Groundwater Recharge Capacity Expansion Project – Ferro Recharge

Final Initial Study – Mitigated Negative Declaration

prepared by

United Water Conservation District
1701 North Lombard Street, Suite 200
Oxnard, California 93030

prepared with the assistance of

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

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Initial Study

1. Project Title

Groundwater Recharge Capacity Expansion Project – Ferro Recharge

2. Lead Agency/Project Sponsor and Contact

Lead Agency/Project Sponsor

United Water Conservation District
1701 North Lombard Street, Suite 200
Oxnard, California 93030

Contact Person

Hannah Garcia-Wickstrum, Environmental Scientist
United Water Conservation District
(805) 525-4431
hannahg@unitedwater.org

3. Project Location

The project site is located in unincorporated Ventura County, approximately one mile north of the Oxnard city limits and three miles northeast of the Camarillo city limits (see Figure 1). The project site is located within the Oxnard Subbasin of the Santa Clara River Valley groundwater basin. The project site traverses State Route (SR) 232 (Vineyard Avenue) in an undeveloped area between properties located at 5625 Vineyard Avenue and 5721 Vineyard Avenue. The project site also includes portions of existing groundwater spreading basins maintained and operated by United Water Conservation District (United), including a portion of the Noble Basin located east of Vineyard Avenue and a portion of the Ferro Basin located west of Vineyard Avenue.

Figure 1 shows the regional location of the project site, and Figure 2 and Figure 3 show the project alignment at a local scale. Figure 4 shows photographs of the project site.

4. Surrounding Land Uses

The project site is generally surrounded by agricultural and agricultural commercial land uses. Agricultural land uses and produce retailers are located to the north and south, the Ferro Basin is located to the west, and the Noble Basin is located to the east. Residences are located approximately 500 feet northeast of the pipeline alignment's intersection with Vineyard Avenue. The project site is located approximately 0.3 mile east of the Santa Clara River.

Figure 1 Regional Project Location

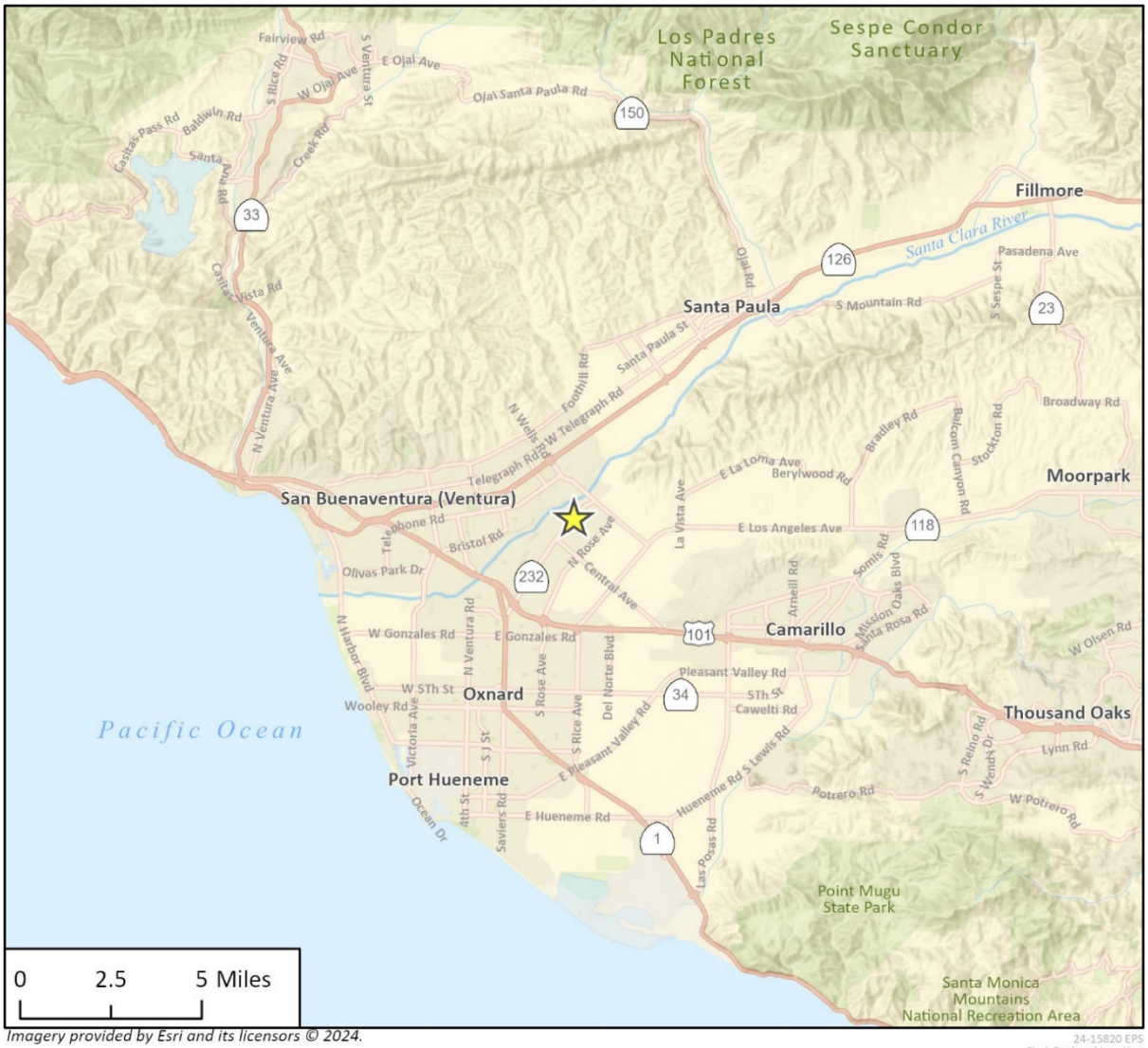

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Fig 1 Regional Location

Project Location

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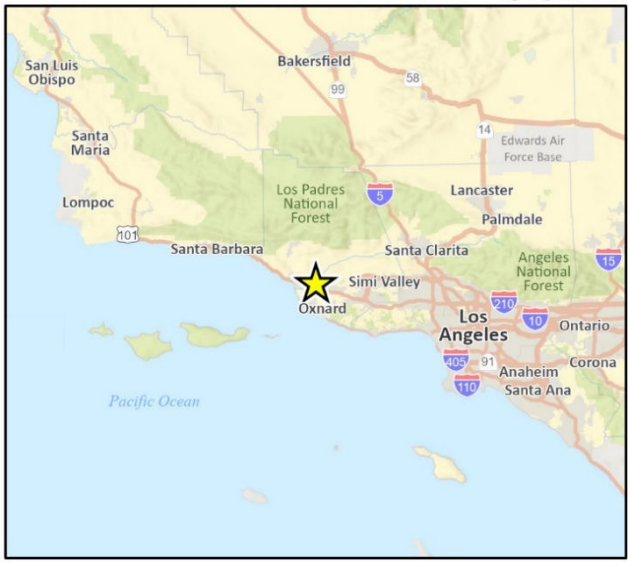

Figure 2 Project Site Location

Figure 3 Project Site Location – Northern Extent

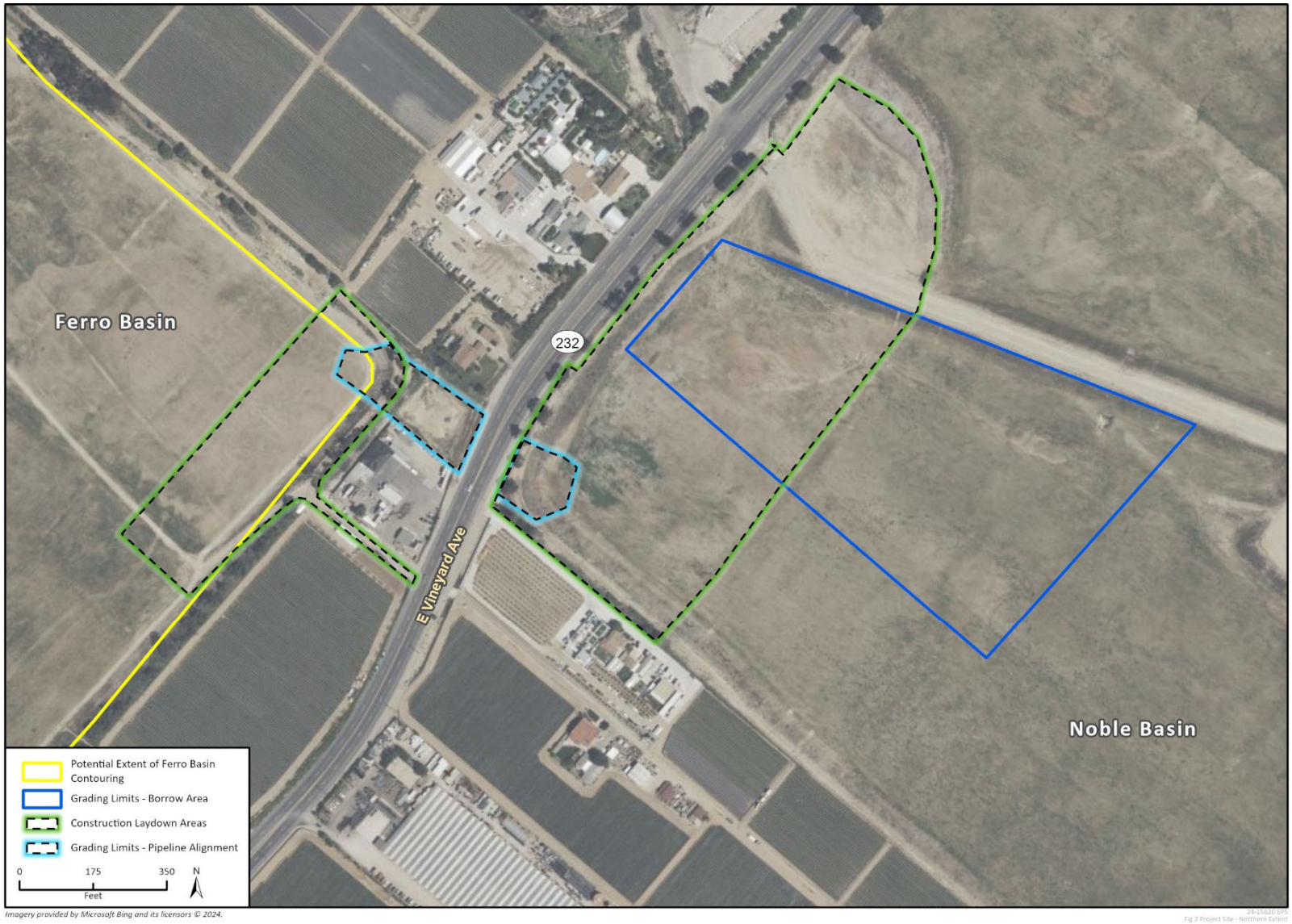

Figure 4 Site Photographs

Photograph 1. The Ferro Basin from the grading limits west of Vineyard Avenue, facing north.

Photograph 2. The Noble Basin from the grading limits east of Vineyard Avenue, facing north.

Photograph 3. The borrow area in the Noble Basin, facing south.

Photograph 4. Construction laydown area in the Ferro Basin, facing south.

5. General Plan Designation

The project site is within the El Rio/Del Norte Area Plan of the Ventura County 2040 General Plan, and is designated as Agricultural. A portion of the pipeline alignment would be located within the public right-of-way of Vineyard Avenue, which does not have a Ventura County 2040 General Plan designation (County of Ventura 2020).

6. Zoning

The project site is zoned Agricultural Exclusive (AE-40 ac) and is within a Mineral Resources Protection overlay zone. A portion of the pipeline alignment would be located within the public right-of-way of Vineyard Avenue, which does not have a County of Ventura zoning designation (County of Ventura Resource Management Agency 2024).

7. Description of Project

Project Background

United is a California Special District, originally formed as the Santa Clara Water Conservation District in 1927, then transitioned to its current role by voter approval in 1950. United's mission is to manage, protect, conserve, and enhance the water resources of the Santa Clara River, its tributaries, and associated aquifers. United's boundaries encompass nearly 213,000 acres of central and southern Ventura County, including the Ventura County portion of the Santa Clara River Valley and the Oxnard Plain. Within this area, United operates and maintains several water facilities, groundwater recharge basins, and associated water delivery infrastructure. These facilities directly and indirectly provide potable water to municipal customers and irrigation supplies in the Oxnard area, sometimes in lieu of coastal groundwater extractions. United's operations facilitate groundwater recharge, mitigate seawater intrusion and groundwater overdraft across the Oxnard Plain, and provide water supply for municipal, industrial, and agricultural uses in Ventura County.

United operates and maintains approximately 600 acres of spreading grounds (also referred to as "basins"), which are used to percolate water and recharge groundwater supplies with Santa Clara River water diverted at the Freeman Diversion. The water diverted at the Freeman Diversion is limited to the amount that can be legally diverted pursuant to United's State Water Resources Control Board (SWRCB) License 10173, which was issued in 1973; and Permit 18908, which was issued in 1982 and amended in 1987 and 1992. United's maximum annual diversion volume on a calendar year basis is 144,630 acre-feet. However, under typical conditions, an average of approximately 60,000 acre-feet per year of surface flow is diverted at the Freeman Diversion.

In previous years when conditions were dry with less precipitation, United did not have a need for additional groundwater recharge capacity as its current basins were sufficient. However, during periods of heavy precipitation, United is currently constrained by the infiltration rates of the existing spreading grounds, and therefore needs to make use of opportunities to recharge additional surface water within permitted diversion amounts.

The Noble Basin and Ferro Basin, located along Vineyard Avenue, are among the approximately 600 acres of spreading grounds United operates. The Ferro Basin is not currently connected to United's diversion and recharge infrastructure and cannot be used for groundwater recharge. United

proposes to construct an undercrossing beneath Vineyard Avenue and install pipelines to connect the Noble Basin to the Ferro Basin, which would enable the conveyance of water to the Ferro Basin for groundwater recharge. United estimates connecting the basins would provide an additional 2,000 to 3,000 acre-feet of groundwater recharge per year on average.

Project Description

The Groundwater Recharge Capacity Expansion Project – Ferro Recharge (Project) would involve construction of an undercrossing at Vineyard Avenue through installation of two reinforced concrete pipelines, 60 inches in diameter and approximately 520 feet in length, to connect the Ferro Basin to the Noble Basin. Pursuant to California Department of Transportation (Caltrans) requirements, the portion of the pipeline within the Vineyard Avenue right-of-way would be installed via trenchless methods. The remaining portion of the pipeline would be installed via open cut trench. The project would also involve the construction of metal grating and control gates on the open ends of the pipelines within the Ferro and Noble Basins respectively, to prevent public access and control flow. Once complete, water would be conveyed from Noble Basin to Ferro Basin via gravity.

The purpose of the project is to recharge groundwater during wet conditions when additional surface water flows are available. The project would not modify United's existing water rights and would not involve diverting additional water from the Santa Clara River beyond existing permitted operations.

Construction Activities

Project construction would occur over approximately six to eight months. United would initiate construction as early as July 2025; however, United could delay construction to be complete by June 2027. To provide a conservative analysis, both potential construction start dates are considered herein. Anticipated project phases and their durations are summarized in Table 1. Actual project phasing would be determined by the construction contractor.

Table 1 Anticipated Construction Schedule

Construction Phase	Estimated Duration
Construction Mobilization and Procurement	8 to 11 weeks
Trenchless Pipeline Installation	3 to 6 weeks
Open Cut Trench Pipeline Installation	3 to 5 weeks
Grading and Contouring (Noble Basin)	3 weeks
Construction of Gates	3 to 4 weeks
Construction of Grating	2 to 3 weeks
Start of Project Operation	2 to 3 weeks
Potential Ferro Basin Grading and Contouring	4 weeks

Construction activities would generally occur from 6:30 a.m. to 6:30 p.m., Monday through Friday. Trenchless pipeline installation, described further below, may require constant (24 hours a day, 7 days a week) construction activities. Construction equipment staging and worker parking areas would be located in the southwestern portion of the Noble Basin and the northeastern portion of the Ferro Basin, as shown in Figure 2. Construction personnel would adhere to the Public Resources Code to minimize fire risk; these regulations include PRC Section 4442, which requires earth-moving

and portable construction equipment with internal combustion engines to use spark arrestors when operating on any forest-covered, brush-covered, or grass-covered land.

If groundwater conditions are approaching historical high levels during project construction, it is possible that groundwater would be encountered and that construction activities would require groundwater dewatering. Dewatered groundwater would be percolated in a separate area of the basin where it was encountered (e.g., groundwater encountered in the Ferro Basin would be percolated elsewhere in the Ferro Basin).

Trenchless Pipeline Installation

The portion of the pipelines within the right-of-way of Vineyard Avenue would be installed via trenchless construction methods such as jack and bore or micro-tunneling. Trenchless pipeline installation would involve excavation of entry and exit pits on either end of the pipeline alignment, and the use of an auger and hydraulic jacks to push pipe casing through the ground between the pits. After completion of the casing, the proposed pipelines would then be installed inside the casing. The pipeline may also be direct jacked, without a casing. Micro-tunnelling would involve the use of drilling fluid to prevent caving. Pursuant to Caltrans requirements, the pipelines would be installed with a minimum spacing of 156 inches apart. The entry pit, which would be located on the west side of Vineyard Avenue outside of the right-of-way, would be approximately 35 feet by 40 feet and the exit pit, which would be located on the east side of Vineyard Avenue outside of the right-of-way, would be approximately 20 feet by 35 feet in size. The maximum excavation depth during this phase would be 25 feet.

Trenchless installation would occur over approximately three to six weeks. Trenchless installation may require the removal of three trees. Temporary traffic controls such as flaggers may be required as construction workers monitor Vineyard Avenue during trenchless construction; however, project construction would not require closure of Vineyard Avenue.

Open Cut Trench Pipeline Installation

The remaining portion of the pipeline alignment, west and east of Vineyard Avenue and outside of the right-of-way, would be installed via open cut trench. Open cut trench pipeline installation would involve excavation of a trench, installation of the new pipelines, and then backfilling the trench with soil. The average excavation depth would be 15 feet, and the maximum depth of excavation is anticipated to be 25 feet. Open cut trench pipeline installation would likely occur once trenchless installation is complete and is anticipated to occur over three to five weeks.

Construction Grading and Contouring

The limits of grading activities are shown in Figure 2. As shown therein, grading would occur on either side of Vineyard Avenue along the pipeline alignment, which would include the entry and exit pits required for trenchless installation. Grading and contouring would occur after pipeline installation. Additionally, an area in the northern portion of the Noble Basin would be used as a "borrow area," or an area in which the construction contractor would excavate materials to create an embankment on the eastern end of the pipelines. Approximately 2,800 cubic yards of soil would be excavated from the Noble Basin borrow area and used to create the embankment.

After installation of the pipeline is complete, United may contour some or all of the Ferro Basin to facilitate recharge. To provide a conservative analysis, the maximum extent of possible contouring is considered herein. Contouring of the Ferro Basin would involve excavation of a maximum of 50,000

cubic yards, and contouring would occur at least 100 feet away from the west property boundary of Ferro Basin. Contouring would occur over approximately four weeks. Overall, there would be no net soil import or export from the project site, and the project would not require hauling of excavated soil across Vineyard Avenue from one basin to the other. Project construction would not require closure of Vineyard Avenue.

Pipeline Features

Once the pipelines are installed, two control gates would be installed on the eastern end of the pipelines within Noble Basin to provide hydraulic control. The gates would also prevent public access when Ferro Basin is not active. A pipe exit structure, including metal grating to prevent access to the pipelines, would be installed on the western end of the pipelines within the Ferro Basin.

Construction General Best Management Practices

The project would incorporate the following general best management practices (BMPs) to minimize or avoid potential impacts to biological resources within the project site:

- Project-related vehicles would observe a five-mile-per-hour speed limit within the unpaved limits of construction.
- All open trenches would be fenced and sloped to prevent entrapment of wildlife species.
- All hollow posts and pipes would be capped, and metal fence stakes would be plugged with bolts or other plugging materials to prevent wildlife entrapment and mortality.
- If construction lighting is required during construction hours, lighting would be shielded and downcast to avoid potential impacts to wildlife migration.
- No deliberate feeding of wildlife would be allowed.
- No pets would be allowed on the project site.
- Before starting or moving construction vehicles at the beginning of each day, a sweep shall be conducted, including inspection under all vehicles to avoid impacts to any wildlife that may have sought refuge on or under equipment. All large building materials and pieces with crevices where wildlife could potentially hide would also be inspected before moving. If wildlife is detected, a qualified biologist would temporarily stop activities until the animal leaves the area. If the animal does not leave the area on its own, a qualified biologist would move the animal out of harm's way. In the case of federal or state-listed species, relocation should be carried out in accordance with regulatory authorizations issued under the Endangered Species Act and/or California Endangered Species Act, Fish and Game Code §§ 1002, 1002.5, 1003, and/or Cal. Code Regs., tit. 14, § 650. United would consult with CDFW prior to relocation of any special status or listed species.
- Rodenticides and second-generation anticoagulant rodenticides would be prohibited.

The project would also incorporate the following Ventura County Air Pollution Control District BMPs to minimize or avoid potential impacts related to fugitive dust within the project site:

RULE 51

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endangers the comfort, repose, health or safety of any such

persons or the public or which cause or have a natural tendency to cause injury or damage to business or property (Ventura County Air Pollution Control District 2004).

RULE 55

- No one shall cause or allow fugitive dust from any applicable source beyond the midpoint (width) of a public street or road adjacent to the property line of the emission source or beyond 50 feet from the property line if there is not an adjacent public street or road.
- No one shall cause or allow fugitive dust from any applicable source that equals or exceeds 20 percent opacity for 3 minutes or more in any one hour.
- No person shall allow track-out to extend 25 feet or more in length unless one of the following control measures is used:
  - Track-Out Area Improvement: Pave or apply chemical stabilization to maintain a stabilized surface starting from the point of intersection with the public paved surface, and extend for a distance of at least 100 feet with a width to accommodate traffic ingress and egress from the site.
  - Track-Out Prevention: Check and clean the undercarriage and wheels on all vehicles before leaving unpaved surface or install a track-out control device(s) that prevents track-out of soil onto paved public roads.
  - Track-Out Removal: Remove track-out from pavement as soon as possible but no later than one hour after it has been deposited on the road. If a street sweeper is used to remove any track-out, only "PM10-efficient" street sweepers certified to meet South Coast AQMD Rule 1186 requirements shall be used. The make, model information and certification documentation of any sweeper used shall be made available to APCD personnel upon request.
- All track-out shall be removed at the conclusion of each workday or evening shift. The use of blowers for removal of track-out is prohibited.
- No person shall engage in earth-moving activities in a manner that creates visible dust emissions over 100 feet in length.
- No person shall conduct an operation with a monthly import or export of 2,150 cubic yards or more of bulk material without utilizing at least one of the following measures at each vehicle egress from the site to a public paved road:
  - Install a pad consisting of washed gravel (one inch minimum size) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.
  - Pave the surface at least 100 feet long and at least 20 feet wide.
  - Utilize a wheel shaker/wheel spreading device, also known as a rumble grate, consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and sufficient width to allow all wheels of vehicle traffic to travel over grate to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.
  - Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.
  - Any other control measure or device that prevents track-out onto public paved roads.

- No person, including the facility or site operator, shall load or allow the loading of bulk materials or soil onto outbound trucks unless at least one of the following dust prevention measures is used:
  - Use properly secured tarps or covering that covers the entire surface area of the load or use a container-type enclosure.
  - Maintain a minimum of 6 inches of freeboard below the rim of the truck bed where the load touches the sides of the cargo area and ensure that the peak of the load does not extend above any part of the upper edge of the cargo area.
  - Water or treat the bulk material to minimize the loss of material to wind or spillage.
  - Any other effective dust prevention control measures (Ventura County Air Pollution Control District 2008).

