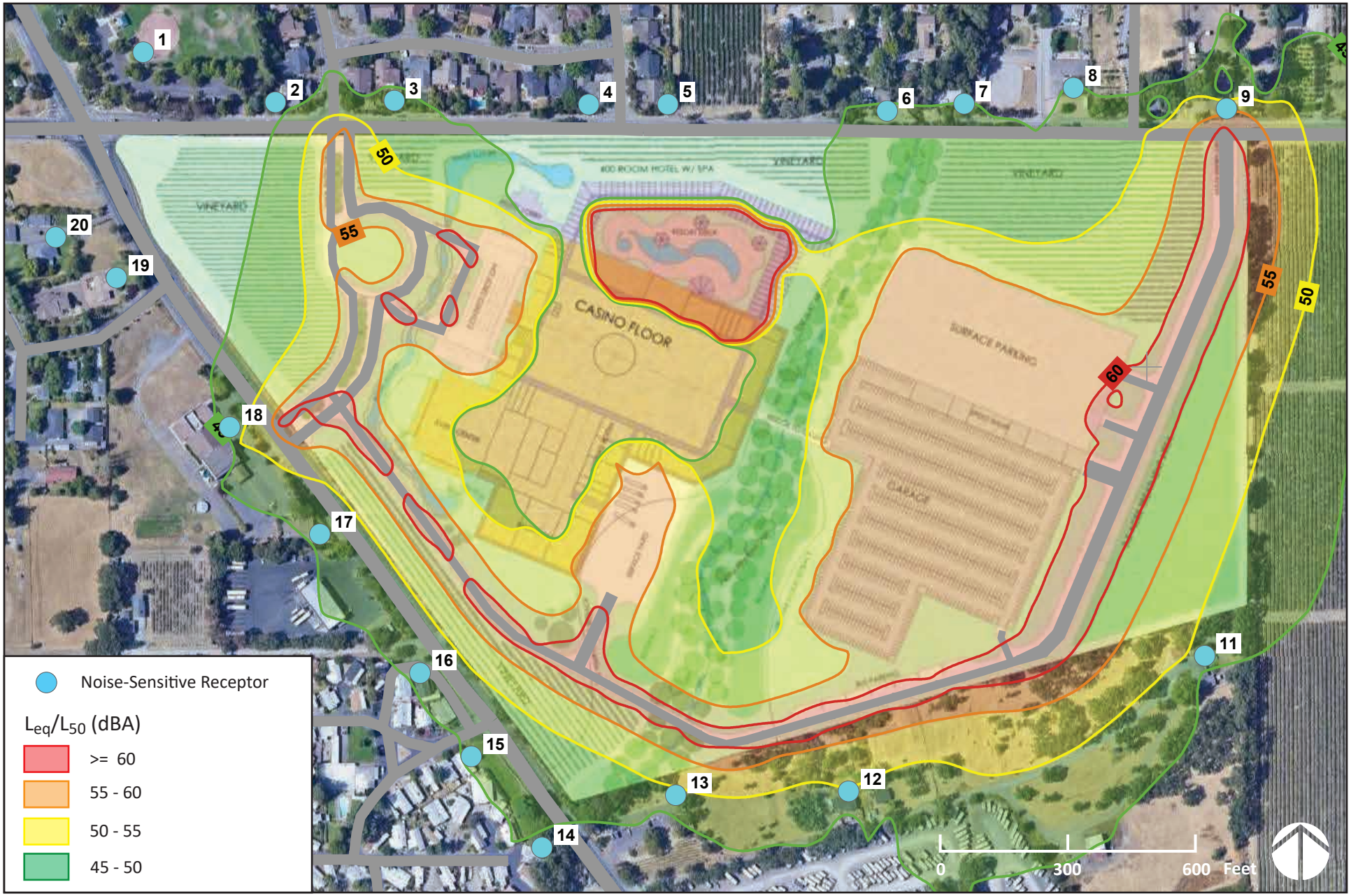
Operation of Alternative A will cause traffic volumes on the local roadway network to increase. Those increases in average daily traffic volumes will result in a corresponding increase in traffic noise levels at existing sensitive uses located along those roadways. **Table 3.11-7** shows the predicted increases in traffic noise levels due Alternative A relative to opening year (2028) conditions without the project. As shown in **Table 3.11-7,** project-generated traffic noise level increases would not result in significant adverse noise effects relative to existing/baseline conditions. Traffic generated noise on Shiloh Road between Hembree Lane and Old Redwood Highway and Old Redwood Highway north of Shiloh road would exceed the 67 dBA FHWA noise abatement criteria threshold for residential uses where residential uses are present; however, the baseline noise levels are predicted to already be above 67 dBA prior to the operation of Alternative A and the increase due to Alternative A would be less than 3 dB, the level associated with a perceivable difference in noise levels (see **Appendix E**). As a result, off-site traffic noise level increases resulting from Alternative A would not result in significant adverse effects relative to baseline conditions.

On-site Operational Noise

On-site noise sources associated with Alternative A include on-site vehicle circulation, parking lot operations, truck deliveries, and swimming pool area activities. As described in **Table 2.1-3** noise generating equipment associated with water and wastewater treatment facilities will be shielded, enclosed, or located within buildings and thus would not result in a significant source of noise.

The SoundPlan modelling results for peak hour conditions at each sensitive receptor location seen in **Figure 3.11-2** are provided in **Table 3.11-8**. **Figure 3.11-2** also shows the average/median noise contours for on-site noise sources associated with Alternative A. The predicted maximum noise levels identified in **Table 3.11-8** for on-site noise sources are below the 65 dBA L_{max} daytime and 60 dB L_{max} nighttime noise level standards applicable at the nearest Sonoma County residences (receivers 5-20) during daytime and nighttime hours at each of the receivers analyzed in this evaluation. Also, the predicted maximum noise levels identified in **Table 3.11-8** for on-site noise sources are below the 55 dBA L_{max} daytime noise level standard applicable at the nearest Town of Windsor residences (receivers 1-4). Because nighttime noise generation from Alternative A is predicted to be lower than daytime noise generation, noise generated by on-site activities is also predicted to be satisfactory relative to the Town of Windsor nighttime 50 dBA L_{max} nighttime noise level standard at the nearest residences. In addition, comparison of the predicted maximum noise levels predicted to be generated by Alternative A against the ambient noise survey results indicates that no substantial increase in single-event, maximum ambient noise levels would result.

The predicted average/median (L_{eq}/L_{50}) noise levels identified in **Table 3.11-8** for on-site noise sources are below the 50 and 55 dBA daytime average/median noise standards of the County and the Town, respectively, at each of the nearest receptors analyzed in this evaluation. Because peak nighttime noise generation is predicted to be considerably lower than peak daytime project noise generation, on-site activities at the Project Site are not expected to cause exceedance of the applicable local average/median nighttime noise level standards at the nearest sensitive receptors.



Source: Bollard Acoustical Consultants, 2022

FIGURE 3.11-2

PROJECTED NOISE CONTOURS

Consequently, no significant adverse noise effects are identified relative to average/median noise levels or single-event maximum noise levels generated by Alternative A at the nearest sensitive receptors to the Project Site from on-site activities.

Table 3.11-7: Alternative A Operation Noise Increases at Existing Sensitive Receptors (2028)

Roadway	From/To	Predicted DNL [dBA], Baseline	Predicted DNL [dBA], Baseline + Project	Predicted DNL [dBA], Increase	Significance Threshold (dBA)	Threshold Exceeded?	Sensitive Receptors Present?
Shiloh Rd	Conde Ln/ Caletti Ave	55.9	56.0	0.1	5	No	Yes
Shiloh Rd	Caletti Ave/ US-101 SB Ramps	66.1	66.2	0.1	5	No	No
Shiloh Rd	US-101 SB Ramps/ US-101 NB Ramps	65.8	66.7	0.9	5	No	No
Shiloh Rd	US-101 NB Ramps/ Hembree Ln	66.0	67.3	1.3	5	No	No
Shiloh Rd	Hembree Ln/ Old Redwood Hwy	67.9	70.1	2.2	3	No	Yes
Shiloh Rd	Old Redwood Hwy/ Gridley Dr	61.6	66.4	4.8	5	No	Yes
Shiloh Rd	Gridley Dr/ Project Entrance East	61.4	65.9	4.5	5	No	Yes
Shiloh Rd	Project Entrance East/ East of Project Entrance	60.9	62.1	1.2	5	No	Yes
Old Redwood Hwy	North of Shiloh Rd/ Shiloh Rd	69.0	69.4	0.4	5	No	Yes
Old Redwood Hwy	Shiloh Rd/ Project Entrance	65.9	66.6	0.7	3	No	Yes
Old Redwood Hwy	Project Entrance/ South of Project Entrance	65.2	65.6	0.4	3	No	Yes

Source: **Appendix L**

Operation Vibration

Commercial uses do not include sources of perceptible vibration. Therefore, Alternative A would not result in vibration and noise levels at nearby sensitive receptors that would exceed the federal noise abatement criteria; therefore, no significant adverse effects would occur.

Table 3.11-8: Predicted Noise Levels from On-Site Activities – Alternative A

	L_{max} (dBA)					L_{eq}/L_{50} (dBA)				
Receiver	**Parking**	**Pool**	**Trucks**	**Traffic**	**Total**	**Parking**	**Pool**	**Trucks**	**Traffic**	**Total**
1	40	26	31	38	40	27	24	2	33	34
2	44	21	33	46	46	31	20	4	41	41
3	51	29	35	49	51	36	25	6	44	44
4	43	34	33	42	43	30	32	5	37	39
5	44	32	30	37	44	32	30	3	32	36
6	50	29	32	49	50	41	27	4	44	46
7	46	23	32	42	46	37	21	2	37	40
8	46	26	46	46	46	39	22	12	41	43
9	31	17	26	56	56	21	15	0	51	51
10	33	26	38	36	38	28	19	10	31	33
11	45	22	37	49	49	35	17	3	44	44
12	50	29	57	53	57	36	24	25	48	48
13	43	27	55	49	55	31	23	26	44	44
14	38	31	59	47	59	28	28	31	42	42
15	40	28	60	50	60	30	25	31	45	45
16	36	28	59	50	59	27	25	26	45	45
17	48	28	56	51	56	30	25	17	46	46
18	48	31	38	51	51	33	25	8	46	46
19	43	35	33	42	43	29	26	3	37	38
20	41	31	32	38	41	27	25	3	33	35

Source: **Appendix L**

3.11.3.4 Alternative B – Reduced Intensity Alternative

The Alternative B would result in similar construction and operational noise and vibrations impacts as Alternative A (refer to **Section 3.11.3.3** for a full discussion of these impacts), although at lower levels due to the smaller scale of the development (for a full analysis of Alternative B, refer to **Appendix L**). Similar to Alternative A, construction noise and vibration would be temporary for Alternative C. These construction activities would not have significant impacts with the BMPs that will be implemented to reduce the potential noise impacts.

The increase in traffic volumes and other on-site noise sources would be similar to Alternative A during operation, but at a reduced scale. For example, the noise induced due to the increase in traffic can be seen in **Table 3.11-9**. Project-generated traffic noise level increases would not result in significant adverse noise effects relative to existing / baseline conditions. In addition, Alternative B would not cause traffic noise levels to exceed the 67 dBA FHWA noise abatement criteria threshold applicable to residential uses at locations where existing residences are present. As a result, off-site traffic noise level increases resulting from Alternative B would not result in significant adverse effects relative to baseline conditions.

The on-site operational noise induced as a result of Alternative B would be similar to Alternative A, but at the reduced scale and would not cause a significant adverse impact to occur. Therefore, the operational noise and vibration impacts related to Alternative B would be less than significant.

Table 3.11-9: Alternative B Operation Noise Increases at Existing Sensitive Receptors (2028)

Roadway	From/To	Predicted DNL [dBA], Baseline	Predicted DNL [dBA], Baseline + Project	Predicted DNL [dBA], Increase	Significance Threshold	Threshold Exceeded?	Sensitive Receptors Present?
Shiloh Rd	Conde Ln/ Caletti Ave	55.9	55.7	-0.2[1]	5	No	Yes
Shiloh Rd	Caletti Ave/ US-101 SB Ramps	66.1	65.8	-0.3[1]	5	No	No
Shiloh Rd	US-101 SB Ramps/ US-101 NB Ramps	65.8	66.3	0.5	5	No	No
Shiloh Rd	US-101 NB Ramps/ Hembree Ln	66.0	66.9	0.9	5	No	No
Shiloh Rd	Hembree Ln/ Old Redwood Hwy	67.9	69.5	1.6	3	No	Yes
Shiloh Rd	Old Redwood Hwy/ Gridley Dr	61.6	65.7	4.1	5	No	Yes
Shiloh Rd	Gridley Dr/ Project Entrance East	61.4	65.2	3.8	5	No	Yes
Shiloh Rd	Project Entrance East/ East of Project Entrance	60.9	61.7	0.8	5	No	Yes
Old Redwood Hwy	North of Shiloh Rd/ Shiloh Rd	69.0	69.0	0.0	5	No	Yes
Old Redwood Hwy	Shiloh Rd/ Project Entrance	65.9	66.1	0.2	3	No	Yes
Old Redwood Hwy	Project Entrance/ South of Project Entrance	65.2	65.2	0.0	3	No	Yes

Source: **Appendix L**

1. Under Alternative B, changes to traffic distribution patterns resulted in reduced traffic along portions of Shiloh Road and thus reduced traffic noise.

3.11.3.5 Alternative C – Non-Gaming Alternative

The Alternative C would result in similar construction and operational noise and vibrations impacts as Alternative A (refer to **Section 3.11.3.3** for a full discussion of these impacts), although at lower levels due to the smaller scale of the development (for a full analysis of Alternative C, refer to **Appendix L**). Noise and vibration would be caused during the construction of Alternative C, but a smaller scale than Alternative A. These construction activities would not have significant impacts, and BMPs would be implemented to further reduce the potential noise impacts.

Alternative C would cause increases in traffic and on-site noise during operation, but at a significantly reduced scale compared to Alternatives A and B due to the smaller development size and commercial

type. On-site operation noise would be barely audible off the Project Site and would only affect two identified sensitive receptor sites, 18 and 17 (see Figure 9 of **Appendix L** for projected noise contours and **Figure 3.11-2** for the sensitive receptor sites). Alternative C generated traffic noise, as can be seen in **Table 3.11-10**, would not exceed the significance thresholds for each study roadway segment and therefore would not negatively impact the sensitive receptors along these roadway segments. The operational noise and vibration impacts related to Alternative C would be less than significant.

3.11.3.6 Alternative D – No Action Alternative

Under the No-Action Alternative, the Project Site would remain undeveloped. With regard to noise, the Project Site would not be a source of construction noise. Operational noise due to the existing vineyard and residence would continue at similar levels to existing conditions. No noise impacts would occur under the No-Action Alternative.

Table 3.11-10: Alternative C Operation Noise Increases at Existing Sensitive Receptors (2028)

Roadway	From/To	Predicted DNL [dBA], Baseline	Predicted DNL [dBA], Baseline + Project	Predicted DNL [dBA], Increase	Significance Threshold	Threshold Exceeded?	Sensitive Receptors Present?
Shiloh Rd	Conde Ln/ Caletti Ave	55.9	55.9	0.0	5	No	Yes
Shiloh Rd	Caletti Ave/ US-101 SB Ramps	66.1	66.1	0.0	5	No	No
Shiloh Rd	US-101 SB Ramps/ US-101 NB Ramps	65.8	66.0	0.2	5	No	No
Shiloh Rd	US-101 NB Ramps/ Hembree Ln	66.0	66.3	0.3	5	No	No
Shiloh Rd	Hembree Ln/ Old Redwood Hwy	67.9	68.5	0.6	3	No	Yes
Shiloh Rd	Old Redwood Hwy/ Gridley Dr	61.6	63.2	1.6	5	No	Yes
Shiloh Rd	Gridley Dr/ Project Entrance East	61.4	62.8	1.4	5	No	Yes
Shiloh Rd	Project Entrance East/ East of Project Entrance	60.9	61.2	0.3	5	No	Yes
Old Redwood Hwy	North of Shiloh Rd/ Shiloh Rd	69.0	69.1	0.1	5	No	Yes
Old Redwood Hwy	Shiloh Rd/ Project Entrance	65.9	66.1	0.2	3	No	Yes
Old Redwood Hwy	Project Entrance/ South of Project Entrance	65.2	65.2	0.0	3	No	Yes

Source: **Appendix L**

3.12 HAZARDOUS MATERIALS AND HAZARDS

3.12.1 Regulatory Setting

The hazardous materials regulatory setting is summarized in **Table 3.12-1**, and additional information on the regulatory setting can be found in **Appendix E.**

Table 3.12-1: Regulatory Policies and Plans Related to Hazardous Materials and Hazards

Regulation	Description
Federal	
Resource Conservation and Recovery Act	▪ Grants the USEPA the authority to manage hazardous waste throughout its life cycle, including storage, treatment, transportation, production, and disposal. ▪ Establishes a management framework for non-hazardous solid wastes. ▪ Authorizes the USEPA to respond to environmental problems related to underground hazardous substance storage tanks, including petroleum.
Federal Food, Drug, and Cosmetic Act	▪ Enables the USEPA to determine the maximum pesticide residue amount on food. Maximum limits are based on findings that the maximum limit will be reasonably safe in terms of accumulated exposure to the pesticide residue. For pesticides without a set maximum residue limit, the USEPA has the authority to seize these commodities.
Federal Insecticide, Fungicide, and Rodenticide Act	▪ Mandates that all pesticides sold or distributed be licensed with the USEPA; a pesticide cannot be licensed until it is proven that the pesticide will not generally cause unreasonable adverse effects on the environment if utilized in accordance with its specifications.
Hazard Communication Standard	▪ Ensures that information about chemical and toxic substance hazards in the workplace and associated protective measures are disseminated to workers exposed to hazardous chemicals, including labels, safety data sheets, and proper handling training for hazardous chemicals. ▪ Chemical manufacturers and importers that produce and import chemicals are required to assess their products for hazards; safety data sheets and labels must be created with information that outlines the dangers of the products.
Hazardous Substances Act	▪ Necessitates that hazardous household products have precautionary labeling to alert consumers of hazards, proper storage, and immediate first aid steps in case of an accident. ▪ Enables the Consumer Product Safety Commission to prohibit severely dangerous products and products with hazards that cannot be labeled accordingly to Hazardous Substances Act standards.
Toxic Substance Control Act	▪ Authorizes the USEPA with the authority to require record keeping, reporting, test requirements, and restrictions associated with certain chemical substances and/or mixtures. ▪ Addresses the production, importation, use, and disposal of certain chemicals (e.g., lead paint).

Regulation	Description
Emergency Planning and Community Right-to-Know Act	▪ Requires industry to report on the use, storage, and release of hazardous substances to federal, state, and local governments. ▪ Requires Indian tribes and state and local governments to utilize this information to prepare their communities for potential risks.
National Fire Protection Association Codes and Standards	▪ Codes and Standards to minimize the possibility and effects of fire and other risks including, but not limited to: sprinkler systems, fire alarms, parking structures, emergency response, and wildland fire protection
State	
California Building Code	▪ The California Building Code (CBC) includes Fire Code Elements to reduce wildfire impacts including Chapter 7A regarding building materials, systems, and/or assemblies used in the exterior design and construction of new buildings located within a Wildland-Urban Interface Fire Area; as well as CBC Section 703A.7 that incorporates State Fire Marshal standards for exterior wildfire exposure protection.
Local	
Sonoma County General Plan	▪ The Public Safety Element contains goals, objectives, and policies to provide protection from wildland fire hazards
Sonoma County Multijurisdictional Hazard Mitigation Plan	▪ Includes measures to reduce risks from natural disasters, including wildfire, in the Sonoma County Operational Area. ▪ Identifies that home loss in wildland fires is primarily driven by two equally important factors: 1) the vulnerability of buildings that make them prone to ignition, and 2) The vegetative fuels within 100 feet of structures (the area referred to as defensible space)
Sonoma County Emergency Operations Plan	▪ In accordance with California's Standardized Emergency Management System (SEMS), this Plan provides the framework for a coordinated effort between partners and provides stability and coordination during a disaster. ▪ Includes Evacuation Annex that outlines the strategies, procedures, and organizational structures to be used in managing coordinated, large-scale evacuations in the Sonoma County Operational Area. ▪ Includes Community Alert and Warning Annex that establishes general and specific policies, procedures, and protocols for the use of Alert and Warning systems in the Sonoma County Operational Area during actual or potential emergencies that pose a significant threat to life or property
Town of Windsor General Plan	▪ The Town of Windsor General Plan Public Health and Safety Element contains goals and policies to provide protection from fire hazards.
Town of Windsor Riparian Corridor Wildfire Fuel Management Plan	▪ Describes the Town's approach to managing riparian corridor vegetation on Town-owned property to reduce the probability of wildfire ignition and reduce the intensity and rate of spread of wildfires. ▪ Includes creek and storm ditch fuel reduction treatment and best management practices.

3.12.2 Environmental Setting

Hazardous Materials

A Phase I Environmental Site Assessment (ESA) was completed in August 2021 for the Project Site to determine if any Recognized Environmental Conditions (RECs) exist, and to satisfy one or more of the requirements for the innocent landholder defense to liability under the Comprehensive Environmental Response, Compensation, and Liability Act. Under the American Society for Testing and Materials (ASTM) Standard Practice E 1527-13, RECs are defined as the presence or probable presence of any petroleum products of hazardous substances in, on, or at a property due to one or more of the following conditions: a release into the environment, signs indicative of a release to the environment, or circumstances that pose a material threat of a future release to the environment. The Phase I ESA was prepared in accordance with the ASTM Standard Practice E 1527-13, and USEPA Final Rule regarding Standards and Practices for All Appropriate Inquiries (70 Federal Register 66070, November 1, 2005; 40 CFR Regulations Part 312). In addition to RECs, the Phase I ESA assessed for Historical RECs (HRECs) and Controlled RECs (CRECS). Under ASTM Standard Practice E 1527-13, HRECs are past RECs that have already been remediated or meet current standards without remediation, do not require use restrictions or engineering controls, or meet current standards. RECs may be defined as CRECs if the REC uses restrictions or engineering controls (**Appendix M**). The Phase I ESA conducted historical research that included reviewing aerial photographs and topographical map, interviews, a site reconnaissance of accessible areas on the Project Site on July 1, 2021, and database review that included regulatory, State, and local databases entries up to a one-mile radius of the Project Site.

The Phase I ESA concluded that no RECs, HRECs, or CRECs were connected with the Project Site. During the on-site reconnaissance visit of the Project Site, no RECs, HRECs, or CRECs were observed related to hazardous materials, hazardous waste, or chemical use, storage, or disposal. Onsite features during the visit included vineyards, one residence, one storage building, one septic system, one solar panel array, four wells, and one dry creek. The Project Site did not appear on any regulatory agency lists, and none of the listed sites near the Project Site were considered able to affect the Project Site. Ultimately, the regulatory records did not reveal any RECs, HRECs, or CRECs. The property owner was interviewed regarding the past and current use of the Project Site. The interview stated that vineyard equipment and chemicals used for the vineyard operations are not stored on the Project Site; the storage building south of the residence stores equipment and chemicals for the Project Site's domestic use. The one irrigation well south of the residence is powered by propane; all other irrigation wells and the domestic well are powered by electricity. The septic system inspection reports indicate the system is functioning properly. The Project Site has never had aboveground or underground fuel or oil storage tanks, waste pits or lagoons, or chemical spills; and prior to the current ownership, portions of the Project Site were used to grow prunes and occasionally graze cattle. No RECs, HRECs, or CRECs were reported relative to hazardous materials, hazardous waste, or chemical use, storage, or disposal. Finally, historical photographs and topographical maps revealed a consistent agricultural use since 1920 with primarily orchards and then later vineyards, which is consistent with the information provided by the Project Site owner (**Appendix M**). For additional information on the findings of the Phase I ESA and methodology, please see **Appendix M**.

Wildfire

CalFire Fire Hazard Severity Zones

California Department of Forestry and Fire Protection (CalFire) has assessed the wildland fire hazard in different areas of the County based on a consideration of wildland fuels, terrain, weather, and other relevant factors. Wildland fuels or vegetation are the basic catalyst that supports the combustion process of wildfires. The various fuels have specific characteristics that allow fire behavior analysts to categorize them based on how they burn (Sonoma County, 2020). **Figure 3.12-1** shows the CalFire fire hazard severity zone (FHSZ) according to the Fire and Resource Assessment Program (FRAP) mapping system (CAL FIRE, 2022). As shown on **Figure 3.12-1**, areas east of the Project Site are categorized as Moderate FHSZ, which includes wildland areas of low fire frequency supporting modest fire behavior and developed/urbanized areas with a very high density of non-burnable surfaces and low vegetation cover that is highly fragmented and low in flammability (Sonoma County, 2020). Sonoma County Wildfire Risk Index

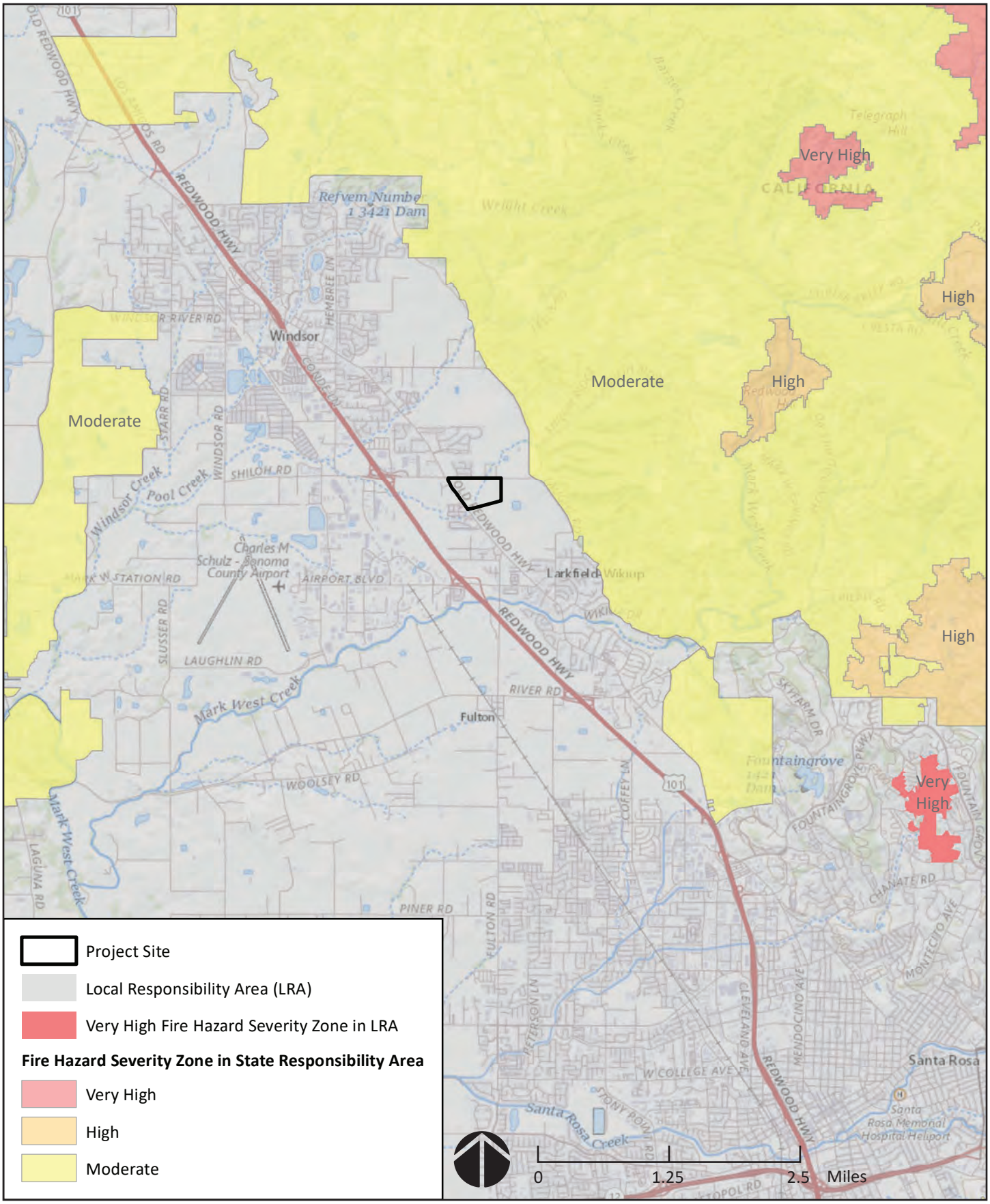
The County Wildfire Risk Index (WRI) is a model that predicts relative wildfire risk based on the County Wildfire Hazard Index, Ember Load Index, structure density, and road network rank (Sonoma County, 2022b). The WRI ranks wildfire risk potential in 100-acre hexagons for the County from a scale of 1 (low) to 5 (extreme). **Figure 3.12-2** shows the County WRI ranking for the Project Site and surrounding area. As shown on **Figure 3.12-2**, the Project Site is primarily designated as 3 (high) wildfire risk. The County's WRI for the area surrounding the Project Site is primarily designated 2 (moderate) and 3 (high) wildfire risk, with some areas to the northeast and southeast ranked 4 (very high).

Regional Wildfire History

The combination of highly flammable fuel, long dry summers and steep slopes creates a significant natural hazard of large wildland fires in many areas of Sonoma County. Since 1964, there have been 14 wildland fires in the County over 300 acres in size which burned a total of over 125,000 acres (Sonoma County, 2020). The most notable fires near the Project Site in the last ten years are the Tubbs Fire and Kincade Fire. Tubbs Fire burned during the month of October 2017 and is the fourth deadliest wildfire in California history, burning approximately 37,000 acres, destroying more than 5,600 structures, and killing 22 people. The Kincade Fire burned from October 23, 2019, to November 6, 2019. By the time of full containment, it had destroyed approximately 374 structures and burned approximately 77,800 acres. The Tubbs and Kincade fires burned northeast and east of the Project Site, with the closest reaches extending just east of the intersection of E. Shiloh Road and Faught Road, approximately 0.3 miles east of the Project Site (**Figure 3.12-2**, **Appendix N-1**).

County Wildfire Hazard Mitigation Strategies

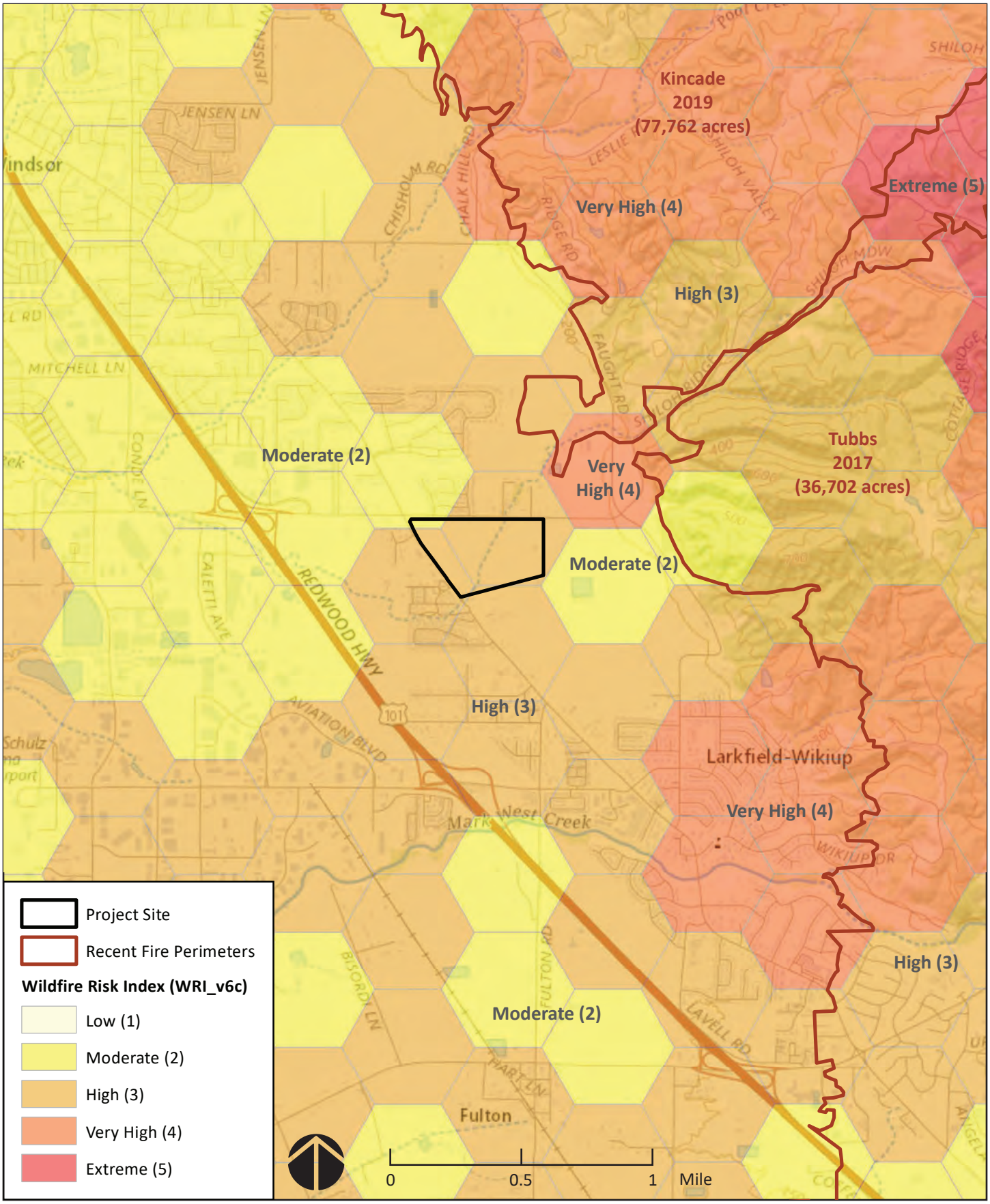
Primary responsibility for preventing and suppressing wildland fires in the County is divided between local firefighting agencies and the State. Local firefighting agencies have the primary responsibility in areas designated within a Local Responsibility Area (LRA). Wildfire management and hazard mitigation in the County are guided by various plans including, but not limited to, the Sonoma County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP), adopted in 2021 (Sonoma County, 2022c); the Sonoma County Emergency Operations Plan (EOP), adopted in March 2022 (Sonoma County, 2022d); and Sonoma County Community Wildfire Protection Plan (CWPP), originally adopted in 2016 and updated in 2023 (Sonoma County 2023). CalFire has the primary responsibility in those areas designated as a State Responsibility Area (SRA). The majority of the County is in the Sonoma-Lake-Napa Unit SRA, and fire management efforts are guided by the Sonoma Lake Napa Unit Fire Management Plan (Sonoma County, 2020).



Source: CAL FIRE Office of the State Fire Marshal

FIGURE 3.12-1

FIRE HAZARD SEVERITY ZONES



Source: County of Sonoma, CAL FIRE - FRAP

FIGURE 3.12-2

COUNTY WILDFIRE RISK INDEX

As shown in **Figure 3.12-1**, the Project Site and adjacent properties are within the LRA, while areas to the east are within the SRA.

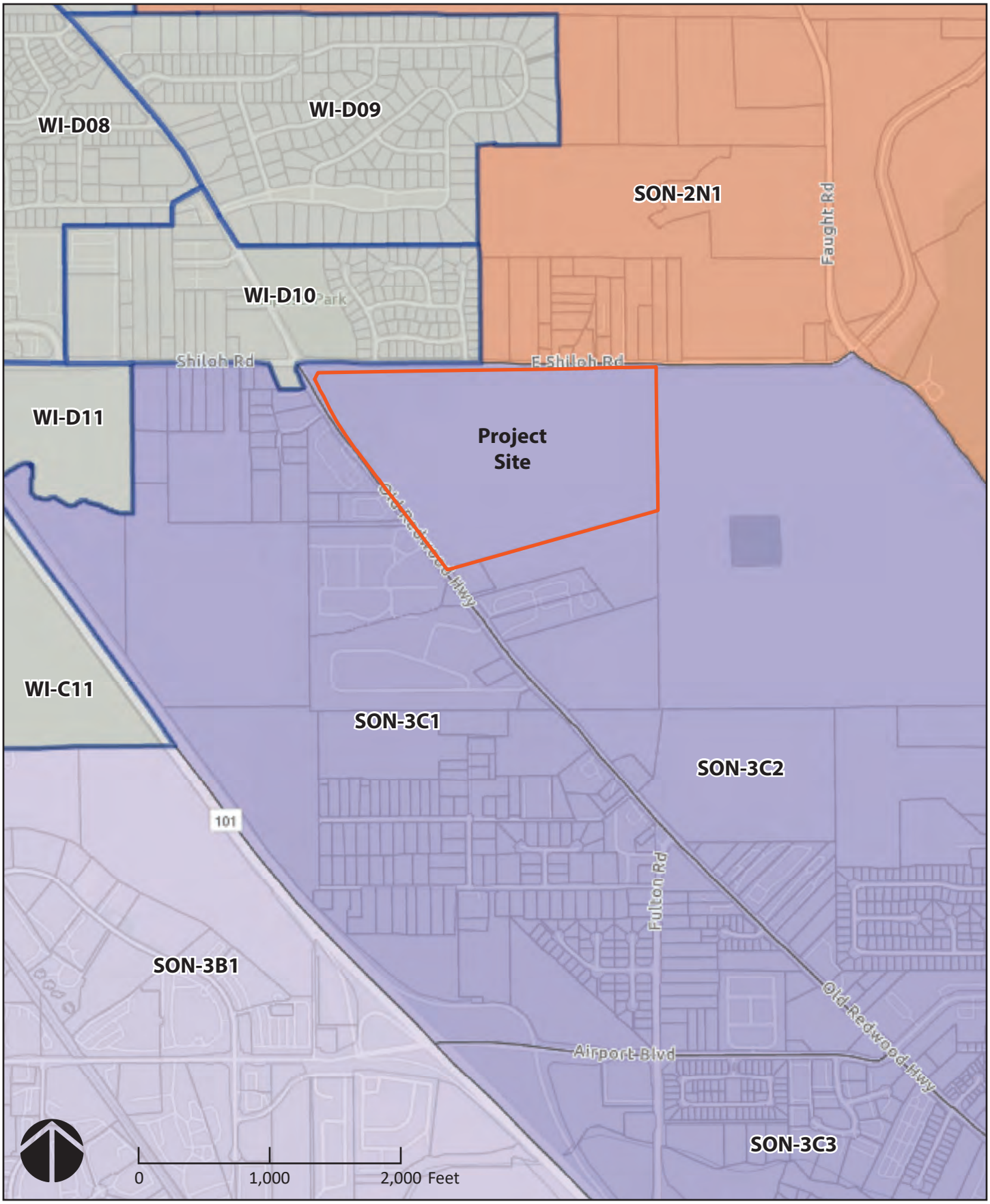
Since the Tubbs Fire of 2017, Sonoma County has augmented systems and methodologies for alerts and evacuations by developing and publicizing evacuation zones and increasing the means for delivery of evacuation notification. Additionally, Many Sonoma County communities, through programs such as Citizens Organized to Prepare for Emergencies (COPE) have organized to help notify their neighborhoods of emergencies (Sonoma County, 2022c). Some of public education steps include:

- **Red Flag Warnings**. A Red Flag Warning is the highest level of alert for critical weather related to wildfires. The County and most cities post information on fire weather and Red Flag Warnings on their websites. Most fire stations in the County display messages or actual red flags during red flag days (**Appendix N-1**).
- **Fire Cameras**. There are dozens of fire cameras now installed in the north bay, which includes the County. The purpose of these cameras is to quickly discover, locate, and confirm the ignition of a fire. They assist first responders in providing response resources and enhanced situational awareness to assist with evacuations. These cameras are available to be viewed by the public at https://www.alertwildfire.org/ (**Appendix N-1**).
- **Alerts**. The County has significantly increased their public education efforts for emergency alerts for its residents and visitors. Examples of those alerts are Wireless Emergency Alert (WEA), SoCoAlert, Nixle, and National Oceanic and Atmospheric Administration (NOAA) weather radio, as well as Emergency Related Apps and Websites[4]. A description of each of these emergency alert and warning notification systems is provided in **Appendix N-3**. These alerts work with mobile and home phones and work independent of telephones while providing weather and emergency alerts (**Appendix N-1**).
- **Evacuation Zone Maps.** The Sonoma County Sheriff's Office and the Emergency Management Department have developed zones within the unincorporated area of the County to help manage any emergency evacuation. The unincorporated portion of the County is broken into numerous evacuation zones. When a disaster occurs and evacuations are needed, the County officials would use these zone maps to determine areas needing evacuation. The areas determined to need evacuations would be provided with information through the emergency alerts and local media outlets. The Project Site is in Sonoma County Zone #SON-3C1 (**Figure 3.12-3**; **Appendix N-1**).

On-Site Wildfire Risk

The Project Site currently has an active vineyard operation with fruit trees, a single-family dwelling, and miscellaneous outbuildings for the vineyard operation. This Project Site is relatively flat with very little change in slope or topography and Pruitt Creek and associated riparian area intersecting through the middle of the property. There is very limited flammable vegetation on the Project Site due to the planted rows of grapevines (**Appendix N-1**). Other than the riparian area along Pruitt Creek, the entire site is essentially free of any dense brush, hardwoods, or timber fuels that could intensify a wildfire.

[4] These websites include, but are not limited to, the Sonoma County Emergency Readiness, Response and Recovery at https://socoemergency.org/; and the Town of Windsor Emergency Information at: https://www.townofwindsor.com/1116/Emergency-Information



Source: Sonoma County

FIGURE 3.12-3

EVACUATION ZONE MAP

3.12.3 Impacts

3.12.3.1 Assessment Criteria

Impacts associated with hazardous materials include a potential release of hazardous materials and improper hazardous material management. A project would be considered to have significant hazardous material impacts if the site had existing hazardous materials onsite that would require remediation or mitigation prior to development of a project. Additionally, if a project results in the use, handling, or generation of a controlled hazardous material that the regulated amount would increase the potential risk of exposure that results in the reduction in the quality or loss of life, then the project would have a significant impact.

A project would be considered to have a significant impact if it were to increase wildfire risk on-site or in the surrounding area. This includes, but is not limited to, building in a high-risk fire zone without project design measures to reduce inherent wildfire risk, increasing fuel loads, exacerbating the steepness of the local topography, introducing uses that would increase the chance of igniting fires, eliminating fire barriers, inhibiting local emergency response to or evacuation routes from wildfires, and conflicting with a local wildfire management plan.

3.12.3.2 Alternatives A– Proposed Project

Hazardous Materials

As described in **Section 3.12.2**, no existing hazardous materials have been identified on or within a 1.0-mile radius of the Project Site that would affect Alternatives A (**Appendix M**). Described below are construction and operation-related impacts related to hazardous materials.

Construction

Hazardous materials used during construction may include gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, various lubricants, paint, paint thinner, and other products. As with any liquid and solid, during handling and transfer from one container to another or general usage, the potential for an accidental release exists. Depending on the relative hazard of the material, if a spill were to occur of significant quantity, the accidental release could pose both a hazard to construction employees as well as to the environment. Construction BMPs required within the NPDES General Construction Permit limit and often eliminate the impact of such accidental releases. Since contact with stormwater during construction is the primary means of transporting these contaminants offsite, appropriate BMPs for this impact are included in the construction stormwater BMPs in **Table 2.1-3**. With the implementation of these BMPs and compliance with federal laws relating to the handling of hazardous materials, no adverse effects associated with the accidental release would occur during construction.

Undiscovered contaminated soil could be present on the Project Site, but this is not anticipated because there are no records of hazardous material incidents as described above. Furthermore, the Phase I ESA indicated no observations were made onsite to imply the presence of hazardous material contamination. In the unlikely case that construction personnel do encounter contaminated soil of any type prior to or during earth-moving activities, a significant hazardous material impact would exist. However, the BMP listed in **Table 2.1-3** would minimize the possible hazards associated with existing contamination. Implementation of this BMP would further reduce the potential for Alternatives A to result in significant adverse effects associated with hazardous materials.

Operation

Alternative A would utilize hazardous materials in varying quantities and capacities that would depend on the project component. The following describes the potential hazardous material risks from each major component of the Alternative A. Provisions included in the U.S. Department of Labor Occupational Safety and Health Administration (OSHA) regulations require documentation of potential risks associated with the handling, use, and storage of flammable and toxic substances under the Hazard Communication Standard. OSHA regulations codified in 29 CFR Part 1910 are applicable to the Project Site.

For the on-site emergency generators for Alternative A, diesel fuel storage tanks would be required. BMPs incorporated into the Proposed Project include the following measures listed in **Table 2.1-3**: storage tanks would comply with the National Fire Protection Association standards for aboveground storage tanks and have secondary containment systems; and materials used for the emergency generators would be handled, stored, and disposed of according to federal and manufacturer's guidelines. They would not require uncommon storage, handling or disposal that would induce issues, and the transportation of the diesel would be infrequent and would not create a potential hazard to the public.

The WWTP would require a limited quantity of chemicals to function, which could include liquid chlorine and liquid muriatic acid or dry granular sodium bisulfate. Only qualified personnel would handle these chemicals according to the manufacturer's guidelines and they would be stored within a secure storage facility. During transportation of these chemicals, no adverse effects are anticipated due to the small quantities, and they would be transported according to applicable regulations.

The maintenance of on-site landscaping would require the transportation, storage, and use of pesticides and fertilizers. If these pesticides were handled inappropriately, then this could pose a potential risk to on-site persons and the environment. Inappropriate handling could happen during transportation, storage, or application. However, the probability of this occurring is minute because appropriate regulations and the manufacturer's guidelines for each hazardous material would be followed. Therefore, the risk to on-site persons and the environment is not significant.

Other hazardous materials used for Alternative A would be primarily for the operation and maintenance of the casino, hotel, and other project facilities. These would include, but are not limited to, motor oil, hydraulic fluid, solvents, cleaners, lubricants, paint, and paint thinner. All hazardous materials would be stored, handled, and disposed of according to federal and manufacturer's guidelines. Waste would also be produced as a result of operation, but this waste would be usual for commercial facilities. In addition to the waste from the commercial facilities on-site, the WWTP treatment plant would also produce biosolids that would require disposal. These biosolids would be dewatered before disposal offsite at a landfill that accepts biosolids. The Central Disposal Site is permitted to accept biosolids and is located approximately 15.3 miles south of the Project Site. For additional information on biosolid disposal and the Central Disposal Site, please refer to **Section 3.10.** For all solid waste produced on the site, manufacturer's guidelines would be followed for the storage, handling, and off-site disposal in addition to adhering to applicable federal and State regulations. Therefore, Alternative A would not result in significant adverse effects related to the waste produced or hazardous materials used.

Wildfire Risk

Construction Fire Ignition Risk

During construction, the operation of equipment could create sparks or fire that could ignite the sparse vegetation on the Project Site. Examples of construction equipment that could ignite a fire and thus

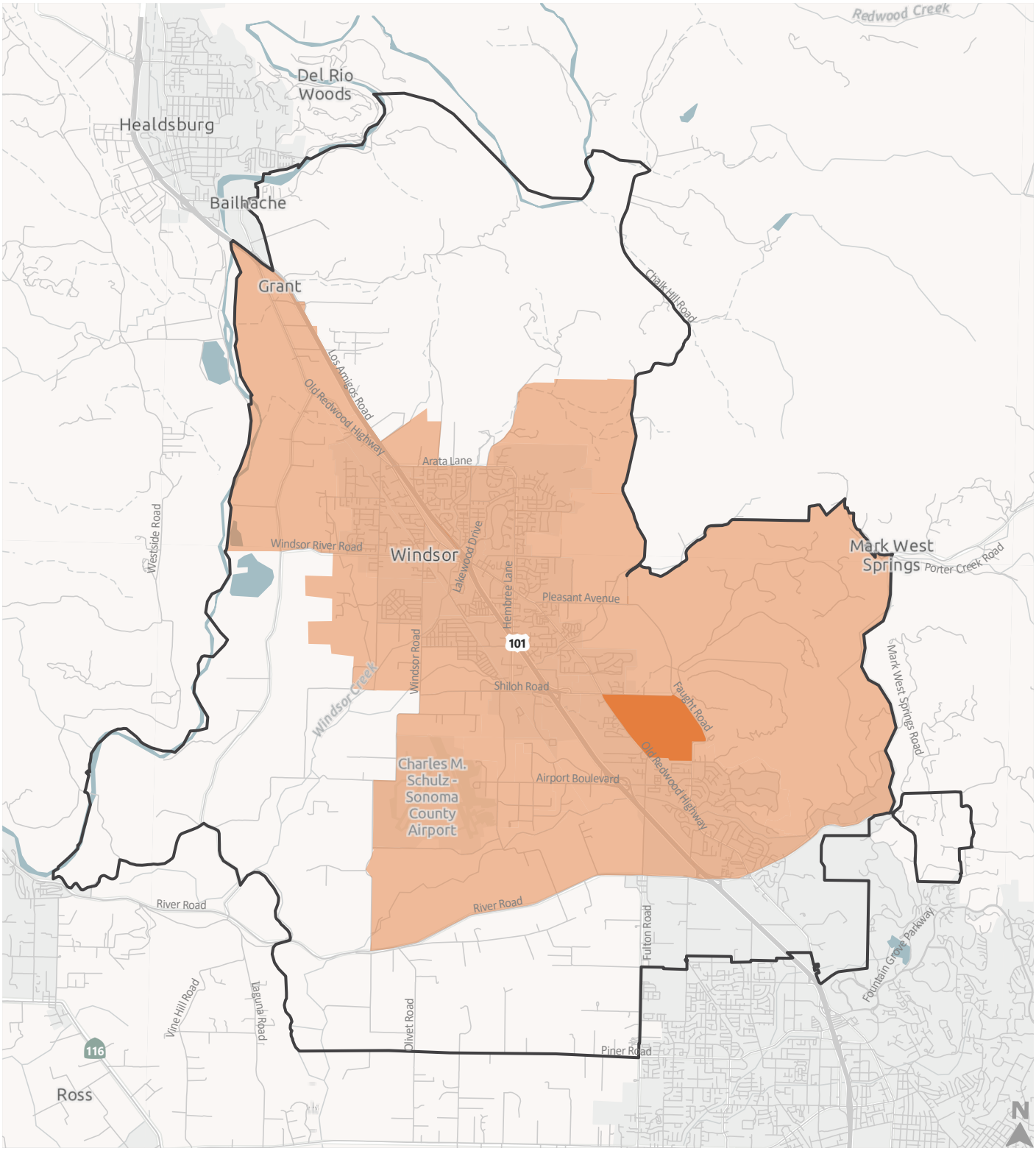
increase risk include power tools and acetylene torches. However, implementation of BMPs in **Table 2.1-3** would reduce the probability of igniting a fire during construction. These BMPs include the prevention of fuel being spilled and putting spark arresters on equipment having the potential to create sparks. Therefore, construction of Alternative A would not increase wildfire risk onsite or in the surrounding area.