Operation and Maintenance

The proposed pipeline infrastructure would require periodic maintenance, including occasional clearing of debris from the metal grating, vegetation mowing in the basins, and pumping of standing water out of pipelines at the end of wet seasons. In dry years, the project would not result in an increase in operations and maintenance trips compared to existing conditions. Daily trips would be required to the Ferro Basin when the basin is being utilized for groundwater recharge. Operation of the project would result in a minor increase in vehicle trips compared to existing conditions, as United staff visits the Noble basin daily during wet years and would subsequently visit the Ferro Basin in the same trip. Water would flow through the pipelines via gravity flow, and the project would not require a power source during operation.

8. Other Public Agencies Whose Approval is Required

United is the lead agency for this project. A Caltrans Utility Encroachment Permit would be required for trenchless pipeline installation within the Vineyard Avenue right-of-way.

Because project construction would disturb greater than one acre of soil, United would be required to obtain coverage from the State Water Resource Control Board's Construction Stormwater General Permit (Order No. 2022-0057-DWQ, National Pollutant Discharge Elimination System No. CAS000002).

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Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

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

Determination

Based on this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

■ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "less than significant with mitigation incorporated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

10-9-24
Date

MARISSA CARINGELLA
Printed Name

ENVIRONMENTAL SERVICES MGR.
Title

Environmental Checklist

1 Aesthetics

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

a. Would the project have a substantial adverse effect on a scenic vista?

The Ventura County General Plan Conservation and Open Space Element establishes Goal COS-3, which seeks to preserve, protect, and enhance the unique scenic resources in Ventura County, and ensure access to scenic resources within Ventura County for present and future generations (County of Ventura 2020). Ventura County offers a variety of scenic resources including panoramic views of the Santa Monica Mountains in the south, northern vistas of the Topatopa mountain range in the Los Padres National Forest, and scenic views of coastal beaches and cliffs in the west (County of Ventura 2020). Scenic vistas visible from the project site include distant views of the Topatopa mountains to the north. Construction activities would require construction vehicles and materials to be located on site. However, construction would be short-term and temporary, and would not substantially affect long-range views from publicly-accessible areas around the project site. Construction impacts on scenic vistas would be less than significant.

After construction, the proposed pipelines would be located entirely below ground. Pipeline entry and exit gates would be located with the Noble and Ferro Basins behind existing berms and would not be visible from the roadway. Therefore, project operation and maintenance would have no potential to adversely affect views of scenic vistas in the local area.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

SR 33, also known as Maricopa Highway, is the closest state-designated scenic highway to the project site (Caltrans 2019). SR 33 is located approximately 13 miles northwest of the project site, and the project site is not visible from this highway due to distance and intervening topography. Given the distance from SR 33, the project would not substantially damage scenic resources within a state scenic highway. Therefore, no impact would occur.

NO IMPACT

c. Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

According to Public Resources Code Section 21071(b), an unincorporated area is considered "urbanized" if 1) the area is completely surrounded by one or more incorporated cities, the total population of the unincorporated area and the surrounding cities is at least 100,000 persons, and the population density of the unincorporated area is at least equal to the population density of the surrounding cities; or 2) the area is located within an urban growth boundary and has an existing residential population of at least 5,000 persons per square mile. The project site is located in unincorporated Ventura County. No incorporated cities are located to the south or east of the area and the project site is located outside of the City of Oxnard's Sphere of Influence (City of Oxnard 2024). Therefore, the project site is located in a non-urbanized area.

The project would include installation of two underground pipelines, beneath Vineyard Avenue and within the Ferro Basin. Construction activities would require construction vehicles and materials to be located on site. Construction would be short-term and temporary, and would not substantially affect long-range views from publicly-accessible areas around the project site. Once construction is complete, the pipelines would be located underground and the entry and exit gates would not be visible from public viewpoints. Accordingly, public views of the project site and its surroundings would not change as compared to existing conditions upon the completion of construction. Therefore, impacts related to degradation of the existing visual character or quality would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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

Project construction would primarily occur from 6:30 a.m. to 6:30 p.m. and is not anticipated to require construction lighting. Trenchless pipeline installation would require 24-hour-a-day construction activities, which would require temporary construction lighting. Construction lighting and vehicles would create a new source of light that could affect nighttime views in the area, including views from the nearest residence to the project site, located approximately 65 feet northeast. Per the *Project Description*, all temporary construction lighting would be shielded and downcast. Remaining land uses surrounding the project site are commercial properties, which would likely not be occupied at nighttime. Lighting and glare impacts during construction would be less than significant.

Operation and maintenance of the project would not permanently add reflective surfaces, such as windows or car windshields, or lighting to the project site or its surroundings. Therefore, project operation and maintenance would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.

LESS-THAN-SIGNIFICANT IMPACT

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2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	■
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	■
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	■

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

The project site is primarily designated by the California Department of Conservation (DOC) as Urban and Built Up Land and Other Land. Most of the Ferro Basin, which would be graded and used for groundwater recharge, is designated as Farmland of Local Importance (DOC 2024a). However, the Ferro Basin is not currently used for agriculture. Prime Farmland is located outside of the project site adjacent to the proposed construction laydown areas; however, the project would not include activities which would result in the conversion of this Prime Farmland to non-agricultural uses. Because the project site is not located on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (which constitute Farmland), the project would not convert Farmland to non-agricultural use. No impact would occur.

NO IMPACT

b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

According to the DOC's California Williamson Act Enrollment Finder, the project site is not within land subject to a Williamson Act contract (DOC 2024b). The project site is zoned Agricultural Exclusive (AE-40 ac) and within the public right-of-way. Pursuant to California Government Code 53091, the building and zoning ordinances of a county or city do not apply to the location or construction of facilities for the production, storage, or transmission of water, wastewater, or electrical energy by a local agency. Accordingly, the project is exempt from the County's zoning ordinance and would not conflict with the County's Agricultural Exclusive zoning. No impact would occur.

NO IMPACT

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

The project site is not zoned forest land, timberland, or timberland zoned Timberland Production. The project site does not contain forest land or timberland. Therefore, the project would not conflict with or cause rezoning of forest land, timberland, or timberland zoned Timberland Production. No impact would occur.

NO IMPACT

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

The project site does not contain forest land. Therefore, the project would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

NO IMPACT

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

The project site is not used for agriculture. The project site does not contain forest land or timberland. The Noble Basin is currently utilized by United for groundwater recharge. The Ferro Basin was previously used as a quarry and is not currently in agricultural use. The project would not convert adjacent agricultural land to non-agricultural uses. The project also would not construct buildings or structures that could result in the conversion of agricultural land. Additionally, the project would facilitate groundwater recharge, which would benefit agricultural activities in the region. Therefore, the project would not involve changes which could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. No impact would occur.

NO IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	■
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	■	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	■	☐

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

The project site is within the South Central Coast Air Basin (Basin) and subject to the jurisdiction of the Ventura County Air Pollution Control District (VCAPCD). VCAPCD has published the *Ventura County Air Quality Assessment Guidelines* (VCAPCD Guidelines) to provide lead agencies, consultants, and project applicants with a framework and uniform methods for preparing air quality evaluations for environmental documents (VCAPCD 2003). According to the VCAPCD Guidelines, a project may be inconsistent with the applicable air quality plan if it would cause the existing population to exceed forecasts contained in the most recently adopted air quality management plan (AQMP). The most recent AQMP adopted by VCAPCD, the 2022 AQMP, relies on the population forecasts from the Southern California Association of Governments' (SCAG) 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to project future emissions (VCAPCD 2022).

The project involves the construction of two pipelines and associated structures to convey water between the Noble Basin and Ferro Basin. The project does not include housing or other infrastructure that would result in population growth. Given the small-scale nature of project construction activities, it is likely construction workers would be drawn from the existing, regional workforce and would not indirectly result in the relocation of people to Ventura County. In addition, a minimal increase in operational vehicle trips would be required to operate and maintain the project. The purpose of the project is to recharge groundwater during wet conditions when additional surface water flows are available. The project would not result in an expanded water supply for United to distribute to additional consumers. Therefore, the project would not result in population growth and would not conflict with the population forecasts of the SCAG 2020 RTP/SCS. Subsequently, the project would not result in excess emissions beyond what is projected by the

2022 AQMP. Therefore, the project would not have the potential to conflict with or obstruct the implementation of the AQMP. No impact would occur.

NO IMPACT

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

VCAPCD is required to monitor air pollutant levels to ensure National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for criteria air pollutants are met. If these standards are met for a specific pollutant, the Basin is classified as being in "attainment." If these standards are not met for a specific pollutant, the Basin is classified as being in "nonattainment," and VCAPCD is required to develop strategies to meet the standards which are currently exceeded. According to the California Air Resources Board (CARB) Area Designation Maps, the Ventura County portion of the Basin is designated nonattainment for the NAAQS for ozone and the CAAQS for ozone and particulate matter measuring 10 microns or less in diameter (PM_{10}) (CARB 2022a).

The VCAPCD Guidelines recommend specific air pollutant emission threshold levels for determining whether a project may have a significant adverse impact on air quality within the Basin. The project would have a significant impact if operational emissions exceed 25 pounds per day of reactive organic compounds (also referred to as reactive organic gases [ROG]) or 25 pounds per day of nitrogen oxides (NO_x). As noted in the VCAPCD Guidelines, the 25 pounds per day threshold for reactive organic compounds and nitrogen oxides is not intended to be applied to construction emissions because such emissions are temporary. Nevertheless, VCAPCD's Guidelines state that construction-related emissions should be mitigated if estimates of reactive organic compounds or nitrogen oxides emissions from heavy-duty construction equipment exceed this threshold (VCAPCD 2003).

The VCAPCD has not established quantitative thresholds for particulate matter for either construction or operation. However, the VCAPCD indicates a project that may generate fugitive dust emissions in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons, or which may endanger the comfort, repose, health, or safety of any such person, or which may cause or have a natural tendency to cause injury or damage to business or property, would have a significant air quality impact. This threshold is applicable to the generation of fugitive dust during construction activities. The VCAPCD Guidelines recommend application of fugitive dust mitigation measures to all dust-generating activities. These measures are listed in the Project Description under Construction General Best Management Practices. Such measures include minimizing the project disturbance area, watering the site prior to commencement of ground-disturbing activities, covering all truck loads, and limiting on-site vehicle speeds to 15 miles per hour or less.

The California Emissions Estimator Model (CalEEMod), version 2022.1.1.22 was used to estimate the project's air pollution emissions. CalEEMod uses project-specific information, including the project's land uses, construction equipment parameters, and location to model a project's construction emissions. The project would not include a substantial increase in operational air pollution because under existing conditions, United personnel take daily trips to the Noble Basin during wet years, and the additional distance to travel from the Noble Basin to Ferro Basin when the basin is being used for groundwater recharge would not result in substantial mobile emissions. Therefore, only construction emissions were modeled. Construction emissions modeled include emissions

generated by construction equipment used on site and emissions generated by vehicle trips associated with construction, such as worker and vendor trips. The analysis reflects construction of the project as described in Section 7 of the Project Description. CalEEMod modeling outputs are included in Appendix A.

Construction

Project construction would generate temporary air pollutant emissions primarily associated with fugitive dust (PM_{10}) and exhaust emissions from heavy construction equipment and construction vehicles. The project's estimated unmitigated construction emissions are summarized in Table 2. As shown therein, construction NO_x emissions would exceed the daily maximum threshold of 25 pounds per day established by VCAPCD. As shown in Appendix A, this exceedance would occur during the grading of the Ferro Basin due to the use of five scrapers simultaneously. Although this threshold is not intended to apply to construction because such emissions are temporary, VCAPCD recommends mitigation be required if NO_x construction emissions exceed 25 pounds per day. Accordingly, construction could potentially result in a cumulatively considerable net increase of NO_x in the Basin, and this impact would require implementation of Mitigation Measure AQ-1.

Table 2 Estimated Maximum Daily Air Criteria Pollutant Emissions – Construction, Unmitigated

	Estimated Maximum Daily Emissions (pounds per day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Construction Emissions	4	31	28	<1	4	2
VCAPCD Thresholds	**25**	**25**	**N/A**	**N/A**	**N/A**	**N/A**
Threshold Exceeded?	No	**Yes**	N/A	N/A	N/A	N/A

ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

Construction would begin between July 2025 and June 2027. The analysis modeled construction to start in July 2025, which would conservatively estimate emissions since emissions factors would decrease in accordance to statewide plans to reduce air quality and GHG emissions.

See Appendix A for air quality modeling results

Project construction would be required to comply with VCAPCD Rule 55, which requires construction BMPs to control dust emissions during ground disturbing activities. BMPs include but are not limited to watering soil stockpiles two times per day, securing soil stockpiles with tarps, and prevention of soil track-out from unpaved project sites. These measures are listed in the Project Description under Construction General Best Management Practices. Compliance with Rule 55 would reduce potential PM_{10} emissions such that the project would not cause injury, detriment, nuisance, or annoyance to any considerable number of persons. Compliance with VCAPCD Rule 55 would ensure construction PM_{10} emissions would not violate air quality standards or result in a cumulatively considerable net increase of criteria pollutants.

Operation

The pipelines and associated infrastructure would not emit criteria air pollutants during operation because the pipelines would direct water via gravity flow and would not require a power source. The project would not include a substantial increase in emissions during operation because under

existing conditions, United personnel take daily trips to the Noble Basin during wet years, and the additional distance to travel from the Noble Basin to Ferro Basin (crossing Vineyard Avenue) when the basin is being used for groundwater recharge would not result in substantial additional mobile emissions. Therefore, project operational impacts related to a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard would be less than significant.

Mitigation Measure

AQ-1 Ferro Basin Grading NOX Emissions Reduction

To reduce NO_X emissions during grading of the Ferro Basin, a minimum of two of the five scrapers shall be equipped with United States Environmental Protection Agency (USEPA) Tier 4 Final or better diesel engines, to the extent feasible. If two of the five scrapers are equipped with USEPA Tier 4 Final or better diesel engines, the other three scrapers may be any engine tier. Equipment engines must be maintained in good condition and in proper tune pursuant to manufacturer's specifications. If the contractor determines equipment with the required tier or fuel type is not reasonably available, United shall require the contractor to utilize a maximum of three scrapers during Ferro Basin grading. Construction equipment used to grade the Ferro Basin must be designated on construction plans and provided to United for review and approval prior to the start of construction.

Significance After Mitigation

Mitigation Measure AQ-1 would reduce construction NO_x emissions during grading of the Ferro Basin by either utilizing Tier 4 Final or better diesel engines concurrently for two of five scrapers or utilizing a maximum of three scrapers at any one time. The estimated construction emissions implementing these methods are shown in Table 3. As shown therein, with implementation of Mitigation Measure AQ-1, NO_x emitted during construction would be reduced below the VCAPCD threshold of 25 pounds per day. Therefore, with implementation of Mitigation Measure AQ-1, this impact would be less than significant.

Table 3 Estimated Maximum Daily Air Criteria Pollutant Emissions – Construction, Mitigated

	Estimated Maximum Daily Emissions (pounds per day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Construction Emissions – Tier 4 Diesel Engines	3	21	36	<1	4	2
Construction Emissions – Three Scrapers	2	19	17	<1	4	2
VCAPCD Thresholds	**25**	**25**	**N/A**	**N/A**	**N/A**	**N/A**
Threshold Exceeded?	No	No	N/A	N/A	N/A	N/A

ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

Construction would begin between July 2025 and June 2027. The analysis modeled construction to start in July 2025, which would conservatively estimate emissions since emissions factors would decrease in accordance to statewide plans to reduce air quality and GHG emissions.

See Appendix A for air quality modeling results

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

The VCAPCD defines sensitive receptors as facilities or land uses that include members of the population particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of sensitive receptors listed in the VCAPCD Guidelines (2003) include schools, hospitals, and daycare centers. Sensitive receptors also typically include residences. The closest sensitive receptors to the project site include a single-family residence approximately 65 feet northeast of the pipeline alignment west of Vineyard Avenue and a single-family residence approximately 200 feet west of the Noble Basin staging area. The potential for project construction to expose sensitive receptors to substantial pollutant concentrations is discussed in the following subsections. The project does not include any stationary sources of air pollutant emissions, and once construction is complete, the project would not result in a substantial increase in operational emissions as mobile emissions are already produced under existing conditions by United staff traveling to the Noble Basin. Therefore, project operation would not expose sensitive receptors to substantial pollutant concentrations and is not discussed further.

Fugitive Dust Emissions

As discussed in Threshold 3(b), the project would result in emissions of fugitive dust. However, these emissions would be temporary and would be reduced in compliance with VCAPCD Rule 55, which requires implementation of BMPs to control dust emissions during ground disturbing activities. Therefore, impacts related to exposure of sensitive receptors to substantial concentrations of criteria pollutant and fugitive dust emissions would be less than significant.

Carbon Monoxide Hotspots

Traffic-congested roadways and intersections have the potential to generate elevated localized carbon monoxide levels (i.e., carbon monoxide hotspots). In general, carbon monoxide hotspots occur in areas with poor circulation or areas with heavy traffic. Existing carbon monoxide levels in Ventura County have been historically low enough that VCAPCD monitoring stations throughout the county ceased monitoring ambient carbon monoxide concentrations in 2004 (VCAPCD 2022). Project construction would result in minor and temporary increases in traffic on Vineyard Avenue due to worker vehicle trips and delivery of heavy-duty equipment and materials. Because the project site is not located in an area with poor circulation or heavy traffic, project-related traffic would not cause or contribute to potential temporary carbon monoxide hotspots. Therefore, no impacts related to exposure of sensitive receptors to substantial concentrations of carbon monoxide would occur.

Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or serious illness, or that may pose a present or potential hazard to human health. TACs generally consist of four types: organic chemicals, such as benzene, dioxins, toluene, and perchloroethylene; inorganic chemicals such as chlorine and arsenic; fibers such as asbestos; and metals such as mercury, cadmium, chromium, and nickel. The primary TAC emitted during project construction would be diesel particulate matter (DPM) generated by heavy-duty equipment and diesel-fueled delivery and haul trucks during construction activities. DPM was identified as a TAC by the CARB in 1998 and is primarily composed of particulate matter exhaust emissions (CARB 2024).

Generation of DPM from construction projects typically occurs in a single area for a short period of time. Construction of the proposed project would occur in phases over approximately six to eight months. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning a longer exposure period would result in a higher exposure level for the maximally exposed individual. 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 toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (California Office of Environmental Health Hazard Assessment 2015). Accordingly, the duration of project construction, up to eight months, is approximately one percent of the total exposure period used for health risk calculation. Current models and methodologies for conducting health-risk assessments are associated with longer-term exposure periods of nine, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities, resulting in difficulties in producing accurate estimates of health risk. Therefore, health risk is discussed qualitatively below.

Maximum DPM emissions would occur during the Noble Basin earthwork and grading activities. The maximum DPM emissions associated with this phase would only occur for approximately three weeks, and these activities represent the worst-case condition for the total construction period. This three week period would represent approximately 0.09 percent of the total exposure period for health risk calculations. Therefore, project construction activities would not represent the type of long-term TAC emission sources typically subject to health risk assessments. Construction activities would also be subject to and would comply with California regulations limiting the idling of heavy-duty construction equipment to no more than five minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. Compliance with the standard construction measures required by the VCAPCD would also further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. As such, impacts related to exposure of sensitive receptors to substantial TAC concentrations would be less than significant.

San Joaquin Valley Fever

San Joaquin Valley Fever (Valley Fever), formally known as Coccidioidomycosis, is an infectious disease caused by the fungus *Coccidioides immitis*. Valley Fever is a disease of concern in the Basin. Infection is caused by inhalation of *Coccidioides immitis* spores that have become airborne when dry, dusty soil or dirt is disturbed by natural processes, such as wind or earthquakes, or by human-induced ground-disturbing activities, such as construction, farming, or other activities (VCAPCD 2003). Substantial increases in the number of reported cases of Valley Fever tend to occur only after major ground-disturbing events such as the 1994 Northridge earthquake (VCAPCD 2003).

Under existing conditions, the population of Ventura County has been and continues to be exposed to Valley Fever from agricultural and construction activities occurring throughout the region. Project construction activities, similar to construction activities throughout Ventura County, would have the potential to release *Coccidioides immitis* spores. Project construction would be carried out in compliance with VCAPCD Rule 55 and standard construction measures in accordance with VCAPCD rules to reduce fugitive dust generation, which would minimize the spores released on site. VCAPCD does not have a recommended threshold for Valley Fever impacts but instead recommends

consideration of the following factors that may indicate a project's potential to result in significant impacts related to Valley Fever:

- Disturbance of the topsoil of undeveloped land (to a depth of about 12 inches)
- Dry, alkaline, sandy soils
- Virgin, undisturbed, non-urban areas
- Windy areas
- Archaeological resources probable or known to exist in the area (Native American midden sites)
- Special events (fairs, concerts) and motorized activities (motocross track, All Terrain Vehicle activities) on unvegetated soil (non-grass)
- Non-native population (i.e., out-of-area construction workers)

The project would require ground-disturbing activities on sandy soils; however, the project site has been previously disturbed. The Ferro Basin has been previously disturbed from quarry operations and is disced annually. The Noble Basin is also disced annually when it is not filled with water. Furthermore, previous disturbance occurred to install Vineyard Avenue and existing structures adjacent to the project site. The project would not involve special events or motorized activities on unvegetated soils. It is anticipated construction workers would be from the local or regional area and would therefore likely have previous exposure to and immunity from Valley Fever. For these reasons, construction of the project would not result in a substantial increase in entrained fungal spores that cause Valley Fever above existing background levels. With incorporation of fugitive dust reduction measures through compliance with existing VCAPCD regulations, impacts related to Valley Fever would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Project construction could generate odors associated with heavy-duty equipment operation and earth-moving activities. Such odors would be temporary in nature and limited to the duration of construction in the vicinity of the project site. The project contractor(s) would also be required to adhere to VCAPCD Rule 51 (Nuisance), which prohibits discharge of air contaminants or any other material from a source that would cause nuisance to any considerable number of persons or the public, including odor. Project operation would involve conveyance of water by gravity via two pipelines and would not result in the generation of odors. At the end of wet seasons, remaining standing water would be pumped out of the pipelines to avoid odors as much as feasible. Therefore, impacts related to other emissions (such as those leading to odors) adversely affecting a substantial number of people would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	■	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	■
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	■
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	■
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	■	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	■

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

Queries of the United States Fish and Wildlife (USFWS) Information for Planning and Consultation system (USFWS 2024a) and California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB; CDFW 2024a) were conducted to obtain comprehensive information regarding state and federally listed species, and other special-status species, with potential to occur in the project area. The CDFW Biogeographic Information and Observation System (CDFW 2024b) and the Ventura County 2023-2024 Locally Important Plant and Animal Lists (County of Ventura 2023) were also reviewed for additional information on existing conditions relating to biological resources within the project area.

United staff conducted a vegetation field assessment of the project site in January 2024. The observations of this field assessment are included herein, and the field assessment is provided as Appendix B. Both the Noble and Ferro Basins are regularly disturbed areas that are predominantly vegetated (primarily around the margins of the basins) with non-native plants. At the time of the field assessment, the Noble Basin was filled with water. Several bird species were observed in the basin, and inactive bird nests were identified in trees adjacent to the Noble Basin (Appendix B). The Ferro Basin is adjacent to the Santa Clara River and, at the time of the field assessment, had been recently disced; discing involves removing vegetation and disturbing surface soils to a depth of approximately six inches. United discs the Ferro Basin approximately once per year for vegetation control and to maintain a permeable surface.

Based on the database queries, three special status plant species were evaluated for their potential to occur within the project site. Near the project site, the bed of the Santa Clara River may provide suitable habitat for white rabbit-tobacco (*Pseudognaphalium leucocephalum*). However, the nearest recorded occurrence of white rabbit-tobacco is approximately 4.3 miles north of the project site, and this plant species was not identified in the project site during the field assessment (Appendix B). Therefore, white rabbit-tobacco has a low potential to occur near the project site. The remaining two special status plant species, Davidson's saltscale (*Atriplex serenana var. davidsonii*) and Ventura marsh milk-vetch (*Astragalus pycnostachyus var. lanosissimus*) are not expected to occur in the vicinity of the project site based on incompatible habitat conditions. No impact to special-status plant species would occur.

The database queries identified 17 special-status wildlife species that could occur within five miles of the project site. Of these species, five species were found to have potential to occur (CDFW 2024a). The remaining 12 species were eliminated based on the species-specific habitat requirements and the disturbed nature of the project site. Additionally, native birds have the potential to nest within the project site. Species determined to have some potential to occur within the project vicinity include:

- Least Bell's vireo (*Vireo bellii pusillus*)
- Tricolored blackbird (*Agelaius tricolor*)
- Unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*)
- Santa Ana sucker (*Catostomus santaanae*)
- Southern California steelhead (*Oncorhynchus mykiss irideus*)

The Santa Clara River may provide potentially suitable habitat for unarmored threespine stickleback, Santa Ana sucker, and Southern California steelhead. The project would not involve physical alteration or modification to the Santa Clara River; therefore, no direct impacts to these species would occur. The purpose of the project is to recharge groundwater during wet conditions when additional surface water flows are available. The project would not modify United's existing water rights and would not involve diverting additional water from the Santa Clara River beyond existing permitted operations. Therefore, no indirect impacts to these species would occur.

The Santa Clara River in the vicinity of the project area may also provide potentially suitable nesting and foraging habitat for the least Bell's vireo and tricolored blackbird. Potential habitat for these species does not occur within the project site. As noted above, the project would not involve physical alteration or modification of the river. Therefore, no direct impacts to least Bell's vireo or tricolored blackbird would occur. Indirect impacts to these species are unlikely given the significant distance between the project site and potential habitat within the river (greater than 500 feet), and the fact that the project does not involve diverting additional water from the river beyond existing conditions.

Other migratory or other common nesting birds are protected by California Fish and Game Code (CFGC) 3503 and the Migratory Bird Treaty Act (MBTA) and have the potential to nest within the project area. The project would likely require removal of three trees in the project site, which could result in direct impacts to nesting birds. Additionally, the project could adversely affect protected nesting birds through construction noise, dust, and other human disturbances that may cause a nest to fail. Implementation of mitigation measure BIO-1 would facilitate compliance with CFGC 3503 and the MBTA.

Mitigation Measure

BIO-1 Nesting Bird Pre-Construction Survey and Avoidance

To avoid impacts to nesting birds, project-related activities shall occur outside of the bird breeding season (February 1 to September 15) to the extent practicable. If construction must occur within the bird breeding season, then no more than 7 days prior to initiation of ground disturbance and/or vegetation removal in areas with potential to support nesting birds (i.e., near the eucalyptus groves or pepper tree groves vegetation communities, or the ornamental landscaping land cover type as well as areas suitable for ground nesting species), a nesting bird pre-construction survey shall be conducted by a qualified biologist within the disturbance footprint plus a 100-foot buffer (300-feet for raptors if suitable raptor habitat is present), where feasible. As the proposed project is anticipated to occur in several phases, multiple pre-construction nesting bird surveys may be necessary to ensure active nest avoidance. Pre-construction nesting bird surveys shall be conducted during the time of day when birds are active and shall factor in sufficient time to perform this survey adequately and completely. A report or email of the nesting bird survey results, if applicable, shall be submitted to the United project manager for review and approval prior to ground and/or vegetation disturbance activities. If burrowing owls or signs of their activity are present in the project site, United shall consult with CDFW.

If nests are found, their locations shall be flagged with bright orange construction fencing or other suitable flagging that is not harmful to wildlife. An appropriate avoidance buffer ranging in size from 25 to 50 feet for passerines, and up to 300 feet for raptors and listed species, depending upon the species and the proposed work activity, shall be determined and demarcated by a qualified biologist. Active nests shall be monitored at a minimum of once per week until it has been

determined by the qualified biologist that the nest is no longer being used by either the young or adults. No ground disturbance shall occur within this buffer until the qualified biologist confirms that the breeding/nesting is completed, and all the young have fledged. If project activities must occur within the buffer, they shall be conducted at the discretion of the qualified biologist. If no nesting birds are observed during pre-construction surveys, no further actions would be necessary.

Significance After Mitigation

Mitigation Measure BIO-1 would achieve compliance with federal and state laws through the implementation of a pre-construction nesting bird survey if construction occurs during the nesting bird season. If active nests are identified, avoidance buffers would be established to minimize impacts to nesting birds until nests are no longer active. Therefore, implementation of Mitigation Measure BIO-1 would facilitate compliance with CFGC 3503 and the MBTA. and impacts to nesting birds would be less than significant.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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

No sensitive plant communities occur within the project site. Southern riparian scrub is located along the Santa Clara River north and south of the Ferro Basin (CDFW 2024a). However, these communities would not be directly impacted by the proposed project. As described above under Item 4(a), the proposed project would not involve alteration or modification to the Santa Clara River. The project would not modify United's existing water rights and would not involve diverting additional water from the Santa Clara River beyond existing permitted operations. Therefore, the project would not have an adverse effect on any riparian habitat or other sensitive natural community, and no impact would occur.

NO IMPACT

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

As discussed under Items 4(a) and 4(b), the proposed project would not involve alteration or modification to the Santa Clara River. The USFWS National Wetlands Inventory (NWI) identifies the Ferro Basin as Freshwater Emergent Wetland and the Noble Basin as Freshwater Pond (USFWS 2024b). However, NWI is based on aerial desktop analysis and field verification is rare. In this case, the basins are erroneously identified as wetland features and are not state or federally jurisdictional wetland or water features. United maintains the basins on an annual basis for vegetation control and to maintain a permeable surface for groundwater recharge. Accordingly, the project would not have a substantial adverse effect on state or federally protected wetlands, and no impact would occur.

NO IMPACT

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

Wildlife corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as between foraging and denning areas, or they may be regional in nature, allowing movement across the landscape. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The project site is not within Essential Connectivity Areas or Natural Landscape Blocks (CDFW 2024c) and does not provide connectivity for local wildlife movement as it is regularly disturbed and surrounded by roadways and agricultural development. No regional wildlife linkages or corridors are mapped within the project area (CDFW 2024b). Within the project site, there are substantial barriers to wildlife movement, including the surrounding agricultural fields and a network of paved and dirt agricultural roads fragmenting the landscape. The Santa Clara River provides passage for wildlife movement in the surrounding region; however, the project would not physically modify the river nor modify United's existing water rights or involve diverting additional water from the Santa Clara River beyond existing permitted operations. Therefore, the project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. No impact would occur.

NO IMPACT

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The project may require removal of three trees for trenchless pipeline installation. Pursuant to California Government Code 53091, the building and zoning ordinances of a county or city do not apply to the location or construction of facilities for the production, storage, or transmission of water, wastewater, or electrical energy by a local agency. Accordingly, the project is exempt from local ordinances, such as Ventura County's tree protection ordinance. The Ventura County General Plan Conservation and Open Space Element includes measures to protect sensitive biological resources (i.e., special-status species and jurisdictional waters and wetlands) and wildlife movement. As discussed above, impacts related to special-status species would be less than significant, no impact would occur on riparian or sensitive vegetation communities, no impact would occur on jurisdiction waters and the project would not interfere substantially with wildlife movement. Therefore, impacts related to conflict with applicable local policies and ordinances would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project site is not located in the planning area for any adopted local, regional, or state Natural Community Conservation Plans or Habitat Conservation Plans. Therefore, the project would not conflict with the provisions of any such plan, and no impact would occur.

NO IMPACT

5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	■
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	■	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	■	☐

The following analysis is based on the Cultural Resources Assessment prepared for the project by Rincon Consultants, Inc. in May 2024. The Cultural Resources Assessment is included as Appendix C.

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

The California Environmental Quality Act (CEQA) requires a lead agency to determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC] Section 21084.1). A historical resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR); a resource included in a local register of historical resources; or any object, building, structure, site, area, place, record, or manuscript a lead agency determines to be historically significant (CEQA Guidelines Section 15064.5[a][1-3]).

A resource shall be considered historically significant if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

On April 5, 2024, Rincon conducted an in-person California Historical Resources Information System (CHRIS) records search at the South Central Coast Information Center (SCCIC) housed at California State University, Fullerton. The SCCIC is the official state repository for cultural resources records and reports for Ventura County. The purpose of the records search is to identify previous cultural resources studies and previously recorded cultural resources within the project site and a 0.5 mile radius. Rincon also reviewed the National Register of Historic Places (NRHP), the CRHR, the

California Historical Landmarks list, the Built Environment Resources Directory, and the Archaeological Determination of Eligibility list. The results of the analysis are included in Appendix C.

The CHRIS records search identified 16 cultural resources studies previously conducted within the 0.5-mile records search radius. Of these 16 studies, four include portions of the project site and two are within 200 feet of the project site. The CHRIS records search did not identify any previously recorded cultural resources within the project site, and identified one resource (the Santa Clara River Levee) within 150 feet of the Ferro Basin. The resource was previously evaluated for inclusion in the NRHP and CRHR and was recommended not eligible for both registers (Appendix C). An east-west trending segment of the levee is located approximately 150 feet northwest of a portion of the Ferro Basin that would be re-contoured. As such, the resource would not be subject to direct impacts as part of project construction. Given that the levee was previously recommended CRHR-ineligible and would not be directly impacted by project construction, the project would not cause a substantial adverse change in the significance of a historical resource. No impact would occur.

NO IMPACT

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

PRC Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Pursuant to PRC Section 21084.1, if it can be demonstrated that a project would cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a-b]).

A pedestrian survey of the project site was conducted on April 17, 2024. As described in Item 5(a), a CHRIS records search was also conducted. No archaeological resources were identified as a result of the field survey per CHRIS records. The background and archival research suggests the project site has low potential to contain intact archaeological deposits due to disturbances as indicated by the presence of fill material, as well as the presence of the sands and gravels (undifferentiated channel deposits) underlying the fill material. Sands and gravels are indicative of a river environment not conducive to the preservation of archaeological deposits (Appendix C). As such, the potential for encountering intact archaeological deposits during project construction is low. Although there is low potential for encountering subsurface archaeological deposits, it is always possible unknown archaeological materials are encountered during project construction. Disturbance of these resources could result in substantial adverse change in the significance of an archaeological resource and impacts could be potentially significant. Mitigation Measure CUL-1 would be required.

Mitigation Measure

CUL-1 Unanticipated Discovery of Cultural Resources

In the event archaeological resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find shall halt and the construction contractor shall immediately contact United's project manager. United shall contract an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) to evaluate the resource. If the qualified archaeologist determines the resource to be prehistoric, then a Native American representative shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or Native American representative determines it to be appropriate, archaeological testing for CRHR eligibility shall be completed. If the resource proves to be eligible for the CRHR and significant impacts to the resource cannot be avoided via project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, per the requirements of the California Code of Regulations (CCR) Guidelines Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources related to the resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance. United shall review and approve the treatment plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the regional repository of the California Historical Resources Information System, per CCR Guidelines Section 15126.4(b)(3)(C).

Significance After Mitigation

Mitigation Measure CUL-1 would minimize potential impacts to unanticipated cultural resources by establishing appropriate procedures for evaluation and treatment of any discoveries made during construction. Therefore, implementation of Mitigation Measures CUL-1 would reduce impacts to archaeological resources to a less-than-significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

No human remains are known to be present within the project site (Appendix C). However, the discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, California Health and Safety Code Section 7050.5 states no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately by United. If the human remains are determined to be of Native American origin, the Coroner will notify the NAHC, which will determine and notify a most likely descendant (MLD). The MLD has 48 hours from being granted site access to make recommendations for the disposition of the remains. If the MLD does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from subsequent disturbance. With adherence to existing regulations, impacts to human remains would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	■
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	■

a. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

During project construction, energy would be consumed in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, and construction worker travel to and from the project site. Energy use during construction would be temporary in nature, and construction equipment used would be typical of similar-sized construction projects in the region. In addition, construction contractors would be required to comply with the provisions of California Code of Regulations Title 13 Sections 2449 and 2485, which prohibit off-road diesel vehicles and diesel-fueled commercial motor vehicles, respectively, from idling for more than five minutes and would minimize unnecessary fuel consumption. Construction equipment would be subject to the USEPA Construction Equipment Fuel Efficiency Standard, and trucks would be subject to the CARB Advanced Clean Trucks regulation, both of which would also minimize inefficient, wasteful, or unnecessary fuel consumption (USEPA 2004). These regulations would result in the efficient use of energy necessary to construct the project. Therefore, project construction would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and no impact would occur.

The project would not require additional operations and maintenance during dry years. During wet years, a minimal amount of additional energy would be required for daily vehicle travel between the Noble Basin and Ferro Basin. United staff currently take daily trips to the Noble Basin during wet years, so the minimal increase in trip length to travel from the Noble Basin to Ferro Basin when the basin is being used for groundwater recharge would not result in substantial additional energy use in a manner that is wasteful or unnecessary. The project would not require a power source during operation, as water would flow through the pipelines via gravity flow. Therefore, project operation would not result in a potentially significant environmental effect due to the wasteful, inefficient, or unnecessary consumption of energy. No impact would occur.

NO IMPACT

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

United does not have specific renewable energy or energy efficiency plans applicable to the project. The County does not have energy action plans that are applicable to the project. The project involves the installation of pipelines to convey water for groundwater recharge and would not include any power sources. State regulations for energy conservation, such as the California Green Building Standards Code and California Energy Code, target energy efficiency in the development or renovation of buildings. Accordingly, these regulations would not apply to the project. Overall, no state or local plans for renewable energy or energy efficiency would apply to the project. Therefore, no impact would occur.

NO IMPACT

7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☐	■
2. Strong seismic ground shaking?	☐	☐	■	☐
3. Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
4. Landslides?	☐	☐	☐	■
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	■	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	■
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	■	☐	☐

a.1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

The project site is not fully or partially intersected by an earthquake fault delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map (DOC 2021). Therefore, the proposed project would not result in the risk of loss, injury, or death involving rupture of a known earthquake fault. No impact would occur.

NO IMPACT

a.2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Similar to all of Southern California, the project site is subject to strong ground shaking associated with active or potentially active faults within the region. Faults in proximity to the project site include the Wright Road Fault located approximately 1.5 miles east of the project site and the Ventura Fault located approximately 2.4 miles northwest of the project site (DOC 2021).

The project involves the construction of an undercrossing and installation of two reinforced concrete pipelines. The project would not include habitable structures which could put people at risk of loss, injury, or death involving strong seismic ground shaking. Design and construction of the proposed project would consider the seismic environment and would comply with applicable seismic design standards. A large seismic event, such as a fault rupture, seismic shaking, or ground failure, could result in breakage of the pipelines and/or underground leakage from the pipeline. In the event an earthquake compromises the pipelines during operation, United would conduct emergency repairs as soon as practicable.

Therefore, while the project site is located within a seismically active area and would place new infrastructure in an area that could be affected by seismic activity, impacts related to the risk of loss, injury, or death involving rupture of a known earthquake fault or strong seismic ground shaking would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

a.3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Liquefaction occurs when strong, cyclic motions during an earthquake cause water-saturated soils to lose their cohesion and take on a liquid state. Liquefied soils are unstable and can subject overlying structures to substantial damage. The project site is located in a liquefaction hazard area (DOC 2021). According to the project's Final Preliminary Design Report, up to approximately two inches of settlement could occur in the soils encountered at the project site. Soils therefore have the potential to liquefy during a seismic event, and seismically-induced liquefaction could potentially damage the proposed pipeline in the event of an earthquake, resulting in joint failure or leakage from the pipeline.

As discussed under Items 7(a.1) and 7(a.2), the project would comply with all applicable seismic design standards, including design standards aimed at reducing risk of liquefaction. In the event seismically-induced liquefaction compromises the pipelines during operation, United would conduct emergency repairs as soon as practicable. In addition, the project involves construction of water

infrastructure and would not involve placement of habitable structures within a liquefaction-prone area, thereby minimizing the potential to result in loss, injury, or death involving seismic-related ground failure due to liquefaction. As a result, impacts related to the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction, would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

a.4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

The project site is located in a relatively flat area that is not within or near an earthquake-induced landslide hazard zone (DOC 2021). Therefore, the project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. No impact would occur.

NO IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

Soil erosion or the loss of topsoil may occur when soils are disturbed but not secured or restored, such that wind or rain events may mobilize disturbed soils, resulting in their transport off the project site. The project site is relatively flat; however, construction of the proposed pipeline would require grading and open cut trenching on land that is currently undeveloped, which would involve exposing soil such that erosion and topsoil loss could occur.

Because the project disturbance area would be greater than one acre in size, United would be required to obtain coverage from the State Water Resource Control Board's (SWRCB) Construction Stormwater General Permit. The Construction Stormwater General Permit requires development and implementation of a project-specific Stormwater Pollution Prevention Plan (SWPPP). Implementation of the SWPPP would minimize the amount of sediment and other pollutants discharged in stormwater runoff from the construction site by requiring BMPs to control erosion and sedimentation. Construction BMPs would include, but not be limited to, measures designed to minimize erosion and retain sediment on site. With adherence to the requirements of the Construction Stormwater General Permit, impacts related to substantial soil erosion or loss of topsoil would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

As discussed in Item 7(a.4), the project site is a flat area devoid of hillsides and therefore not subject to landslides. As discussed in Item 7(a.3), the project site is within a liquefaction hazard area. Accordingly, the proposed project could be subject to unstable soils. However, the project is not anticipated to adversely affect soil stability or increase the potential for local or regional liquefaction, lateral spreading, subsidence or collapse, as excavated areas would be properly backfilled in accordance with applicable compaction requirements. The project would not include habitable structures and impacts related to landslide, lateral spreading, subsidence, liquefaction, or collapse would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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

Expansive soils are soils with high shrink-swell potential. The shrink-swell potential is low if the soil has a linear extensibility of less than three percent (United States Department of Agriculture [USDA] 2017). The project site is underlain by the Metz, Mocho, and Pico soil series (USDA 2024). These soils have linear extensibility ranging from 1.5 to 2.6 percent, indicating a low shrink-swell potential (USDA 2024). In addition, the project does not include construction of habitable structures. Therefore, the proposed project would not expose people to risks related to expansive soils and no impact would occur.

NO IMPACT

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The proposed project does not include the use of septic tanks or alternative wastewater disposal systems. Therefore, no impact would occur.

NO IMPACT

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Paleontological resources, or fossils, are the evidence of once-living organisms preserved in rock. They include the fossilized remains of ancient plants and animals and evidence of ancient plants and animals, such as trackways, imprints, or burrows. Paleontological resources are not found in "soil;" rather, they are contained within the geologic deposits or bedrock that underlies the soil layer. Typically, fossils are over 5,000 years old (i.e., older than middle Holocene in age) and are preserved in sedimentary rocks. Fossils are often distributed in a non-continuous and unpredictable manner within some sedimentary units, and the potential for fossils to occur within sedimentary units depends on several factors. It is possible to evaluate geologic units' potential to contain scientifically important paleontological resources, and to evaluate the potential for impacts to those resources.

The paleontological sensitivity of the geologic units underlying the project site was evaluated to assess the potential for scientifically-important paleontological resources to be encountered during construction. This evaluation included a paleontological locality search and a review of existing information and scientific literature regarding known fossils within geologic units mapped at the project site. According to the SVP (2010) classification system, geologic units can be assigned a high, low, undetermined, or no potential for containing scientifically-significant, nonrenewable paleontological resources. Following the literature review, a paleontological sensitivity classification was assigned to each geologic unit mapped within the project site. This classification is based on rock units within which vertebrate or significant invertebrate fossils may be present, as determined by previous studies. The potential for impacts to significant paleontological resources is based on the potential for ground disturbance to directly impact paleontologically-sensitive geologic units.

The project site is situated in the Transverse Ranges geomorphic province, one of the eleven geomorphic provinces in California (California Geological Survey 2002). Locally, the project site is located on the Oxnard Plain, a broad coastal plain formed primarily from Pleistocene- to Holocene-aged alluvial sediments.

A fossil locality search was requested from the Natural History Museum of Los Angeles, which identified there are no known fossil localities within the project site (Bell 2024). The nearest fossil localities to the project site originate from areas mapped as the Saugus and Pico formations. in the mountains to the northwest and Las Posas Hills. However, these geologic units are found several hundred feet below the surface within the project site, so they will not be impacted by project construction.

The project is located in the *Saticoy, California* United States Geological Survey 7.5-minute topographic quadrangle(s). The geology of the region surrounding the project site was mapped by Tan et al. (2004), who identified two geologic units underlying the project site: Holocene stream terrace deposits and Holocene alluvial deposits.

Holocene stream terrace deposits underlie most of the project site, bordering the Santa Clara River, whereas Holocene alluvial deposits underlie the southeastern portions of the project site (Tan et al. 2004). Both geologic units consist of sandy clay and clayey sand. However, Holocene stream terrace deposits represent point-bar (i.e., fluvial) deposition, whereas Holocene alluvial deposits represent overbank (i.e., floodplain) deposits; accordingly, Holocene stream terrace deposits generally contain more gravel. Holocene-aged sediments are generally considered too young (i.e., less than 5,000 years old) to preserve paleontological resources (SVP 2010). Therefore, Holocene stream terrace deposits and Holocene alluvial deposits have low paleontological sensitivity.

Holocene-aged geologic units, such as Holocene stream terrace deposits, may be underlain by sediments that are old enough (i.e., more than 5,000 years old) to preserve paleontological resources. Early Holocene and Pleistocene sediments are known to preserve paleontological resources in Ventura County (Bell 2024; Jefferson 2010; Paleobiology Database 2024), and therefore have high paleontological sensitivity.

Sediments associated with the Oxnard Aquifer consist of alluvium that is early Holocene (Hansen et al. 2003) or late Pleistocene (DeVecchio et al. 2009) in age and, thus, are highly paleontologically sensitive. Based on groundwater modeling (Hansen et al. 2003), it is estimated that Oxnard Aquifer sediments are located approximately 50 feet below the surface within the project site. Ground-disturbing activities within previously undisturbed sediments with high paleontological sensitivity could encounter paleontological resources. Impacts would be significant if construction activities result in the destruction, damage, or loss of scientifically important paleontological resources and associated stratigraphic and paleontological data. The project would involve grading in the Ferro Basin and Noble Basin, excavations and horizontal drilling for the trenchless crossing of Vineyard Avenue, and open cut trench pipeline installation. These activities are anticipated to reach a maximum depth of 25 feet, so no excavations within high-sensitivity sediments (i.e., sediments associated with the Oxnard Aquifer) are anticipated. However, these age-depth estimates are not based on data from within the project site itself, and stream channel sediments may rework (i.e., erode and re-deposit) older sediments and the fossils they contain. Therefore, there is low potential for paleontological resources to be encountered and the following mitigation measure (GEO-1) is required to reduce impacts to a less-than-significant level.