Wildfire Evacuation

The Sonoma County Operational Area EOP Evacuation Annex outlines the strategies, procedures, and organizational structures to be used in managing coordinated, large-scale evacuations in the Sonoma County Operational Area. As described therein, the nature and timing of evacuation orders for a particular event are based on a number of considerations including, but not limited to, the nature and severity of impact, area affected and likely to be affected, expected duration of the incident, number of people to be evacuated, time available for evacuation, and impediments to and capacity of evacuation routes. Therefore, analysis of a future evacuation event is inherently speculative. In the case of the Tubbs Fire, evacuations occurred with little warning as the Tubbs Fire was driven by high winds. In the case of the Kincade Fire, evacuations in other communities like Windsor and Santa Rosa occurred with some warning time as the Kincade Fire had started near Geyserville a few days prior and eventually spread through Sonoma County.

For the purposes of evaluating the potential effect of Alternative A on evacuation timing, an Evacuation Travel Time Assessment (ETTA; **Appendix N-2**) was conducted based on circumstances similar to what occurred during the Tubbs Fire in 2017, referred to as the "No Notice Scenario", and the Kincade Fire in 2019, referred to as the "With Notice Scenario", under both "2028 No Project" and "2028 Plus Project" conditions.

In the No Notice Scenario, it is assumed that a rapidly spreading wildfire requires the simultaneous evacuation of all land uses within the evacuation zone shown on **Figure 3.12-4** without notice. This scenario is conservative because, as described in **Section 3.12.2**, since the Tubbs fire, the County has augmented systems and methodologies for alerting and evacuating by developing and publicizing more refined evacuation zones and increasing the means for delivery of evacuation notification. These advancements include community fire preparedness education efforts, establishment of advanced Alert and Warning Systems, establishment of Pre-determined Evacuation Zones, and the installation of early detection devices such as wildfire cameras to reduce the risk of "no notice" events and enhance life-safety through orderly evacuations. The wildfire camera system consists of cameras on mountaintops that can detect a wildfire from a distance, locate and mark the wildfire, and the direction of travel. The system immediately notifies dispatchers and emergency officials and provides situational awareness of where the fire is. In addition, since the 2017 Tubbs Fire, Sonoma County has defined pre-determined evacuation zones to enable a methodical approach to move people out of areas in case of an emergency. Since the 2017 Tubbs Fire, Sonoma County has employed a philosophy of early and wide evacuations to protect life and safety and enable firefighters to have the ability to fight the fire with people out of the area. Additionally, more aggressive firefighting tactics are being applied at the onset of a fire. For example, strike teams and firefighting aircraft are routinely dispatched to small fires to prevent the fire from spreading. These philosophies have been applied several times in the County since the Tubbs Fire, which has resulted in no deaths and less property damage. Further, Pacific Gas & Electric has developed other protection measures since the 2017 Tubbs Fire, such as: Public Safety Power Shutoffs (PSPS) and Enhanced Powerline Safety Settings (EPSS). PSPS' are when Pacific Gas and Electric intentionally shuts off the power in an area because of high-risk fire weather, such as red flag warnings, to prevent a downed line from starting a fire. These shut offs have become a tool to prevent wildfires. EPSS' are designed to prevent fires in the event of a fault in a power line. These enhanced settings shut down power in an area immediately



Source: Fehr & Peers, Sonoma County, Evacuation Area, EOC

FIGURE 3.12-4

EVACUATION ZONE FOR NO NOTICE SCENERIO

upon a line integrity issue, such as a fallen tree bringing a power line down. A No Notice Scenario is conservatively included in the analysis due to concerns raised by the public during scoping; however, the enhanced safety measures and procedures in place today significantly lower the chances of another No Notice Scenario, similar to the 2017 Tubbs Fire, from occurring.

In the With Notice Scenario, it is assumed that there would be some knowledge of a wildfire burning in the direction of the study area before an evacuation order or warning was issued. Using the designated evacuation zones in the Kincade Fire timeline and maintaining the same mandatory evacuation time differences, two evacuation phases were assumed. These evacuation zones are shown on **Figure 3.12-5**. To maximize the potential for Alternative A to impact evacuation times under both scenarios, the ETTA assumed that an evacuation order would be issued at 4:30 PM (the afternoon peak hour of typical travel) on the Friday before Labor Day (when wineries are in the harvest period, and the Friday before a major holiday weekend). This assumption has a theoretical maximum background utilization of the study area's roadway network, with limited remaining capacity to accommodate the evacuation demand of Alternative A. For additional information on the methodology for the ETTA, please see **Appendix N-2**.

The results of the ETTA, summarized in **Table 3.12-2**, indicate the modeled amount of time to clear the study area of evacuation demand under the 2028 No Project and 2028 Plus Project (Alternative A) conditions. The analysis assumes that the total number of evacuating vehicles is equal to the total number of parking spaces available on the Project Site, including the overflow parking area, (5,110) plus an additional 5% to reach the conservative estimate of 5,367 vehicles that would need to evacuate from the Project Site. This is considered an extremely conservative analysis as a marketing assessment estimates that the expected maximum occupancy at the casino-resort would be approximately 2,450 vehicles (less than half of the number of vehicles assumed to evacuate in **Appendix N-2**). Regardless, the increase in evacuation times as a result of the operation of Alternative A is a potentially significant impact.

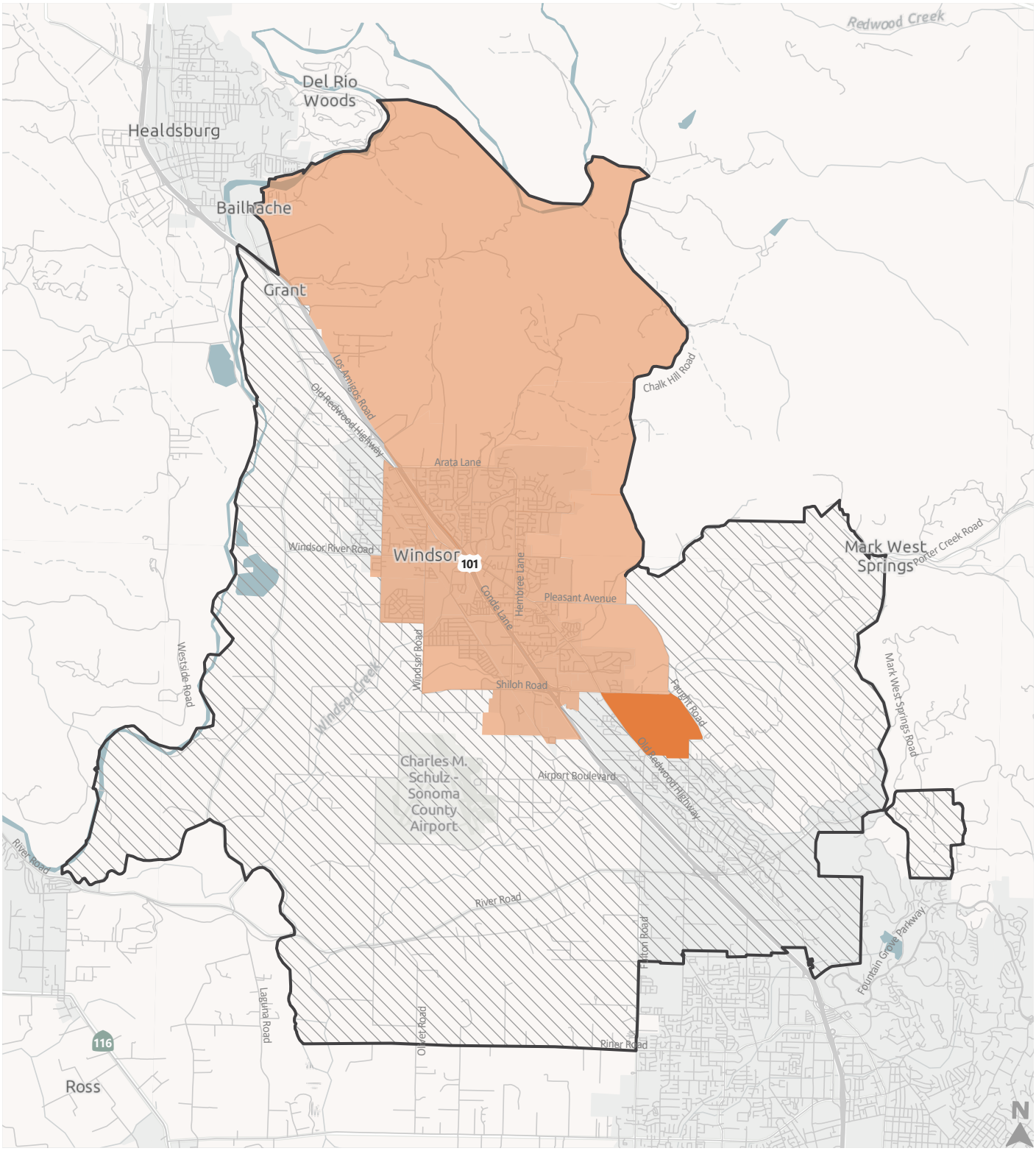
Table 3.12-2: Evacuation Time Results (2028)

Scenario	No Project (minutes)	Plus Project (minutes)	Percent Change
No Notice	210	270	+29%
With Notice	195	300	+54%

Source: **Appendix N-2**

The ETTA also estimated the evacuation time for just Alternative A while maintaining the rest of the With Notice Scenario assumptions, such as the level of background traffic and the evacuation destinations. The results of this 2028 Project-only evacuation travel time analysis shows that Alternative A would need a maximum of 52 minutes to evacuate 5,367 vehicles from the study area shown on **Figure 3.12-5**. Thus, if the Project Site began evacuating about one hour ahead of other zones, the vehicle demand generated by Alternative A would have exited the study area before neighboring evacuation zones are ordered to evacuate.

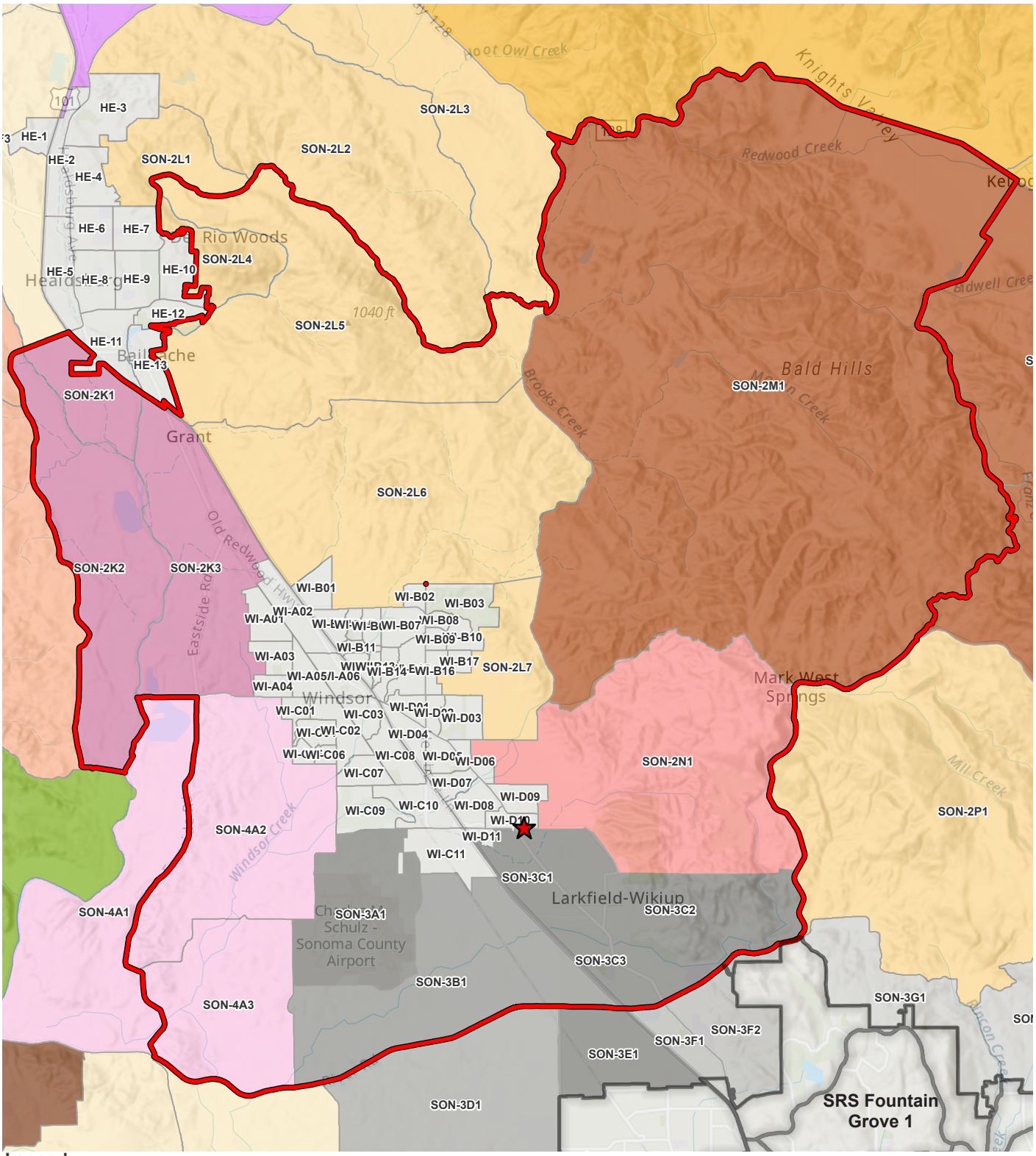
Mitigation is included in **Section 4**, which includes implementation of the Evacuation Mitigation Plan included in **Appendix N-4**, as well as recommendations from evacuation experts included in **Appendix N-1**, and **Appendix N-3**. The Evacuation Mitigation Plan presents two options to relieve evacuation traffic: Option 1) Creation of a Trigger Evacuation Zone; and Option 2) Creation of a Pre-Determined Evacuation Zone. Option 1 consists of a procedure to initiate a mandatory evacuation of the Project Site as soon as evacuation zones within a designated "Trigger Evacuation Zone", shown in **Figure 3.12-6**, are issued an evacuation warning or order. The Trigger Evacuation Zone was determined by analyzing the ETTA, including the 2028 Project-only evacuation time travel analysis; reviewing past fire behavior and the



Source: Fehr & Peers, Sonoma County, Evacuation Area, EOC

FIGURE 3.12-5

EVACUATION ZONE FOR WITH NOTICE SCENERIO



Source: CAS Safety, Sonoma County, Evacuation Area, EOC

FIGURE 3.12-6

TRIGGER EVACUATION ZONE

timing of evacuations by zones; and understanding how today's emergency managers would likely proceed with evacuations with the current pre-determined evacuation zone system. Option 2 consists of the creation of a pre-determined evacuation zone specific to the Project Site. This would facilitate the ability of the County's Emergency Officials to determine the most appropriate time to issue an evacuation order of the Project Site zone based on their situational awareness during a disaster, understanding the population of the casino, and other pre-determined evacuation zones. Under the With Notice Scenario, these tactical procedures would minimize the potential for project-related evacuation traffic to coincide with community wide evacuation orders, thereby minimizing the potential for Alternative A to contribute to traffic congestion and increased community-wide evacuation timelines.

With mitigation, the Project Site is intended to be evacuated early and before community wide evacuation, to minimize the potential for increase evacuation timelines. Additionally, the Tribe would coordinate with Sonoma County and the Town of Windsor on their respective emergency operation plans and implement or contribute to the implementation of measures intended to improve early detection of wildfire events, and evacuation times for the Project Site and vicinity. These measures would improve the ability of the County to rapidly identify and respond to wildfire events, even further reducing the potential for a "No Notice" scenario. With implementation of the mitigation measures included in **Section 4**, Alternative A would not significantly inhibit local emergency response to or evacuation from wildfire or conflict with a local wildfire management plan.

3.12.3.3 Alternative B – Reduced Intensity Alternative

Hazardous Materials

Alternative B would have similar hazardous material risks as Alternative A during construction, but the risks would be reduced due to the smaller building scale of the project. Similar to Alternative A, BMPs in **Table 2.1-3** would reduce these potential risks to less than significant. Operation of Alternative B would have similar hazardous material usage, handling, storage, and disposal as Alternative A because the proposed building components would require similar chemicals for its facilities. As with Alternative A, all hazardous materials used during operation would be handled, stored, and disposed of according to federal and manufacturer's guidelines; therefore, no adverse effects regarding hazardous materials would occur during operation of Alternative B.

Wildfire Risk

While the risk of wildfires under Alternative B would be similar to Alternative A, potential effects to evacuation timelines would be slightly reduced as the maximum number of potential persons on the Project Site would be reduced. With the implementation of project design features to reduce inherent wildfire risk described in **Section 2.2**, BMPs listed in **Table 2.1-3,** and mitigation measures in **Section 4**, construction or operation of Alternative B would not increase wildfire risk onsite or in the surrounding area or significantly inhibit local emergency response to or evacuation from wildfire.

3.12.3.4 Alternative C – Non-Gaming Alternative

Hazardous Materials

Alternative C would have similar hazardous material risks as Alternatives A and B during construction, but the risks would be reduced due to the smaller building scale of the project. Similar to Alternatives A and B, BMPs in **Table 2.1-3** would reduce these potential risks to less than significant.

Operation of Alternative C would have similar hazardous material usage, handling, storage, and disposal as Alternatives A and B because the proposed building components would require similar chemicals for its facilities. In addition to these chemicals, agricultural maintenance chemicals would be needed under Alternative C due to the vineyards. However, the agricultural maintenance would be stored, handled, and disposed of in a similar manner as the landscape maintenance chemicals described under Alternatives A and B. As with Alternatives A and B, all hazardous materials used during operation would be handled, stored, and disposed of according to federal and manufacturer's guidelines; therefore, no adverse effects regarding hazardous materials would occur during operation of Alternative C.

The one building component that would require different hazardous materials than described under Alternatives A and B is the winery. While limited hazardous materials are utilized during wine production, some can be classified as "Irritants" according to their material safety data sheets, such as certain yeasts and wine additives. Hazardous chemicals that may be present during wine production are sulfur dioxide, diatomaceous earth, carbon dioxide, caustic cleaners, ozone, anhydrous ammonia, copper sulfate, and carbon monoxide (CO) (University of Washington, n.d.). However, wine production would be required by OSHA to train the wine workers to properly handle, store, and use these substances, and manufacturer guidelines would be utilized. This would reduce the potential risk of hazardous material mismanagement. No members of the public would be permitted in the winery without supervision and would therefore not be exposed to unsafe levels of hazardous materials. Hence, the hazardous material risk from operation of Alternative C would be less than significant.

Wildfire Risk

While the risk of wildfires under Alternative C would be similar to Alternative A, potential effects to evacuation timelines would be reduced as the maximum number of potential persons on the Project Site would be reduced. With the implementation of project design features to reduce inherent wildfire risk described in **Section 2.3**, BMPs listed in **Table 2.1-3,** and mitigation measures in **Section 4**, construction or operation of Alternative C would not increase wildfire risk onsite or in the surrounding area or significantly inhibit local emergency response to or evacuation from wildfire.

3.12.3.5 Alternative D – No Action Alternative

No development would occur under Alternative D, and the Project Site would remain in its undeveloped state. No impacts associated with hazardous materials or hazards would occur under Alternative D.

3.13 VISUAL RESOURCES

3.13.1 Regulatory Setting

The visual resources regulatory setting is summarized in **Table 3.13-1**, and additional information on the regulatory setting can be found in **Appendix E.**

Table 3.13-1: Regulatory Policies and Plans Related to Visual Resources

Regulation	Description
Local	
Sonoma County General Plan 2020	▪ The Sonoma County General Plan contains goals, objectives, and policies to guide development within the County.

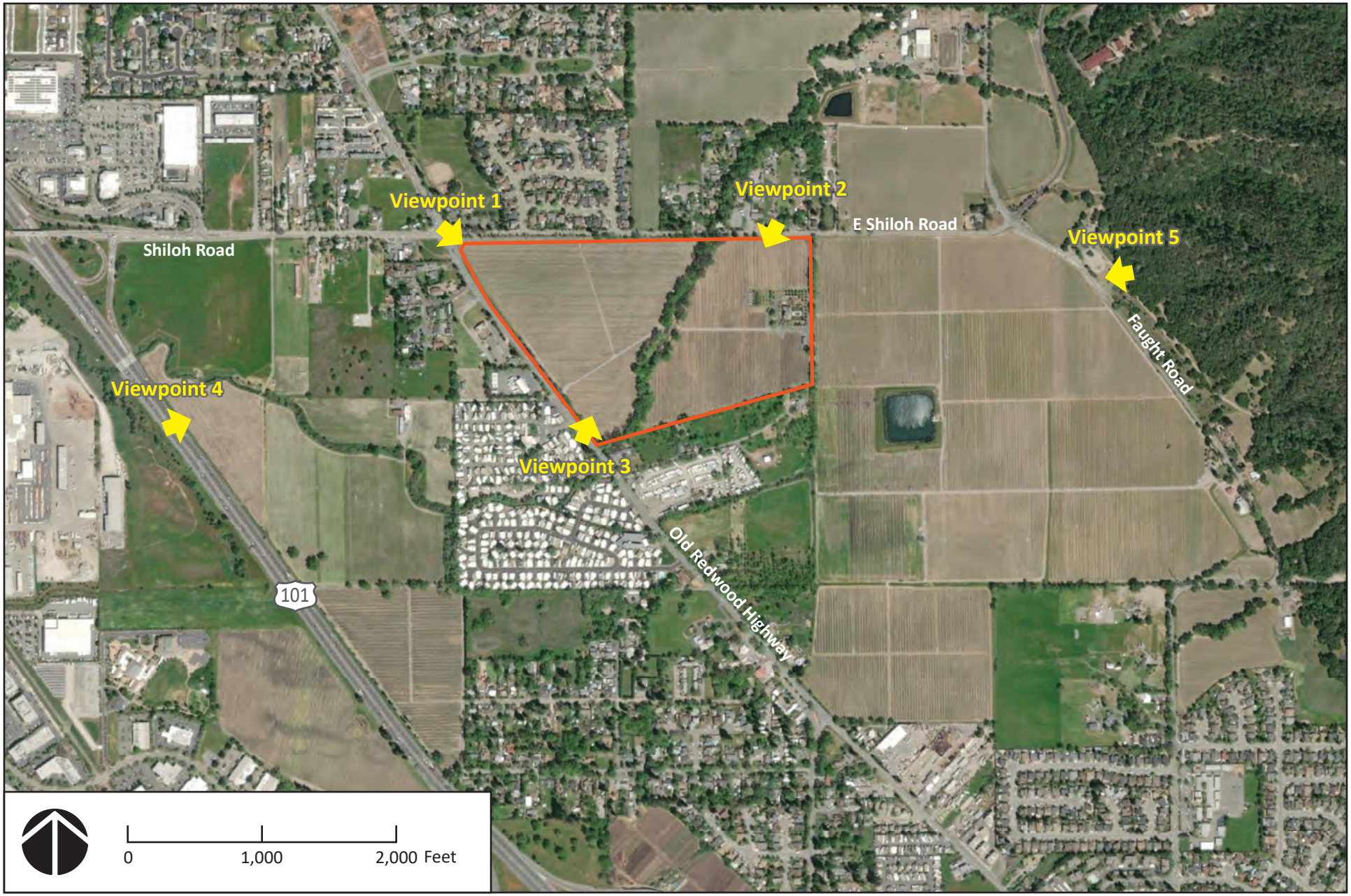
Regulation	Description
	▪ The Open Space and Resource Conservation Element intends to preserve the unique rural and natural character of Sonoma County for residents, businesses, visitors, and future generations.
Sonoma County Code of Ordinances	▪ The Code of Ordinances includes specific development criteria for Community separators and scenic landscape units including encouraging the siting of new construction in inconspicuous areas, as well as the use of vegetation and natural landforms for visual screening. Additionally, the development criteria include clustering buildings, height limitations, and limited cut and fill.
Dark-Sky Association's Model Lighting Ordinance	▪ The International Dark-Sky Association and the Illuminating Engineering Society of North America have developed a Model Lighting Ordinance to address the need for strong, consistent outdoor lighting regulation in North America.

3.13.2 Environmental Setting

The Project Site is generally flat with elevations ranging from approximately 135 to 160 feet amsl), and views of the site are of an operating vineyard surrounded by trees, the riparian area along Pruitt Creek which bisects the property (which includes a mixture of very tall mature trees, perennials, and ferns), and the rural residential home.