Mitigation Measure

GEO-1 Unanticipated Discovery of Paleontological Resources

United shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If a potential fossil is discovered during project construction, construction activity within 50 feet of the find shall cease until the discovery is examined by a

Qualified Professional Paleontologist. If the find is determined to be significant, the Qualified Professional Paleontologist shall direct all mitigation measures related to paleontological resources consistent with the Society of Vertebrate Paleontology (2010) standards.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	■	☐
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	■

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. Climate change is the result of numerous, cumulative sources of greenhouse gas (GHG) emissions contributing to the warming of Earth's surface. GHG emissions occur both naturally and as a result of human activities, such as fossil fuel burning, decomposition of landfill wastes, raising livestock, deforestation, and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

GHG emissions associated with project construction and operation were estimated using CalEEMod, with the assumptions described under Item 3(b) in Section 3, *Air Quality*. CalEEMod modeling outputs are included in Appendix A. For the purposes of this GHG analysis, it was assumed the project would have a 50-year lifetime. Construction emissions were amortized over the project's estimated 50-year lifetime because construction emissions are confined to a relatively short period of time in relation to the overall life of the project.

According to the CEQA Guidelines, projects can tier from a qualified GHG reduction plan, which allows for project-level evaluation of GHG emissions through the comparison of a project's consistency with the GHG reduction policies included in a qualified GHG reduction plan. Neither United, the County of Ventura, the VCAPCD, the California Office of Planning and Research, CARB, the California Air Pollution Control Officers Association, nor any other state or applicable regional agency has adopted a numerical significance threshold for assessing GHG emissions that is applicable to the project. Therefore, there is no qualified GHG reduction plan to tier from. In the absence of any adopted numeric threshold, the significance of the proposed project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b) by considering whether the proposed project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG

emissions. Therefore, the significance of the proposed project's potential impacts regarding GHG emissions and climate change is evaluated based on consistency with plans and polices adopted for the purposes of reducing GHG emissions and mitigating the effects of climate change. The most directly applicable adopted regulatory plans to reduce GHG emissions are the CARB 2022 Scoping Plan and the SCAG 2024 RTP/SCS.

Construction Emissions

Construction of the project would result in GHG emissions primarily associated with the use of off-road construction equipment. Table 4 shows the estimated annual GHG construction emissions associated with the project as well as the amortized construction emissions over a 50-year project life. As shown therein, project construction would generate approximately 239 metric tons of carbon dioxide equivalent[1] over the construction period. Amortized over 50 years, the project would generate approximately 5 metric tons of carbon dioxide equivalent per year. GHG emissions generated during construction would be short-term in nature, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions. As demonstrated under Item (b), the project would not conflict with an applicable plan, policy, or regulation pertaining to the reduction of GHG emissions. Therefore, in the absence of a numerical threshold, impacts related to construction GHG emissions would be less than significant.

Table 4 Estimated Construction GHG Emissions

Year	Project Emissions (Metric Tons Per Year of Carbon Dioxide Equivalent)
Total Construction Emissions	239
Total Amortized over 50 Years	5

Construction would begin between July 2025 and June 2027. The analysis modeled construction to start in July 2025, which would conservatively estimate emissions since emissions factors would decrease in accordance to statewide plans to reduce air quality and GHG emissions.

See Appendix A for CalEEMod worksheets.

Operational Emissions

Operation of the project would result in negligible GHG emission associated with the minor increase in operations and maintenance trip length as workers travel from the Noble Basin to the Ferro Basin during wet years. The project would not require a power source as water would be directed through the pipelines via gravity flow. As demonstrated under Item (b), the project would not conflict with an applicable plan, policy, or regulation pertaining to the reduction of GHG emissions. Therefore, in the absence of a numerical threshold, impacts related to operational GHG emissions would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

[1] Carbon dioxide equivalent is a unit of measurement used to standardize the climate effects of various GHGs in terms of the amount of carbon dioxide that would create the same amount of global warming.

b. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The most directly applicable adopted regulatory plans to reduce GHG emissions are the CARB 2022 Scoping Plan and the SCAG 2024 RTP/SCS. The project's consistency with these plans is discussed in the subsections below.

2022 Scoping Plan

The principal state policies for reducing GHG emissions are Assembly Bill (AB) 32 and Senate Bill (SB) 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020 and the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030. The 2022 Scoping Plan identifies plans, regulations and strategies to be implemented at the state and project level that will reduce GHG emissions consistent with state policies with a target of 85 percent below 1990 levels by 2045, which is the equivalent of carbon neutrality by 2045.

The 2022 Scoping Plan identifies priority GHG reduction strategies related to transportation electrification, building decarbonization, and VMT reduction (CARB 2022b). Because the project involves the construction of a pipeline for water conveyance, the majority of 2022 Scoping Plan priority GHG reduction strategies are inapplicable to the project. In addition, operation of the project would not require a power source and therefore would not generate GHG emissions which could conflict with the 2022 Scoping Plan. Given that the project would negligibly increase the number of operational trips beyond existing conditions, the project would not conflict with the 2022 Scoping Plan's goal of reducing GHG emissions through reductions in vehicle miles travelled (VMT) statewide. Therefore, the project would not conflict with the priority GHG reduction strategies within the 2022 Scoping Plan. No impact would occur.

Southern California Association of Governments' 2024 Regional Transportation Plan/Sustainable Communities Strategy

In April 2024, SCAG approved and adopted the updated 2024 RTP/SCS, which is a regional growth-management strategy that targets per capita GHG reduction from passenger vehicles and light-duty trucks in the Southern California region. The plan integrates land use and transportation strategies to achieve GHG emissions reduction targets set by CARB. The 2024 RTP/SCS incorporates local land use projections and circulation networks in city and county general plans. Typically, a project would be inconsistent with the 2024 RTP/SCS if the project would exceed the population and employment growth assumptions within the 2024 RTP/SCS. As discussed under Item 3(b) in Section 3, *Air Quality*, the project would not require additional United employees and therefore would not contribute to the projected growth in employment in Ventura County. The project would also not result in population growth, as project would not include housing or substantial new water supplies which would lead to population growth. The project would not exceed the population and employment growth assumptions within the 2024 RTP/SCS. Therefore, the project would not conflict with the 2024 RTP/SCS. No impact would occur.

NO IMPACT

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9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	■	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☐	■	☐
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■
e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	■
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	■	☐

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction of the project would require the use of limited quantities of construction-related hazardous materials and petroleum products (e.g., diesel fuel, lubricants, and solvents). The transport, use, and storage of hazardous materials would be conducted pursuant to applicable local, state, and federal regulations regarding the handling of potentially hazardous materials, including Title 49 of the Code of Federal Regulations and Title 13 of the California Code of Regulations. Title 49 of the Code of Federal Regulations requires training of every employee who handles hazardous materials to ensure proper handling, transport, and disposal of the hazardous materials. Title 13 of the California Code of Regulations regulates transport of hazardous materials to ensure the safe transport of hazardous materials. With adherence to these regulations, project construction would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. This impact would be less than significant.

Operation of the project would include the use of equipment to maintain the Ferro Basin and Noble Basin, which would use fuels. As discussed above, the project would comply with applicable regulations regarding the use of potentially hazardous materials. The project would involve the conveyance of water via gravity flow to the Ferro Basin for groundwater recharge. Therefore, operation of the project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. No impact would occur.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The presence of hazardous materials during project construction activities could result in an accidental upset or release of hazardous materials if they are not properly stored and secured. Hazardous materials used during project construction would be disposed of off-site in accordance with all applicable laws and regulations. Additionally, the project would adhere to BMPs required by the SWPPP, including BMPs to prevent spills, leaks, and off-site discharge of construction debris and waste. In the event groundwater dewatering is required, United would discharge the groundwater back into the same basin the groundwater was extracted. Dewatered groundwater would infiltrate in the basin and no impacts to surface waters would occur. As discussed under Item 9(a), the use of fuels during project operation would also comply with applicable requirements for potentially hazardous materials. Therefore, the project would have a less than significant impact related to creating hazards through upset and accident conditions.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

The closest school to the project site is the Linda Vista Adventist Elementary School, located approximately 0.14 mile east of the Ferro Basin. As described under Items 9(a) and 9(b), project personnel would adhere to applicable regulations regarding the handling of potentially hazardous materials. In addition, BMPs required by the SWPPP would further prevent the potential for spills, leaks, and off-site discharge of construction debris and waste during construction. These regulatory requirements would minimize the potential for the release of hazardous materials. Therefore, the project would have a less than significant related to handling hazardous materials within 0.25-mile of an existing or proposed school.

LESS-THAN-SIGNIFICANT IMPACT

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

The following resources were reviewed on April 4, 2024, to determine if the project site is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5:

- California Environmental Protection Agency's (CalEPA) list of active cease and desist and cleanup and abatement orders (CalEPA 2024)
- California Department of Toxic Substances Control's (DTSC) EnviroStor database (DTSC 2024)
- SWRCB's GeoTracker database (SWRCB 2024a)

Based on a review of these databases, the project site is not listed as a hazardous materials site. There are three Leaking Underground Storage Tank (LUST) Cleanup Sites and two Cleanup Program sites within 1,000 feet of the southern corner of the Ferro Basin. These sites have all been designated as "Completed-Case Closed" since 2003, meaning remedial action has been undertaken, and following the remedial action the County issued a closure letter or other formal closure decision document stating the site does not pose a substantial risk (SWRCB 2024b; SWRCB 2024c; SWRCB 2024d; SWRCB 2024e; SWRCB 2024f). The Ferro Basin has been previously disturbed from quarry operations and is disced annually. Accordingly, the Ferro Basin has been routinely disturbed such that contamination would likely have been previously encountered had it existed on site. Project activities would not result in ground disturbance at these Completed-Case Closed sites. Therefore, the project would have no impact related to hazardous material sites.

NO IMPACT

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

The closest airports to the project site are the Camarillo Airport, located approximately 4.1 miles southeast of the Ferro Basin, and the Oxnard Airport, located approximately 4.9 miles southwest of the Ferro Basin. The project site is outside of the influence areas and compatibility zones of these airports (Ventura County Transportation Commission 2024). Accordingly, the project would not result in a safety hazard or excessive noise for people residing or working in the project area due to proximity to an airport. No impact would occur.

NO IMPACT

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

The project site is within the planning area of the County's Emergency Operations Plan (County of Ventura 2021). As discussed in Section 17, *Transportation*, while implementation of the project would increase traffic to and from the project site during construction, the project would not require the closure of Vineyard Avenue. Vineyard Avenue is not designated as an evacuation route (County of Venture 2021). Due to the proposed embankment's proximity to Vineyard Avenue, temporary traffic controls such as flaggers may be required. United would be required to implement traffic controls in accordance with the required Caltrans Utility Encroachment Permit. However, project construction would not substantially interfere with traffic on Vineyard Avenue. In wet years when the Ferro Basin is being utilized for groundwater recharge, daily trips would be required to the Ferro Basin; United staff currently take daily trips to the Noble Basin during wet years, so the project would result in a minor increase in operations and maintenance activities as workers travel from the Noble Basin to the Ferro Basin. However, this would not require road closures or result in substantial interferences with implementation of the Emergency Operations Plan. Accordingly, the project would have a less than significant impact related to the impairment or interference with an adopted emergency response plan or emergency evacuation plan.

LESS-THAN-SIGNIFICANT IMPACT

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

As discussed in Section 20, *Wildfire*, the project site is not within a fire hazard severity zone, but is located approximately 1.2 miles southwest of lands designated as moderate, high, and very high fire hazard severity zones within a state responsibility area (California Department of Forestry and Fire Protection [CAL FIRE] 2024). The project site is surrounded by existing agricultural and agricultural commercial land uses, residences, and roadways and is not located proximate to undeveloped wildland areas. In addition, the project consists of water conveyance infrastructure and would not include habitable structures. Construction personnel would adhere to the PRC to minimize fire risk. These regulations include PRC Section 4442 which requires earth-moving and portable construction equipment with internal combustion engines to use spark arrestors when operating on any forest-covered, brush-covered, or grass-covered land. Therefore, impacts related to exposure of people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	■	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	■
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	☐	☐	☐	■
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☐	■
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	■	☐
(iv) Impede or redirect flood flows?	☐	☐	☐	■
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	■
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	■

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction

The project would involve excavation, grading, and other construction activities which could adversely impact water quality due to increased erosion and sedimentation resulting from exposed soils and the generation of pollutants such as trash, construction materials, and equipment fluids. The SWRCB requires projects that would disturb more than one acre during construction activities to obtain coverage under the *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities*, Order No. 2022-0057-DWQ, National Pollutant Discharge Elimination System (NPDES) No. CAS000002 (Construction Stormwater General Permit). The project would disturb more than one acre and therefore United must obtain coverage under the Construction Stormwater General Permit prior to the start of construction. Obtaining coverage from the Construction Stormwater General Permit requires preparation and implementation of a SWPPP which includes project-specific erosion and sediment control BMPs to control erosion, sediment release, and otherwise reduce the potential for discharge of pollutants from construction into stormwater. Typical BMPs include, but are not limited to, covering stockpiled soils, installation of silt fences and erosion control blankets, and proper handling and disposal of wastes. In addition, the Construction Stormwater General Permit requires implementation of BMPs such as vehicle maintenance and proper storage of construction materials to reduce the potential for leaks and spills.

If groundwater conditions approach historical high levels during project construction, it is possible groundwater could be encountered and construction activities could require groundwater dewatering. In the event groundwater dewatering is required, United would discharge the groundwater back into the same basin the groundwater was extracted from. No dewatered groundwater would be discharged into a surface water body or municipal stormwater system. Because dewatered groundwater would be discharged in a different area of the same groundwater basin it was extracted from, dewatered groundwater would infiltrate and not reach surface waters. Accordingly, no impacts to surface water quality would occur.

Compliance with the requirements of the Construction Stormwater General Permit, including implementation of a SWPPP and associated BMPs, would minimize the project's potential to degrade surface or groundwater quality. This impact would be less than significant.

Operation

The project would not modify United's existing water rights and would not involve diverting additional water from the Santa Clara River beyond existing permitted operations. Project operation would negligibly increase the amount of impervious surfaces on site and would not increase discharge of stormwater which could adversely affect water quality. The project would convey water from the Noble Basin to the Ferro Basin via gravity flow for groundwater recharge. Because the Noble Basin is downstream of other United recharge basins, most debris and trash is removed from conveyed water by the time it is conveyed to the Noble Basin. United staff would periodically clean any remaining debris from the metal grating and would pump out remaining standing water at the end of wet seasons to avoid debris from accumulating and prevent stagnant water. With routine maintenance of the project to minimize trash and debris at the project site, project operation would not substantially degrade surface or groundwater quality. This impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The project site overlies the Santa Clara River Valley-Oxnard subbasin, which is designated as a high-priority groundwater basin by the California Department of Water Resources (DWR; DWR 2024). The groundwater basin is under the management of the Fox Canyon Groundwater Management Agency (FCGMA; FCGMA 2019). As described in the Initial Study Section 7, *Description of Project*, the purpose of the project is to facilitate groundwater recharge in the subbasin. The project would allow United to provide capacity for an additional 2,000 to 3,000 acre-feet of groundwater recharge per year. Accordingly, no impacts related to groundwater supplies, groundwater recharge, and sustainable groundwater management would occur.

NO IMPACT

c.(i) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?

The project would not alter the course of a stream or river or otherwise alter the existing drainage pattern of the site or area. The project also would not introduce substantial impervious surfaces. Therefore, the project would not alter existing drainage patterns in a manner which would result in substantial erosion or siltation on- or off-site. No impact would occur.

NO IMPACT

c.(ii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

The project would not alter the course of a stream or river or add substantial impervious surfaces and therefore would not substantially increase the rate or amount of surface runoff compared to existing conditions. Accordingly, the project would have no impact related to on- or off-site flooding.

NO IMPACT

c.(iii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

The project would not alter the course of a stream or river or add substantial impervious surfaces. The project would convey stormwater from the Noble Basin to the Ferro Basin for groundwater recharge and would not introduce stormwater to existing or planned drainage systems. The project would include metal grating that would prevent debris from entering the Ferro Basin. With routine maintenance of the project to minimize trash and debris at the project site, the project would not provide substantial additional sources of polluted runoff. This impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c.(iv) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

According to the Federal Emergency Management Agency (FEMA), the project site is located within Zone X, which is an area outside of a flood hazard zone (FEMA 2024). Although the Ferro Basin is adjacent to the Santa Clara River, an existing levee protects the Ferro Basin from flooding and the project site is not subject to flood flows (FEMA 2024). The project would not alter the course of a stream or river or add substantial impervious surfaces and therefore would not alter the existing flooding potential at the site. Therefore, the project would not substantially alter the existing drainage pattern of the site or area in a manner which would impede or redirect flood flows. No impact would occur.

NO IMPACT

d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

As described in Item 10(c.iv), the project site is not located in a flood hazard area. The project site is approximately 6.2 miles east of the Pacific Ocean. According to the DOC, the project site is located outside of a tsunami hazard area (DOC 2024c). The project site is also not proximate to large bodies of water which could put the project site at risk due to seiche. Therefore, the project would not risk release of pollutants due to inundation in flood hazard, tsunami, or seiche zones. No impact would occur.

NO IMPACT

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Water Quality Control Plan for the Los Angeles Region Basin is the water quality control plan applicable to the project site. This plan defines beneficial uses, sets forth water quality objectives, and establishes programs to manage the quality of surface water and groundwater and achieve those water quality objectives for protection of beneficial uses (Los Angeles Regional Water Quality Control Board 2023). As stated in Item 10(a), project construction would be required to obtain coverage under the Construction Stormwater General Permit which requires preparation and implementation of a SWPPP to control erosion, sediment release, and otherwise reduce the potential for discharge of pollutants from construction into stormwater. Compliance with the Construction Stormwater General Permit would ensure project construction would not impair beneficial uses of surface water and groundwater identified in the Water Quality Control Plan for the Los Angeles Region Basin. Operation of the project would utilize site controls and housekeeping to prevent debris and pollutants from entering the Ferro Basin. Therefore, the project would not conflict with or obstruct implementation of a water quality control plan.

As described in Item 10(b), the project site overlies the Santa Clara River Valley-Oxnard subbasin which is managed by FCGMA. FCGMA has implemented a Groundwater Sustainability Plan for the subbasin intended to guide sustainable management of the subbasin and prevent substantial groundwater overdraft, facilitate groundwater recharge, and mitigate seawater intrusion (FCGMA 2019). The purpose of the project is to facilitate groundwater recharge in the subbasin. The project would allow United to provide capacity for an additional 2,000 to 3,000 acre-feet of groundwater recharge per year. The project would therefore assist FCGMA to sustainably manage the subbasin.

Additionally, the project would not modify United's existing water rights and would not involve diverting additional water from the Santa Clara River beyond existing permitted operations. Therefore, the project would not conflict with or obstruct implementation of a sustainable groundwater management plan.

For the reasons described above, no impact would occur.

NO IMPACT

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11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☐	■
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	■

a. Would the project physically divide an established community?

The project would include installation of an undercrossing and two concrete pipelines. Project construction would not require the closure of Vineyard Avenue. The project would not include any structures, such as new roads, which could potentially physically divide an established community. Therefore, no impact would occur.

NO IMPACT

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The project site is located in unincorporated Ventura County. Pursuant to California Government Code 53091, the building and zoning ordinances of a county or city do not apply to the location or construction of facilities for the production, storage, or transmission of water, wastewater, or electrical energy by a local agency. Therefore, the project is only evaluated for consistency with the Ventura County 2040 General Plan.

The 2040 General Plan identifies policies to provide a sustainable water supply and support groundwater recharge. The project's potential consistency with applicable policies is described in Table 5. As shown therein, the project would actively support 2040 General Plan policies related to water supply, groundwater storage, water quality protection, and groundwater recharge. Accordingly, the project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No impact would occur.

NO IMPACT

Table 5 2040 General Plan Consistency

General Plan Goal or Policy	Proposed Project Consistency
WR-1.1 Sustainable Water Supply. The County should encourage water suppliers, groundwater management agencies, and groundwater sustainability agencies to inventory and monitor the quantity and quality of the county's water resources, and to identify and implement measures to ensure a sustainable water supply to serve all existing and future residents, businesses, agriculture, government, and the environment.	**Potentially Consistent.** The project would enable United to provide capacity for an additional 2,000 to 3,000 acre-feet of groundwater recharge per year which would promote sustainable groundwater management and groundwater supply.
WR-1.9 Groundwater Basin Use for Water Storage. Where technically feasible, the County shall support the use of groundwater basins for water storage.	**Potentially Consistent.** The project's purpose is to utilize the Ferro Basin for groundwater recharge and provide additional groundwater recharge capacity.
WR-2.2 Water Quality Protection for Discretionary Development. The County shall evaluate the potential for discretionary development to cause deposition and discharge of sediment, debris, waste, and other contaminants into surface runoff, drainage systems, surface water bodies, and groundwater. In addition, the County shall evaluate the potential for discretionary development to limit or otherwise impair later reuse or reclamation of wastewater or stormwater. The County shall require discretionary development to minimize potential deposition and discharge through point source controls, storm water treatment, runoff reduction measures, best management practices, and low impact development.	**Potentially Consistent.** Construction of the project would comply with SWRCB and RWQCB permitting requirements to reduce potential impacts to water quality. Operation of the project would not generate stormwater pollutants.
WR-4.2 Important Groundwater Recharge Area Protection. In areas identified as important recharge areas by the County or the applicable Groundwater Sustainability Agency, the County shall condition discretionary development to limit impervious surfaces where feasible and shall require mitigation in cases where there is the potential for discharge of harmful pollutants within important groundwater recharge areas.	**Potentially Consistent.** The project would not introduce substantial impervious surfaces as the pipelines would be installed via an undercrossing. The project would provide additional groundwater recharge capacity.
WR-4.3 Groundwater Recharge Projects. The County shall support groundwater recharge and multi-benefit projects consistent with the Sustainable Groundwater Management Act and the Integrated Regional Water Management Plan to ensure the long-term sustainability of groundwater.	**Potentially Consistent.** The project is a groundwater recharge project that would provide capacity for an additional 2,000 to 3,000 acre-feet of groundwater recharge per year.

Source: County of Ventura 2020

12 Mineral Resources

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

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

According to the DOC's *Special Report 253 - Mineral Land Classification: Portland Cement Concrete Aggregate in the Western Ventura County and Simi Production-Consumption Regions*, the project site is designated as a Mineral Resources Zone-2 area, indicating the presence of construction aggregate resources (Marquis 2022).

The project would not result in the loss of availability of aggregate resources as the proposed undercrossing and pipelines would primarily be installed within the public right-of-way utilized as an existing roadway. The Ferro Basin was previously used as a quarry to extract aggregate resources prior to its acquisition by United. Accordingly, aggregate resources have been previously depleted from the Ferro Basin, and the use of the Ferro Basin for groundwater recharge would not result in substantial losses of aggregate resources. Furthermore, the project would not include habitable buildings or other uses that would prohibit the extraction of aggregate resources in the area. Therefore, although the project is located in a Mineral Resources Zone-2 area, no impacts related to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state would occur.

NO IMPACT

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

The project site is located within a Mineral Resources Protection overlay zone designated by the County. As stated in Item 12(a), the Ferro Basin was previously used as a quarry to extract aggregate resources; however, similar to the rest of the project site, the Ferro Basin is proposed for use as spreading grounds to percolate water and recharge groundwater supplies. Therefore, under existing conditions, the Ferro Basin is not considered a mineral resource recovery site. The project would not require other quarries or mineral resource recovery sites to cease extraction activities. The project would not include habitable buildings or other structures which would result in the loss of a mineral resource recovery site. Therefore, no impacts related to the loss of availability of a locally important mineral resource recovery site would occur.

NO IMPACT

13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	■	☐	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	■	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response. Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in the noise level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line), the path the sound will travel, site conditions, and obstructions.

Noise levels from a point source (e.g., construction, industrial machinery, air conditioning units) typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance. Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013). Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. The noise descriptors used for this study are the equivalent noise level (L_{eq}), and the community noise equivalent level (CNEL; may also be symbolized as L_{den}).