The Project Site is visible from multiple vantage points, which are generally represented by the viewpoints identified in **Figure 3.13-1** and described as follows:

- **Viewpoint 1**: View experienced from the corner of Old Redwood Highway and E Shiloh Road. Mature trees can be seen along the Project Site boundary, with vineyard areas dominating the foreground and large trees along Pruitt Creek riparian corridor in the background.
- **Viewpoint 2**: View experienced from E Shiloh Road between Old Redwood Highway and Faught Road. Vineyard areas can be seen dominating the foreground, with large trees along the southern Project Site boundary in the background as well as large trees along Pruitt Creek riparian corridor to the right.
- **Viewpoint 3**: View experienced from Old Redwood Highway, south of Shiloh Road. Vineyard areas can be seen dominating the foreground, with large trees along Pruitt Creek riparian corridor to the right. Several mature trees are visible along Old Redwood Highway, on the western Project Site boundary.
- **Viewpoint 4**: View experienced from Highway 101 facing east toward the Project Site. Vineyard areas can be seen dominating the foreground, and mature trees and rolling hills are visible in the background.
- **Viewpoint 5**: View experienced from Shiloh Ranch Regional Park facing west toward the Project Site. Mature trees and a grassy park area with picnic tables dominate the foreground. Faught Road and vineyards are visible in the midground, followed by mature trees and rolling hills in the background.



Source: ESRI

FIGURE 3.13-1

VIEWPOINT MAP

Sensitive receptors that currently experience views of the Project Site include:

- Residential areas primarily to the north and west of the Project Site. Given the flat topography of the areas, views of the site are mostly limited to the residential homes directly adjacent to Shiloh Road, and Old Redwood Highway, as well as a single-family rural home located adjacent to the southeast corner of the site. Represented by Viewpoints 1, 2 and 3 in **Figure 3.13-1**.
- Travelers on nearby local roadways, including Old Redwood Highway and Shiloh Road. Represented by Viewpoints 1, 2, and 3 in **Figure 3.13-1**.
- Travelers on Highway 101. Represented by Viewpoint 4 in **Figure 3.13-1**.
- Hikers and/or other recreationalists visiting the Shiloh Ranch Regional Park or Esposti Park. Represented by Viewpoints 1 and 5 in **Figure 3.13-1**.

Scenic resources surrounding the Project Site include views of the Coast Range to the northwest, views of neighboring vineyards directly east of the Project Site, and views of Shiloh Ranch Regional Park beyond the eastern vineyards. There are no designated State scenic highways in the vicinity of the Project Site.

3.13.3 Impacts

3.13.3.1 Assessment Criteria

Assessing the impacts of a project on visual resources is in large part subjective by nature. Impacts related to visual resources would be considered significant if the alternative were to degrade or diminish the aesthetics of visual resources such as scenic vistas or designated scenic areas, introduce lighting that would substantially increase the nighttime lighting in the area, and/or cast a shadow on private residences or public areas for substantial portions of the day.

3.13.3.2 Alternative A – Proposed Project

Operational Impacts

The proposed facilities for Alternative A are described in **Section 2.1.2**, including architectural design, signage, lighting, and other visible features. Alternative A would substantially alter the visual character of the Project Site by converting vineyard areas to a casino-resort with parking garage, wastewater treatment plant, reclaimed water storage facilities, and other supporting uses. The most visually dominant features of Alternative A would be the 65-foot high five-story hotel tower, the 60-foot-high four-story parking garage, and potentially the 65-foot-tall reclaimed water storage tanks.

Alternative A has been designed to preserve and maintain the existing vineyards and trees around the perimeter of the site to serve as a buffer from adjacent land uses and to be more visually cohesive with the rural/wine country character of the surrounding community. These vineyard buffer areas would range from 100–500 feet wide around the northern and western site boundaries closest to the majority of nearby residential uses. The existing chain link fences around the site would be replaced with a low rock wall to complement the rural setting. The architecture of the facility would incorporate natural materials and colors to integrate the buildings with the natural characteristics of the site and surrounding areas. The proposed casino and parking garage would have a green roof, which would soften the appearance of commercial development from long range views that may be experienced by hikers or other recreationalists visiting the Shiloh Ranch Regional Park, and the parking garage would include a decorative, perforated metal screen around the exterior to provide visual screening from residential areas along Shiloh Road. Additionally, the Pruitt Creek riparian corridor, including trees and vegetation, would

be preserved. **Figure 3.13-1** includes a viewpoint map, and **Figures 3.13-2** through **3.13-6** include photos of the existing conditions at the Project Site compared to a simulation of proposed conditions with implementation of Alternative A.

As illustrated, Alternative A would substantially alter views of the site as experienced from nearby residential areas, including residences along Shiloh Road, Old Redwood Highway, and the southern property line of the site. With the implementation of design features described in **Section 2.1**, including the preservation of vineyard areas around the perimeter of the site, visual impacts resulting from Alternative A would be less than significant.

Lighting, Shadow and Glare

A significant effect from shadows would result if the Proposed Project were to cast a shadow on private residences or public areas for substantial portions of the day. The nearest off-site buildings to the development footprint of Alternative A are residences located north and west of the Project Site. As described in **Section 2.1.2**, the maximum building height would be 65 feet. The buildings would not be located in close enough proximity to cast shadows on any private residences or public areas. Additionally, existing trees along the Project Site boundary would be retained. Many of the existing trees are taller than the maximum building height; therefore, existing off-site buildings already experience shadows greater than would result from Alternative A.

Alternative A would introduce new sources of light into the existing setting. While the project site itself contains few sources of nighttime lighting associated with the residence, existing sources of nighttime lighting in the project area include approximately 20-foot tall streetlights along the western half of Shiloh Road adjacent to the Project Site, residential lighting from adjacent subdivisions and rural residential housing, and sky glow from nearby urban areas along Highway 101, the Town of Windsor and the City of Santa Rosa. Light spillover from Alternative A into surrounding areas and increases in regional ambient illumination could result in potentially significant effects if it were to cause traffic safety issues or create a nuisance to sensitive receptors. Illuminated signage and light from occupied hotel rooms would be visible from surrounding areas at night and would have the potential to significantly alter the nighttime lighting environment within surrounding properties. Additionally, the use of glass panels and reflective ornamental detailing could increase the glare to travelers along regional roadways and adjacent properties.

Alternative A would increase light and glare in the vicinity, but project design features and strategies described in **Appendix C** and presented in **Table 2.1-3** would minimize effects. These measures include, but are not limited to, shielding of outdoor lighting fixtures, designing exterior lighting to avoid creating illumination beyond the Project Site boundary, and design of exterior lighting consistent with the International Dark-Sky Association's Model Lighting Ordinance (MLO), including the use of warm correlated color temperatures for exterior lighting for reduced likelihood of blue wavelengths which stimulate the photoreceptors of humans and some wildlife. For the majority of the Project Site, lighting will be designed consistent with the MLO recommendations for low-density residential areas, though pockets within the site will be designed consistent with lighting recommendations for commercial and business districts. Furthermore, measures will be taken to reduce interior light from spilling onto Pruitt Creek or nearby sensitive receptors, including automated shading of hotel windows at sunset, and the use of shielding around the border of the parking structure with direct line of sight to residential areas or Pruitt Creek. A visual rendering of Alternative A lighting at dusk is provided in Section 2.1 as **Figure 2.1-2b**, and **Figure 3.13-7** provides a visual representation of the parking garage lighting at dusk as viewed

Existing view from corner of Old Redwood Highway and Shiloh Road

View of Alternative A from corner of Old Redwood Highway and Shiloh Road

Source: Dale Partners

FIGURE 3.13-2

VISUAL SIMULATION OF ALTERNATIVE A - VIEWPOINT 1

Existing view from Shiloh Road

View of Alternative A from Shiloh Road

Source: Dale Partners

FIGURE 3.13-3

VISUAL SIMULATION OF ALTERNATIVE A - VIEWPOINT 2

Existing view from Old Redwood Highway

View of Alternative A from Old Redwood Highway

Source: Dale Partners

FIGURE 3.13-4

VISUAL SIMULATION OF ALTERNATIVE A - VIEWPOINT 3

Existing view from Highway 101

View of Alternative A from Highway 101

Source: Dale Partners

FIGURE 3.13-5

VISUAL SIMULATION OF ALTERNATIVE A - VIEWPOINT 4

Existing view from Shiloh Ranch Regional Park

View of Alternative A from Shiloh Ranch Regional Park

Source: Dale Partners

FIGURE 3.13-6

VISUAL SIMULATION OF ALTERNATIVE A - VIEWPOINT 5

Source: Dale Partners

FIGURE 3.13-7

DUSK VISUAL SIMULATION OF ALTERNATIVE A - VIEWPOINT 2

from residential uses along Shiloh Road. With the incorporation of BMPs listed in **Table 2.1-3**, the lighting and illumination levels under Alternative A would be less than significant.

3.13.3.3 Alternative B – Reduced Intensity Alternative

As discussed in **Section 2.2**, Alternative B would include the same land uses as Alternative A but the hotel would be reduced to three-stories (36-feet tall) and the large ballroom, the event center, and the surface parking lot are eliminated. Additionally, the vineyard buffer areas around the proposed development would be increased in size, and the reclaimed water storage facilities would be reduced. Therefore, Alternative B would result in decreased impacts to visual resources as compared to Alternative A. With the implementation of the BMPs in **Table 2.1-3**, Alternative B would not interrupt or substantially alter local views or create sources of glare or excessive nighttime illumination. Visual impacts would be less than significant.

3.13.3.4 Alternative C – Non-Gaming Alternative

Alternative C would result in a reduced development footprint on the Project Site as compared with Alternatives A and B, and no casino would be developed. Alternative C would maintain a larger percentage of the existing vineyards and would not include any development east of Pruitt Creek except for limited water and wastewater infrastructure. As discussed in **Section 2.3**, architecture, signage, lighting, and landscaping design under the Alternative C would be similar to Alternatives A and B except the proposed three-story hotel and winery/visitor center would have a maximum height of approximately 40 feet above ground level, 25 feet shorter than the resort facility under Alternative A. Nevertheless, the visual resource impacts proposed would result in impacts similar in nature to those that would occur with Alternative A, but at a reduced scale. With the implementation of the BMPs in **Table 2.1-3**, Alternative C would not interrupt or substantially alter local views or create sources of glare or excessive nighttime illumination. Visual impacts would be less than significant.

3.13.3.5 Alternative D – No Action Alternative

Under Alternative D, the Project Site would remain under County jurisdiction and no development would occur on the Project Site. Therefore, visual resource impacts would not occur under this alternative.

3.14 CUMULATIVE EFFECTS

This section assesses the potential for the project alternatives to contribute to "cumulative" environmental impacts. Cumulative effects are defined by the Council of Environmental Quality (CEQ) as effects "on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions" (40 CFR § 1508.1(i)(3)). For the purposes of this analysis, the cumulative setting includes growth and development envisioned in the Sonoma County General Plan and Town of Windsor 2040 General Plan. A general planning horizon of 2040 was used consistent with the Town's planning horizon and available long-range data for Sonoma County.

The cumulative setting also includes several development projects listed in **Table 3.14-1** that are proposed, planned, and/or currently being constructed. These projects are generally located within one mile of the Project Site and/or between the Project Site and Highway 101 on Shiloh Road. In addition to the buildout of the projects listed above, the cumulative impact analysis within this EIS and associated

traffic impact study conservatively assumed a 2.189% annual growth rate for the population of the surrounding region until 2040 (**Appendix I**). Cumulative impacts for each environmental issue area are discussed below. Unless otherwise specified below, the following analysis applies to the Proposed Project Alternative, Reduced Intensity Alternative, and the Non-Gaming Alternative, referred to collectively as project alternatives or the development alternatives.

3.14.1 Land Resources

Cumulative effects associated with land resources could occur as a result of future development in combination with the project alternatives. Topographic changes, soil loss, and seismic risk may be cumulatively significant even if the developments alone would not result in significant alterations of the landscape or increase seismic risk. However, approved developments would be required to follow applicable permitting procedures and development codes. Local permitting requirements for construction would address regional geotechnical and topographic conflicts, seismic hazards, and resource extraction availability. In addition, the project alternatives and all other developments that disturb one acre or more must comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit. Adherence to this permit would lessen the probability of significant erosion occurring regionally. The project would develop a project-specific Stormwater Pollution Prevention Plan (SWPPP) with BMPs for stormwater and erosion to lessen its potential impacts with regards to these environmental issue areas. Therefore, implementation of the project alternatives would not result in significant cumulative impacts to land resources.

Table 3.14-1: Cumulative Projects

Project Name	Distance from project site (miles)	Project Location	Project Description	Project Status
Shiloh Crossing	0.25 miles west of Project Site	295 Shiloh Road, Windsor, CA 95492	Affordable multi-family housing development with 173 units, 8,000 square feet of commercial space, and a 3,000 square foot community center.	Approved/Under Construction
Shiloh Terrace	0.75 miles west of Project Site	6035 and 6050 Old Redwood Highway, Windsor, CA 95492	Affordable multi-family housing development with 134 units.	Approved/ Under Construction
Clearwater at Windsor	0.25 miles west of Project Site	376 Shiloh Road, Windsor, CA 95492	Senior living and care facility with a 141-unit senior living complex, 34-bed memory care unit, and 21,000 square feet of commercial development. Includes 12 acres of avoided habitat for wetlands and/or rare plants.	Approved; Building permit and improvement plans not yet submitted

Project Name	Distance from project site (miles)	Project Location	Project Description	Project Status
Windsor Gardens	0.22 miles north of the Project Site	6100 Old Redwood Highway, Windsor, CA 95492	12 Lot Residential and 37 onsite parking spaces.	Approved; Building permit pending
Old Redwood Highway Villages	0.25 miles north of the Project Site	6114 and 6122 Old Redwood Highway, Windsor, CA 95492	29-two story unit small lot subdivision with two common space open parcels. Six units with flex/office spaces.	Planning Stages-Application not yet submitted
Bo Dean Co. Asphalt Processing Plant	0.75 miles west of Project Site	470, 510, 590, 600, and 610 Caletti Avenue, Windsor, CA 95492	New asphalt plant and construction materials processing facility.	Planning Stages – Notice of Preparation for EIR released; Under Review
Shiloh Business Park	0.5 miles west of Project Site	790 Shiloh Road, Windsor, CA 95492	Business park to include light industrial, manufacturing, and/or warehouse distribution uses. Includes three, one-story buildings with a total of 480,000 square feet.	Planning Stages – Application not yet submitted; Under Review
Graton Resort and Casino Expansion	Approx 14 miles south of Project Site	288 Golf Course Dr W, Rohnert Park, CA 94928	Approximately 144,000 square feet of new gaming space, a new 221-room hotel tower, a 3,500-seat theater, additional F&B, parking, and other property improvements	Under construction

3.14.2 Water Resources

Surface Water

Cumulative effects to water resources may occur as the result of the construction of the project alternatives and future development. Construction activities could result in erosion and sediment discharge to surface waters, potentially affecting water quality in downstream water bodies. In addition, construction equipment and materials have the potential to leak, thereby discharging oil, grease, and construction supplies into stormwater, potentially affecting both surface water and groundwater. Cumulative developments would be required to apply for the NPDES General Construction Permit and develop site-specific SWPPPs.

Stormwater discharges from developed sites could increase the chance of downstream pollution and flooding, and runoff characteristics of a watershed are altered when impervious surfaces replace natural vegetation, row crops, or bare soil. Changes in runoff characteristics could increase drainage volumes, increase stream velocities, increase peak discharges, shorten the time to peak flows, and lessen groundwater contributions to stream base-flows during non-precipitation periods. The immediate area surrounding the Project Site is either developed or zoned and used for agricultural purposes and thus is not anticipated to create cumulative increases in the quantity or velocity of stormwater. Further, the project alternatives include treatment and detention to limit off-site stormwater flows to pre-development levels. Therefore, implementation of the project alternatives in combination with other cumulative development would not result in significant cumulative effects to surface water and flooding.

Groundwater

Future demands on the groundwater basin from cumulative development would be controlled by local land use authorities, as well as Senate Bill 1168 that requires local agencies to create groundwater management plans, and Assembly Bill 1739 that allows the State to intervene if local groups do not adequately manage groundwater resources.

In order to assess the cumulative effects of groundwater pumping associated with Alternative A, the GRIA (**Appendix D-4**) completed a forecast scenario that added pumping two new municipal wells described in the Town of Windsor 2020 Urban Water Management Plan, the Esposti Park well and the North Windsor well. Consistent with the operating strategy for these proposed municipal wells presented in the UWMP, they were simulated to be operated only during dry years. The number and timing of dry years during which pumping occurred followed a climate change simulation scenario included in the USGS model. **Figure 3.14-1** shows the results of the cumulative impact forecast scenario at the end of the 50-year simulation period and the maximum predicted drawdown, which occurs after multiple dry years, under baseline conditions resulting from operation of the Town's new wells, and baseline plus the addition of Alternative A. At the end of the 50-year simulation, the drawdown at the water table and in the pumped aquifer is predicted to be similar to the drawdown predicted under the Alternative A forecast scenario discussed in **Section 3.3.3.2**. This appears to be because the simulation ends after a period of non-drought conditions and water level recovery occurs relatively quickly in the groundwater system. However, at the end of multiple dry years, the magnitude of drawdown and the affected area increases across the study area.

Cumulative Effects to Domestic Wells in Shallow and Intermediate Zones

The GRIA determined that the maximum cumulative drawdowns at the hypothetical nearest possible domestic well location to the Project Site are predicted to be 5.91 feet for the shallowest reported well depth, and 9.08 feet for the average reported well depth. The predicted drawdowns for shallow and average wells exceed the 5-foot drawdown thresholds for shallow and intermediate domestic wells and would be considered potentially cumulatively significant. It should be noted that impacts from Alternative A alone for wells of these depths would not be significant and would account for approximately 30% of the total cumulative drawdown. After the cessation of dry year pumping, drawdowns would decrease to less-than-significant levels.

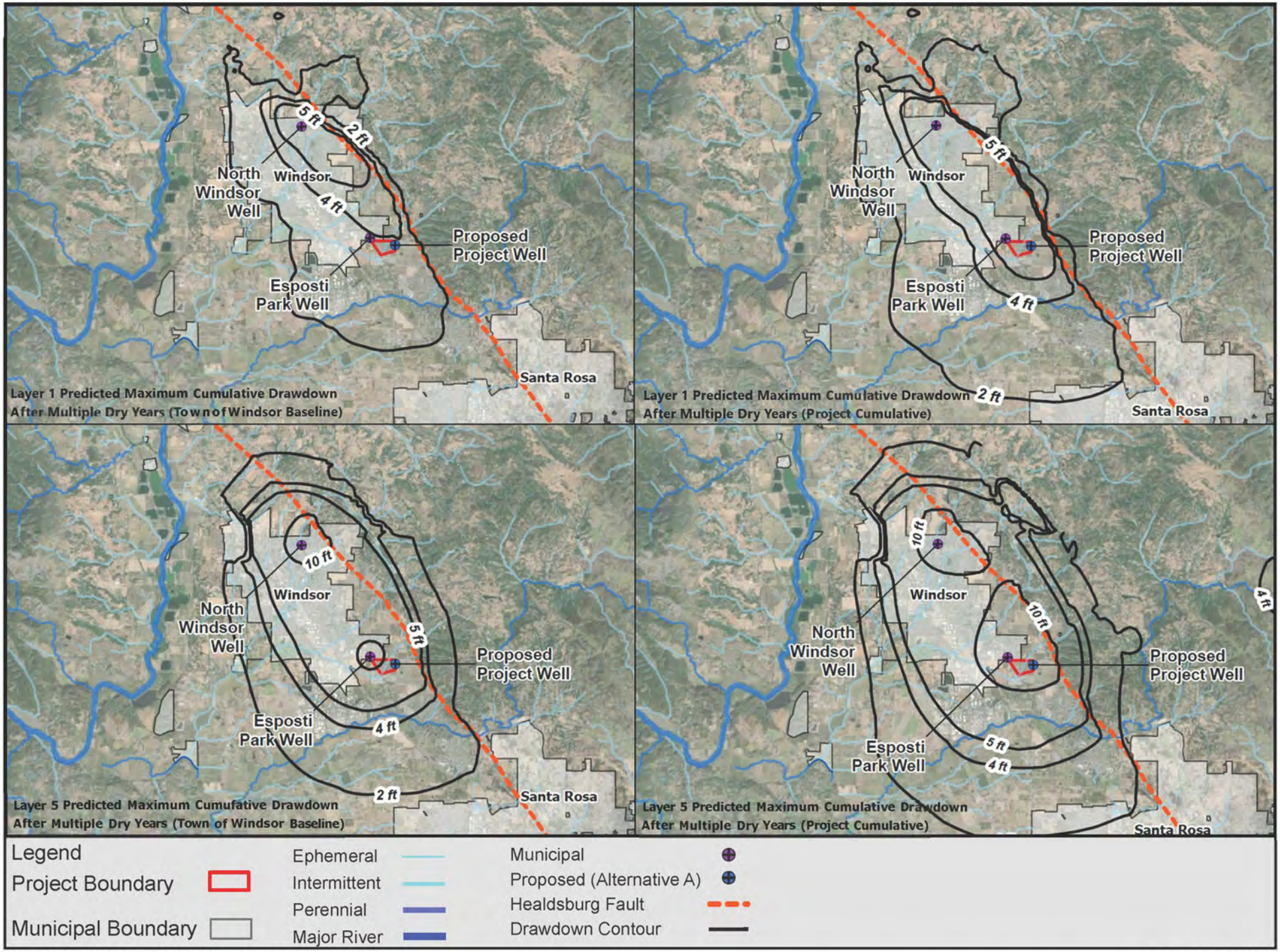


FIGURE 3.14-1
PREDICTED CUMULATIVE DRAWDOWN AFTER MULTIPLE DRY YEARS
(TOWN OF WINDSOR BASELINE VS PROJECT CUMULATIVE)

Cumulative Effects to Domestic, Municipal and Irrigations Wells in Deep Zone

The GRIA determined that cumulative drawdown predicted at nearby domestic, municipal and irrigation wells in the deep aquifer zone would range from 8.08 to 17.49 feet, which is less than the 20-foot drawdown threshold for wells in the deep zone aquifer. Based on this information, cumulative drawdown impacts to nearby domestic, municipal and irrigation wells in the deep aquifer would be less than significant.

Cumulative Effects to Groundwater Dependent Ecosystems

Cumulative drawdown at the potential riparian hardwood GDE along Pruitt Creek on and near the Project Site is predicted to be just under 6 feet during dry years. Direct and near-term drawdown from Alternative A is forecast to be in the range of 1.6 feet, which would represent a new and relatively stable baseline to which tree roots would have adjusted. The additional 4.2 to 4.3 feet of drawdown induced by the Town of Windsor wells would be significantly greater and intermittent during dry years. This amount of drawdown is similar to the low end of the range of observed seasonal groundwater level fluctuations. In the absence of groundwater level data at the Project Site, it may be expected that relatively rapid groundwater level fluctuations of this magnitude may exceed the ability of the tree's roots to adapt and could result in plant stress and habitat decline. Cumulative drawdown impacts at this GDE in dry years would therefore be considered potentially cumulatively significant; however, it should be noted that adverse effects that could occur would result from the additional intermittent drawdown resulting from pumping of the Town of Windsor wells, which is projected to be nearly four times greater than pumping for Alternative A.