L_{eq} is one of the most frequently used noise metrics; it considers both duration and sound power level. The L_{eq} is defined as the single steady-state A-weighted sound level equal to the average sound energy over a time period. When no time period is specified, a 1-hour period is assumed. The L_{max} is the highest noise level within the sampling period, and the L_{min} is the lowest noise level within the measuring period. Normal conversational levels are in the 60 to 65-dBA L_{eq} range; ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations (Federal Transit Administration [FTA] 2018).

The primary existing noise sources in the vicinity of the project site include vehicular traffic on Vineyard Avenue and agro-industrial development in the area. The closest sensitive receivers to the project site include a single-family residence approximately 65 feet northeast of the pipeline alignment west of East Vineyard Avenue and a single-family residence approximately 200 feet west of Noble Basin staging area. The closest school, Linda Vista Adventist Elementary School, is located approximately 1,500 feet from the center of Ferro Basin grading activities and 2,400 feet from pipeline construction and Noble Basin staging area.

United has not adopted thresholds for construction noise. Pursuant to California Government Code 53091, the building and zoning ordinances of a county or city do not apply to the location or construction of facilities for the production, storage, or transmission of water, wastewater, or electrical energy by a local agency. Accordingly, the project is exempt from local noise thresholds. The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction in their *Transit and Noise Vibration Impact Assessment Manual* (FTA 2018). For residential uses, the daytime noise threshold is 80 dBA L_{eq} for an 8-hour period, and the nighttime noise threshold is 70 dBA L_{eq} for an 8-hour period. Therefore, in lieu of a United-specific threshold, the FTA thresholds are used to determine the significance of project construction noise.

Daytime Construction Activities

Project construction activities would generate temporary noise, exposing sensitive receivers to increased noise levels. Project construction noise would be generated by heavy-duty diesel construction equipment used for the phases described under Table 1. Each phase of construction has a specific equipment mix and associated noise characteristics, depending on the equipment used during that phase. Construction noise would be short-term and temporary at any given location given construction activities would take place over a wide area over the course of the six- to eight-month construction schedule.

Reference noise levels for construction noise were estimated using the FHWA Roadway Construction Noise Model (RCNM) (FHWA 2006). RCNM predicts construction noise levels for a variety of construction operations based on empirical data and the application of acoustical propagation formulas. A distance attenuation rate of 7.5 dBA per doubling of distance was then applied as the surfaces between construction and the nearest sensitive receivers are predominantly agricultural fields.

The nearest sensitive receivers from construction activities were determined to be housing on agricultural lots, which includes 5625 Vineyard Avenue, 5636 Vineyard Avenue, and 5721 Vineyard Avenue. Noise levels from each construction activity to the nearest sensitive receivers are shown in Table 6. As shown in Table 6, construction noise levels would not exceed the FTA's daytime construction noise threshold of 80 dBA L_{eq} (8-hour), and daytime construction noise impacts would be less than significant.

Table 6 Construction Noise Levels

Construction Phase	Equipment	Nearest Sensitive Receiver	Distance to Nearest Sensitive Receiver (feet)[1]	Construction Noise Level (dBA Leq)[2]	Exceed Threshold of 80 dBA?[3]
Construction Mobilization and Procurement	Dozer (1)	5721 East Vineyard Avenue	100	72	No
Trenchless Pipeline Installation	Drill Rig (1)	5721 East Vineyard Avenue	100	66	No
Open Cut Trench Pipeline Installation	Crane (2), Excavator (2)	5721 East Vineyard Avenue	100	74	No
Grading and Contouring (Noble Basin)	Dozer (1), Scraper (1), Loader (1)	5636 East Vineyard Avenue	250	69	No
Construction of Gates	Crane (1), Forklift (1), Generator (1), Loader (3)	5721 East Vineyard Avenue	100	72	No
Construction of Grating	Crane (1), Forklift (3), Generator (1), Loader (3), Welder (1)	5721 East Vineyard Avenue	100	75	No
Start of Project Operation	Crane (2), Drill Rig (1), Excavator (2)	5721 East Vineyard Avenue	100	76	No
Potential Ferro Basin Grading and Contouring	Scraper (5)	5721 East Vineyard Avenue	250	73	No

dBA Leq = A-weighted decibels time-weighted equivalent.

[1] Distance assumes from the center of overall construction activity for each activity.

[2] Distance attenuation assumes a soft surface attenuation, which results in a -7.5 dBA reduction per doubling of distance, due to the predominantly agricultural surroundings between the construction areas and sensitive receivers.

[3] Threshold is 80 dBA Leq (8-hour) .

See Appendix D for RCNM outputs.

Nighttime Construction Activities

Nighttime construction would be required for trenchless pipeline installation, which may use an auger drill rig. This construction would occur at a distance of approximately 100 feet from the nearest sensitive receiver to the north at 5721 East Vineyard Avenue and 250 feet from the next closest sensitive receiver to the south at 5625 Vineyard Avenue. Noise levels from an auger drill rig at these distances would be 71 dBA L_{eq} (8-hour) at 5721 East Vineyard Avenue and 63 dBA L_{eq} (8-hour) at 5625 Vineyard Avenue. Therefore, nighttime construction noise levels may exceed the FTA's nighttime construction noise threshold of 70 dBA L_{eq} (8-hour) at 5721 East Vineyard Avenue, and impacts would be potentially significant. Mitigation Measure NOI-1 would be required.

Operation

The proposed pipeline infrastructure would require periodic maintenance, including occasional clearing of debris from the metal grates, vegetation mowing in the basins, and pumping of standing water out of pipelines at the end of wet seasons. In dry years, the project would not result in an increase in operations and maintenance trips compared to existing conditions. In wet years when the Ferro Basin is utilized for groundwater recharge, daily trips would be required to the Ferro Basin; United staff currently take daily trips to the Noble Basin during wet years, so the project

would result in a minor increase in operations and maintenance trip length as workers travel from the Noble Basin to the Ferro Basin. However, this minor increase would not result in a substantial increase in noise levels and would be similar noise to that occurs within the agricultural area that the basins are located within. In addition, water would flow through the pipelines via gravity flow, and the project would not require a power source during operation. Therefore, operational noise levels from the project would be less than significant.

Mitigation Measure

NOI-1 Nighttime Construction Noise Reduction Measures

For construction occurring between the hours of 10:00 p.m. and 7:00 a.m., United or its construction contractor shall reduce construction noise levels so as not to exceed a nighttime noise level of 70 dBA L_{eq} (8-hour) at nearby residences. Strategies to achieve this may include, but are not limited to, the following noise reduction measures:

- Drill rigs will be controlled with the best available noise control technology. For example, drilling noise control may be achieved by shrouding the drill rig, shielding drilling noise with temporary noise barriers, and/or by reducing exhaust noise with a sound-absorbing muffler.
- Material hauling and deliveries shall be coordinated by the construction contractor to reduce the potential for nighttime truck trips.
- Where feasible, hydraulic equipment shall be used instead of pneumatic impact tools, and electric powered equipment shall be used instead of diesel-powered equipment.
- At least 21 days prior to the start of construction activities, residents within 500 feet of the proposed night work shall be notified of the planned construction activities. The written notification shall include a brief description of the project, the activities that would occur, the hours when construction would occur, and the construction period's overall duration. The notification shall include the telephone numbers of United's and contractor's authorized representatives that are assigned to respond in the event of a noise complaint.
- If a construction noise complaint(s) is registered, the contractor shall retain a qualified noise consultant to conduct noise measurements at the properties that registered the complaint. The noise measurements shall be conducted for a minimum of eight hours. The consultant shall prepare a letter report for United summarizing the measurement results and potential measures to reduce nighttime noise to 70 dBA L_{eq} (8-hour) at residences.

Significance After Mitigation

Implementation of Mitigation Measure NOI-1 would reduce drill rig noise levels through best available noise control technology. Generally, blocking the line of sight between a noise source and a receiver will provide at least a 5-dBA reduction in source noise levels at the receiver (FHWA 2011). With implementation of Mitigation Measure NOI-1, nighttime construction noise levels would be reduced to approximately 66 dBA Leq (8-hour) at the nearest residence and would not exceed the FTA's nighttime construction noise threshold of 70 dBA Leq (8-hour). Therefore, this impact would be less than significant with mitigation.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent buildings or structures and vibration energy may propagate through the buildings or structures. The primary concern from vibration is that it can be intrusive and annoying to building occupants at vibration-sensitive land uses and may cause structural damage. Typically, ground-borne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean squared (RMS) vibration velocity. The PPV and RMS velocity are normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used as it corresponds to the stresses that are experienced by buildings (Caltrans 2020).

Potential vibration impacts related to project construction and operation are discussed below.

Construction

Project construction may require operation of vibratory equipment such as bulldozers, and this equipment may be used in proximity to the nearest building, which is a residential building located approximately 65 feet northeast of the project site. A bulldozer creates a vibration level of 0.089 in/sec PPV at a distance of 25 feet (Caltrans 2020). This would attenuate to 0.042 in/sec PPV at a distance of 50 feet. This would not exceed Caltrans' construction vibration threshold for residential building damage of 0.2 in/sec PPV. Therefore, construction vibration impacts would be less than significant.

Operation

The proposed project consists of an underground pipeline and maintenance activities in the Noble Basin and Ferro Basin. These activities would not be completed with equipment that would result in substantial vibration levels. Therefore, operational vibration impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The nearest airports to the project site are the Camarillo Airport, located approximately 4.1 miles southeast of the Ferro Basin, and the Oxnard Airport, located approximately 4.9 miles southwest of the Ferro Basin. The project site is outside of the influence areas and compatibility zones of these airports (Ventura County Transportation Commission 2024). Given the distance of the project site from the airport, the project would not expose people residing or working in the project area to excessive noise levels associated with airport operations. No impact would occur.

NO IMPACT

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14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	■
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The purpose of the project is to recharge groundwater during wet conditions when additional surface water flows are available. The project would not include housing or other infrastructure that would directly lead to population growth. Given the small-scale nature of project construction activities, construction workers would be drawn from the existing, regional workforce and would not indirectly result in the relocation of people to Ventura County. While the project would result in a minor increase in operations and maintenance trips to the Noble Basin and Ferro Basin during wet years, no employment increases would occur due to these trips. Accordingly, the project would not directly result in population growth. The project would not modify United's existing water rights and would not involve diverting additional water from the Santa Clara River beyond existing permitted operations, and therefore would not indirectly result in population growth. No existing people or housing are located on the project site; as such, the project would also not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Accordingly, no impacts related to population and housing would occur.

NO IMPACT

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15 Public Services

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
a.	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	1 Fire protection?	☐	☐	☐	■
	2 Police protection?	☐	☐	☐	■
	3 Schools?	☐	☐	☐	■
	4 Parks?	☐	☐	☐	■
	5 Other public facilities?	☐	☐	☐	■

a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

a.5. Would the project result in substantial adverse physical impacts associated with the provision of other new or physically altered public facilities, or the need for other new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

As described in Section 14, *Population and Housing*, the project does not include development of structures or infrastructure that would directly or indirectly increase the population in Ventura County. As an undercrossing and pipelines, the project would not include components that would place additional demands on fire or police protection services. Therefore, the project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, or other public facilities. No impact would occur.

NO IMPACT

16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	■
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	■

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

As described in Section 14, *Population and Housing*, the project does not include development of structures or infrastructure that would directly or indirectly increase the population in Ventura County. Therefore, the project would not increase the population served by local recreation facilities or otherwise result in increased demand for or degradation of those facilities. As such, the project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. The project also does not include recreational facilities or require the construction or expansion of recreational facilities. No impact related to recreation would occur.

NO IMPACT

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17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	■	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	■	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	☐	☐	■	☐
d. Result in inadequate emergency access?	☐	☐	■	☐

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Regional and local plans and policies addressing the circulation system include the Ventura County General Plan Circulation, Transportation and Mobility Element; the SCAG 2024 RTP/SCS; and Ventura County Comprehensive Transportation Plan Update (County of Ventura 2020; SCAG 2024; Ventura County Transportation Commission 2023). Access to the project site would be provided by Vineyard Avenue. No transit stops, paved sidewalks, or bicycle facilities are located along the segment of Vineyard Avenue adjacent to the project site. Construction traffic would be temporary, lasting approximately six to eight months.

The proposed pipelines would be installed via trenchless methods underneath Vineyard Avenue. Project construction would not require closure of Vineyard Avenue because the entry and exit pits would be located outside of the Vineyard Avenue right-of-way. Due to the proposed embankment's proximity to Vineyard Avenue, temporary traffic controls such as flaggers may be required. United would be required to implement traffic controls in accordance with the required Caltrans Utility Encroachment Permit. Project construction would not substantially interfere with traffic on Vineyard Avenue.

In wet years when the Ferro Basin is utilized for groundwater recharge, daily trips would be required to the Ferro Basin; United staff currently take daily trips to the Noble Basin during wet years, so the project would result in a minor increase in operations and maintenance activities as workers travel from the Noble Basin to the Ferro Basin. This increase would not require road closures or otherwise substantially impact transit, roadway, bicycle, or pedestrian facilities. Therefore, impacts related to potentially conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

CEQA Guidelines Section 15064.3(b) identifies criteria for evaluating transportation impacts. Specifically, the guidelines state VMT exceeding an applicable threshold of significance may indicate a significant impact. According to Section 15064.3(b)(3) of the CEQA Guidelines, a lead agency may include a qualitative analysis of operational and construction traffic if existing models or methods are not available to estimate the VMT for the project being considered. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. United has not adopted VMT thresholds.

A VMT calculation is typically conducted on a daily or annual basis, for long-range planning purposes. As discussed in Item 17(a), construction of the proposed project would temporarily increase vehicle trips due to the transport of construction workers, vehicles, and equipment to and from the project site. Increases in VMT from construction would be short-term, minimal, and temporary. While the project would result in a minor increase in additional operations and maintenance activities at the Ferro Basin during wet years, these additional operations would not increase vehicle trips or generate substantial VMT compared to existing conditions because workers already visit the Noble basin daily during wet years. Therefore, impacts related to conflict or inconsistency with CEQA Guidelines Section 15064.3(b) would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

The project would not involve the construction of new roads or reconfiguration of any roadways or intersections that could result in a substantial increase in traffic hazards. During construction, staging and worker parking would occur in designated areas in the project alignment outside of Vineyard Avenue. No road closures would be required as a result of the project. Upon the completion of construction, the pipeline would be located underground and thus would not substantially increase traffic hazards. Therefore, impacts related to substantially increasing hazards due to a geometric design feature or incompatible use would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project result in inadequate emergency access?

During construction, the project would not require the closure of Vineyard Avenue and therefore would allow emergency vehicles to access facilities adjacent to Vineyard Avenue. Due to the proposed embankment's proximity to Vineyard Avenue, temporary traffic controls such as flaggers may be required. United would be required to implement traffic controls in accordance with the required Caltrans Utility Encroachment Permit which would facilitate traffic management for emergency vehicles. With adherence to regulatory requirements, project construction would have a less than significant impact on emergency access.

Operation of the project would result in a minor increase in vehicle trips compared to existing conditions, as United staff visits the Noble basin daily during wet years and would subsequently visit the Ferro Basin in the same trip. Accordingly, project operation would not result in substantial vehicle travel which could impede emergency access. Therefore, project operation would not result in inadequate emergency access, and no impact would occur.

LESS-THAN-SIGNIFICANT IMPACT

18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	☐	☐	☐	■
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	■

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?

On July 1, 2015, Assembly Bill 52 (AB 52) was enacted, expanding CEQA by defining a new resource category, "tribal cultural resources." AB 52 states, "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states the lead agency

shall establish measures to avoid impacts altering the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Sections 21074 (a)(1)(A-B) define tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and are:

1. Listed or eligible for listing in the CRHR or in a local register of historical resources as defined in PRC Section 5020.1(k); or
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1(c). In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified or adopted. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those having requested notice of projects proposed in the jurisdiction of the lead agency.

Rincon contacted the Native American Heritage Commission (NAHC) on March 15, 2024, to request a search of the Sacred Lands File (SLF) as well as an Assembly Bill 52 (AB 52) specific contact list of Native Americans culturally affiliated with the project site vicinity. On March 25, 2024, the NAHC responded to the AB 52 contacts and SLF request, stating the results of the SLF search were negative. On April 25, 2024 United distributed AB 52 consultation letters for the project, including project information, a map, and United contact information to the following Native American tribes:

- Barbareño/Ventureño Band of Mission Indians
- Chumash Council of Bakersfield
- Coastal Band of the Chumash Nation
- Gabrieleño/Tongva San Gabriel Band of Mission Indians
- Gabrieliño/Tongva Nation
- Gabrieliño-Tongva Tribe
- Northern Chumash Tribal Council
- Santa Ynez Band of Chumash Indians

Pursuant to AB 52, Native American tribes have 30 days to respond and request further project information and formal consultation. On May 8, 2024, the Northern Chumash Tribal Council responded and stated they shall defer to more proximal tribal groups. On June 10, 2024, the Santa Ynez Band of Chumash Indians responded and stated they request no further consultation on the project. None of the other contacted tribes responded to the consultation letters, and the consultation period ended on May 28, 2024. Accordingly, AB 52 consultation is complete for the project.

No tribal cultural resources listed or eligible for listing in the CRHR or in a local register of historical resources were identified within the project site. In addition, no tribal cultural resources were identified within or near the project site that have been determined by United (the lead agency) to be significant. Therefore, the project would not cause a substantial adverse change in the

significance of a tribal cultural resource as defined in PRC Section 21074 that is listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k) or that is a resource determined by United (the lead agency), in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1(c). No impact would occur.

NO IMPACT

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19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	■
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	■
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	■
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	■	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	■	☐

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water

The project itself consists of water conveyance infrastructure to facilitate groundwater recharge. The environmental impacts of the project have been evaluated throughout this document. The project would not result in growth requiring additional water infrastructure or water supply. Therefore, the project would not require or result in the relocation or construction of new or expanded water facilities. No impact would occur.

Wastewater

During construction, wastewater from construction personnel would be collected via portable facilities and would not require installation of wastewater infrastructure. This wastewater would likely be disposed of at an existing wastewater treatment facility, and because wastewater generated during construction would be minimal and short-term, it would not exceed the capacity of existing wastewater facilities. The project would not require permanent on-site personnel and does not include installation of restroom facilities. Therefore, the project would not result in the construction or relocation of additional new or expanded wastewater facilities. No impacts related to construction of new or expanded wastewater treatment would occur.

Stormwater Drainage

The project would not introduce impervious surfaces as the pipelines and associated infrastructure would be installed via an undercrossing at Vineyard Avenue. Therefore, the project would not increase runoff and would not necessitate additional stormwater drainage infrastructure at the project site. No new or expanded stormwater drainage facilities would be required, and no impact would occur.

Electric Power

No power source would be required for the project because the pipelines would convey water from the Noble Basin to the Ferro Basin via gravity flow. Therefore, the project would not require new or expanded electric power facilities. No impact would occur.

Natural Gas

No power source would be required for the project because the pipelines would convey water from the Noble Basin to the Ferro Basin via gravity flow. Therefore, the project would not require connections to natural gas facilities and would not require new or expanded natural gas facilities. No impact would occur.

Telecommunications

The project would not require any connection to telecommunication facilities. Therefore, the project would not require new or expanded telecommunication facilities. No impact would occur.

NO IMPACT

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

The purpose of the project is to facilitate groundwater recharge in the subbasin. The project would allow United to provide capacity for an additional 2,000 to 3,000 acre-feet of groundwater recharge per year, which would result in beneficial impacts related to groundwater supplies. Small quantities of water would be required during construction for dust suppression activities. This water use would be temporary and minimal and would ultimately be offset by United's increased groundwater recharge capacity that would occur following completion of the project. The project would not include habitable buildings or other structures requiring increased long-term water demand. Therefore, no impacts related to water supply would occur.

NO IMPACT

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

During construction, wastewater from construction personnel would be collected via portable facilities and would not require installation or expansion of wastewater infrastructure. In operation, the project would not require permanent on-site personnel and does not include installation of restroom facilities. No impact would occur.

NO IMPACT

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

As described in Initial Study Section 7, *Project Description*, no soil export from the project site would occur during construction. Construction would not include paving, demolition, or other activities and would generate minimal quantities construction and demolition debris. Operation and maintenance of the project would not generate solid waste. Therefore, impacts related to solid waste would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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20 Wildfire

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

a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The project site is not within a fire hazard severity zone, but is located approximately 1.2 miles southwest of lands designated as moderate, high, and very high fire hazard severity zones within a state responsibility area (CAL FIRE 2024).

As discussed in Environmental Checklist Section 9, *Hazards and Hazardous Materials*, the project site is within the planning area of the County's Emergency Operations Plan (County of Ventura 2021). While implementation of the project would increase traffic to and from the project site during construction, the project would not require the closure of Vineyard Avenue and United would implement traffic controls as necessary to ensure traffic is able to safely travel on Vineyard Avenue and, if necessary, Vineyard Avenue could be used as an evacuation route. During operation,

the project would result in a minor increase in operations and maintenance activities as workers travel from the Noble Basin to the Ferro Basin. However, this would not require road closures or otherwise result in substantial interferences with implementation of the Emergency Operations Plan. Therefore, impacts related to impairment of an adopted emergency response plan or emergency evacuation plan would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The project site is in a flat area and would not exacerbate wildfire risks due to slope. Additionally, the project would not have project occupants as no habitable structures are proposed; accordingly, only construction workers located on site during the construction phase could be exposed to wildfire. The project site is surrounded by existing agricultural and agricultural commercial land uses, residences, and roadways and is not located in areas with unmanaged combustible vegetation. To minimize fire risk, construction personnel would adhere to PRC Section 4442, which requires earth-moving and portable construction equipment with internal combustion engines to use spark arrestors when operating on any forest-covered, brush-covered, or grass-covered land. In addition, PRC Section 4428 requires construction contractors to maintain fire suppression equipment during the highest fire danger period (April 1 to December 1) when operating on or near any forest-covered, brush-covered, or grass-covered land. The project area contains limited grass-covered land, which would reduce the potential for spark-induced wildfire. Therefore, impacts related to exposure of construction workers to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The project would not require the installation of roads, fuel breaks, emergency water sources, or power lines. The proposed pipelines would be installed via an undercrossing and would not include materials that would exacerbate fire risk or result in temporary or ongoing impacts to the environment. No impact would occur.

NO IMPACT

d. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project would not include the construction of habitable structures that could expose people to downslopes or downstream flooding or landslides. As discussed in Environmental Checklist Section 7, *Geology and Soils*, the project site is flat and not subject to landslides. As discussed in Environmental Checklist Section 10, *Hydrology and Water Quality*, the project site is not subject to flooding. Therefore, the project would not expose structures to downslopes or downstream flooding or landslides as a result of runoff, post-fire slope instability or drainage changes. No impact would occur.

NO IMPACT

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21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	■
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	■	☐	☐
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	■	☐	☐

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

As discussed in Section 4, *Biological Resources*, the project would not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal. In addition, as discussed in Section 5, *Cultural Resources*, the project would not eliminate important examples of the major periods of California history or prehistory. No impact would occur.

NO IMPACT

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Cumulative impacts are defined as two or more individual (and potentially less than significant) project effects which, when considered together or in concert with other projects, combine to result in a significant impact within an identified geographic area. Cumulative development in the vicinity of the project site includes the following (County of Ventura 2024):

- **Approved Permit PL23-0133**: A conditional use permit to allow rental and leasing of heavy equipment. This project also involves the replacement of parking spaces with an area for tractor displays. This project is located approximately 0.5 mile southwest of the Ferro Basin.
- **Approved Permit PL23-0067:** A conditional use permit to allow the continued operation of an existing concrete batch plant until 2030. The project would not include new construction, expansion, or increase in the facility's operational capacity. This project is located approximately 0.6 mile northeast of the Noble Basin.