Summary

Based on the GRIA (**Appendix D-4**), Alternative A would contribute to potentially cumulatively significant impacts related to interference drawdown in shallow wells and degradation of GDEs during dry years in combination with potential pumping of the Esposti Park well and the North Windsor well by the Town of Windsor during multiple dry years. Mitigation measures are recommended in **Section 4.**

As discussed in more detail below and illustrated in **Figure 3.14-1**, the majority of the projected drawdown is shown to be caused by operation of the new municipal wells. These "stand-by wells" were originally proposed in the Town's 2009 Water Master Plan Update, which was subject to preparation of a Program Environmental Impact Report (PEIR) in compliance with CEQA. The adopted CEQA findings for the Water Master Plan PEIR found that:

> *Pumping tests at the Esposti Park well site suggest that the shallow and intermediate/ deep aquifers are hydrologically isolated from one another and have limited connectivity. Separation of the shallow and intermediate/deep aquifer suggests that injection of water from the RRWF into the intermediate/deep aquifer and subsequent extraction of that water (from the intermediate/deep aquifer) would not affect shallow aquifer levels (and in turn not affect surface flows in creeks or wells located within the shallow aquifer). … If a stronger connection between the intermediate/deep and shallow aquifers exists (a condition not indicated by field pump tests to date), then pumping from the intermediate/deep aquifer could lower water levels in the shallow aquifer, and effectively lower the local groundwater level, with potentially corresponding effects on local wells and creeks. This could result in impacts to streamflow and groundwater supplies in nearby wells. (Town of Windsor, 2011)*

Implementation of PREIR Mitigation Measure HYD-3 was proposed to avoid or substantially lessen the significant effect identified in the PEIR, which required the establishment of a long-term monitoring program and a mitigation program to identify and mitigate long-term effects on existing groundwater wells. The program was to require that at least three pump testing events shall be conducted with monitoring of shallow wells within a 1/2-mile radius. If these tests reveal that injections into or extracting from the intermediate/deep aquifer causes a substantial increase or decrease in water levels in the shallow aquifer or in surrounding wells, alterations to surface streamflow, or impacts to natural recharge, the well operations shall cease and be reassessed. Under the mitigation requirements, the managed groundwater operations would not be allowed to proceed until there is a significant body of evidence that existing wells would not be affected (Town of Windsor, 2011). Specifically, mitigation measure HYD-3 includes the following (emphasis added in bold to identify potentially applicable sections):

> *To ensure the long-term sustainability of the MGP [Managed Groundwater Program], the Town shall establish operating rules prior to commencement of the program. The operating rules may be refined over time based on additional investigations of the groundwater basin and data analyses, and incorporate the following conditions based on concerns about aquifer connectivity, the maximum amount of water withdrawn from the aquifer, and the maximum amount of water projected for injection into the aquifer. The Town shall establish a long-term monitoring program and a mitigation program to identify and mitigate long-term effects on existing groundwater wells.*
>
> *1. Maintaining Long-Term Sustainability of Aquifer: The MGP shall be operated such that, over the long-term, there is no net decrease of the aquifer groundwater elevations and the aquifer is maintained to sustainable elevation conditions that are similar to the current existing conditions. To achieve this long-term sustainability, the total aquifer injections and extractions will be maintained within 20 percent of one another over a 10-year rolling average. Further, should long-term declines in groundwater levels result from MGP operations (outside of the range of natural fluctuation), the Town would increase the ratio of injections to extractions to reverse this trend and bring groundwater levels back up to sustainable levels.*
>
> *2. Aquifer Connectivity: As future sites are investigated to establish other MGP wells and well fields, at least three injection and pump testing events shall be conducted with monitoring of shallow wells within a 1/2-mile radius.* ***If these tests reveal that injections into or extracting from the intermediate/deep aquifer causes a substantial increase or decrease in water levels in the shallow aquifer or in surrounding wells, alterations to surface streamflow, or impacts to natural recharge, the MGP operations shall cease and be reassessed before proceeding with injection or pumping activities. MGP operations shall not proceed until there is a significant body of evidence that existing wells would not be affected.***
>
> *3. Maximum Infiltration into Aquifer: In general, the allowable amount of infiltration into a well in a confined aquifer is controlled by depth to water and the amount of pressure in the system. Increased pressure in the system from infiltrating too much water into a confined aquifer can cause hydraulic fracturing, or break apart formations that separate an intermediate/deep and shallow aquifer system. Huismann and Olsthoorn (1983) provide a method to determine the maximum water level rise based on the injection pressures and the water level rise. This method was applied to the Esposti Park*

replacement well, which approximated a maximum water level rise of 97 to 145 feet. This method, or a comparable method, shall be used to determine the maximum water level rise for additional wells constructed for the MGP. MGP operation conditions for each individual well shall be operated such that the maximum water level rise is not exceeded.

4. Adaptive Management of MGP to Ensure Sustainability: ***A long-term injection monitoring and testing program to assess sustainable injection and production rates and corresponding operation and maintenance procedures shall be developed prior to initiation of the MGP.*** *Long-term operating protocols shall be modified annually and as additional wells are added to the program. As a performance standard, the MGP shall be operated such that there is no substantial long-term net deficit in aquifer volume.*

5. Participation in Santa Rosa Plain Managed Groundwater Program: The Town's continued participation in the Santa Plain Rosa Managed Groundwater Program will help to ensure that the MGP is consistent with overall basin management.

It is assumed that the Town of Windsor will likely adopt applicable monitoring and mitigation measures adapted from HYD-3 to identify and substantially lessen or prevent potentially significant impacts associated with its operation of the Esposti Park and North Windsor Wells. If such measures are adopted, Mitigation Measures in **Section 4** of this EIS require that the Tribe would participate in the development and implementation of the Town's mitigation program in proportion to its contribution to the potentially significant impacts associated with drawdown induced by the Project wells. In the event that the Town of Windsor does not implement a monitoring and mitigation program associated with the operation of the two new municipal wells, the Tribe would implement its own program, as required by mitigation in **Section 4**. Implementation of mitigation measures in **Section 4** would reduce the cumulative impacts of Alternative A to a less-than-significant level.

Wastewater Treatment and Disposal

The wastewater generated by Alternative A would have a less than significant impact with regard to water quality due to proper treatment and disposal. Other cumulative developments would be required to adhere to local, State, and federal regulations with regard to wastewater treatment and disposal. Therefore, Alternatives A in combination with the cumulative projects listed in in **Section 3.14** would not result in significant adverse cumulative effects to water quality.

3.14.3 Air Quality

Carbon Monoxide Hot Spot Analysis

As described in **Section 3.4.3.3**, CO concentrations were modeled to determine whether increased traffic associated with Alternative A would result in CO emissions that could exceed the NAAQS. The analysis used the General Plan 2040 traffic conditions, and included traffic from Alternative A. The analysis also took into account future growth in traffic levels on US 101. Accordingly, the CO hot spot analysis addresses cumulative conditions. As described in **Section 3.4.3.3**, maximum concentrations of CO would not exceed the 1-hour and 8-hour NAAAQS. Cumulative impacts to CO levels resulting from Alternative A would be less than significant. Because Alternative A would generate more traffic than Alternatives B and C, the impacts to CO levels from those alternatives would also be less than significant.

Operation Emissions

Operation of the project alternatives would result in the generation of mobile emissions from patron, employee, and delivery vehicles and stationary source emissions from the combustion of natural gas in boilers and other equipment. In the cumulative year 2040, operational emissions are expected to decrease due to improved fuel efficiency technology and stricter federal and State regulations.

By its very nature, air pollution is largely a cumulative impact. The analysis in **Sections 3.4.3.3** through **3.4.3.5** specifically addresses potential cumulative emissions of criteria pollutants. Emissions of all criteria pollutants except CO are below de minimis levels and therefore are considered to be less than significant. Because CO emissions would exceed the de minimis levels, CO concentrations were modeled to determine whether increased traffic associated with Alternative A would result in CO emissions that could exceed the NAAQS for CO. As shown in **Table 3.4-5** and the Draft General Conformity Determination included as **Appendix F-2**, maximum concentrations of CO would not exceed the 1-hour and 8-hour NAAAQS. Accordingly, the emissions of all criteria pollutants from Alternatives A, B, and C are not considered to be cumulatively significant as they are not expected to significantly contribute to exceedances of NAAQS or alter the existing trend of improving air quality. Those improvements to air quality are largely a product of increasing fuel and vehicle emission standards. Likewise, the transition to electric vehicles is further reinforcing the trend of improving air quality.

Other cumulative projects identified in **Table 3.14-1** are primarily residential developments that would not generate significant emissions of criteria pollutants. The Shiloh Business Park may include light industrial, manufacturing, and/or warehousing uses. Stationary sources that have the potential to cause air pollution would be subject to permitting requirements of the Bay Area Air Quality Management District (BAAQMD), including an Authority to Construct and Permit to Operate. The facilities would be required to employ best available control technology to minimize pollution. Likewise, the proposed BoDean asphalt and construction material processing plant would operate under BAAQMD air permits, which would minimize pollution. Due to these requirements and because these sites are 0.5 miles or more from the Project Site, the emissions from these other projects are not expected to impact the Project Site. As identified in **Table 2.1-3**, the project alternatives include measures to reduce emissions of criteria air pollutants in support of improving regional air quality. Cumulative air quality effects from operation of the project alternatives would be less than significant.

Hazardous Air Pollutants

As described in **Section 3.4.3.3** through **3.4.3.5**, a review of construction and operational sources of DPM emissions associated with the project alternatives would not result in significant increases in cancer risk, chronic hazards, or $PM_{2.5}$ concentrations. Additionally, based on a review of BAAQMD's Stationary Source Screening Map (BAAQMD, 2022a), there are no significant industrial or other stationary sources in the vicinity of the Project Site that could significantly combine with on-site and mobile emissions. Cumulative HAP emission impacts would be less than significant.

Climate Change

Climate change has global impacts, such as more erratic weather patterns, more frequent droughts, and rising sea levels, as well as regional and local impacts. Climate change for California has the potential to reduce the snowpack in mountainous regions, increase drought periods, increase wildfire frequency and intensity, and reduce water availability in general (USEPA, 2016). Development of Alternatives A, B, and C

would result in an increase in GHG emissions from construction, mobile sources (trips generated), stationary and area sources (components that directly emit GHG), and indirect sources related to energy production. **Table 3.14-2** estimates total GHG emissions for Alternatives A, B, and C. Operational GHG emissions per year are estimated to be approximately 69,862, 55,934, and 7,100 metric tons (MT) CO2e for Alternatives A, B, and C, respectively.

Table 3.14-2: Greenhouse Gas Emissions

Emission Source	Alternative A MT of CO2e/year	Alternative B MT of CO2e/year	Alternative C MT of CO2e/year
Construction (Total)			
Construction	2,920	2,574	1,003
Operation (Annual)			
Area	0.04	0.09	0.01
Energy	7,204	5,905	603
Mobile	58,645	47,643	5,514
Stationary	3,426	1,987	937
Solid Waste	483	319	33
Water/Wastewater	104	80	13
Operation Total	**69,862**	**55,934**	**7,100**

Source: **Appendix F-1**
CO2e = carbon dioxide equivalent; MT = metric tons

The Interagency Working Group on Social Cost of Greenhouse Gases (IWG) has developed estimates of the social cost of GHGs (SC-GHG) (IWG, 2021). The SC-GHG is the monetary value of the net harm to society associated with adding an amount of that GHG to the atmosphere in a given year. In principle, it includes the value of all climate change impacts, including (but not limited to) changes in net agricultural productivity, human health effects, property damage from increased flood risk natural disasters, disruption of energy systems, risk of conflict, environmental migration, and the value of ecosystem services. Discount rates are used to account for the present value of future costs. Using a low discount rate increases the present value of future costs, whereas using a high discount rate decreases the present value of future costs. The IWG cost estimates are provided for 2.5%, 3% and 5% discount rates. The cost estimates for carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) used in this analysis are based on the 3% discount rates provided by IWG (2021). **Table 3.14-3** presents the social cost of the GHG emissions from construction, annual operations, and the lifetime of the project alternatives (lifetime costs include construction and 30 years of operation).

As shown in **Table 3.14-2**, approximately 84% of the operational GHG emissions would come from indirect mobile emissions from delivery, patron, and employee vehicles. The federal government and the State of California have enacted measures that would reduce GHG emissions from mobile sources. These include increasing fuel efficiency of vehicles and providing incentives for transitioning to electric vehicles. As shown in **Table 3.14-3**, operational carbon dioxide emissions would fall from 68,634 metric tons at opening, to 57,690 metric tons in 2040. By 2050, carbon dioxide emissions would fall to 45,116 metric tons. This represents a 16% reduction by 2040, and a 34% reduction by 2050.

Table 3.14-3: Social Cost of GHG Emissions

GHG/Cost per metric ton	Alternative A Tons	Alternative A Cost	Alternative B Tons	Alternative B Cost	Alternative C Tons	Alternative C Cost
Construction						
CO_2/$59	2,853.50	$168,357	2,517.00	$148,503	989.10	$58,357
CH_4/$1,850	0.2	$370	0.2	$370	0.2	$370
N_2O/$21,500	0.2	$4,300	0.2	$4,300	0	$0
Total Cost		$173,027		$153,173		$58,727
Operation (2028)						
CO_2/$60	68,634.8	$4,118,088	54,981.30	$3,298,878	6,987.4	$419,244
CH_4/$1,900	16.6	$31,540	11.7	$22,230	1.4	$2,660
N_2O/$22,000	2.7	$59,400	2.2	$48,400	0.3	$6,600
Total Cost		$4,209,028		$3,369,508		$428,504
Operation (2040)						
CO_2/$73	57,690.4	$4,211,399	46,091.00	$3,364,643	5,958.9	$435,000
CH_4/$2,500	16	$40,000	11.1	$27,750	1.3	$3,250
N_2O/$28,000	2.1	$58,800	1.7	$47,600	0.2	$5,600
Total Cost		$4,310,199		$3,439,993		$443,850
Lifetime						
CO_2	1,733,565.50	$126,510,333	1,385,247.00	$101,087,793	179,756.10	$13,108,348
CH_4	480.20	$1,200,370	333.20	$832,870	39.20	$97,870
N_2O	63.20	$1,768,300	51.20	$1,432,300	6.00	$168,000
Total Cost		**$129,479,003**		**$103,352,963**		**$13,374,218**

Notes: Social Cost of GHG emissions from IWG, 2021. Construction costs based on linear interpolated values for 2027. Operation costs (2028) based on linear interpolated values for 2028. Lifetime GHG emissions include construction emissions and 30 years of 2040 operational emissions. GHG emissions quantities are from **Appendix F-1**.

To lessen project-related GHG emissions, BMPs have been provided in **Table 2.1-3**. Construction BMPs include minimization of equipment idling, use of environmentally preferable materials, and use of Tier 3 or greater engines in construction equipment. Operational BMPs would reduce indirect GHG emissions from electricity use, water and wastewater transport, and waste transport during operation. These BMPs include installation of energy efficient lighting, use of electric boilers and appliances, use of recycled water, use of a green roof to reduce energy use, low-flow appliances, drought resistant landscaping, and recycling receptacles. Operational BMPs would also reduce indirect mobile GHG emissions by requiring adequate ingress and egress to minimize vehicle idling, installation of EV charging stations, and preferential parking for vanpools and carpools to reduce project-related trips. Therefore, with the implementation of BMPs, implementation of the project alternatives would not result in a significant adverse cumulative impact associated with climate change.

The State has adopted a Climate Change Scoping Plan that identifies GHG reduction targets and the types of measures that will be used to reach them per AB 32. In the approximately 126 measures and strategies identified that would achieve a State-wide reduction in GHG emissions, only three would apply to the project alternatives: diesel anti-idling, achieve 50% State-wide recycling goal, and water use efficiency (refer to **Appendix E** for details). The other policies do not apply to the project alternatives because they either apply to particular industries, State entities, or are planning-level measures. The project alternatives would comply with applicable emission reduction strategies of the State through the BMPs described in **Table 2.1-3**. The BMPs described in **Table 2.1-3** are also consistent with the approach taken by the local air district. The Bay Area Air Quality Management District (BAAQMD) provided guidance in 2022 to determine the significance of climate impacts from land use projects (BAAQMD, 2022c). If a project will not include natural gas appliances; will not result in wasteful, inefficient, or unnecessary energy use; will generate an average vehicle miles traveled (VMT) per employee below 85% of the regional average; and will provide EV facilities consistent with current California building standards, then a project's climate change impact is considered less than significant. The BMPs described in **Table 2.1-3** provide for the use of electric boilers and appliances, avoidance of inefficient energy use, and installation of EV facilities consistent with current California building standards. As presented in Section 4 of **Appendix I**, Alternatives A, B, and C would result in average VMT per employee that is lower than 85% of the regional average (10.53 VMT per employee).

The effect of climate change on the alternatives is also considered in this EIS. As described above, the average temperatures in the State will increase, which subsequently means the average temperatures will increase in County as well. On the local levels, the County has already experienced severe weather events caused by climate change that includes droughts, wildfires, and flooding. On September 17, 2019, the County declared a climate emergency in order to solidify its commitment to mobilizing an emergency response to the climate crisis (County of Sonoma, 2019).

The project alternatives include components that would lessen their vulnerability to the impacts from climate change. On-site heating and air conditioning will lessen the effects of increasing temperatures and frequency of extreme heat days or extreme weather conditions. The Project Site is not located near the sea and is therefore not susceptible to sea level rise risks. Emergency services sufficiently service the Project Site and surrounding area due to being in a primarily developed region with paved areas. While wildfire risk exists and would be exacerbated by climate change, the project alternatives have incorporated BMPs and mitigation measures to reduce their susceptibility to this risk (refer to **Section 3.12** for further discussion of wildfire risks).

3.14.4 Biological Resources

Although the project alternatives have the potential to impact protected aquatic and riparian habitats, wetlands and Waters of the U.S., federally-listed species, and migratory birds, potential impacts would be reduced to a less-than-significant level with adherence to the conditions of applicable permits and implementation of BMPs in **Table 2.1-3** and mitigation measures in **Section 4**. Other development projects in the region would be required to implement similar mitigation measures to protect sensitive biological resources in accordance with federal, State, and local regulations. Therefore, with the implementation of mitigation measures specified in **Section 4**, development of the project alternatives would not contribute to significant adverse cumulative effects to biological resources.

3.14.5 Cultural Resources

Cumulative effects to cultural resources typically occur when sites that contain cultural features or artifacts or paleontological resources are disturbed by development. As these resources are destroyed or displaced, important information is lost and connections to past events, people and culture are diminished. No known historic or paleontological resources were identified within the Project Site; however, there is a potential for significant subsurface cultural resources to be buried beneath the Project Site. Implementation of mitigation measures in **Section 4** would reduce potential impacts to unknown subsurface cultural resources on the Project Site to a less-than-significant level. Other development projects in the region would be required to implement similar mitigation measures to protect known and unknown cultural resources in accordance with federal, State, and local regulations. Therefore, with the implementation of mitigation measures specified in **Section 4**, development of the project alternatives would not contribute to significant adverse cumulative effects to cultural resources.

3.14.6 Socioeconomic Conditions and Environmental Justice

Alternative A in combination with the projects outlined in **Table 3.14-1** would result in generally beneficial socioeconomic effects associated with economic output, job creation, and fiscal effects. The project alternatives would increase jobs and would create only nominal non-gaming substitution effects typical of similar developments. Any future non-tribal development in the vicinity would be subject to County or Town review and approval, payment of state and local taxes, and development impact fees as appropriate to offset fiscal effects. Mitigation measures in **Section 4** would require that project-related fiscal effects resulting from increased demands on law enforcement and fire protection providers would be offset through fair share payments. With mitigation, the project alternatives, when considered in combination with other projects, would not lead to significant adverse cumulative impacts associated with the economy and employment, property values, social effects, or environmental justice. However, as discussed in **Section 3.7.3.2**, Alternative A in combination with the expansion of the Graton Resort and Casino, which is currently under construction, would resulting in cumulative competitive effects to nearby gaming facilities, including the River Rock Casino owned by the Dry Creek Rancheria Band of Pomo Indians. While review of similar case studies and market data as reported in **Appendix B-2** suggests that it is unlikely that the River Rock Casino and associated expansion plans would no longer be economically viable, the Dry Creek Band has not provided the BIA with the financial data necessary to verify the ability of the River Rock Casino to remain open or to expand. Therefore, in the absence of this data, the potential for competitive effects resulting from Alternative A in combination with the Graton Resort and Casino expansion to the River Rock Casino is considered a potentially significant cumulative impact.

3.14.7 Transportation and Circulation

Study Intersections

A Traffic Impact Study was prepared by TJKM (**Appendix I**), which evaluated cumulative impacts. The cumulative roadway operations analysis addresses the following traffic scenarios for the project alternatives:

- **General Plan 2040 No Project Conditions** – This scenario expands Existing Conditions based on an annual growth rate derived from the Town of Windsor General Plan. It also accounts for the effects from planned roadway improvements that will be in place by the 2040 horizon year of the

currently adopted Town of Windsor General Plan. A compounding annual growth rate of 2.189% derived from the General Plan was applied to measured 2022 volumes.

- **General Plan 2040 plus Alternative A, B, or C Conditions** – This scenario is identical to General Plan 2040 Conditions, but with the addition of traffic from Alternative A, B, or C.

The intersection Level of Service (LOS) analysis results for General Plan 2040 No Project Conditions are summarized in Table 29 of **Appendix I**. The following intersections would operate at an unacceptable LOS under 2040 background conditions without the development of any of the project alternatives:

1) Shiloh Rd. & Old Redwood Hwy. (Weekday AM and PM peak hours)
2) Shiloh Rd. & Hembree Ln. (Weekday AM and PM, and Saturday midday peak hours)
3) Shiloh Rd. & US 101 NB Ramps (Weekday AM peak hour)
5) Shiloh Rd. & Caletti Ave. (Weekday AM and PM, and Saturday midday peak hours)
6) Shiloh Rd. & Conde Ln. (Weekday AM and PM peak hours)
8) Old Redwood Hwy. & Casino Entrance 1 (Weekday AM and PM peak hours)
12) Old Redwood Hwy. & US 101 SB Ramps (Weekday AM and Saturday midday peak hours)

The intersection LOS analysis results for General Plan 2040 plus Alternative A Conditions are summarized in Table 31 of **Appendix I,** and General Plan 2040 plus Alternative B Conditions are summarized in Table 33 of **Appendix I**. The following intersections would operate at an unacceptable LOS under cumulative conditions with the addition of either Alternative A or Alternative B, which is considered a significant cumulative impact:

1) Shiloh Rd. & Old Redwood Hwy. (Weekday AM and PM, and Saturday midday peak hours)
2) Shiloh Rd. & Hembree Ln. (Weekday AM and PM, and Saturday midday peak hours)
3) Shiloh Rd. & US 101 NB Off Ramp (Weekday AM and PM, and Saturday midday peak hours)
5) Shiloh Rd. & Caletti Ave. (Weekday AM and PM, and Saturday midday peak hours)
6) Shiloh Rd. & Conde Ln. (Weekday AM and PM peak hours)
7) Shiloh Rd. & Casino Entrance 1 (Weekday PM and Saturday midday peak hours)
8) Old Redwood Hwy. & Casino Entrance 1 (Weekday AM and PM, and Saturday midday peak hours)
12) Old Redwood Hwy. & US 101 SB Ramps (Weekday AM and Saturday midday peak hours)

The intersection LOS analysis results for General Plan 2040 plus Alternative C Conditions are summarized in Table 35 of **Appendix I**. The following intersections would operate at an unacceptable LOS under cumulative conditions with the addition of Alternative C, which is considered a significant cumulative impact:

1) Shiloh Rd. & Old Redwood Hwy. (Weekday AM and PM peak hours)
2) Shiloh Rd. & Hembree Ln. (Weekday AM and PM, and Saturday midday peak hours)
3) Shiloh Rd. & US 101 NB Off-ramp (Weekday AM and Saturday midday peak hours)
5) Shiloh Rd. & Caletti Ave. (Weekday AM and PM, and Saturday midday peak hours)
6) Shiloh Rd & Conde Ln. (Weekday AM and PM peak hours)
8) Old Redwood Hwy. & Project Entrance (Weekday AM and PM peak hours)
12) Old Redwood Hwy & US 101 SB Ramps (Weekday AM and Saturday midday peak hours)

Mitigation measures are detailed in **Section 4** and include: widening of Shiloh Road; conversion of split phasing at intersection #1 and #2; restriping at Intersections #1, #2 #3, and #5; and optimizing signal time parameters at Intersection #6. For Alternatives B and C, mitigation includes signalization of Intersection

#8, which was warranted under 2028 Opening Year Conditions for Alternative A. With mitigation, the impacted intersections would operate at an acceptable LOS. Thus, mitigation would reduce cumulative impacts to a less-than-significant level.

Roadway Segments

All study segments were evaluated for changes in weekday average daily traffic (ADT) due to the project alternatives. For the cumulative analysis, growth factors for each segment were derived by comparing the growth in adjacent intersection volumes between existing and 2040 conditions. Roadway segments that would operate at an unacceptable LOS under 2040 background conditions include Shiloh Road between Conde Lane and the US 101 SB ramps, and Shiloh Road between the US 101 SB ramps and the US 101 NB ramps.

In comparison to 2040 General Plan No Project Conditions, an additional segment of Shiloh Road between Hembree Lane and Old Redwood Highway degrades to unacceptable LOS F under Alternative A, LOS E under Alternative B and LOS D under Alternative C. Mitigation measures detailed in **Section 4** would collectively increase lane capacities.

Widening is planned under the Town of Windsor General Plan and Traffic Impact Fee program and assumed to be implemented under mitigated conditions. With these capacity increasing measures taken into account, the project alternatives would consistently improve v/c ratios and segment LOS compared to General Plan 2040 No Project Conditions, consistent with the Town of Windsor and Sonoma County standards and plans. As such, impacts to roadway segments would be less than significant.

Queue Lengths

Under all cumulative scenarios, project-related trips would be added to some dedicated left-turn lane and right-turn lane groups. As discussed in **Appendix I**, all cumulative scenarios experience 95th percentile queue lengths that exceed local standards at various intersections. The implementation of mitigation measures identified in **Section 4** and planned improvements by the Town of Windsor and County of Sonoma would mitigate queue lengths to acceptable levels. As such, cumulative impacts with respect to queue lengths would be less than significant with mitigation.

Bicycle, Pedestrian, and Transit Networks

Cumulative increases in transit ridership are anticipated with population growth. In addition to fare revenue, transit system improvements in Sonoma County are funded from federal and State and local sources, such as sales tax, taxes on diesel and gasoline and local sales tax measures (County of Sonoma Transportation and Public Works, 2022b). Pedestrian and bicycle facility improvements are planned in the study area to support increased demands from growth, including Class II bicycle lanes on both sides of Shiloh Road and Old Redwood Highway near the Project Site (**Appendix I**). The project alternatives are not anticipated to affect the development of bicycle, pedestrian and transit networks or create significant demands on these networks. Thus, cumulative impacts would be less than significant.

3.14.8 Land Use

If taken into federal trust, the Project Site would generally not be subject to local jurisdiction regarding land uses. Although the project alternatives are not consistent with existing zoning, potential impacts from land use conflicts would be reduced to less than significant levels through the implementation of mitigation measures in **Section 4**. Additionally, the project alternatives would not preclude agricultural uses on adjacent parcels or have significant impacts to agriculture. Planned development in the vicinity, including several projects to the west of the Project Site noted in **Table 3.14-1,** would be subject to Town or County land use regulations and approval. Therefore, cumulatively significant impacts to land use and agricultural uses would not occur.

3.14.9 Public Services

As stated above, the project alternatives would not rely on public services related to water supply or wastewater. Further, the project alternatives would not significantly increase the population in the County and therefore would not impact schools and parks. Increased demand for law enforcement and fire protection services resulting from cumulative developments may require additional facilities, equipment, or employees. New development, including the cumulative projects listed above, would fund in part public services, including law enforcement, through development fees and property tax.

Public services for the project alternatives would be accommodated by extension of utility infrastructure and potential service agreements between SCFD and SCSO. As development of other areas of the County and Town continues, the combined need for public services may create a cumulative impact. Consultation with service providers is necessary to confirm that service providers' capacities are adequate to accommodate for any development on the Project Site, and any fiscal impacts would be mitigated. The County's General Plan has evaluated projected growth and public service needs, and future projects would be subject to approval by local governments.

Cumulative projects in the vicinity of the Project Site have the potential to impact public services in a way that could result in significant impacts when considered in combination with development on the Project Site. Any future non-tribal development in the vicinity would be subject to County or Town review and approval, payment of state and local taxes, and development impact fees as appropriate to offset fiscal effects. Mitigation measures in **Section 4** would require that project-related fiscal effects resulting from increased demands on law enforcement and fire protection providers would be offset through fair share payments. The State has adopted a Climate Change Scoping Plan that identifies the goal of achieving a 50% State-wide recycling rate, which would cumulatively reduce landfill demands. Therefore, with mitigation, development on the Project Site in combination with other cumulative development would not result in significant cumulative effects to public services.

3.14.10 Noise

Cumulative projects in the vicinity of the Project Site have the potential to impact noise and vibration in a way that could result in significant impacts when considered in combination with Alternative A. Approved projects in the vicinity of the Project Site would be required to complete an environmental analysis to assess their potential noise impacts per local, State, and federal regulations and policies. Furthermore, they would be required to mitigate their own noise and vibration impacts should they be identified and found inconsistent with the applicable regulations and policies in place.

To assess the operational impacts of Alternative A and the other alternatives in the planning horizon of 2040, similar methodology for the noise analysis in **Section 3.11.3** was utilized, which is described in detail in **Section 3.11.3.2** Since Alternative A would result in the worst-scenario cumulative impacts compared to the other alternatives, which would each result in less adverse effects, Alternative A is analyzed in this cumulative analysis in detail. However, for a full analysis of each alternative, including Alternative A, refer to **Appendix L**. **Table 3.14-4** presents a comparison of the baseline (2028) with the projected noise environment in 2040 with the addition of traffic under Alternative A. As can be seen in **Table 3.14-4**, cumulative plus project traffic noise environment would exceed the existing / baseline traffic noise environment by 1.4 to 5.4 dBA DNL at existing sensitive receptors located adjacent to the project-area roadways. The cumulative plus project traffic noise level increases would exceed the applicable significance thresholds along three (3) of the roadway segments containing sensitive land uses. In addition, along two of the roadway segments evaluated in **Table 3.14-4** (segments 6 and 10), cumulative plus project traffic conditions exceed the 67 dBA threshold applicable to residential uses where that threshold is not currently being exceeded under existing / baseline conditions. As a result, increases in in existing / baseline traffic noise levels resulting from cumulative plus project traffic is predicted to result in significant adverse effects at the residences located along Shiloh Road, between Hembree Lane and Gridley Drive, and Old Redwood Highway, between Shiloh Road and the Project Entrance. With the implementation of mitigation in **Section 4**, noise-reducing pavement would be installed along these road segments under cumulative conditions that would reduce this impact to a less-than-significant level.

It should be noted that Alternatives B and C would have a similar cumulative impact as Alternative A to residences located along Shiloh Road, between Hembree Lane and Old Redwood Highway, and Old Redwood Highway, between Shiloh Road and the Project Entrance. With the implementation of mitigation in **Section 4**, noise-reducing pavement would be installed along these road segments under cumulative conditions that would reduce this impact to a less-than-significant level.

Table 3.14-4: Alternative A Operation Noise Increases at Existing Sensitive Receptors (2040)

Roadway	From/To	Predicted DNL [dBA], Baseline	Predicted DNL [dBA], Cumulative + Project	Predicted DNL [dBA], Increase	Significance Threshold	Threshold Exceeded?	Sensitive Receptors Present?
Shiloh Rd	Conde Ln/ Caletti Ave	55.9	57.7	1.8	5.0	No	Yes
Shiloh Rd	Caletti Ave/ US-101 SB Ramps	66.1	67.5	1.4	5.0	No	No
Shiloh Rd	US-101 SB Ramps/ US-101 NB Ramps	65.8	68.3	2.5	5.0	No	No
Shiloh Rd	US-101 NB Ramps/ Hembree Ln	66.0	68.7	2.7	5.0	No	No
Shiloh Rd	Hembree Ln/ Old Redwood Hwy	67.9	72.1	4.2	3.0	Yes	Yes

Roadway	From/To	Predicted DNL [dBA], Baseline	Predicted DNL [dBA], Cumulative + Project	Predicted DNL [dBA], Increase	Significance Threshold	Threshold Exceeded?	Sensitive Receptors Present?
Shiloh Rd	Old Redwood Hwy/ Gridley Dr	61.6	67.0	5.4	5.0	Yes	Yes
Shiloh Rd	Gridley Dr/ Project Entrance East	61.4	66.3	4.9	5.0	No	Yes
Shiloh Rd	Project Entrance East/ East of Project Entrance	60.9	63.0	2.1	5.0	No	Yes
Old Redwood Hwy	North of Shiloh Rd/ Shiloh Rd	69.0	71.5	2.5	5.0	No	Yes
Old Redwood Hwy	Shiloh Rd/ Project Entrance	65.9	69.7	3.8	3.0	Yes	Yes
Old Redwood Hwy	Project Entrance/ South of Project Entrance	65.2	66.6	1.4	3.0	No	Yes

Source: **Appendix L**

3.14.11 Hazardous Materials and Hazards

There is the potential for impacts related to hazardous materials during construction of the project alternatives in combination with other projects. New developments on non-federal lands would be required to adhere to federal, State and municipal regulations regarding the delivery, handling, and storage of hazardous materials, thereby reducing the risk to the public's health and welfare due to accidental exposure. Therefore, there are no significant cumulative hazardous materials impacts associated with the project alternatives.

There is the potential for impacts related to wildfire hazards in combination with other projects. The ETTA (**Appendix N-2**) modeled a No Notice Scenario and With Notice Scenario under both "2040 No Project" and "2040 Plus Project" conditions (see **Section 3.12.3.2** for a description of these scenarios). The year 2040 background traffic demand was developed based on applying a 1.4% per year straight-line growth factor to base traffic volumes based on the SCTA travel demand model. The results of the ETTA are shown in **Table 3.14-5**. New developments would be required to adhere to federal, State, and local building codes and fire protection codes and standards. As described in **Section 3.12.3**, with the implementation of project design features to reduce inherent wildfire risk described in **Section 2**, BMPs listed in **Table 2.1-3,** and mitigation measures in **Section 4**, construction or operation of the project alternatives would not increase wildfire risk onsite or in the surrounding area or inhibit local emergency response to or

evacuation from wildfire. Therefore, cumulative impacts associated with wildfire would be less than significant.

Table 3.14-5: Evacuation Time Results (2040)

Scenario	No Project (minutes)	Plus Project (minutes)	Percent Change
No Notice	315	420	+33%
With Notice	345	360	+4%

Source: **Appendix N-2**

3.14.12 Visual Resources

Cumulative projects in the vicinity of the Project Site have the potential to impact visual resources in a way that could result in significant impacts when considered in combination with the project alternatives. The project alternatives would be compatible with existing and planned commercial and residential development northwest of the Project Site (**Table 3.14-1**). Any future non-tribal development in the vicinity would be subject to Town or County review and approval. Therefore, development of the project alternatives in combination with other cumulative development would not result in significant cumulative effects to visual resources.

3.15 INDIRECT AND GROWTH-INDUCING EFFECTS

Under NEPA, the environmental effects of a Proposed Project must be analyzed. The definition of effects includes indirect and growth-inducing effects (40 CFR § 1508.1(i)). The CEQ Regulations define indirect effects as effects that are caused by the action and are later in time or further removed in distance but are still reasonably foreseeable (40 CFR § 1508.1(i)(2)). Growth-inducing effects are a type of indirect effects that are discussed further in **Section 3.15.3**.

3.15.1 Indirect Effects of Off-Site Traffic Mitigation and Off-Site Irrigation

Implementation of the project alternatives would require roadway improvements identified as mitigation in **Section 4**. Most of the traffic mitigation measures consist of signalization, signal optimization, and restriping improvements, which would be located within the existing developed right-of-way. Cumulative traffic mitigation for Alternatives A, B, and C, includes contribution of a fair share towards the widening of Shiloh Road between Caletti Avenue and Gridley Drive, which includes the portion of Shiloh Road that crosses over Highway 101. The widening project encompasses improvements to the Shiloh Road/Highway 101 interchange. **Figure 3.15-1** depicts the Off-Site Traffic Mitigation Effect Area.

As described in **Section 2.1.4**, recycled water from the on-site wastewater treatment plant could be used for off-site irrigation on land adjacent to or in proximity to the Project Site subject to federal, State, and local regulations. Recycled water irrigation would involve the construction of a buried pipeline connecting the on-site wastewater treatment plant to the off-site use area. The pipeline is assumed to be in areas currently disturbed by agricultural uses or within developed right-of-way. It is assumed that recycled water would be used on areas that are currently irrigated with well water, thus reducing current off-site groundwater pumping.

Source: Esri Community Maps Contributors, California State Parks, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS, Pictometry International, Maxar

FIGURE 3.15-1

OFF-SITE TRAFFIC MITIGATION EFFECT AREA

Off-site traffic mitigation and recycled water irrigation would require obtaining approvals and permits from the Town of Windsor, Sonoma County, California Department of Transportation (Caltrans), and/or the State Water Resources Control Board (SWRCB), and may be subject to the California Environmental Quality Act (CEQA), which requires additional environmental review prior to approval. Implementation of permitting and CEQA requirements would further reduce the potential for significant adverse impacts from off-site construction projects.

The indirect effects of off-site traffic mitigation and off-site irrigation are addressed below.

Land Resources

Roadway improvements and off-site irrigation may require grading and/or the introduction of fill material. Potential impacts include geological hazards and increased potential for soil erosion due to the increase of impervious surfaces and additional earthwork needed to construct the improvements. Stable fill material, engineered embankments, and erosion control features would be used to reduce the potential for slope instability and erosion in accordance with requirements imposed by local jurisdictional agencies, such as Caltrans, the County, and/or the Town. In accordance with the federal Clean Water Act (CWA), any construction over one acre in area would be required to comply with the National Pollutant Discharge Elimination System (NPDES) permit program. A Stormwater Pollution Prevention Plan (SWPPP) would be developed, including soil erosion and sediment control practices to reduce the amount of exposed soil, prevent runoff from flowing across disturbed areas, slow runoff from the site, and remove sediment from the runoff. Under the Clean Water Act, sites less than one acre would still be prohibited from discharging sediments and other pollutants to off-site waterways. With compliance with the CWA, standard construction practices and specifications required by the jurisdictional agencies, and the NPDES General Construction Permit for activities over one acre in size, indirect effects would be less than significant.

Water Resources

As discussed above, construction of improvements that exceed one acre of land would be required to comply with the NPDES General Construction Permit Program, including the development of a SWPPP that would include soil erosion and sediment control. Sites less than one acre would still be prohibited from discharging sediments and other pollutants to off-site waterways under the CWA. Roadway widening could increase impervious surfaces and modify drainage patterns. Curbs, gutters, inlets, and other drainage facilities would be constructed to meet the standards of the Town, County, and/or Caltrans and provide adequate facilities to direct stormwater runoff. With adherence to the CWA, NPDES General Construction Permit for activities over one acre in size, California Title 22 standards and standards for drainage facilities, indirect effects would be less than significant.

Off-site irrigation water would be treated to California Title 22 standards and thus would not result in a reduction in the quality of surface or groundwater. The use of recycled water for irrigation of off-site areas would result in an overall decrease in the amount of off-site groundwater pumping, which would partially offset the increase in groundwater pumping within the Project Site. Indirect effects to water resources from off-site irrigation with recycled water would be less than significant.

Air Quality

Off-site improvements would result in short term, construction-related air pollutant emissions. Construction would produce two types of air contaminants: exhaust emissions from construction equipment and fugitive dust generated as a result of demolition and soil movement. Construction of improvements would be limited in scope and duration. The limited nature of roadway improvement and pipeline construction activities, combined with adherence to applicable Bay Area Air Quality Management District rules and regulations, would result in less-than-significant indirect effects to air quality. Construction of off-site improvements would be much less extensive than that of the proposed project alternatives; correspondingly, greenhouse gas (GHG) emissions would be less extensive as well. Given the limited and temporary nature of off-site improvement construction activities, GHG emissions would be less than significant.

Operational effects would occur if the roadway improvements resulted in localized increases in carbon monoxide (CO) concentrations or if the improvements contributed to traffic congestion at large intersections. However, it is expected that the roadway improvements described in **Section 4** would reduce congestion and improve traffic flow. With the improved circulation resulting from traffic mitigation, level of service (LOS) would be improved, thereby reducing idling time and associated vehicle emissions. Therefore, operational effects to air quality from roadway widening would be less than significant.

Biological Resources

Off-site improvements are anticipated to primarily impact previously disturbed areas, agricultural land, ruderal vegetation, and/or roadside drainage channels. A Biological Resource Assessment was conducted for the Off-Site Traffic Mitigation Effect Area (**Figure 3.15-1**) and is included in **Appendix G-5**. As part of the Assessment, a review of USFWS, CNDDB, and NWI databases was undertaken as well as a biological field survey. As described in **Appendix G-5**, the Effect Area contains urbanized habitat that consists of natural habitats that have been transformed into paved roads and roadbeds, with associated drainage features such as gutters, road relief ditches, drop inlets, and pipe culverts. No sensitive habitats occur within the Effect Area; however, implementation of the Off-Site Traffic Mitigation could require tree removal that would be subject to the Sonoma County Tree Protection Ordinance. The USFWS NWI reported no water features within the Effect Area. **Appendix G-5** found that the Off-Site Traffic Mitigation would not have any direct effects on federal- or state-listed plant or animal species as none occur within the Effect Area. Downstream of the Effect Area, there are various seasonal wetlands and channels and other sensitive habitats that provide suitable conditions for vernal pool plants and animals and other protected species dependent upon aquatic habitats that could be indirectly impacted by runoff during construction and operational of the Off-Site Traffic Mitigation. However, as discussed above under Water Resources, with adherence to the CWA, NPDES General Construction Permit for activities over one acre in size, California Title 22 standards, and standards for drainage facilities, indirect effects to water quality would be less than significant. The Off-Site Traffic Mitigation Effect Area contains suitable nesting habitat for various bird species because of the presence of some trees, shrubs, tall grass, and poles. Pipelines associated with off-site irrigation are anticipated to be constructed in areas currently disturbed by agriculture or within existing rights-of-way and thus generally not considered sensitive habitat. Adherence to State and federal requirements that protect special status species, nesting birds, and waters of the U.S., as well as the Sonoma County Tree Protection Ordinance would ensure that impacts to biological resources from construction of off-site improvements would be less than significant.

Cultural Resources

Off-site improvements would primarily impact previously disturbed areas, agricultural land, ruderal areas, and/or roadside drainage channels. A cultural resources study was conducted for the Off-Site Traffic Mitigation Effect Area (**Figure 3.15-1**) and is included in **Appendix H-8**. On January 19, 2024, a field inspection was conducted for the anticipated APE of the Off-Site Traffic Mitigation Effect Area. In addition, a review of all recorded historic resources and resource inventory reports was conducted at the Northwest Information Center of the California Historical Resources Inventory System (CHRIS), historic U.S. Government Plat Maps of the area, as well as local and regional histories. The surface inspection did not encounter any historic or prehistoric cultural materials or features and did not identify any resources that met the criteria for inclusion on the NRHP; therefore, development of the Off-Site Traffic Mitigation would not result in direct adverse effects to known historic properties. Pipelines associated with off-site irrigation are anticipated to be constructed in areas currently disturbed by agriculture or within existing rights-of-way, it is likely that any cultural resources remaining in these areas would be highly disturbed and lack integrity, thus diminishing their significance. Potential off-site improvement projects would be subject to the protection of cultural resources afforded by CEQA Guidelines § 15064.5 and related provisions of the Public Resources Code. Therefore, a less-than-significant indirect effect to cultural resources would result.

Socioeconomic Conditions

Traffic mitigation, including roadway widening, and the installation of irrigation pipelines within roadways, could result in short term disturbances to traffic flow and minor delays due to constricted traffic movement. Nearby businesses and residences would remain accessible throughout construction. The area of roadway impacts would be of a limited size and would not create significant adverse socioeconomic effects. The improvements would not result in the long term disruption of access to the surrounding land uses or to minority or low-income populations. Therefore, no significant indirect effects related to socioeconomic conditions would occur as a result of off-site traffic mitigation. Construction of the off-site irrigation line and subsequent operation is not anticipated to have socioeconomic effects.

Transportation/Circulation

Traffic mitigation, including roadway widening, and the installation of irrigation pipelines within roadways could result in short term inconveniences and minor delays due to constricted traffic movements, but these are not expected to result in long term disruptions of access to the surrounding land uses. If construction activities would require temporary lane closures to accommodate construction equipment, a traffic management plan would be prepared in accordance with the jurisdictional agency requirements, thus avoiding potentially significant impacts from construction. Roadway widening would improve operational conditions/LOS along Shiloh Road and thus there would be no significant impacts following construction. Construction of the off-site irrigation line and subsequent operation is not anticipated to have transportation effects.

Land Use

Construction of roadway improvements is not anticipated to conflict with the surrounding land uses. Roadway widening, which would be generally consistent with the Town's Traffic Impact Fee program, would include reconstruction of the Shiloh Road/Highway 101 interchange, widening of Shiloh Road

between Highway 101 and Old Redwood Highway, and improvement of the Old Redwood Highway and Shiloh Road intersection. Right-of-way acquisition for the improvements may be required. Adjacent property owners would be compensated at fair market values for land needed for rights-of-way. The improvements would not result in land use changes inconsistent with the General Plans or other guiding documents. For these reasons, roadway improvements would not result in significant effects to land use. Construction of the off-site irrigation line and subsequent operation is not anticipated to have land use effects.

Public Services

Construction of off-site improvements may require relocation of utilities, including overhead electricity lines and telecommunication lines. Relocation of these lines could result in a temporary break in service to some homes and businesses in the area. However, because these effects are common when upgrading and maintaining utility services, and because potential service breaks would be temporary, these effects are considered less than significant. No significant impacts to police, fire, or emergency medical services are expected, as access to homes and businesses would be maintained during the construction period either through design or with implementation of a traffic management plan prepared in accordance with Town, County and/or Caltrans regulatory requirements.

Noise

Construction of off-site improvements would result in short-term increases in local ambient noise levels. Construction would be required to adhere to Town and/or County noise requirements, which generally limit activities to daytime hours. As such, noise impacts would be less than significant.

Hazardous Materials

The accidental release of hazardous materials used during grading and construction activities could pose a hazard to construction employees, surrounding residents, and the environment. Additionally, equipment used during grading and construction activities could ignite dry grasses and weeds along the roadside. These hazards, which are common to construction activities, would be minimized with adherence to State and federal statutes overseeing hazardous materials transportation. For construction improvements that exceed one acre of land, the NPDES General Construction Permit Program would be applicable, including the development of a SWPPP. The SWPPP would include measures to reduce the potential for hazardous releases and protocol for handling hazardous materials releases. As such, potential indirect impacts from the construction of off-site improvements would be less than significant.

Aesthetics

Visual effects from the roadway widening would be minimal as Shiloh Road and the associated interchange with Highway 101 are existing features. Roadway widening would conform to applicable Town, County and Caltrans design standards and thus indirect impacts related to aesthetics would be less than significant. The off-site irrigation line would be underground and would not result in visual effects.

3.15.2 Indirect Effects of On-Site Riparian Corridor Wildfire Management Plan Mitigation

Implementation of the project alternatives includes a Riparian Corridor Wildfire Management Plan to reduce the potential for flammable vegetation in the riparian area. Mitigation included in **Section 4** outlines the minimum procedures and BMPs that are required to be included in the plan. The indirect effects of implementing the Riparian Corridor Wildfire Management Plan are addressed in this section.

Biological and Water Resources

Vegetation removal within the riparian corridor along Pruitt Creek could result in impacts to the Creek. As described in **Section 4**, the plan will be overseen by a qualified arborist/biologist and will require the following measures be taken during implementation:

- Vegetation management would be prohibited in the wetted channel (i.e., the creek must be dry to perform work).
- Vegetation removal would be conducted with hand tools; if a chain saw is needed to perform work, a tarp would be used to contain any wood chips/debris.
- No motorized vehicles would be allowed in the channel.
- Vegetation would not be removed from channel banks.
- Large woody debris (downed logs and root wads) in the channel and banks would remain in place.
- Vegetation management shall be conducted in a manner that protects riparian habitat and water quality, including tree canopies that provide shade to the channel (i.e., trees shall be trimmed only if a canopy can be maintained over the creek).

Adherence to these requirements would minimize the potential for impacts to Pruitt Creek.

Vegetation removal within the riparian corridor along Pruitt Creek could impact nesting birds. As described in **Section 4**, the plan will require that vegetation removal be conducted either outside the bird nesting season (February 1 to August 15), or that a nesting bird survey be conducted by a qualified biologist prior to starting work. Adherence to this requirement will minimize the potential for impacts to nesting birds from the implementation of the plan.

Noise

Implementation of the Riparian Corridor Wildfire Management Plan may result in short-term increases to local ambient noise levels from chainsaws and other landscaping equipment. With implementation of the BMPs included in **Table 2.1-3**, significant adverse effects to the ambient noise environment would not occur.

Other Values

Implementation of the Riparian Corridor Wildfire Management Plan would involve periodic removal of vegetation that presents a fire hazard in a manner that protects riparian habitat and water quality and, therefore, would not result in impacts associated with socioeconomics, transportation/circulation, land use compatibility, public services, hazardous materials, or aesthetics. Implementation of the plan would not result in ground disturbance and, therefore, would not result in impacts associated with geology and soils or unknown cultural or paleontological resources.

3.15.3 Growth-Inducing Effects

Growth-inducing effects are defined as effects that foster economic or population growth, either directly or indirectly. Growth inducement may constitute an adverse impact if the increased growth is not consistent with or accommodated by the land use and growth management plans and policies for the area affected. Local land use plans provide for development patterns and growth policies that allow for orderly development supported by adequate public services and utilities such as water supply, roadway infrastructure, sewer services, and solid waste disposal services. A project that would induce "disorderly" growth (i.e., would conflict with local land use plans) could indirectly cause adverse environmental or public service impacts. The growth-inducing analysis below conservatively focuses on Alternative A because Alternative A would result in the highest generation of employment and utility demands. Growth-inducing effects of Alternatives B and C would be similar to or less than Alternative A.

As described in **Section 3.7.3.1**, Alternative A would employ 1,859 individuals (with 1,571 originating from Sonoma County). There is ample population in the region to provide employment to Alternative A. Therefore, Alternative A would not result in a need for increased housing due to the employment needs of the resort. An increase in population could occur from senior level management hires who do not live in the region. However, the total impact associated with these positions would not likely total more than 10 families. In 2021, the County had approximately 205,236 housing units, of which approximately 17,163 (8.4%) were vacant. Therefore, it is anticipated that any housing needs created by Alternative A would be filled by existing vacant units. In addition, as described in **Section 3.7.3.1**, Alternative A would create 269 full-time equivalent indirect jobs and 751 full-time equivalent induced jobs. Indirect jobs would be the result of the impact of the direct expenditures on other business sectors while induced jobs would be a result of the spending of labor income. Sonoma County is a densely populated area that has a sufficient labor force focused on the hospitality industry. With other casino resorts in the market area, as well as other hospitality developments, the population already includes people who are seeking casino and/or hospitality-based employment. Therefore, it is assumed that employment for Alternative A would be filled by the local populace.

Direct output measures the total spending by gaming facility patrons, including labor income from gratuities, less expenditures that occur outside of the study area. The net direct impact from operations is estimated at $185.6 million. The indirect output resulting from operation, which emanates from economic activities of suppliers and vendors and has a ripple effect in the regional economy, is estimated at $57.5 million. The induced spending, reflecting increased consumption attributable to the direct and indirect earnings, is projected to result in $48.9 million of output. Overall, an estimated $292.0 million in economic output would be generated within Sonoma County on an annual basis once the gaming facility is operational, in 2033 dollars. This indirect and induced output could stimulate further commercial growth; however, such demand would be diffused and distributed among a variety of different sectors and businesses in the State. As such, significant regional commercial growth inducing impacts would not be anticipated to occur.