Project impacts are primarily temporary, localized effects that would occur during construction activities. As discussed throughout this IS-MND, the project would result in no impacts to agriculture and forestry resources, energy, land use and planning, mineral resources, population and housing, public services, recreation, and tribal cultural resources, and therefore the project would not contribute to cumulative impacts to these resources. The potential for the project to contribute to cumulative impacts would be limited to the infrequent periods of project activities and the following specific issue areas, for which the project is anticipated to have less than significant impacts (with or without mitigation):

- **Air Quality:** Because the Basin is designated as being in nonattainment for the ozone NAAQS and CAAQS and nonattainment for the PM_{10} CAAQS, significant cumulative air quality impacts currently exist for these pollutants. As discussed in Section 3, *Air Quality,* with implementation of Mitigation Measure AQ-1, the proposed project would not generate emissions of these air pollutants which exceed the VCAPCD significance thresholds, which are intended to assess whether a project's contribution to existing cumulative air quality impacts is considerable. Therefore, the project's contribution to significant cumulative air quality impacts would not be cumulatively considerable.
- **Biological Resources:** Cumulative development in the region would continue to disturb areas with the potential to contain or provide habitat for biological resources. Cumulative development projects have undergone or would be required to undergo CEQA review, which would determine the extent of potential biological resources impacts and mitigate those impacts appropriately. If these cumulative projects would result in impacts to biological resources, impacts to such resources would be addressed on a case-by-case basis. Given the uncertainty in the extent of impacts associated with these projects, this analysis conservatively assumes a significant cumulative impact to biological resources would occur. Nevertheless, the proposed project would be required to implement Mitigation Measure BIO-1 to reduce its impacts to biological resources to a less-than-significant level such that project-level impacts would not result in a cumulatively considerable contribution to this cumulative impact.

- **Cultural Resources:** Cumulative development in the region would continue to disturb areas with the potential to contain cultural and tribal cultural resources. As mentioned above, cumulative development projects have undergone or would be required to undergo CEQA review, which would determine the extent of potential cultural resources impacts and mitigate those impacts appropriately. If cumulative projects would result in impacts to known or unknown cultural resources, impacts to such resources would be addressed on a case-by-case basis. Given the uncertainty in the extent of impacts associated with these projects, this analysis conservatively assumes a significant cumulative impact to cultural resources would occur. Nevertheless, the proposed project would be required to implement Mitigation Measure CR-1 to reduce its impacts to cultural resources to a less-than-significant level such that project-level impacts would not result in a cumulatively considerable contribution to this cumulative impact.
- **Geology and Soils:** Cumulative development in the region would continue to disturb areas with the potential to contain paleontological resources. As discussed above, cumulative development projects have undergone or would be required to undergo CEQA review, which would determine the extent of potential paleontological resources impacts and mitigate those impacts appropriately. This analysis conservatively assumes a significant cumulative impact to paleontological resources would occur. Nevertheless, the proposed project would be required to implement Mitigation Measure GEO-1 to reduce its impacts to paleontological resources to a less-than-significant level such that project-level impacts would not result in a cumulatively considerable contribution to this cumulative impact.
- **Greenhouse Gas Emissions:** GHG emissions and climate change are, by definition, cumulative impacts. As discussed in Environmental Checklist Section 8, *Greenhouse Gas Emissions*, the adverse environmental impacts of cumulative GHG emissions, including increased average temperatures, more drought years, and more frequent large wildfires, are already occurring. As a result, cumulative impacts related to GHG emissions are significant. Thus, the issue of climate change involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. As discussed in Section 8, *Greenhouse Gas Emissions*, project emissions would be consistent with adopted plans and would therefore not be cumulatively considerable.
- **Hazards and Hazardous Materials:** Similar to the proposed project, cumulative projects would be required to comply with regulations applicable to the use, disposal, and transportation of hazardous materials during construction activities, and compliance with applicable regulations would reduce potential cumulative impacts to less-than-significant levels. With respect to the use and accidental release of hazardous materials in the environment during construction, effects are generally limited to site-specific conditions. Therefore, cumulative impacts related to accidental release of hazardous materials would not be significant.
- **Hydrology and Water Quality:** As discussed in Section 10, *Hydrology and Water Quality*, the project's construction-related water quality impacts would be less than significant with SWPPP implementation and regulatory compliance. The cumulative projects listed above would have less than significant impacts related to hydrology and water quality, as they would be required to comply with existing NPDES regulations to ensure they do not result in substantial erosion or stormwater discharges that would substantially affect water quality in the area. Implementation of these regulations minimizes and avoids the potential for cumulative impacts to occur. Additionally, implementation of the BMPs identified in the construction BMPs in the *Project Description* would further reduce potential impacts to water quality. Therefore, the project's contribution to significant cumulative hydrology and water quality impacts would not be cumulatively considerable.

- **Transportation:** The cumulative development projects listed above may occur at the same time as the proposed project. However, the cumulative development projects and the proposed project would not require roadway closures such that they would result in a significant cumulative transportation impact.
- **Utilities and Service Systems:** The project itself consists of water conveyance infrastructure to facilitate groundwater recharge, and would therefore not result in cumulatively considerable contribution to adverse impacts on water supply. The project would temporarily generate minimal wastewater and solid waste during construction. Therefore, the project's contribution to cumulative impacts related to solid waste or wastewater would not be considerable.
- **Wildfire:** As described in Section 20, *Wildfire*, potential wildfire impacts associated with the project would be limited to heavy-duty construction equipment possibly producing sparks to ignite vegetation, which would be less than significant with compliance with applicable law. Project operation would not involve potentially flammable activities. In addition, the proposed project would not introduce habitable structures, and therefore, would not expose new residents to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. The cumulative projects listed above would generally involve the continued operation of existing activities, and would not contribute considerably to cumulative wildfire impacts. Since there would be no long-term project operational wildfire impacts and potential construction-related wildfire impacts would be limited, the project's contribution to cumulative impact wildfire impacts would not be considerable.

Given the above discussion, the proposed project would not result in a cumulatively considerable contribution to a significant cumulative impact with mitigation incorporated.

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

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, noise, and wildfire. These are discussed in detail in Section 3, *Air Quality*, Section 9, *Hazards and Hazardous Materials*, Section 13, *Noise*, and Section 20, *Wildfire*. The project would implement Mitigation Measure AQ-1 which would require use of Tier 4 construction equipment or a maximum of three scrapers during Ferro Basin grading activities which would reduce potential air quality impacts to a less-than-significant level. The project's impact on hazards and hazardous materials, noise, and wildfire would be less than significant. Therefore, with incorporation of mitigation AQ-1, the project's impact on human beings would be reduced to a less-than-significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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List of Preparers

Rincon Consultants, Inc. prepared this IS-MND under contract to the United Water Conservation District. Persons involved in data gathering analysis, project management, and quality control are listed below.

Rincon Consultants, Inc.

Jennifer Haddow, PhD, Principal in Charge
Nicole West, CPSWQ, QSD/QSP, Project Manager
Kayleigh Limbach, Assistant Project Manager
Ethan Knox, Environmental Planner
Steven Hongola, Natural Resources Principal
Eric Schaad, Supervising Biologist
Bill Vosti, Supervising Environmental Planner
Andy McGrath, Paleontologist
Michael Vader, Senior Archaeologist
Ken Victorino, Senior Supervising Archaeologist
Annette Tran, GIS Analyst

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Appendix A

CalEEMod Modeling Outputs

United Groundwater Recharge Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	United Groundwater Recharge
Construction Start Date	7/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	7.20
Location	34.26682841503914, -119.14500137269494
County	Ventura
City	Unincorporated
Air District	Ventura County APCD
Air Basin	South Central Coast
TAZ	3451
EDFZ	8
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.24

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Other Non-Asphalt Surfaces	184	Acre	184	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.23	3.56	31.2	28.3	0.09	1.22	2.59	3.45	1.12	1.32	1.69	—	9,633	9,633	0.39	0.08	0.61	9,668
Mit.	2.92	2.52	20.6	35.9	0.09	0.80	2.59	3.03	0.74	1.32	1.69	—	9,633	9,633	0.39	0.08	0.61	9,668
% Reduced	31%	29%	34%	-27%	—	34%	—	12%	34%	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.23	3.56	31.2	28.2	0.09	1.22	3.07	3.76	1.12	1.38	2.02	—	9,626	9,626	0.39	0.08	0.03	9,660
Mit.	2.92	2.51	20.6	35.8	0.09	0.80	3.07	3.76	0.74	1.38	2.02	—	9,626	9,626	0.39	0.08	0.03	9,660
% Reduced	31%	29%	34%	-27%	—	34%	—	—	34%	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.43	0.36	3.20	3.41	0.01	0.12	0.49	0.60	0.11	0.24	0.34	—	923	923	0.04	0.01	0.06	926
Mit.	0.36	0.31	2.62	3.83	0.01	0.11	0.49	0.60	0.10	0.24	0.34	—	923	923	0.04	0.01	0.06	926
% Reduced	17%	16%	18%	-12%	—	13%	—	—	13%	—	—	—	—	—	—	—	—	—

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.08	0.07	0.58	0.62	< 0.005	0.02	0.09	0.11	0.02	0.04	0.06	—	153	153	0.01	< 0.005	0.01	153
Mit.	0.07	0.06	0.48	0.70	< 0.005	0.02	0.09	0.11	0.02	0.04	0.06	—	153	153	0.01	< 0.005	0.01	153
% Reduced	17%	16%	18%	-12%	—	13%	—	—	13%	—	—	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	25.0	25.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	—	No	Yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mit.	—	No	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	25.0	25.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	—	No	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mit.	—	No	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.15	0.97	9.09	7.67	0.01	0.40	2.59	2.99	0.37	1.32	1.69	—	1,411	1,411	0.06	0.01	0.13	1,417
2026	4.23	3.56	31.2	28.3	0.09	1.22	2.23	3.45	1.12	0.26	1.38	—	9,633	9,633	0.39	0.08	0.61	9,668
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2025	2.13	1.79	16.8	15.1	0.03	0.69	3.07	3.76	0.63	1.38	2.02	—	3,613	3,613	0.15	0.03	0.01	3,626
2026	4.23	3.56	31.2	28.2	0.09	1.22	3.07	3.70	1.12	1.38	1.96	—	9,626	9,626	0.39	0.08	0.03	9,660
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.33	0.28	2.59	2.41	< 0.005	0.11	0.49	0.60	0.10	0.24	0.34	—	516	516	0.02	< 0.005	0.03	518
2026	0.43	0.36	3.20	3.41	0.01	0.12	0.19	0.31	0.11	0.04	0.15	—	923	923	0.04	0.01	0.06	926
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.06	0.05	0.47	0.44	< 0.005	0.02	0.09	0.11	0.02	0.04	0.06	—	85.5	85.5	< 0.005	< 0.005	0.01	85.8
2026	0.08	0.07	0.58	0.62	< 0.005	0.02	0.03	0.06	0.02	0.01	0.03	—	153	153	0.01	< 0.005	0.01	153

2.3. Construction Emissions by Year, Mitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.15	0.97	9.09	7.67	0.01	0.40	2.59	2.99	0.37	1.32	1.69	—	1,411	1,411	0.06	0.01	0.13	1,417
2026	2.92	2.52	20.6	35.9	0.09	0.80	2.23	3.03	0.74	0.26	1.00	—	9,633	9,633	0.39	0.08	0.61	9,668
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.13	1.79	16.8	15.1	0.03	0.69	3.07	3.76	0.63	1.38	2.02	—	3,613	3,613	0.15	0.03	0.01	3,626
2026	2.92	2.51	20.6	35.8	0.09	0.80	3.07	3.70	0.74	1.38	1.96	—	9,626	9,626	0.39	0.08	0.03	9,660
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.33	0.28	2.59	2.41	< 0.005	0.11	0.49	0.60	0.10	0.24	0.34	—	516	516	0.02	< 0.005	0.03	518
2026	0.36	0.31	2.62	3.83	0.01	0.10	0.19	0.29	0.09	0.04	0.13	—	923	923	0.04	0.01	0.06	926
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.06	0.05	0.47	0.44	< 0.005	0.02	0.09	0.11	0.02	0.04	0.06	—	85.5	85.5	< 0.005	< 0.005	0.01	85.8

2026	0.07	0.06	0.48	0.70	< 0.005	0.02	0.03	0.05	0.02	0.01	0.02	—	153	153	0.01	< 0.005	0.01	153

3. Construction Emissions Details

3.1. Mobilization and Procurement (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.14	0.96	9.08	7.51	0.01	0.40	—	0.40	0.37	—	0.37	—	1,378	1,378	0.06	0.01	—	1,383
Dust From Material Movement	—	—	—	—	—	—	2.56	2.56	—	1.31	1.31	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.37	1.13	< 0.005	0.06	—	0.06	0.06	—	0.06	—	208	208	0.01	< 0.005	—	208
Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.20	0.20	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.25	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	34.4	34.4	< 0.005	< 0.005	—	34.5
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.4	33.4	< 0.005	< 0.005	0.13	34.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.85	4.85	< 0.005	< 0.005	0.01	4.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.80	0.80	< 0.005	< 0.005	< 0.005	0.81
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Mobilization and Procurement (2025) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.14	0.96	9.08	7.51	0.01	0.40	—	0.40	0.37	—	0.37	—	1,378	1,378	0.06	0.01	—	1,383
Dust From Material Movement	—	—	—	—	—	—	2.56	2.56	—	1.31	1.31	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.37	1.13	< 0.005	0.06	—	0.06	0.06	—	0.06	—	208	208	0.01	< 0.005	—	208
Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.20	0.20	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.25	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	34.4	34.4	< 0.005	< 0.005	—	34.5
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.4	33.4	< 0.005	< 0.005	0.13	34.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.85	4.85	< 0.005	< 0.005	0.01	4.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.80	0.80	< 0.005	< 0.005	< 0.005	0.81
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Ferro Grading (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.18	3.51	31.2	27.6	0.09	1.22	—	1.22	1.12	—	1.12	—	9,469	9,469	0.38	0.08	—	9,502

Dust From Material Movement	—	—	—	—	—	—	2.07	2.07	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.18	3.51	31.2	27.6	0.09	1.22	—	1.22	1.12	—	1.12	—	9,469	9,469	0.38	0.08	—	9,502
Dust From Material Movement	—	—	—	—	—	—	2.07	2.07	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.19	1.71	1.51	< 0.005	0.07	—	0.07	0.06	—	0.06	—	519	519	0.02	< 0.005	—	521
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.31	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	85.9	85.9	< 0.005	< 0.005	—	86.2
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.73	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	164	164	< 0.005	0.01	0.61	166
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.66	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	157	157	< 0.005	0.01	0.02	158
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.64	8.64	< 0.005	< 0.005	0.01	8.76
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.43	1.43	< 0.005	< 0.005	< 0.005	1.45
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Ferro Grading (2026) - Mitigated

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

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

Off-Road Equipment	2.86	2.46	20.6	35.2	0.09	0.80	—	0.80	0.74	—	0.74	—	9,469	9,469	0.38	0.08	—	9,502
Dust From Material Movement	—	—	—	—	—	—	2.07	2.07	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.86	2.46	20.6	35.2	0.09	0.80	—	0.80	0.74	—	0.74	—	9,469	9,469	0.38	0.08	—	9,502
Dust From Material Movement	—	—	—	—	—	—	2.07	2.07	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.14	1.13	1.93	< 0.005	0.04	—	0.04	0.04	—	0.04	—	519	519	0.02	< 0.005	—	521
Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	85.9	85.9	< 0.005	< 0.005	—	86.2
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.73	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	164	164	< 0.005	0.01	0.61	166
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.66	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	157	157	< 0.005	0.01	0.02	158
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.64	8.64	< 0.005	< 0.005	0.01	8.76
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.43	1.43	< 0.005	< 0.005	< 0.005	1.45
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Noble Earthwork (2025) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.09	1.76	16.8	14.7	0.03	0.69	—	0.69	0.63	—	0.63	—	3,517	3,517	0.14	0.03	—	3,529
Dust From Material Movement	—	—	—	—	—	—	2.97	2.97	—	1.36	1.36	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.49	0.43	< 0.005	0.02	—	0.02	0.02	—	0.02	—	103	103	< 0.005	< 0.005	—	104
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.1	17.1	< 0.005	< 0.005	—	17.2
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.43	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	95.8	95.8	< 0.005	< 0.005	0.01	97.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.83	2.83	< 0.005	< 0.005	0.01	2.87
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Noble Earthwork (2025) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.09	1.76	16.8	14.7	0.03	0.69	—	0.69	0.63	—	0.63	—	3,517	3,517	0.14	0.03	—	3,529

Dust From Material Movement	—	—	—	—	—	—	2.97	2.97	—	1.36	1.36	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.49	0.43	< 0.005	0.02	—	0.02	0.02	—	0.02	—	103	103	< 0.005	< 0.005	—	104
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.1	17.1	< 0.005	< 0.005	—	17.2
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.43	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	95.8	95.8	< 0.005	< 0.005	0.01	97.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.83	2.83	< 0.005	< 0.005	0.01	2.87
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Noble Earthwork (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.00	1.68	15.4	14.1	0.03	0.63	—	0.63	0.58	—	0.58	—	3,518	3,518	0.14	0.03	—	3,530
Dust From Material Movement	—	—	—	—	—	—	2.97	2.97	—	1.36	1.36	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.2	48.2	< 0.005	< 0.005	—	48.4

Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.98	7.98	< 0.005	< 0.005	—	8.01
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.04	0.40	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	93.9	93.9	< 0.005	< 0.005	0.01	95.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.30	1.30	< 0.005	< 0.005	< 0.005	1.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.21	0.21	< 0.005	< 0.005	< 0.005	0.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Noble Earthwork (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.00	1.68	15.4	14.1	0.03	0.63	—	0.63	0.58	—	0.58	—	3,518	3,518	0.14	0.03	—	3,530
Dust From Material Movement	—	—	—	—	—	—	2.97	2.97	—	1.36	1.36	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.2	48.2	< 0.005	< 0.005	—	48.4
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.98	7.98	< 0.005	< 0.005	—	8.01

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.04	0.40	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	93.9	93.9	< 0.005	< 0.005	0.01	95.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.30	1.30	< 0.005	< 0.005	< 0.005	1.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.21	0.21	< 0.005	< 0.005	< 0.005	0.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Punch List / Startup (2026) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.03	9.74	10.6	0.02	0.36	—	0.36	0.33	—	0.33	—	2,648	2,648	0.11	0.02	—	2,657
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.40	0.43	< 0.005	0.01	—	0.01	0.01	—	0.01	—	109	109	< 0.005	< 0.005	—	109
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.0	18.0	< 0.005	< 0.005	—	18.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Punch List / Startup (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.03	9.74	10.6	0.02	0.36	—	0.36	0.33	—	0.33	—	2,648	2,648	0.11	0.02	—	2,657
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.40	0.43	< 0.005	0.01	—	0.01	0.01	—	0.01	—	109	109	< 0.005	< 0.005	—	109
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.0	18.0	< 0.005	< 0.005	—	18.1

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Noble Gate (2026) - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.11	0.93	8.50	10.9	0.02	0.31	—	0.31	0.29	—	0.29	—	2,092	2,092	0.08	0.02	—	2,099
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.47	0.60	< 0.005	0.02	—	0.02	0.02	—	0.02	—	115	115	< 0.005	< 0.005	—	115
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.0	19.0	< 0.005	< 0.005	—	19.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	0.93	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	219	219	< 0.005	0.01	0.02	222
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.1	12.1	< 0.005	< 0.005	0.02	12.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.00	2.00	< 0.005	< 0.005	< 0.005	2.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Noble Gate (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.11	0.93	8.50	10.9	0.02	0.31	—	0.31	0.29	—	0.29	—	2,092	2,092	0.08	0.02	—	2,099
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.47	0.60	< 0.005	0.02	—	0.02	0.02	—	0.02	—	115	115	< 0.005	< 0.005	—	115
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.0	19.0	< 0.005	< 0.005	—	19.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	0.93	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	219	219	< 0.005	0.01	0.02	222
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.1	12.1	< 0.005	< 0.005	0.02	12.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.00	2.00	< 0.005	< 0.005	< 0.005	2.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Ferro Structure and Trash Rack (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.40	0.53	< 0.005	0.02	—	0.02	0.01	—	0.01	—	98.5	98.5	< 0.005	< 0.005	—	98.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.3	16.3	< 0.005	< 0.005	—	16.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.19	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	282	282	< 0.005	0.01	0.03	285
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	0.02	11.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.93	1.93	< 0.005	< 0.005	< 0.005	1.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Ferro Structure and Trash Rack (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.40	0.53	< 0.005	0.02	—	0.02	0.01	—	0.01	—	98.5	98.5	< 0.005	< 0.005	—	98.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.3	16.3	< 0.005	< 0.005	—	16.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.10	0.09	0.11	1.19	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	282	282	< 0.005	0.01	0.03	285
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	0.02	11.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.93	1.93	< 0.005	< 0.005	< 0.005	1.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Open Cut Pipeline (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	0.95	8.98	8.27	0.02	0.35	—	0.35	0.32	—	0.32	—	2,264	2,264	0.09	0.02	—	2,272
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.08	0.07	0.62	0.57	< 0.005	0.02	—	0.02	0.02	—	0.02	—	155	155	0.01	< 0.005	—	156
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	25.7	25.7	< 0.005	< 0.005	—	25.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.57	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	128	128	0.01	< 0.005	0.01	129
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.81	8.81	< 0.005	< 0.005	0.02	8.94
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.46	1.46	< 0.005	< 0.005	< 0.005	1.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Open Cut Pipeline (2025) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	0.95	8.98	8.27	0.02	0.35	—	0.35	0.32	—	0.32	—	2,264	2,264	0.09	0.02	—	2,272
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.62	0.57	< 0.005	0.02	—	0.02	0.02	—	0.02	—	155	155	0.01	< 0.005	—	156
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	25.7	25.7	< 0.005	< 0.005	—	25.8
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.57	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	128	128	0.01	< 0.005	0.01	129
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.81	8.81	< 0.005	< 0.005	0.02	8.94
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.46	1.46	< 0.005	< 0.005	< 0.005	1.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Tunneling (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	1.28	2.38	< 0.005	0.04	—	0.04	0.03	—	0.03	—	382	382	0.02	< 0.005	—	384
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.4	31.4	< 0.005	< 0.005	—	31.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.20	5.20	< 0.005	< 0.005	—	5.22
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.9	31.9	< 0.005	< 0.005	< 0.005	32.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.64	2.64	< 0.005	< 0.005	< 0.005	2.68
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.44	0.44	< 0.005	< 0.005	< 0.005	0.44
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Tunneling (2025) - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	1.28	2.38	< 0.005	0.04	—	0.04	0.03	—	0.03	—	382	382	0.02	< 0.005	—	384
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.4	31.4	< 0.005	< 0.005	—	31.5
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.20	5.20	< 0.005	< 0.005	—	5.22
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.9	31.9	< 0.005	< 0.005	< 0.005	32.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.64	2.64	< 0.005	< 0.005	< 0.005	2.68
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.44	0.44	< 0.005	< 0.005	< 0.005	0.44
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

Remove	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Mobilization and Procurement	Site Preparation	7/1/2025	9/30/2025	5.00	55.0	—
Ferro Grading	Grading	3/24/2026	4/21/2026	5.00	20.0	—
Noble Earthwork	Grading	12/17/2025	1/7/2026	5.00	15.0	—
Punch List / Startup	Architectural Coating	3/2/2026	3/23/2026	5.00	15.0	—
Noble Gate	Trenching	1/8/2026	2/5/2026	5.00	20.0	—
Ferro Structure and Trash Rack	Trenching	2/6/2026	2/27/2026	5.00	15.0	—
Open Cut Pipeline	Trenching	11/17/2025	12/16/2025	5.00	25.0	—
Tunneling	Trenching	10/1/2025	11/1/2025	7.00	30.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Mobilization and Procurement	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Ferro Grading	Scrapers	Diesel	Average	5.00	8.00	423	0.48
Noble Earthwork	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Noble Earthwork	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Noble Earthwork	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Punch List / Startup	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
Punch List / Startup	Cranes	Diesel	Average	2.00	8.00	367	0.29
Punch List / Startup	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Noble Gate	Cranes	Diesel	Average	1.00	7.00	367	0.29
Noble Gate	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Noble Gate	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