On-site water and wastewater utilities proposed under Alternatives A, B, and C would be designed to only serve the proposed development and thus would not result in any off-site growth inducement.

If an area does not have gas stations, increased traffic could result in the need for the development of a gas station. There are two existing gas stations on Shiloh Road adjacent to US 101 ramps that would serve vehicle traffic from the project alternatives; thus, Alternatives A, B and C are not anticipated to induce the need for a gas station in the general area of the Project Site.

Section 4 | Mitigation Measures

The National Environmental Policy Act requires that, if a project would have significant adverse effects on the environment, mitigation for those impacts must be identified. Mitigation consists of the following:

- Avoiding the adverse effect altogether by not taking a certain action or parts of an action.
- Minimizing the adverse effect by limiting the degree or magnitude of the action and its implementation.
- Rectifying the adverse effect by repairing, rehabilitating, or restoring the affected environment.
- Reducing or eliminating the adverse effect over time by preservation and maintenance operations during the life of the action.
- Compensating for the adverse effect by replacing or providing substitute resources or environments. (40 CFR § 1508.1(y))

As described in **Section 2.0**, alternatives integrate regulatory requirements and Best Management Practices (BMPs) in the overall project design in an effort to minimize the potentially adverse environmental effects identified in **Section 3.0**, including indirect and cumulatively adverse effects. Mitigation measures have been recommended as appropriate for any potentially significant effects identified following the incorporation of project design measures and BMPs and are listed in the table below. Further, as required by 40 CFR § 1505, the Bureau of Indian Affairs (BIA) or other appropriate consenting agency shall be responsible for ensuring that mitigation adopted within a Record of Decision (ROD) is implemented. 40 CFR § 1505.3 states that "agencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases. Mitigation (§ 1505.2(c)) and other conditions established in the environmental impact statement or during its review and committed as part of the decision shall be implemented by the lead agency or other appropriate consenting agency." The BIA shall prepare and publish a monitoring and compliance plan for mitigation part of the ROD pursuant to 40 CFR § 1505.3(d).

Resource Area	Proposed Mitigation	Alternative
Water Resources	The following measures shall be implemented to address cumulative groundwater impacts under a scenario in which the Town of Windsor is operating two new municipal wells under multiple dry year conditions: A. Well Interference Drawdown Mitigation. Should the Town of Windsor determine pursuant to mitigation measure HYD-3 Section 2 in the Town's PEIR for adoption of the 2009 Draft WMP Water Master Plan (Horizon, 2011), or an equivalent mitigation measure adopted in a subsequent California Environmental Quality Act document for these wells, that aquifer connectivity in the vicinity of the Esposti Park and/or Bluebird wells causes their operation to induce a substantial decrease in water levels in the shallow aquifer or in surrounding wells, alterations to surface streamflow, or impacts to natural recharge, then the Tribe shall participate in the development and implementation of an interference drawdown monitoring	A, B, C

Resource Area	Proposed Mitigation	Alternative
	and mitigation plan, and shall pay a share of the mitigation costs that is proportional to its contribution to the shallow aquifer impact being mitigated. The Tribe's obligation to contribute proportionate fair share funding shall be limited to measures to address impacts to existing domestic water supply wells from groundwater pumping; the Tribe shall have no obligation to participate in or fund other water supply initiatives or infrastructure improvements. Absent implementation of a mitigation plan by the Town of Windsor, the following monitoring and mitigation measures will be implemented by the Tribe should the Town of Windsor operate two new municipal wells under multiple dry year conditions: ▪ Property owners and water agencies in the area where predicted drawdown exceeds 5 feet shall be notified by certified letter of the existence of a Well Interference Drawdown Monitoring and Mitigation Program and invited to register any domestic wells in the predicted 5-foot drawdown area and any municipal, industrial, or irrigation wells in the predicted 20-foot drawdown area to participate in the program. To register for the program, well owners will be required to complete a Well Information Questionnaire regarding the construction, use, history and performance of their well, and to sign an Access Agreement that allows access for periodic measurement of water levels and assessment of well conditions and performance. A drawdown monitoring program shall be implemented to assess the extent and distribution of drawdown at the Site and in the vicinity. ▪ Well owners may submit claims for diminished well capacity or increased well maintenance costs. Such claims shall be evaluated to verify their veracity and whether the capacity loss or increased maintenance cost has occurred as a result of the Project. If well performance is found to be diminished by more than 25% or to be no longer adequate to meet historical water demands due to interference drawdown, registered participants will be eligible to receive reimbursement for reasonable and customary costs for well replacement, deepening or rehabilitation, or pump lowering as needed to restore adequate well function. In addition, the cost of additional maintenance attributable to interference drawdown caused by the Project will be eligible for reimbursement. The cost of reimbursement shall be borne by the Tribe. ▪ As an alternative to reimbursement, the Tribe may, at its sole discretion, elect to connect the claimant to an alternative potable water source such as the casino's water	

Resource Area	Proposed Mitigation	Alternative
	system at the Tribe's expense. Based on review of the extent to which the claim is due to drawdown caused by the Project vs. pumping by the Town of Windsor, the Tribe may request reimbursement from the Town of Windsor for a fair share in proportion to the degree of the Project's contribution to the drawdown that caused the diminished yield or increased maintenance cost. B. Baseline Groundwater Level Monitoring Program. The Tribe shall implement an onsite groundwater level monitoring program, including the installation and monitoring of three shallow groundwater monitoring wells (one near Pruitt Creek; one near the southwestern boundary of the site; and one near the eastern side of the northern boundary of the site) and monitoring of at least one of the existing supply wells, which shall be repurposed for monitoring purposes to assess groundwater levels in the pumped aquifer and at the water table beneath the Project site. Monitoring shall begin at least one year prior to initiation of Project pumping and shall continue for a period of least 5 years after pumping of the Town of Windsor's Esposti Park well commences in order to help assess the vertical connectivity of the aquifer system and the potential cumulative effects of Town of Windsor and Project pumping on shallow domestic wells and Groundwater Depended Ecosystems (GDEs). Groundwater level measurements shall be collected in the spring and fall of each year using an electronic well sounder to assess the depth to groundwater beneath a designated reference point. In addition, recording pressure transducers shall be deployed to assess short term changes in groundwater levels that can be compared to pumping of the on-site supply well(s) or nearby wells operated by the Town of Windsor and other parties. Observed groundwater levels shall be compared to predicted groundwater levels presented in the Supplemental Groundwater Resources Impact Assessment (GRIA) to help guide the implementation of appropriate well interference measures in cooperation with the Town of Windsor under Measure A, if required. C. GDE Monitoring and Mitigation. Should the Town of Windsor develop and operate two new municipal potable water supply wells during dry years as described in its Urban Water Management Plan, including one at Esposti Park, a GDE Verification Monitoring Workplan shall be developed and implemented to verify whether vegetation stress and habitat degradation is occurring along the riparian area of Pruitt Creek through the Project Site. The GDE Monitoring Plan shall	

Resource Area	Proposed Mitigation	Alternative
	describe the program procedures, schedules, responsibilities, documentation requirements. ▪ Baseline resource characterization and data acquisition shall be conducted by a qualified biologist in the on-Site portion of the GDE, including documentation of species composition and habitat condition, and documentation of photo points and reference transects. ▪ Data collection at photo points and transects shall be conducted annually by a qualified biologist. ▪ Satellite data available from the Landsat or Sentinel program shall be assessed annually and compared to a baseline and to shallow groundwater level trends. ▪ Baseline data shall be analyzed for a period of at least six representative hydrologic years by using the satellite data to calculate a vegetation index such as Normalized Difference Vegetation Index or Leaf Area Index; ▪ Annual data shall be analyzed and compared to the baseline data to assess whether there is quantifiable remote sensing evidence of plant stress or reduced vigor. ▪ The biological and satellite data shall be evaluated, including consideration of groundwater levels in the shallow aquifer, Town of Windsor pumping records and precipitation records in a nearby representative meteorological station to assess whether a loss of vegetation vigor has occurred that may result in habitat degradation and that is attributable to groundwater level changes caused by groundwater pumping. ▪ An annual monitoring report shall be submitted to the BIA by April 1 of the following year. If the program verifies that loss of plant vigor that may lead to habitat degradation is occurring, a meeting shall be convened between BIA, Sonoma County and the Town of Windsor to discuss and agree to appropriate changes in groundwater pumping and management procedures, parties responsible for implementation and cost sharing. See Hazardous Materials and Hazards – Wildfire Hazards mitigation below regarding water quality measures related to the riparian corridor wildfire management plan.	
Biological Resources	The following measures shall be implemented to avoid and/or reduce impacts to the Riparian Corridor: A. Alterations to riparian vegetation shall be avoided to the maximum extent possible. The project footprint shall be established at the minimum size necessary to complete the work. Temporary setback areas shall be marked with fencing to	A, B, C

Resource Area	Proposed Mitigation	Alternative
	protect the riparian zone and its function. Any disturbed riparian areas shall be replanted with native trees and shrubs. B. A qualified biologist shall delineate an Environmentally Sensitive Area along Pruitt Creek. The contractor shall install high-visibility fence to prevent accidental incursion on the Environmentally Sensitive Area. C. Staging areas, access routes, and total area of activity shall be limited to the minimum area necessary to achieve Project goals. Routes and boundaries shall be clearly marked and outside of the riparian area and create a buffer zone wide enough to support sediment and nutrient control and bank stabilization function. The following measures shall be implemented to minimize or avoid potential impacts to wetlands, Waters of the U.S., and special-status species: D. Prior to the start of construction, wetlands and jurisdictional features shall be fenced, and excluded from activity. Fencing shall be located as far as feasible from the edge of wetlands and riparian habitats and installed prior to the dry season, after special-status species surveys have been conducted and prior to construction. The fencing shall remain in place until all construction activities on the site have been completed. E. Ground disturbing activities, such as grading, clearing, and excavation, within 50 feet of any U.S. Army Corps of Engineers (USACE) jurisdictional features identified in the formal delineation process shall be conducted during the dry season (between June 15 and October 15) to minimize erosion. In the event of substantial, unseasonably high flow within Pruitt Creek on or after April 15, work shall be altered or stopped until flow ceases in the creek. Temporary stormwater Best Management Practices such as vegetative stabilization and linear sediment barriers shall be established between disturbed portions of the Project Site and Pruitt Creek to prevent sedimentation in the watercourse. F. Staging areas shall be located away from the areas of aquatic habitat that are fenced off. Temporary stockpiling of excavated or imported material shall occur only in approved construction staging areas. Excess excavated soil shall be used on site or disposed of at a regional landfill or other appropriate facility. Stockpiles that are to remain on the site through the wet season shall be protected to prevent erosion (e.g. with tarps, silt fences, or straw bales). G. Standard precautions shall be employed by the construction contractor to prevent the accidental release of fuel, oil, lubricant, or other hazardous materials associated with	

Resource Area	Proposed Mitigation	Alternative
	construction activities into jurisdictional features. A contaminant program shall be developed and implemented in the event of release of hazardous materials. H. If impacts to Waters of the U.S. and wetland habitat are unavoidable, a 404 permit and 401 Certification under the Clean Water Act shall be obtained from the USACE and U.S. Environmental Protection Agency (USEPA). Mitigation measures may include creation or restoration of wetland habitats either on site or at an appropriate off-site location, or the purchase of approved credits in a wetland mitigation bank approved by the USACE. Compensatory mitigation shall occur at a minimum of 1:1 ratio or as required by the USACE and USEPA. I. Consultation with the National Oceanic and Atmospheric Administration Fisheries for impacts to fish and essential fish habitat shall be conducted in accordance with Section 7 of the federal Endangered Species Act (FESA) and Magnuson-Stevens Act and any requirements resulting from that consultation shall be adhered to. The following measures shall be implemented to avoid impacts to California red-legged frogs (CRLF): J. A qualified biologist shall conduct a preconstruction habitat assessment survey for CRLF following Appendix D of the U.S. Fish and Wildlife Service [USFWS (2005)] *Revised Guidance of Site Assessments and Field Surveys for the California Red-legged Frog*. The survey shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the CRLF. The survey shall be conducted in all potential CRLF habitat on and within 200 feet of ground disturbance. K. If CRLF is detected during pre-construction surveys or during construction, the USFWS shall be contacted immediately to determine the best course of action. L. Should CRLF be identified during surveys, additional silt fencing shall be installed after surveys have been completed to further protect this species from construction impacts. The fencing shall remain in place until construction activities cease. The following measures shall be implemented to avoid impacts to northwestern pond turtle (NWPT): M. A qualified biologist shall conduct a preconstruction survey for NWPT along Pruitt Creek 24 hours prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the NWPT. The survey shall be conducted within 350 feet of the stretch of Pruitt Creek. If	

Resource Area	Proposed Mitigation	Alternative
	NWPT is detected within or immediately adjacent to the area of ground disturbance, the USFWS shall be contacted immediately to determine the best course of action. N. Should NWPT be identified during surveys, additional silt fencing shall be installed after surveys have been completed to further protect this species from construction impacts. The fencing shall remain in place until construction activities cease. The following measures shall be implemented to avoid and/or reduce impacts to potentially nesting migratory birds and other birds of prey in accordance with the federal Migratory Bird Treaty Act. O. Removal of vegetation and trimming or removal of trees shall occur outside the bird nesting season (February 1 to August 30) to the extent feasible. P. If removal or trimming of vegetation and trees cannot avoid the bird nesting season, a qualified wildlife biologist shall conduct a pre-construction nesting survey within 7 days prior to the start of such activities or after any construction breaks of 14 days or more. Surveys shall be performed for the Project Site and suitable habitat within 250 feet of the Project Site in order to detect any active passerine (perching bird) nests and within 500 feet of the Project Site to identify any active raptor (bird of prey) nests. Q. If active nests are identified during the pre-construction bird nesting surveys, the wildlife biologist shall place species- and site-specific no-disturbance buffers around each nest. Buffer size would typically be between 50 and 250 feet for passerines and between 300 and 500 feet for raptors (birds of prey). These distances may be adjusted depending on the level of surrounding ambient activity (e.g., if the Project Site is adjacent to a road or community development) and if an obstruction, such as a building structure, is within line-of-sight between the nest and construction. For bird species that are federally- and/or State-listed sensitive species (i.e., fully protected, endangered, threatened, species of special concern), a Project representative, supported by the wildlife biologist, shall consult with the USFWS and/or the California Department of Fish and Wildlife (CDFW) regarding modifying nest buffers. The following measures shall be implemented based on their determination: ▪ If construction would occur outside of the no-disturbance buffer and is not likely to affect the active nest, the construction may proceed. However, the biologist shall be consulted to determine if changes in the location or magnitude of construction activities (e.g., blasting) could	

Resource Area	Proposed Mitigation	Alternative
	affect the nest. In this case, the following measure would apply: ▪ If construction may affect the active nest, the biologist and a Project representative shall consult with USFWS and/or CDFW, dependent on regulatory status, to develop alternative actions such as modifying construction, monitoring of the nest during construction, or removing or relocating active nests. R. Any birds that begin nesting within the Project Site and survey buffers amid construction activities shall be assumed to be habituated to construction-related or similar noise and disturbance levels and minimum work exclusion zones of 25 feet shall be established around active nests in these cases. S. A qualified wildlife biologist shall conduct pre-construction burrowing owl surveys within 7 days prior to the start of such activities or after any construction breaks of 14 days or more. Surveys shall be performed at known mammal burrows or areas with the potential for new mammal burrows, within 250 feet of the Project Site. Surveys shall be conducted between morning civil twilight and 10:00 AM or two hours before sunset until evening civil twilight to provide the highest detection probabilities. T. If surveys identify evidence of western burrowing owls within 250 feet of the Project Site, the contractor shall: ▪ Establish a 250-foot exclusion zone around the occupied burrow or nest, as directed by the qualified biologist. ▪ Avoid the exclusion zone while the burrow is occupied. ▪ Not resume construction activities within the 250-foot zone until the Project representative provides written Notice to Proceed based on the recommendation of the qualified biologist. U. If avoidance of occupied burrows is not feasible during the September 1 to January 31 non-breeding season, construction may occur within 250 feet of the overwintering burrows as long as the contractor's qualified biologist monitors the owls for at least 3 days prior to Project construction and during construction and finds no change in owl foraging behavior in response to construction activities. If there is any change in owl foraging behavior as a result of construction activities, activities shall cease within the 250-foot exclusion zone. V. If destruction of occupied burrows is necessary, burrow exclusion can be conducted in accordance with the Staff Report on Burrowing Owl Mitigation.	
Cultural Resources	The following measures shall be implemented to avoid or reduce potential impacts to previously unknown archaeological and historical resources that may exist on the Project Site:	A, B, C

Resource Area	Proposed Mitigation	Alternative
	A. Any ground-disturbing activities that occur within 150 feet of Pruitt Creek or within 50 feet of areas identified by the Canine Field Survey as having an "alert" shall be monitored by a qualified archaeologist, Native American Tribal Monitor from Koi Nation, and/or a Native American Tribal Monitor or archaeologist selected by interested Sonoma County tribes. An archaeological monitoring program shall be established that includes consultation between the consulting archaeologist, lead agency, and the project proponent. The program shall clearly define the authority to temporarily halt/redirect construction should resources be encountered. B. In the event of any inadvertent discovery of prehistoric or historic archaeological resources during construction-related earth-moving activities, all such finds shall be subject to Section 106 of the National Historic Preservation Act as amended (36 CFR Part 800). Specifically, procedures for post-review discoveries without prior planning pursuant to 36 CFR § 800.13 shall be followed. All work within 50 feet of the find shall be halted until a professional archaeologist meeting the Secretary of the Interior's qualifications (36 CFR Part 61), or paleontologist if the find is of a paleontological nature, can assess the significance of the find in consultation with the BIA and other appropriate agencies. If any find is determined to be significant by the archaeologist or paleontologist and project proponent, a BIA representative shall meet with the archaeologist or paleontologist and project proponent to determine the appropriate course of action, including the development of a Treatment Plan and implementation of appropriate avoidance measures or other mitigation. C. If human remains are discovered during ground-disturbing activities a BIA representative shall be contacted immediately. No further disturbance shall occur until the BIA representative has made the necessary findings as to the origin and disposition. If the remains are determined to be of Native American origin, the BIA representative shall notify a Most Likely Descendant. The Most Likely Descendant is responsible for recommending the appropriate disposition of the remains and any grave goods.	
Public Services and Utilities	The following measures shall be implemented to reduce impacts to police and fire services: A. Prior to operation, the Tribe shall make good faith efforts to enter into a service agreement with the Sonoma County Sheriff's Office (SCSO) to compensate SCSO for quantifiable direct and indirect costs incurred in conjunction with providing law enforcement services to the Project Site. The agreement shall include a provision requiring the Tribe to meet with SCSO	A, B, C

Resource Area	Proposed Mitigation	Alternative
	at least once a year, if requested, to discuss ways to improve police services and prosecution of crimes associated with the project. B. Prior to operation, the Tribe shall make good faith efforts to enter into a service agreement with the Sonoma County Fire District (SCFD) to compensate SCFD for quantifiable direct and indirect costs incurred in conjunction with providing fire protection and emergency medical services to the Project Site. The agreement shall address any required conditions and standards for emergency access and fire protection systems. C. If the Tribe does not enter into a service agreement for law enforcement and/or fire protection services, the Tribe shall establish, equip, and staff a public safety building for such services on the Project Site. The fire department shall follow the certification and standards of the BIA and shall be staffed at all times with a minimum of 3 personnel, each trained as a firefighter and emergency medical technician. The building shall be located in the "treatment area" designated in the eastern portion of the Project Site (**Figure 2.1-1**).	
Noise	The following measures shall be implemented to reduce impacts from off-site traffic noise during the cumulative year: A. The Tribe shall pay a fair share towards repaving the following road segments with noise-reducing pavement: ▪ Shiloh Road, between Hembree Lane and Gridley Drive ▪ Old Redwood Highway, between Shiloh Road and the Project Entrance. B. If repaving is not necessitated by traffic improvements prior to 2040, the Tribe will compensate homeowners adjacent to the identified roadway segments for dual pane exterior windows or other noise reducing measures, such installing window assemblies with higher than 27 Sound Transmission Class, that can achieve noise reduction in the interior of the sensitive receptors that meet federal, state, and local standards, at the request of the homeowner.	A
	C. The Tribe shall pay a fair share towards repaving the following road segments with noise-reducing pavement: ▪ Shiloh Road, between Hembree Lane and Old Redwood Highway ▪ Old Redwood Highway, between Shiloh Road and the Project Entrance. D. If repaving is not necessitated by traffic improvements prior to 2040, the Tribe will compensate homeowners adjacent to the identified roadway segments for dual pane exterior windows, at the request of the homeowner.	B, C

Resource Area	Proposed Mitigation	Alternative
Transportation and Circulation	While the timing for the off-site roadway improvements is not within the jurisdiction or ability to control of the Tribe, the Tribe shall make good faith efforts to assist with implementation of the opening year improvements prior to opening day. The Tribe shall either complete or make in-lieu fair share contributions to the cumulative 2040 traffic mitigation measures prior to the need for the improvements. The Tribe's fair share contribution percentage, as estimated in the Traffic Impact Study (**Appendix I**), is included for each measure. Funding shall be for design standards consistent with those required for similar facilities in the region. The actual cost of the improvements shall be calculated by a California-licensed transportation engineer according to industry accepted practices, and in consultation with the governmental agency with jurisdiction over the roadway to be improved. These estimated fair share contributions could be adjusted based on an agreement with the governmental entity with jurisdiction over the road to be improved. Funds for opening year 2028 and cumulative 2040 mitigation measures shall be placed in an escrow account, or other account as agreed to by the Tribe and relevant government agency, for use by the governmental entity with jurisdiction over the road to be improved so that the entity may design, obtain approvals/permits for, and construct the recommended road improvement. The following measures shall be implemented to reduce traffic impacts:	
	Opening Year 2028: A. For Intersection 1) Shiloh Rd. & Old Redwood Hwy. (100% fair share contribution) ▪ Convert split phasing in Eastbound (EB)/Westbound (WB) direction to protected phasing. ▪ Convert existing WB-through lane to an exclusive left-turn lane (storage length of 200 feet and taper length of 75 feet) and shared through/right turn. ▪ Add one Northbound left-turn lane. ▪ Restripe Eastbound right (EBR) to give 150 ft. storage length. ▪ Restripe Southbound left (SBL) to 190 ft. storage length. ▪ Restripe SBR to 105 ft. storage length. ▪ Construct Traffic Impact Fee (TIF) project to add second Northbound left (NBL) turn lane and second WB receiving lane. B. For Intersection 2) Shiloh Rd. & Hembree Ln. (100% fair share contribution) - Optimize splits and cycle length. C. For Intersection 7) Shiloh Rd. & Casino Entrance 1 (100% fair share contribution) - Signalize intersection.	A

Resource Area	Proposed Mitigation	Alternative
	D. For Intersection 8) Old Redwood Hwy. & Casino Entrance 1 (100% fair share contribution) - Signalize intersection. Cumulative Year 2040: E. For Intersection 1) Shiloh Rd. & Old Redwood Hwy. (39.4% fair share contribution) ▪ Convert split phasing in EB/WB direction to protected phasing. ▪ Restripe NB approach to include two exclusive left turn lanes, two through lanes, and one exclusive right turn lane. ▪ Restripe Southbound (SB) approach to include one exclusive left turn lane, two through lanes, and one exclusive right turn lane. ▪ Restripe EB approach to include one exclusive left turn lane, two through lanes, and one exclusive right turn lane. ▪ Restripe WB approach to include one exclusive left turn lane, two through lanes, and one exclusive right turn lane. ▪ Restripe Eastbound left (EBL) to give 385 ft. storage length. ▪ Restripe SBL to 145 ft. storage length. ▪ Restripe Southbound right (SBR) to 105 ft. storage length. ▪ Construct TIF project to add second NBL turn lane and WB receiving lane. ▪ Widen Shiloh Rd. between Hembree Ln. and Gridley Dr. from two lanes to four lanes. F. For Intersection 2) Shiloh Rd. & Hembree Ln. (36.4% fair share contribution) ▪ Convert split phasing in NB/SB direction to protected phasing. ▪ Restripe NB approach to include one exclusive left turn lane and one shared through-right turn lane. ▪ Restripe SB approach to include one exclusive left turn lane, one through lane, and two exclusive right turn lanes. ▪ Restripe EB approach to include two exclusive left turn lanes, one through lane, and one shared through-right turn lane. ▪ Restripe WB approach to include one exclusive left turn lane, one through lane, and one shared through-right turn lane. G. For Intersection 5) Shiloh Rd. & Caletti Ave. (5.9% fair share contribution) ▪ Restripe WB approach to include one exclusive left turn lane and two through lanes. H. For Intersections 2, 3, and 5 (27.4% fair share) – Contribute fair share payment to TIF Project #2 Shiloh Road Interchange. I. For Intersection 6) Shiloh Rd. & Conde Ln. (6.3% fair share contribution)	