Noble Gate	Tractors/Loaders/Backh	Diesel	Average	3.00	7.00	84.0	0.37
Noble Gate	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Ferro Structure and Trash Rack	Cranes	Diesel	Average	1.00	7.00	367	0.29
Ferro Structure and Trash Rack	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Ferro Structure and Trash Rack	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Ferro Structure and Trash Rack	Tractors/Loaders/Backh oes	Diesel	Average	3.00	7.00	84.0	0.37
Ferro Structure and Trash Rack	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Open Cut Pipeline	Cranes	Diesel	Average	2.00	8.00	367	0.29
Open Cut Pipeline	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Tunneling	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Mobilization and Procurement	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Ferro Grading	Scrapers	Diesel	Average	3.00	8.00	423	0.48
Ferro Grading	Scrapers	Diesel	Tier 4 Final	2.00	8.00	423	0.48
Noble Earthwork	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Noble Earthwork	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Noble Earthwork	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Punch List / Startup	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
Punch List / Startup	Cranes	Diesel	Average	2.00	8.00	367	0.29
Punch List / Startup	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Noble Gate	Cranes	Diesel	Average	1.00	7.00	367	0.29

Noble Gate	Forklifts	Diesel	Average	1.00	8.00	82.0	0.20
Noble Gate	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Noble Gate	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Noble Gate	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Ferro Structure and Trash Rack	Cranes	Diesel	Average	1.00	7.00	367	0.29
Ferro Structure and Trash Rack	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Ferro Structure and Trash Rack	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Ferro Structure and Trash Rack	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Ferro Structure and Trash Rack	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Open Cut Pipeline	Cranes	Diesel	Average	2.00	8.00	367	0.29
Open Cut Pipeline	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Tunneling	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Mobilization and Procurement	—	—	—	—
Mobilization and Procurement	Worker	2.50	18.5	LDA,LDT1,LDT2
Mobilization and Procurement	Vendor	—	10.2	HHDT,MHDT
Mobilization and Procurement	Hauling	0.00	20.0	HHDT
Mobilization and Procurement	Onsite truck	—	—	HHDT
Tunneling	—	—	—	—
Tunneling	Worker	2.50	18.5	LDA,LDT1,LDT2

Tunneling	Vendor	—	10.2	HHDT,MHDT
Tunneling	Hauling	0.00	20.0	HHDT
Tunneling	Onsite truck	—	—	HHDT
Open Cut Pipeline	—	—	—	—
Open Cut Pipeline	Worker	10.0	18.5	LDA,LDT1,LDT2
Open Cut Pipeline	Vendor	—	10.2	HHDT,MHDT
Open Cut Pipeline	Hauling	0.00	20.0	HHDT
Open Cut Pipeline	Onsite truck	—	—	HHDT
Noble Earthwork	—	—	—	—
Noble Earthwork	Worker	7.50	18.5	LDA,LDT1,LDT2
Noble Earthwork	Vendor	—	10.2	HHDT,MHDT
Noble Earthwork	Hauling	0.00	20.0	HHDT
Noble Earthwork	Onsite truck	—	—	HHDT
Noble Gate	—	—	—	—
Noble Gate	Worker	17.5	18.5	LDA,LDT1,LDT2
Noble Gate	Vendor	—	10.2	HHDT,MHDT
Noble Gate	Hauling	0.00	20.0	HHDT
Noble Gate	Onsite truck	—	—	HHDT
Ferro Structure and Trash Rack	—	—	—	—
Ferro Structure and Trash Rack	Worker	22.5	18.5	LDA,LDT1,LDT2
Ferro Structure and Trash Rack	Vendor	—	10.2	HHDT,MHDT
Ferro Structure and Trash Rack	Hauling	0.00	20.0	HHDT
Ferro Structure and Trash Rack	Onsite truck	—	—	HHDT
Ferro Grading	—	—	—	—
Ferro Grading	Worker	12.5	18.5	LDA,LDT1,LDT2
Ferro Grading	Vendor	—	10.2	HHDT,MHDT
Ferro Grading	Hauling	0.00	20.0	HHDT

Ferro Grading	Onsite truck	—	—	HHDT
Punch List / Startup	—	—	—	—
Punch List / Startup	Worker	0.00	18.5	LDA,LDT1,LDT2
Punch List / Startup	Vendor	—	10.2	HHDT,MHDT
Punch List / Startup	Hauling	0.00	20.0	HHDT
Punch List / Startup	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Mobilization and Procurement	—	—	—	—
Mobilization and Procurement	Worker	2.50	18.5	LDA,LDT1,LDT2
Mobilization and Procurement	Vendor	—	10.2	HHDT,MHDT
Mobilization and Procurement	Hauling	0.00	20.0	HHDT
Mobilization and Procurement	Onsite truck	—	—	HHDT
Tunneling	—	—	—	—
Tunneling	Worker	2.50	18.5	LDA,LDT1,LDT2
Tunneling	Vendor	—	10.2	HHDT,MHDT
Tunneling	Hauling	0.00	20.0	HHDT
Tunneling	Onsite truck	—	—	HHDT
Open Cut Pipeline	—	—	—	—
Open Cut Pipeline	Worker	10.0	18.5	LDA,LDT1,LDT2
Open Cut Pipeline	Vendor	—	10.2	HHDT,MHDT
Open Cut Pipeline	Hauling	0.00	20.0	HHDT
Open Cut Pipeline	Onsite truck	—	—	HHDT
Noble Earthwork	—	—	—	—
Noble Earthwork	Worker	7.50	18.5	LDA,LDT1,LDT2
Noble Earthwork	Vendor	—	10.2	HHDT,MHDT

Noble Earthwork	Hauling	0.00	20.0	HHDT
Noble Earthwork	Onsite truck	—	—	HHDT
Noble Gate	—	—	—	—
Noble Gate	Worker	17.5	18.5	LDA,LDT1,LDT2
Noble Gate	Vendor	—	10.2	HHDT,MHDT
Noble Gate	Hauling	0.00	20.0	HHDT
Noble Gate	Onsite truck	—	—	HHDT
Ferro Structure and Trash Rack	—	—	—	—
Ferro Structure and Trash Rack	Worker	22.5	18.5	LDA,LDT1,LDT2
Ferro Structure and Trash Rack	Vendor	—	10.2	HHDT,MHDT
Ferro Structure and Trash Rack	Hauling	0.00	20.0	HHDT
Ferro Structure and Trash Rack	Onsite truck	—	—	HHDT
Ferro Grading	—	—	—	—
Ferro Grading	Worker	12.5	18.5	LDA,LDT1,LDT2
Ferro Grading	Vendor	—	10.2	HHDT,MHDT
Ferro Grading	Hauling	0.00	20.0	HHDT
Ferro Grading	Onsite truck	—	—	HHDT
Punch List / Startup	—	—	—	—
Punch List / Startup	Worker	0.00	18.5	LDA,LDT1,LDT2
Punch List / Startup	Vendor	—	10.2	HHDT,MHDT
Punch List / Startup	Hauling	0.00	20.0	HHDT
Punch List / Startup	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Mobilization and Procurement	0.00	0.00	27.5	0.00	—
Ferro Grading	0.00	0.00	100	0.00	—
Noble Earthwork	0.00	0.00	22.5	0.00	—

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Non-Asphalt Surfaces	184	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	8.58	annual days of extreme heat
Extreme Precipitation	5.95	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	36.5	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

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

Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—

AQ-Ozone	42.6
AQ-PM	34.8
AQ-DPM	17.1
Drinking Water	98.3
Lead Risk Housing	32.7
Pesticides	97.0
Toxic Releases	20.9
Traffic	8.22
Effect Indicators	—
CleanUp Sites	19.0
Groundwater	63.4
Haz Waste Facilities/Generators	67.6
Impaired Water Bodies	99.0
Solid Waste	96.2
Sensitive Population	—
Asthma	27.5
Cardio-vascular	22.1
Low Birth Weights	41.5
Socioeconomic Factor Indicators	—
Education	63.4
Housing	39.2
Linguistic	67.2
Poverty	41.5
Unemployment	29.4

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	76.10676248
Employed	68.92082638
Median HI	83.69049147
Education	—
Bachelor's or higher	61.31143334
High school enrollment	100
Preschool enrollment	26.60079559
Transportation	—
Auto Access	78.96830489
Active commuting	62.03002695
Social	—
2-parent households	29.86013089
Voting	84.89670217
Neighborhood	—
Alcohol availability	78.98113692
Park access	4.632362376
Retail density	6.569998717
Supermarket access	9.957654305
Tree canopy	62.59463621
Housing	—
Homeownership	65.95662774
Housing habitability	77.21031695
Low-inc homeowner severe housing cost burden	59.25830874
Low-inc renter severe housing cost burden	80.94443732
Uncrowded housing	46.83690491

Health Outcomes	—
Insured adults	38.84255101
Arthritis	0.0
Asthma ER Admissions	77.7
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	42.2
Cognitively Disabled	36.6
Physically Disabled	22.7
Heart Attack ER Admissions	80.5
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	15.2
SLR Inundation Area	0.0

Children	83.0
Elderly	13.7
English Speaking	55.4
Foreign-born	41.4
Outdoor Workers	8.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	94.3
Traffic Density	16.8
Traffic Access	23.0
Other Indices	—
Hardship	40.8
Other Decision Support	—
2016 Voting	85.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	51.0
Healthy Places Index Score for Project Location (b)	67.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Applicant provided schedule
Construction: Off-Road Equipment	Mobilization and Procurement, Ferro Grading, Noble Earthwork, Open Cut Pipeline, and Tunneling use construction equipment provided by the applicant. Defaults were assumed for the Noble Gate, Ferro Structure and Trash Rack, and Tunneling phases. The Punch List/Startup phase models the construction equipment used during open cut pipeline and tunneling.
Construction: Architectural Coatings	No architectural coatings included.

Appendix B

Biological Field Assessment

Noble and Ferro Basin Field Assessment

Date: January 2, 2024
Surveyor(s): Randall McInvale, Hannah Garcia-Wickstrum

Start Time: 0745
End Time: 0930
Weather: Cold and breezy
Habitat Type(s): Disturbed/developed

Objective/Summary

Assess the Noble and Ferro Basins for the Vineyard Crossing Project.

Survey Details/Observations

Noble Basin (Figure 1) was filled with water. Several species of birds utilizing the basin. Observed an old nest in one of the pine trees adjacent to Noble Basin (Figure 2).

Ferro Basin (Figure 3) had recently been disced and there was primarily non-native plants growing along the edges (Figure 4). Did not observe any old nests in any of the eucalyptus trees.

Table 1 - Plant Species Observed

Common Name	Scientific Name
Golden wattle	*Acacia pycnantha*
Spurge	*Euphorbia* sp.
Iceplant	*Carpobrotus edulis*
Mustard	*Hirschfeldia incana*
Morning glory	*Calystegia macrostegia*
Jersey cudweed	*Pseudognaphalium luteo-album*
Coyote bush	*Baccharis pilularis*
Unknown grass	*Bromus* sp.
Castor bean	*Ricinus communis*
Tree tobacco	*Nicotiana glauca*
Horseweed	*Conyza canadensis*
Russian thistle	*Salsola tragus*
White sweet clover	*Melilotus albus*
Telegraph weed	*Heterotheca grandiflora*
Peruvian pepper tree	*Schinus molle*
Mousehole tree	*Myoporum laetum*
Red gum eucalyptus? Blue gum?	*Eucalyptus* sp.
Bermuda buttercup	*Oxalis pes-caprae*
Redstem filaree	*Erodium cicutarium*

Lupine	*Lupinus* sp.
False goldenaster	*Heterotheca sessiflora*
Unknown pine tree	*Pinus* sp.
Southern silky oak	*Grevilea robusta*
Jimson weed	*Dautra wrightii*

Survey Photos

Figure 1 – Noble Basin filled with water. Pine trees and silky oaks along the edges.

Figure 2- stick nest in pine tree along the Noble Basin

Figure 3 – Disced field in Ferro Basin.

Figure 4 – non-native plants along slope of Ferro Basin. Eucalyptus trees in distance.

Appendix C

Cultural Resources Assessment

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003
805-644-4455

July 30, 2024
Project No: 24-15820
Hannah Garcia-Wickstrum, Environmental Scientist
United Water Conservation District
1701 North Lombard Street, Suite #200
Oxnard, California 93030
Via email: hannahg@unitedwater.org

Subject: Cultural Resources Assessment for Groundwater Recharge Capacity Expansion Project – Ferro Recharge, Ventura County, California

Dear Ms. Garcia-Wickstrum:

The United Water Conservation District (United) retained Rincon Consultants, Inc. (Rincon) to conduct a cultural resources assessment for the Groundwater Recharge Capacity Expansion Project – Ferro Recharge (project) in support of an Initial Study – Mitigated Negative Declaration (IS-MND) being prepared pursuant to the California Environmental Quality Act (CEQA). The project involves the construction of an undercrossing at Vineyard Avenue for the installation of two reinforced concrete pipelines to connect the existing Noble and Ferro Basins. United is the lead agency under CEQA. This cultural resources assessment report has been prepared to comply with CEQA and summarizes the methods and results of a California Historical Resources Information System (CHRIS) records search at the South Central Coastal Information Center (SCCIC), a Sacred Lands File (SLF) search conducted by the California Native American Heritage Commission (NAHC), archival and background research, and a pedestrian cultural resources survey.

Project Location and Description

Project Location

The project is located in an unincorporated portion of southwestern Ventura County, in an unsectioned portion of Township 2 North, Range 22 on the *Saticoy*, *California* United States Geological Survey (USGS) 7.5-minute topographic quadrangle (Attachment 1, Figure 1). Specifically, the project site is located on the southern margin of the Santa Clara River on both the northwestern and southeastern margins of Vineyard Avenue (State Route 232) approximately 0.5 mile southwest of State Route 118 between properties located at 5625 Vineyard Avenue and 5721 Vineyard Avenue (Attachment 1, Figure 2).

Project Description

United operates several hundred acres of groundwater spreading basins to facilitate groundwater recharge with diverted surface water flows. The purpose of the project is to connect United's Ferro and Noble basins, located on the northwest and southwest sides of Vineyard Avenue, respectively, via underground pipelines beneath Vineyard Avenue. The pipeline crossing would include installation of two reinforced concrete pipelines, 60 inches in diameter and approximately 650 feet in length, using open cut trench and jack-and-bore methods. The project would also involve the construction of metal grating and control gates on the open ends of the pipelines within the Ferro and Noble basins respectively, to prevent public access and control flow. Following installation of the undercrossing, an

earthen embankment would be constructed on the eastern side of the pipelines using sediments from a borrow area within the Noble Basin. Additionally, United may contour some or all of the Ferro Basin to facilitate the flow of water.

The following paragraphs summarize the construction methods for the proposed project.

Trenchless Pipeline Installation

The portion of the pipelines within the right-of-way of Vineyard Avenue would be installed via trenchless construction methods such as jack and bore or micro-tunneling. Trenchless pipeline installation would involve excavation of entry and exit pits on either end of the pipeline alignment, and the use of an auger and hydraulic jacks to push pipe casing through the ground between the pits. After completion of the casing, the proposed pipelines would then be installed inside the casing. The pipeline may also be direct jacked, without a casing. Micro-tunnelling would involve the use of drilling fluid to prevent caving. Pursuant to Caltrans requirements, the pipelines would be installed with a minimum spacing of 156 inches apart. The entry pit, which would be located on the west side of Vineyard Avenue outside of the right-of-way, would be approximately 35 feet by 40 feet and the exit pit, which would be located on the east side of Vineyard Avenue outside of the right-of-way, would be approximately 20 feet by 35 feet in size. The maximum excavation depth during this phase would be 25 feet.

Open Cut Trench Pipeline Installation

The remaining portion of the pipeline alignment, west and east of Vineyard Avenue and outside of the right-of-way, would be installed via open cut trench. Open cut trench pipeline installation would involve excavation of a trench, installation of the new pipelines, and then backfilling the trench with soil. The average excavation depth would be 15 feet, and the maximum depth of excavation is anticipated to be 25 feet. Open cut trench pipeline installation would likely occur once trenchless installation is complete and is anticipated to occur over three to five weeks.

Construction Grading and Contouring

Grading would occur on either side of Vineyard Avenue along the pipeline alignment, which would include the entry and exit pits required for trenchless installation. Grading and contouring would occur after pipeline installation. Additionally, an area in the northern portion of the Noble Basin would be used as a "borrow area," or an area in which the construction contractor would excavate materials to create an embankment on the eastern end of the pipelines. Approximately 2,800 cubic yards of soil would be excavated from the Noble Basin borrow area and used to create the embankment.

After installation of the pipeline is complete, United may contour some or all of the Ferro Basin to facilitate recharge. To provide a conservative analysis, the maximum extent of possible contouring is considered herein. Contouring of the Ferro basin would involve excavation of a maximum of 50,000 cubic yards, and contouring would occur at least 100 feet away from the western property boundary of Ferro Basin.

Pipeline Features

Once the pipelines are installed, two control gates would be installed on the eastern end of the pipelines within the Noble Basin to provide hydraulic control. The gates would also prevent public access when Ferro Basin is not active. A pipe exit structure, including metal grating to prevent access to the pipelines, would be installed on the western end of the pipelines within the Ferro Basin.

Methods

California Historical Resources Information System Records Search

On April 5, 2024, Rincon conducted an in-person CHRIS records search at the SCCIC housed at California State University, Fullerton. The SCCIC is the official state repository for cultural resources records and reports for Ventura County. The purpose of the records search is to identify previous cultural resources studies and previously recorded cultural resources within the project site and a 0.5-mile radius. Rincon also reviewed the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Historical Landmarks list, the Built Environment Resources Directory, and the Archaeological Determination of Eligibility list.

Sacred Lands File Search

Rincon contacted the NAHC on March 15, 2024, to request a search of the SLF and a list of contacts for Native American groups culturally affiliated with the project site.

Background and Archival Research

Rincon conducted archival research in support of this study, including a review of historical topographic maps and aerial photographs as well as geologic and soils maps. The intent of the archival research is to determine the development history of the project site and its vicinity and to assess the likelihood for the project site to contain subsurface archaeological deposits.

Field Survey

Rincon Archaeologist Debbie Balam conducted a pedestrian survey of the project site on April 17, 2024. Due to the presence of standing water and thick vegetation, a combination of systematic and opportunistic survey methodologies was implemented to identify cultural resources. Systematic pedestrian survey were conducted in areas with visible ground surfaces using transect intervals spaced 10 to 15 meters apart and oriented from north to south. Opportunistic surveys were conducted in areas with standing water or dense vegetation and basin margins, clearings, and other accessible areas were inspected for the presence of cultural resources.

Exposed ground surfaces were examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools), ecofacts (marine shell and bone), soil discoloration that might indicate the presence of a cultural midden, historical debris (e.g., metal, glass, ceramics), and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, foundations). Ground disturbances such as burrows and drainages were also visually inspected. A handheld Global Positioning Satellite unit and a georeferenced map of the project site were utilized to maintain survey location accuracy. Field records and a digital camera were used to document site characteristics and survey conditions. Copies of the survey notes and digital photographs are maintained at Rincon's Ventura office.

Findings

California Historical Resources Information System Records Search

Previous Cultural Resources Studies

The CHRIS records search indicates that 16 cultural resources studies were previously conducted within the 0.5-mile records search radius. Of these 16 studies, four (VN-00575, VN-00971 VN-01816, and VN-03287) include portions of the project site and two are within 200 feet of the project site (VN-01018 and VN-01172). Approximately 30 percent of the project site has been covered by previous studies. These six studies within and immediately adjacent to the project site are discussed in detail in the following paragraphs.

Study VN-00575

Study VN-00575 is an archaeological reconnaissance report prepared by Robert Lopez in 1988 for pipeline alignments, one of which is located within the Vineyard Avenue portion of the project site (Lopez 1988). The report summarizes the methods and results of a records search and a pedestrian survey. Three archaeological resources were identified as part of the study; however, none of these three resources are located within or immediately adjacent to the project site.

Study VN-00971

Study VN-00971 is a cultural resources survey report prepared by Singer and Associates in 1990 for four recycling station locations, one of which includes the portion of the project site on the southeast side of Vineyard Avenue (Singer and Atwood 1990). The study consisted of archival and background research, a records search, and a pedestrian survey. No cultural resources were identified within or adjacent to the project site as a result of the study.

Study VN-01018

Study VN-01018 is a cultural resources survey record prepared by Shelia Callison in 1980 for an approximately 17-acre parcel of land located northwest of the Central Avenue and Vineyard Avenue intersection, on the southwestern margin of the Ferro Basin (Callison 1980). The survey record summarizes only the results of the survey and does not include any archival research or records searches. No cultural resources were identified within or immediately adjacent to the project site as a result of the survey.

Study VN-01172

Study VN-01172 is an archaeological resources monitoring report prepared in 1992 documenting trenching within a parcel located immediately northeast of the Noble Basin (Brown 1992). The report summarizes the methods and results of archaeological resources monitoring conducted to assess the presence of buried archaeological deposits. No subsurface archaeological resources were identified during the trenching activities.

Study VN-01816

Study VN-01816 is an archaeological survey report prepared by Conejo Archaeological Consultants for a proposed juvenile hall center, the study area of which partially overlaps the southwestern margin of the Ferro Basin (Maki 1999). The report summarizes the methods and results of archival and

background research, a records search, and a pedestrian survey. No cultural resources were identified within or adjacent to the project site as a result of the study.

Study VN-03287

Study VN-03287 is a cultural resources study prepared by Rincon in 2017 for a recycled water pipeline project, a portion of which overlaps the southwestern margin of the Ferro Basin (Szromba et al. 2017). The study includes archival and background research, a records search, Native American outreach, local historic group outreach, and a pedestrian survey. No cultural resources were identified within or adjacent to the project site as a result of the study.

Previously Recorded Cultural Resources

The CHRIS records search indicates two cultural resources, both of which are historic-period built environment resources, have been previously recorded within the 0.5-mile records search radius. Of these two resources, one (P-56-153146 [Santa Clara River Levee]) is located immediately adjacent to the project site.

Resource P-56-153146 is a historic-period built resource documented in 2018 as the Santa Clara River Levee. Within Ventura County, the approximately 18-foot-wide Santa Clara River Levee traverses a 4.72-mile-long segment of the Santa Clara River's southern margin. The levee was originally constructed in 1961 to protect residential, industrial, and agricultural properties from periodic flooding (Smith and Hommerding 2018). The earthen levee is constructed of riprap siding and gravel, with embankments every two feet. Concrete drains and culverts were installed through the levee wall between 1981 and 2010. The resource was evaluated for inclusion in the NRHP and CRHR and was recommended not eligible due to a lack of association with significant individuals and events, as well as its lack of distinctive design and method of construction (Smith and Hommerding 2018). Resource P-56-153146 is located approximately 150 feet northwest of the Ferro Basin.

Sacred Lands File Search

On March 25, 2024, the NAHC responded to Rincon's SLF request, stating the results of the SLF search was negative for the presence of Native American cultural resources.

Background and Archival Research

Historical Topographic Map and Aerial Photograph Review

Historical topographic maps reviewed include the 1903, 1942, 1947, and 1964 *Santa Paula* 15-minute topographic quadrangles, and the 1951 *Saticoy* 7.5-minute topographic quadrangle. Historical aerial photographs of the project site were available for the years 1947, 1959, 1967, 1978, 1980, 1984, 1994, 2005, and 2016 (NETR Online 2024).