Resource Area	Proposed Mitigation	Alternative
	▪ Optimize signal timing parameters. ▪ Restripe SBR to give 65 ft. storage length. J. For Intersection 12) Old Redwood Hwy. & US 101 SB Ramp (5.2% fair share contribution) - Optimize signal timing parameters.	
	Opening Year 2028: K. For Intersection 1) Shiloh Rd. & Old Redwood Hwy. (100% fair share contribution) ▪ Convert split phasing in EB/WB direction to protected phasing. ▪ Convert existing westbound-through lane to an exclusive left-turn lane (storage length of 200 feet and taper length of 75 feet) and a shared through/right turn lane. ▪ Add one northbound left-turn lane. ▪ Restripe EBR to give 150 ft. storage length. ▪ Restripe SBL to 190 ft. storage length. ▪ Restripe SBR to 105 ft. storage length. ▪ Construct TIF project to add second NBL turn lane. L. For Intersection 2) Shiloh Rd. & Hembree Ln. (100% fair share contribution) - Optimize splits and cycle length. M. For Intersection 7) Shiloh Rd. & Casino Entrance 1 (100% fair share contribution) - Signalize intersection. Cumulative Year 2040: N. For Intersection 1) Shiloh Rd. & Old Redwood Hwy. (36% fair share contribution) ▪ Convert split phasing in EB/WB direction to protected phasing. ▪ Restripe NB approach to include two exclusive left turn lanes, two through lanes, and one exclusive right turn lane. ▪ Restripe SB approach to include one exclusive left turn lane, two through lanes, and one exclusive right turn lane. ▪ Restripe EB approach to include one exclusive left turn lane, two through lanes, and one exclusive right turn lane. ▪ Restripe WB approach to include one exclusive left turn lane, two through lanes, and one exclusive right turn lane ▪ Restripe EBL to give 385 ft. storage length. ▪ Restripe SBL to 145 ft. storage length. ▪ Restripe SBR to 105 ft. storage length. ▪ Construct TIF project to add second NBL turn lane and WB receiving lane. ▪ Widen Shiloh Rd. between Hembree Ln. and Gridley Dr. from two lanes to four lanes. O. For Intersection 2) Shiloh Rd. & Hembree Ln. (33.1% fair share contribution)	B

Resource Area	Proposed Mitigation	Alternative
	▪ Convert split phasing in NB/SB direction to protected phasing. ▪ Restripe NB approach to include one exclusive left turn lane and one shared through-right turn lane. ▪ Restripe SB approach to include one exclusive left turn lane, one through lane, and two exclusive right turn lanes. ▪ Restripe EB approach to include two exclusive left turn lanes, one through lane, and one shared through-right turn lane. ▪ Restripe WB approach to include one exclusive left turn lane, one through lane, and one shared through-right turn lane. P. For Intersection 3) Shiloh Rd. & US 101 NB Off-ramp. (33.8% fair share contribution) ▪ Restripe NB approach to include one exclusive left turn lane and two exclusive right turn lanes. ▪ Restripe EB approach to include two through lanes. ▪ Restripe WB approach to include two through lanes. Q. For Intersection 5) Shiloh Rd. & Caletti Ave. (5.1% fair share contribution) ▪ Restripe WB approach to include one exclusive left turn lane and two through lanes. R. For Intersections 2, 3, and 5 (26.7% fair share contribution) – Contribute fair share payment to TIF Project #2 Shiloh Road Interchange. S. For Intersection 6) Shiloh Rd. & Conde Ln. (5.5% fair share contribution) ▪ Optimize signal timing parameters. ▪ Restripe SBR to give 65 ft. storage length. T. For Intersection 8) Old Redwood Hwy. & Casino Entrance 1 (100% fair share contribution) - Signalize intersection. U. For Intersection 12) Old Redwood Hwy. & US 101 SB Ramp (4.3% fair share contribution) - Optimize signal timing parameters.	
	Opening Year 2028: V. For Intersection 1) Shiloh Rd. & Old Redwood Hwy. (100% fair share contribution) ▪ Restripe SBR to give 130 ft. storage length. ▪ Construct TIF project to add second NBL turn lane and WB receiving lane. Cumulative Year 2040: W. For Intersection 1) Shiloh Rd. & Old Redwood Hwy. (13.3% fair share contribution) ▪ Convert split phasing in EB/WB direction to protected phasing.	C

Resource Area	Proposed Mitigation	Alternative
	▪ Restripe NB approach to include two exclusive left turn lanes, one through lane, and one exclusive right turn lane. ▪ Restripe SB approach to include one exclusive left turn lane, one through lane, and one exclusive right turn lane. ▪ Restripe EB approach to include one exclusive left turn lane, one through lane, and one exclusive right turn lane with overlap phasing. ▪ Restripe WB approach to include one exclusive left turn lane, one through lane, and one exclusive right turn lane. ▪ Restripe EBL to give 405 ft. storage length. ▪ Restripe EBR to 180 ft. storage length. ▪ Restripe SBL to 190 ft. storage length. ▪ Restripe SBR to 200 ft. storage length. ▪ Construct TIF project to add second NBL turn lane and WB receiving lane. X. For Intersection 2) Shiloh Rd. & Hembree Ln. (22.7% fair share contribution) ▪ Convert split phasing in NB/SB direction to protected phasing. ▪ Restripe NB approach to include one exclusive left turn lane and one shared through-right turn lane. ▪ Restripe SB approach to include one exclusive left turn lane, one through lane, and two exclusive right turn lanes. ▪ Restripe EB approach to include two exclusive left turn lanes, one through lane, and one shared through-right turn lane. ▪ Restripe WB approach to include one exclusive left turn lane, one through lane, and one shared through-right turn lane. Y. For Intersection 3) Shiloh Rd. & US 101 NB Off-ramp. (25.2% fair share contribution) ▪ Restripe EB approach to include two through lanes. ▪ Restripe WB approach to include two through lanes. Z. For Intersection 5) Shiloh Rd. & Caletti Ave. (3.4% fair share contribution) ▪ Restripe WB approach to include one exclusive left turn lane and two through lanes. AA. For Intersections 2, 3, and 5 (9.1% fair share contribution) Contribute fair share payment to TIF Project #2 Shiloh Road Interchange. BB. For Intersection 6) Shiloh Rd. & Conde Ln. (3.7% fair share contribution) ▪ Optimize signal timing parameters. ▪ Restripe SBR to give 50 ft. storage length. CC. For Intersection 8) Old Redwood Hwy. & Project Entrance 1 (100% fair share contribution) - Signalize intersection.	

Resource Area	Proposed Mitigation	Alternative
	DD. For Intersection 12) Old Redwood Hwy. & US 101 SB Ramps (3.2% fair share contribution) - Optimize signal timing parameters.	
Hazardous Materials and Hazards – Wildfire Hazards	The following measures shall be implemented for all alternatives: A. Prior to opening day the Tribe shall engage a qualified arborist and/or biologist to develop a riparian corridor wildfire management plan to be implemented annually during operation. The goal of the plan shall be to reduce fire hazard on and adjacent to the on-site riparian corridor. At a minimum the plan shall include the following procedures and best management practices that shall be overseen by a qualified arborist and/or biologist: ▪ Weed abatement and fuel load reduction outside of the creek channel shall be conducted in late Spring (May and June) by hand crews and repeated as necessary through the fire season. ▪ When riparian vegetation is within a 100-foot radius of a structure or the property line, the following procedures shall be implemented: o All dead or dying trees, branches, shrubs, or other plants adjacent to or overhanging buildings shall be removed. o Lower branches of trees shall be pruned to a height of 6 to 15 feet or 1 /3 tree height for trees under 18 feet. o All dead or dying grass, leaves, needles, or other vegetation shall be removed. o Live flammable ground cover and shrubs shall be removed or separated. o Climbing vines shall be maintained free of dead or dying material or removed from trees and structures. o Dead or dying grass shall be mowed to a maximum of 4 inches in height. Trimmings may remain on the ground. o Live flammable ground cover less than 18 inches in height may remain, but overhanging and adjacent trees must be pruned to a height of 6 to 15 feet. o Logs and stumps embedded in the soil shall be removed or isolated from structures and other vegetation. o All dead or dying brush or trees, and all dead or dying tree branches within 15 feet of the ground shall be removed. ▪ Vegetation management is prohibited in the wetted channel (i.e., the creek must be dry to perform work) ▪ Vegetation removal is with hand tools; if a chain saw is needed to perform work, a tarp is used to contain any wood chips/debris. ▪ No motorized vehicles are allowed in the channel.	A, B, C

Resource Area	Proposed Mitigation	Alternative
	▪ Vegetation shall not be removed from channel banks. ▪ Large woody debris (downed logs and root wads) in the channel and banks shall remain in place. ▪ Debris jams (fallen trees) that block the channel causing obstruction shall be removed. ▪ Vegetation management shall be conducted in a manner that protects riparian habitat and water quality, including tree canopies that provide shade to the channel (i.e., trees shall be trimmed only if a canopy can be maintained over the creek). ▪ Vegetation removal shall either conducted outside the bird nesting season (February 1 to August 15) or a field survey for bird nests by a qualified biologist shall occur prior to starting work and implementing appropriate avoidance buffers. B. Prior to occupancy, the Tribe shall coordinate with emergency evacuation and traffic experts to develop a project-specific evacuation plan that includes, but is not limited to, the following procedures and best management practices: ▪ The evacuation plan shall complement the County of Sonoma's Emergency Evacuation Plan, Operations Plan, supporting documents, and the standard operating procedures of fire, law, and emergency management agencies of the County. ▪ Designated staff shall coordinate evacuation procedures with the lead agency for evacuations and other participating agencies during an evacuation event. ▪ Unless a pre-determined evacuation zone specific to the casino-resort is created and/or unless specifically directed otherwise by the lead authority for evacuations, the casino-resort shall initiate a mandatory evacuation of the Project Site as soon as the evacuation zones within the Trigger Evacuation Zone are issued a evacuation warning or order. The Trigger Evacuation Zone (shown on **Figure 3.12-6**) includes the following evacuation zones: SON-2K1, SON-2K2, SON-2K3, SON-2L4, SON-2L5, SON-2L6, SON-2L7, SON-2M1, SON-2N1, SON-3A1, SON-3B1, SON-3C1, SON-3C2, SON-3C3, SON-4A2, SON-4A3, WI-A01, WI-A02, WI-A03, WI-A04, WI-A05, WI-A06, WI-B01, WI-B02, WI-B03, WI-B04, WI-B05, WI-B06, WI-B07, WI-B08, WI-B09, WI-B10, WI-B11, WI-B12, WI-B13, WI-B14, WI-B15, WI-B16, WI-B17, WI-C01, WI-C02, WI-C03, WI-C04, WI-C05, WI-C06, WI-C07, WI-C08, WI-C09, WI-C10, WI-C11, WI-D01, WI-D02, WI-D03, WI-D04, WI-D05, WI-D06, WI-D07, WI-D08, WI-D09, WI-D10, WI-D11. This shall shut down all operations with visitors, hotel guests, and most staff evacuating immediately.	

Resource Area	Proposed Mitigation	Alternative
	▪ Staff shall post critical emergency evacuation information (e.g., Red Flag Warnings and Fire Weather Watches) and handouts shall be made available to all visitors, guests, and staff. Staff shall incorporate the latest technology available, such as QR codes that contain links to webs sites for mobile devices, or better technology as it evolves. ▪ Using the emergency evacuation information provided, guests shall be encouraged to make themselves familiar with available routes, stay informed and connected to all available emergency alert tools, and follow directions provided by staff, law enforcement, fire agencies, news media, and other credible sources. ▪ Staff and guests shall be provided with information on the local AM and FM radio stations to monitor for disaster information and all emergency alert tools like Emergency Alert System (EAS), SoCoAlert, and Nixle. ▪ Guests, through the emergency evacuation information, shall also be advised to not rely just on navigation apps that may inadvertently lead them toward an approaching wildfire, flooding, hazardous materials, or other hazards. ▪ Staff shall be trained on how to connect to the available emergency alert notification tools such as EAS, SoCoAlert, and Nixle. Staff shall monitor those services while at the facility. ▪ Designated staff shall be provided with Community Emergency Response Training. This training provides information on how to be prepared for disasters and emergencies and reorganize life-threatening conditions and apply life-saving techniques. ▪ A public address system shall be installed inside all occupied buildings so that emergency notifications can be provided by staff to visitors and guests. Additionally, designated staff shall be issued handheld portable radios for communication during an emergency. ▪ The hotel shall send registered guests emergency notification connection instructions to their mobile device at time of registration. This shall be done through the resort's registration process using guest registration information. ▪ Guests without cars or those who are uncomfortable driving themselves in an emergency shall be offered off-site transportation by staff in a resort vehicle, ride share, public transportation, and/or on-site shuttles. These options shall be directed to pre-established County Emergency Management approved community shelters.	

Resource Area	Proposed Mitigation	Alternative
	▪ All intersections on the Project Site shall include signage that clearly indicates the exit route from the property to major evacuation routes such as Old Redwood Highway and Shiloh Road to Highway 101. ▪ There shall be at least six trained traffic attendants to direct the vehicles exiting the garage and surface parking areas. In addition, at least two attendants shall be posted at each of the three project site access points. A total of 12 persons would be needed during evacuation. These traffic attendants should be specially trained employees of the project. ▪ Trained on-site personnel shall direct roughly half of the vehicles from the garage and surface parking areas on the eastern portion of the Project Site to either the east Shiloh Road access point or the signalized Old Redwood Highway access point. C. Management and staff at the casino-resort shall be trained on evacuation procedures for guests and visitors as part of their new hire orientation and receive updated evacuation procedures training annually. D. The Tribe shall coordinate with Sonoma County and the Town of Windsor on their respective emergency operation plans and implement or contribute to the implementation of measures intended to improve early detection of wildfire events, and evacuation times for the Project Site and vicinity. These measures could include, but would not be limited to: ▪ Installation of a wildfire detection camera within the Project Site and/or at another location in the vicinity of the Town of Windsor that would expand the coverage of the wildfire camera system. The wildfire camera(s) would be connected to the existing early detection system and be accessible to emergency officials. ▪ Installation of variable message signs for the outbound lanes at the three project egress points that connect to Shiloh Road and Old Redwood Highway. The variable message signs shall be connected to on-site staff and the County Emergency Operations Center (EOC) so that evacuation-related messages can be controlled by fire personnel managing the evacuation. At the time of an evacuation order, evacuating project traffic shall be directed to alternate routes to US 101 and/or other areas of safety. Unless precluded by wildfire or otherwise directed by emergency officials, evacuation project traffic shall be directed to US 101, Old Redwood Highway, Fulton Road, and/or eastbound Shiloh Road towards Faught Road and Old Redwood Highway.	

Resource Area	Proposed Mitigation	Alternative
	▪ Installation of adaptive signal control (ASC) systems at key intersections along potential evacuation routes in the vicinity of the Project Site that can adjust traffic signal timing to account for high volumes that occur during hazard events. These signals shall be upgraded to wireless communication with emergency battery backup. ASC systems could be implemented by emergency staff during a wildfire and significantly extend maximum green times on key evacuation approaches, depending on traffic conditions and evacuation patterns.	

Section 5 | Consultation and Coordination

This section lists agencies and organizations consulted during the preparation of this EIS.

Agencies and Organizations, Consulted	Summary of Consultation and Coordination
U.S. Fish & Wildlife Service (USFWS)	The USFWS IPaC database was accessed to obtain a list of federally listed special-status species with the potential to occur in the vicinity of the Project Site. Additionally, the USFWS National Wetlands Inventory was accessed to identify potential wetlands and waters in the vicinity of the Project Site. The BIA provided the Biological Assessment to USFWS on February 6, 2024.
U.S. Army Corps of Engineers (USACE)	The aquatic resource delineation (ARD) was submitted to USACE in April 2022 as part of a request for USACE preliminary Jurisdictional Determination (**Appendix G-4**). The ARD was revised based on an in-field verification with USACE on October 27,2023 (**Appendix G-6**).
National Oceanic and Atmospheric Administration, Fisheries Service (NOAA Fisheries)	The NOAA Fisheries website was reviewed for information concerning special-status fish species, critical habitat, and Essential Fish Habitat (EFH). The Biological Assessment/EFH Assessment was sent to NOAA Fisheries by BIA on December 15, 2023 for preliminary review. NOAA Fisheries provided comments on the document within an e-mail on February 9, 2024 and a virtual meeting on February 21, 2024. The Biological Assessment/EFH Assessment will be revised and submitted to NOAA Fisheries for review and concurrence.
U.S. Environmental Protection Agency (USEPA)	In anticipation of future project-related regulatory reviews and approvals by the USEPA, including the potential issuance of a National Pollution Discharge Elimination System direct discharge permit for the proposed wastewater treatment plant, the BIA extended an invitation to the USEPA to participate in the NEPA process as a Cooperating Agency. The USEPA accepted the invitation to participate as a Cooperating Agency.
National Indian Gaming Commission (NIGC)	In anticipation that the Tribe may submit a future request to the NIGC for review and approval of a gaming management agreement, the BIA extended an invitation to the NIGC to participate in the NEPA process as a Cooperating Agency. The NIGC accepted the invitation to participate as a Cooperating Agency.

Agencies and Organizations, Consulted	Summary of Consultation and Coordination
Federal Aviation Administration (FAA)	FAA was consulted to perform an aeronautical study on the Project Site to determine the aeronautical hazard of developing the site. Results of the aeronautical study is included as **Appendix J**.
U.S. Geological Survey (USGS)	The USGS website was reviewed for information concerning geological information and hazards, such as landslides and mineral data.
U.S. Census Bureau	The U.S. Census Bureau website was reviewed for information concerning demographic data.
U.S. Office of the Assistant Secretary for Planning and Evaluation	The Office of Assistant Secretary was consulted for information concerning federal poverty guidelines to determining poverty.
U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS)	The USDA NRCS was consulted for data concerning farmland and soil characteristics information. A Farmland Conversion Impact Rating was submitted to the NRCS and is provided in **Appendix K**.
National Park Service (NPS)	The NPS website was consulted through reviewing the National Register of Historic Places database for results in proximity to the Project Site.
Native American Tribes	Various Native American Tribes were consulted under Section 106 of the NHPA.
Koi Nation of Northern California	The Tribe was consulted throughout the NEPA process in its role as Applicant.
California Department of Finance (CDF)	The CDF website was reviewed for information concerning population and housing estimates.
California Native American Heritage Commission (NAHC)	The NAHC was consulted to conduct a review of the Sacred Lands File. The NAHC also supplied a list of Native American individuals who may have information regarding the sacred lands or other cultural resources in the vicinity of the area of potential effects (APE).
California Office of Historical Preservation (COHP)	The COHP website was consulted to review the California Registry of Historic Resources data in proximity to the Project Site.
California State Historic Preservation Officer (SHPO)	The SHPO Historic Sites Database was consulted in order to obtain a list of previous archaeological surveys and identified cultural resources. SHPO was also consulted under Section 106 of the NHPA.
California Energy Commission (CEC)	The CEC website was reviewed for information concerning existing electrical infrastructure in the vicinity of the Project Site.
California Employee Development Department (EDD)	The EDD website was reviewed to obtain information related employment statistical information.

Agencies and Organizations, Consulted	Summary of Consultation and Coordination
California Department of Conservation (DOC)	The DOC was consulted to determine California Important Farmland in proximity to the Project Site.
California Department of Resources Recycling and Recovery (CalRecycle)	The CalRecycle website was reviewed to obtain information about solid waste generation numbers, and capacity and permit information about Sonoma County Central Landfill.
California Department of Forestry and Fire Protection (CAL FIRE)	The CAL FIRE website was reviewed to obtain information related to fire hazard severity designations in area surrounding Project Site.
California Department of Fish and Wildlife (CDFW)	CDFW's California Natural Diversity Database and RareFind 5 were reviewed to determine if any State-listed special-status species have the potential to occur in the vicinity of the Project Site.
Sonoma County Sheriff's Office (SCSO)	The SCSO website was reviewed to obtain law enforcement services information.
Sonoma County Fire District (SCFD)	The SCFD website was reviewed to obtain fire and emergency services information for the department, and to obtain information regarding average calls for service at similar facilities. A Letter of Intent between the Tribe and SCFD that specifies the intention of the Tribe and SCFD to enter into a Memorandum of Understanding for the provision of fire response and emergency medical services to the Project Site is included as **Appendix O**.
Sonoma County (County)	The proposed scope for the Traffic Impact Study was sent to the County for review.
Bay Area Air Quality Management District (BAAQMD)	The BAAQMD website was reviewed to obtain information related to air quality and climate conditions in County. Furthermore, BAAQMD was consulted for information about permitted stationary sources, emission estimates and health screening tools, and significance criteria assessment for air quality impacts.
University of California Museum of Paleontology	University of California Museum of Paleontology Database was accessed and reviewed for any paleontological resources within the same formation as the Project Site.
Town of Windsor (Town)	The proposed scope for the Traffic Impact Study was sent to the Town for review. The Town website was reviewed for the location of locally managed parks in proximity to the Project Site.
Republic Services of Sonoma County	The Republic Services of Sonoma County website was reviewed to obtain information about its solid waste services.
Pacific Gas and Electric (PG&E)	The PG&E website was reviewed to obtain information about PG&E's services and electrical sources. Furthermore, PG&E was directly consulted about providing electrical services and natural gas to the Proposed Project.

Section 6 | References

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Section 7 | Preparers

7.1 LEAD AGENCY

Bureau of Indian Affairs (BIA)

Amy Dutschke, Regional Director
Chad Broussard, Environmental Protection Specialist
Dan Hall, Regional Archaeologist
Peter DeJongh, Regional Biologist

7.2 COOPERATING AGENCIES

National Indian Gaming Commission (NIGC)

Dustin Thomas, Chief of Staff
Austin Badger, Senior Attorney

Environmental Protection Agency (EPA)

Laney Gordon, NEPA Reviewer
Karen Vitulano, NEPA Reviewer

7.3 ENVIRONMENTAL CONSULTANTS

Name	Qualifications	Participation
Acorn Environmental – Environmental Impact Statement		
Ryan Sawyer, AICP	BA, 19 years of experience, certified environmental planner by the American Institute of Certified Planners	Project Director; EIS Author
Bibiana Sparks-Alvarez	BS, 16 years of experience	Project Manager; EIS Author
Jennifer Wade	BA, 19 years of experience	Senior Environmental Analyst
Josh Ferris	BA, 23 years of experience	Senior Environmental Analyst
Kristen Miner	BS, MS, 9 years of experience	Environmental Analyst
Kimberly Fuchs	BS, 18 years of experience	Senior Environmental Analyst
Darienne Highsmith	BS, 3 years of experience	Environmental Analyst
Jeremy Huey	BA, MS; +12 years of experience	Graphics
Peter Von der Porten	BA, +11 years of experience	Graphics
Sequoia Ecological Consulting, Inc. – Biological Resources		
Claire Buchanan	BS, +9 years of experience	Biological Assessment

Name	Qualifications	Participation
Ari Rogers	BS, +5 years of experience	Biological Assessment
Archeological Research – Cultural Resources		
John W. Parker	Ph.D., +40 years of experience, Registered Professional Archeologist (RPA)	Archaeological Monitoring, Historic Property Survey Report
Tom Origer & Associates – Cultural Resources		
Thomas M. Origer	MA, +40 years of experience; RPA	Cultural Resources Study
Vern Losh & Associates – Wildfire Risk		
Vern Losh	National Fire Academy, 27 years of experience	Fire and Emergency Response
Institute for Canine Forensics		
Adela Morris		Canine Field Survey
CAS Safety Consulting LLC – Wildfire Risk		
Chris Shubel	30 years of experience	Fire and Emergency Response
Rob Giordano	35 years of experience	Fire and Emergency Response
Bollard Acoustical Consultants, Inc. – Noise		
Paul Bollard	BS, +35 years of experience	Noise Impact Study
Global Marketing Advisors – Socioeconomics		
Kit Szybala	BA, 11 years of experience	Socioeconomic Impact Study
TJKM Transportation Consultants – Transportation and Circulation		
Chris Kinzel	BS, MS, +60 years of experience	Transportation Impact Study
Sandeep Paparaju	BS, MS, +8 years of experience	Transportation Impact Study
Renee Reavis	BS, MS, +7 years of experience	Transportation Impact Study
Fehr & Peers		
Ian Barnes, PE	BS, MS, +15 years of experience, CA Registered Civil Engineer	Evacuation Travel Time Assessment
Grace Chen	MS, +2 years of experience	Evacuation Travel Time Assessment
HydroScience Engineers – Water Resources, Land Resources		
Curtis Lam	BS, MS, +25 years of experience, CA Registered Professional Engineer	Site Grading and Hydrology Study
Angela N. Singer	BS, MS, 13 years of experience, CA Registered Professional Engineer	Water and Wastewater Feasibility Study
Formation Environmental – Groundwater Resources		
Mike Tietze, PG, CHG, CEG	BS, 39 years of experience	Groundwater Resource Impact Assessment

Name	Qualifications	Participation
Pete Townsend	MA, 30 years of experience	Groundwater Resource Impact Assessment
Nat Beal, PG	MS, 20 years of experience	Groundwater Resource Impact Assessment
Christina Johnson	MS, 10 years of experience	Groundwater Resource Impact Assessment
Will Gnesda	MS, 2 years of experience	Groundwater Resource Impact Assessment
Pivotal Lighting Design		
Leah Robinson, PE, LC, MIES	BS, +23 years of experience	Lighting Analysis