The 1903 topographic map shows the project site on the southeastern margin of the braided Santa Clara River floodplain, and a northeast-southwest trending road analogous to present-day Vineyard Avenue is depicted passing through the center of the project site. The 1942, 1947, 1951, and 1964 maps show agricultural fields/orchards covering a majority of the project site.

The 1947, 1959 and 1967 aerial photographs show the project site primarily comprised of agricultural fields and orchards. The 1978 photograph depicts gravel mining operations extending into the Noble Basin, with the 1980 and 1994 photographs showing standing water within the basin. The 1994 and 2005 photographs show a high degree of disturbance, possibly associated with adjacent gravel mining

operations within the northeastern portion of the Ferro Basin. The 2005 and 2016 photographs depict the project site's current condition, with two existing basins bisected by Vineyard Avenue.

Geologic Map Review

Geologic mapping indicates Holocene-age (11,650 years ago to present) stream terrace deposits (Qht) are mapped at surface within the project site (Tan et al. 2004). Stream terrace deposits are comprised of unconsolidated clayey sand and sandy clay gravel deposited on point bars and overbanks. These sediments were deposited during the Holocene, a period spanning human occupation of the region. However, these deposits form within braided stream channels and are comprised of large clastic particles such as gravel and sand, which represent a high energy, erosional environment that is not conducive to the natural burial and preservation of archaeological deposits (Waters 1992).

Soils Map Review

Soils mapping indicates a majority of the project site is underlain by Metz loamy sand, with the exception of the Ferro Basin's southern portion which is underlain by Pico sandy loam. Metz series soils form on floodplains and alluvial fans and are derived from sedimentary sources. The typical Metz series soil profile consists of topsoil disturbed by agricultural activities (Ap-horizon) from the ground surface to a depth of 12 inches below the ground surface followed by a C-horizon from 12 to 118 inches below the ground surface (USDA 1999).

The Pico series is characterized by deep, well-drained soils that form on floodplains and alluvial fans and are derived from sedimentary rocks (USDA 2003). The typical Pico series soil profile includes topsoil disturbed by agricultural activities (Ap-horizon) from the surface to a depth of 4 inches below the ground surface, followed by undisturbed topsoil (A-horizon) from depths of 4 to 14 inches below the ground surface, and sedimentary parent material (C-horizon) from depths of 14 inches to 60 inches below the ground surface.

Metz and Pico series soils do not typically contain subsurface topsoil (Ab-horizon), which would increase the potential for the presence of subsurface archaeological deposits.

Geotechnical Report Review

Rincon reviewed two geotechnical reports covering portions of the project site. The reports include one prepared by Oakridge Geoscience in 2019 (Oakridge Geoscience 2019), which covers the entire Ferro Basin, and one prepared by Fugro in 2022, which includes the eastern margin of the Ferro Basin, the pipeline alignment, and the western margin of the Noble Basin (Fugro 2022). The Oakridge Geoscience study included hand auger borings at 10 locations systematically placed to cover most of the Ferro Basin. The borings indicated the presence of fill material extending from the ground surface to depths ranging from 14 to 36 inches below the ground surface, with alluvium at greater depths.

The Fugro study included the placement of four mechanical borings within the project site that extend from the ground surface to a depth of 36 feet. In general, Fugro's borings identified the following subsurface sediments:

- Fill material from the ground surface to 6.5 - 8 feet below the ground surface.
- Undifferentiated channel deposits from 6.5 – 8 feet to 20 - 25 feet below the ground surface.
- Sandy-silt with gravel extending from 20 – 25 feet to 36 feet below the ground surface.

Summary

The background and archival research identified Holocene-age stream terrace deposits within the project site. Although these deposits are of the appropriate age to naturally preserve and bury archaeological materials, they represent high energy environments associated with stream channels. This is supported by the undifferentiated channel deposits identified by Fugro's geotechnical study as being comprised of sand with gravel. These are large clastic particles associated with high-energy braided channels that reflect erosional conditions not conducive to the preservation of intact archaeological deposits.

The geotechnical reports identified fill material at the surface within the project site extending to depths ranging from approximately 1.5 to 6.5 feet below the ground surface, with sand and gravels associated with undifferentiated channel deposits at greater depths. The presence of fill material suggests the project site has been subject to past disturbance, potentially from the agricultural and gravel mining activities depicted in the historical map and aerial review as well as the development of the existing basins.

Given the degree of previous disturbances within the project site indicated by the presence of fill, as well as the high energy erosional conditions of the underlying channel deposits, the project site has low potential for the presence of buried archaeological deposits.

Field Survey

The topography of the project site is generally level with the exception of the earthen berms surrounding the Ferro and Noble basins (Attachment 1, Figure 3). The Santa Clara River Levee (P-56-153146) is located north of the earthen berm along the Ferro Basin's northern margin (Attachment 1, Figure 4). Survey limitations included thick seasonal grasses and standing water within the Noble Basin (Attachment 1, Figure 5 and Figure 6). An opportunistic survey was conducted to inspect clearings within the vegetation and along the margins of the Noble Basin. The remainder of the project site was clear of obstruction and was systematically surveyed (Attachment 1, Figure 7). Ground surfaces within these areas were partially covered by annual grasses with fair to good (50 to 75 percent) ground surface visibility (Attachment 1, Figure 8). Soils observed within the project site include a grayish brown sandy loam to a brown silty sand. No archaeological resources were identified during the pedestrian survey.

Conclusions and Recommendations

The impact analysis included here is organized based on the cultural resources thresholds included in CEQA Guidelines Appendix G: Environmental Checklist Form:

a. *Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?*
b. *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?*
c. *Would the project disturb any human remains, including those interred outside of dedicated cemeteries?*

Threshold A broadly refers to historical resources. To more clearly differentiate between archaeological and built environment resources, analysis under Threshold A is limited to built environment resources. Archaeological resources, including those that may be considered historical resources pursuant to

Section 15064.5 and those that may be considered unique archaeological resources pursuant to Section 21083.2, are considered under Threshold B.

Historical Built Environment Resources (Threshold A)

One built environment resource, the Santa Clara River Levee (P-56-153146), located immediately adjacent to the project site, was identified in the CHRIS record search. The resource was previously evaluated for inclusion in the NRHP and CRHR and was recommended as not eligible for both registers (Smith and Hommerding 2018). An east-west trending segment of the levee is located approximately 150 feet northwest of a portion of the Ferro Basin that would be re-contoured during construction of the proposed project. As such, the resource would not be directly impacted during project construction. Given that the levee was previously recommended CRHR-ineligible and would not be directly impacted by project construction, the project would result in **no impacts to historical resources** pursuant to CEQA.

Historical and Unique Archaeological Resources (Threshold B)

No archaeological resources were identified as a result of the CHRIS records search and field survey. The background and archival research suggests the project site has low potential to contain intact archaeological deposits due to past disturbances, which is indicated by the presence of fill material and sand and gravel (undifferentiated channel deposits) underlying the fill material. These materials are indicative of a dynamic braided river environment, which is not conducive to the preservation of archaeological deposits. As such, the potential for encountering intact archaeological deposits during project construction is low. Although there is low potential for encountering subsurface archaeological deposits, in the unlikely event archaeological materials are encountered during project construction, Rincon recommends the following mitigation measure be implemented. With the implementation of this measure, the project would have a **less than significant impact with mitigation incorporated** for archaeological resources that may qualify as historical resources or unique archaeological resource pursuant to CEQA.

Recommended Measures

Unanticipated Discovery of Cultural Resources

In the event archaeological resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find shall halt and the construction contractor shall immediately contact United's project manager. United shall contract an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) to evaluate the resource. If the qualified archaeologist determines the resource to be prehistoric, then a Native American representative shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or Native American representative determines it to be appropriate, archaeological testing for CRHR eligibility shall be completed. If the resource proves to be eligible for the CRHR and significant impacts to the resource cannot be avoided via project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, per the requirements of the California Code of Regulations (CCR) Guidelines Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources related to the resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance. United shall review and approve the treatment

plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the regional repository of the California Historical Resources Information System, per CCR Guidelines Section 15126.4(b)(3)(C).

Human Remains (Threshold C)

No human remains are known to be present within the project site. However, the discovery of human remains is always a possibility during ground disturbing activities. If human remains are unexpectedly found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be of Native American origin, the Coroner would notify the Native American Heritage Commission, who would determine and notify a most likely descendant (MLD). The MLD has 48 hours from being granted site access to make recommendations for the disposition of the remains. If the MLD does not make recommendations within 48 hours, United must reinter the remains in an area of the property secure from subsequent disturbance. With adherence to existing regulations, Rincon recommends a finding of **less than significant impact** to human remains under CEQA.

Should you have any questions concerning this study, please do not hesitate to contact Rincon Senior Archaeologist Michael Vader at 619-241-9238 or email at mvader@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Debbie Balam, BA
Archaeologist

Michael Vader, BA
Senior Archaeologist/Project Manager

Christopher A. Duran, MA, RPA
Principal

Attachments

Attachment 1 Figures
Attachment 2 California Historical Resources Information System Records Search
Attachment 3 Native American Heritage Commission Documents

References

Brown, Joan C.

1992 Archaeological Monitoring of Trenching for the Calmat Co. Ventura County, California. Report on file with the SCCIC.

Callison, Sheila

1980 Cultural Resources Survey Of: Dp-252. Ventura County, California. Report on file with the SCCIC.

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Lopez, Robert

1988 An Archaeological Reconnaissance of the Areas Involved in the Proposed SWEPI Well Locations and Pipeline Routes Oxnard Plain, Ventura County, California. Report on file with the SCCIC.

Maki, Mary K.

1999 Phase I Archaeological Survey and Impact Assessment of 46 Acres El Rio Site-juvenile Hall Justice Center El Rio, Ventura County, California. Report on file with the SCCIC.

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1983 *Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines*. Electronic resource, https://www.nps.gov/subjects/historicpreservation/upload/standards-guidelines-archeology-historic-preservation.pdf, accessed April 24, 2024.

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2019 Results of Soil Sampling and Laboratory Testing, Ferro Recharge Basin, Saticoy, California. On vile at the United Water Conservation District, Oxnard, California.

Singer, Clay A., and John E. Atwood

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Smith, Timothy and Chris Hommerding

2018 P-56-153146 Archaeological Site Survey Record. Department of Parks and Recreation 523 Form: Archaeological Site Survey Record. Report on file with the SCCIC.

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2004 Geologic map of the Saticoy 7.5-minute quadrangle, Ventura County, California. Electronic resource, online at https://ngmdb.usgs.gov/ngm-bin/pdp/zui_viewer.pl?id=71736, accessed April 24, 2024.

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1999 Metz Series. Electronic resource, https://soilseries.sc.egov.usda.gov/OSD_Docs/M/METZ.html, accessed April 24, 2024.

2003 Pico Series. Electronic resource, https://soilseries.sc.egov.usda.gove/OSD_Docs/P/PICO.html, accessed April 24, 2024.

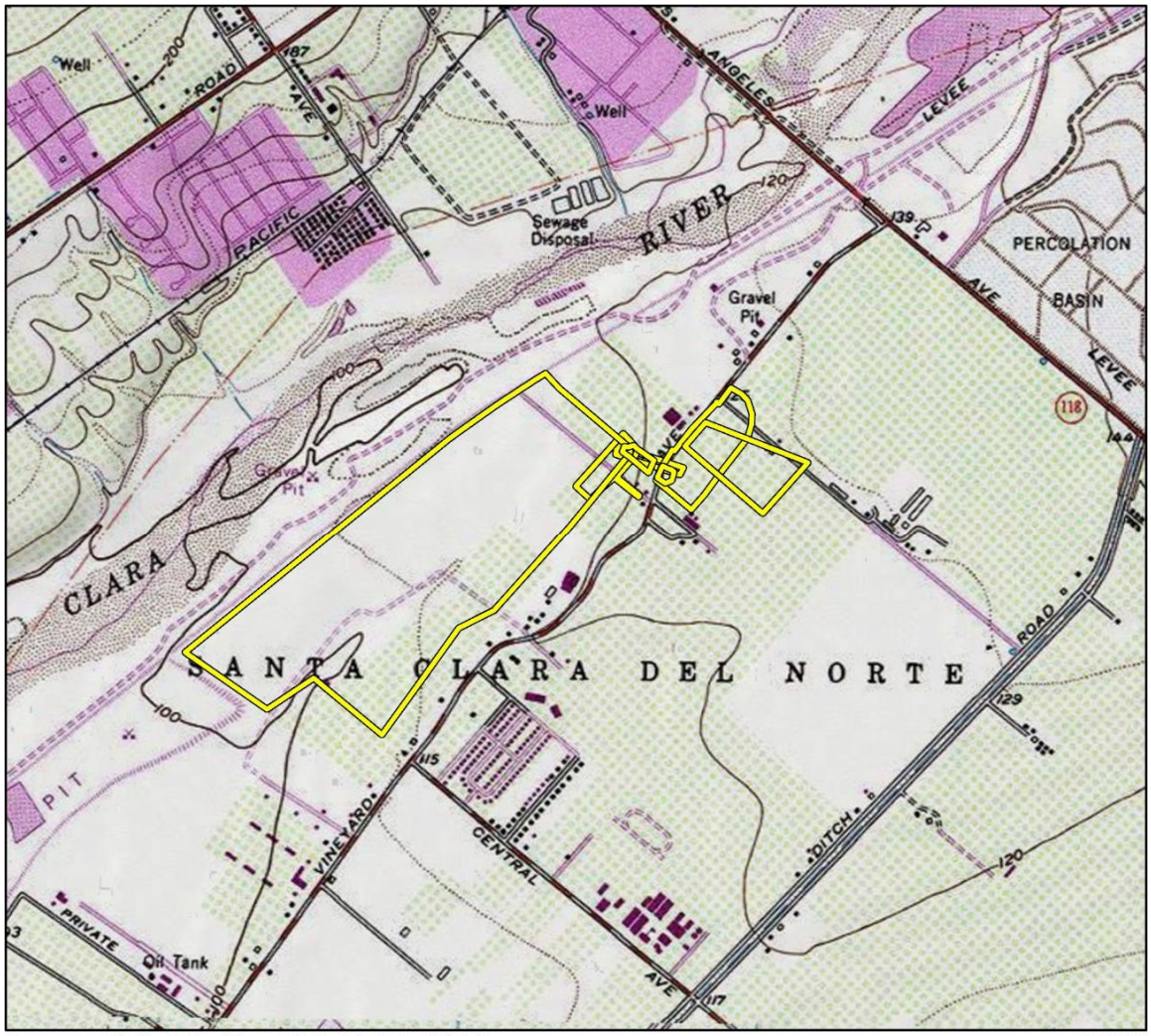
Waters, Michael R.

1992 Principles of Geoarchaeology: A North American Perspective. Tucson, Arizona: The University of Arizona Press.

Attachment 1

Figures

Figure 1 Regional Location Map



Basemap provided by National Geographic Society, Esri and their licensors © 2024. Saticoy Quadrangle. T02N R22W S11,12,14. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

24-15820 CR
CRFig 1 Proj Locn Map

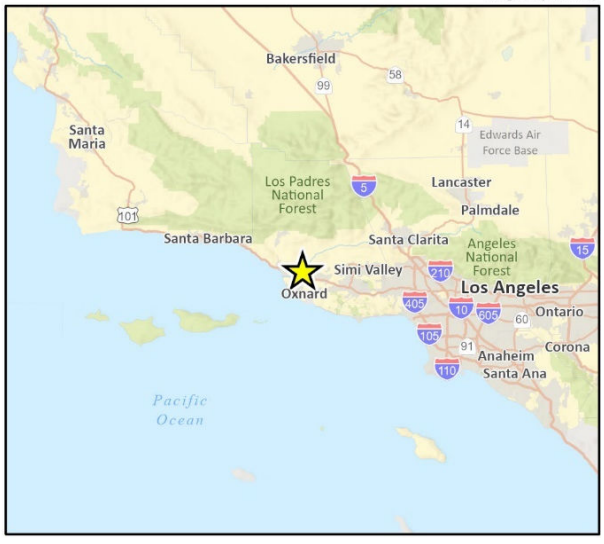


Figure 2 Project Location

Figure 3 Overview of Sloped Area Along the Northern Portion of the Potential Ferro Basin Contouring Area Looking North

Figure 4 The Santa Clara River Levee Observed from the Western Boundary of the Potential Basin Contouring Area Looking West

Figure 5 Overgrown Vegetation within the Noble Side Access and Contractor Laydown Area Looking North

Figure 6 Overview of the Flooded Noble Barrow Area Looking South

Figure 7 Overview of Exposed Ground Surface within the Ferro Basin Grading Area Looking South

Figure 8 Overview of Exposed Ground Surface within the Ferro Basin Looking North

Attachment 2

California Historical Resources Information System Records Search

CHRIS Information Center Records Search Data Sheet

Project Name:	United Groundwater Recharge Capacity Expansion Project
Project Number:	24-15820 Date: April 4, 2024
Information Center:	SCCIC
Search Radius:	Half Mile: X One Mile: Other:
USGS Quadrangle:	Saticoy, CA 7.5-minute
Public Land Survey System (PLSS):	Township: 2N Range: 22W Section: N/A
County:	Ventura
Previously Recorded Resources	2 within search radius; 1 adjacent to project
Previous Studies:	16 within search radius; 4 overlap project; 2 adjacent to project

National Register of Historic Places:	Copies:	Y	N
California Register of Historical Resources:	Copies:	Y	N
California Points of Historical Interest:	Copies:	Y	N
California Historical Landmarks List:	Copies:	Y	N
Archaeological Determinations of Eligibility:	Copies:	Y	N
California Historical Resources Inventory:	Copies:	Y	N

Historic Maps:

Notes:

Report List

24-15820 United Groundwater Recharge

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
VN-00044		1974	Clewlow, William C. Jr.	Impact Report on the Archaeological Resources at the Santa Clara River Area Proposed Ferro Drill Site		56-000032, 56-000033, 56-000035
VN-00332		1978	Lopez, Robert	An Archaeological Reconnaissance of the Three Proposed Alternatives for the Upgrading of the Saticoy Sanitation District Facilities Ventura County, California	Robert Lopez, Archaeological Consultant	56-000031, 56-000032, 56-000033, 56-000034
VN-00575		1988	Lopez, Robert	An Archaeological Reconnaissance of the Areas Involved in the Proposed Swepi Well Locations and Pipeline Routes Oxnard Plain, Ventura County, California	Robert Lopez, Archaeological Consultant	56-000631, 56-000665, 56-000666
VN-00586		1987	Lopez, Robert	Archaeological Assessment of Rancho Atillo, Saticoy		56-000031, 56-000032, 56-000033, 56-000034
VN-00754		1989	Lopez, Robert	An Archaeological Reconnaissance of the Twenty-three Acres Involved in Tract 4395, City of San Buenaventura, Ventura County, California		
VN-00955		1990	Pence, Robert L.	Archaeological Reconnaissance in the El Rio Area Ventura County	Pence Archaeological Consulting	
VN-00971		1990	Singer, Clay A. and John E. Atwood	Cultural Resources Survey and Impact Assessment for Four Alternative Recycling Station Sites in Ventura County, California	C.A. Singer & Associates, Inc.	56-000666, 56-000918
VN-01018		1980	Callison, Sheila	Cultural Resources Survey Of: Dp-252.	Ventura County	
VN-01072		1991	Atwood, John E.	Supplemental Archaeological Survey for the Bristol Relief Sewer Line.	C.A. Singer & Associates, Inc.	
VN-01172		1992	Brown, Joan C.	Archaeological Monitoring of Trenching for the Calmat Co.	RMW Paleo Associates, Inc.	
VN-01495		1997	Hoffman, Sheila M.	Archaeological Monitoring of Tract 4772 City of San Buenaventura, Ventura County, California		
VN-01741		1999	Maki, Mary K.	Phase I Archaeological Survey and Impact Assessment of 50.2 Acres for the River Bend Ranch Project, Ventura, Ventura County, California	Conejo Archaeological Consultants	
VN-01742			Webb, L.M., Robert Wlodarski, and George Casen	Historic Architectural Survey Report for 07-VEN-118 P.m. 0.5/2.2 07203-004060		56-152244, 56-152245, 56-152755, 56-152757, 56-152758, 56-152759, 56-152760, 56-152761, 56-152762

Report List

24-15820 United Groundwater Recharge

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
VN-01744		1985	Unknown	Historic Property Survey 07-VEN-118, P.m. 0.5/2.2 Vineyard Avenue/ Route 126, Saticoy, Ventura County, California 07203-004060		
VN-01816		1999	Maki, Mary K.	Phase I Archaeological Survey and Impact Assessment of 46 Acres El Rio Site-juvenile Hall Justice Center El Rio, Ventura County, California	Conejo Archaeological Consultants	
VN-01893		2000	Maki, Mary K.	Phase I Archaeological Survey of Five Acres and Approximately 7,000 Linear Feet for the Saticoy Wastewater Treatment Plant Upgrade Project, Saticoy	Conejo Archaeological Consultants	
VN-01925		2000	Maki, Mary K.	Phase I Archaeological Survey of Approximately 15.8 Linear Miles for the El Rio Sewer Project, El Rio, Ventura Co.	Conejo Archaeological Consultants	
VN-01930		1999	Wlodarski, Robert J.	A Phase I Archaeological Study for Six Project Areas Within the Santa Paula Branch Line Recreational Trail Study Area, County of Ventura	Historical, Environmental, Archaeological, Research, Team	
VN-02715		2009	Gonzalez, Matthew and Kyle Garcia	Results of the Cultural Resource Assessment for the Southern California Edison Replacement of Four Deteriorated Pole Nos. 1604543E, 1604637E, 1573814E, and 1573815E; Ventura County and Orange County, California; WO 4605-2301, WO 4805-0548	PCR Services Corporation (PCR)	
VN-02796		2009	Schmidt, June A.	Moorpark-Shelline-Valdez 66kV New Pole Installation/ Old Pole Removal and WO 6039-4800; 9-4857 Deteriorated Pole Replacements, Various Distribution Circuits, Ventura County, California	Compass Rose Archaeological, Inc.	56-000031, 56-000032, 56-000033, 56-000034, 56-000201, 56-000241, 56-152746, 56-152747, 56-152748
VN-02894		2010	Schmidt, James	Archaeological Letter Report: Santa Clara-Gonzales and Santa Clara-Levy-Procgen 66kV Deteriorated Pole Replacement Project (WO 4605-2344; 800372670), Ventura County, California	Compass Rose Archaeological, Inc.	56-000031, 56-000032, 56-000034, 56-000545, 56-001392, 56-152748, 56-152843
VN-03287	Paleo -	2017	Szromba, Meagan, Kyle Brudvik, and Christopher Duran	UWCD Recycled Water Pipelines Project, Cultural and Paleontological Resources Technical Study	Rincon Consultants, Inc.	

Resource List

24-15820 United Groundwater Recharge

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-56-152824		Resource Name - United Concrete Pipe Co; Other - Famlon Pipe & Supply Co	Building	Historic	HP06	1986 (George Casen, Caltrans)	
P-56-153146		Resource Name - SCR-1; Resource Name - Santa Clara River Levee	Structure	Historic	HP21	2018 (Timothy Smith, Mead & Hunt)	

Attachment 3

Native American Heritage Commission Documents

Sacred Lands File & Native American Contacts List Request

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd, Suite 100
Sacramento, CA 95814
(916) 373-3710
(916) 373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: 24-15820 United Groundwater Recharge Capacity Expansion Project

County: Ventura

USGS Quadrangle Name: Saticoy, CA 7.5-minute topographic quadrangle

Township: Range: Section(s): Township 2 North; Range 22 West; Unsectioned

Company/Firm/Agency: Rincon Consultants, Inc.

Contact Person: Michael Vader

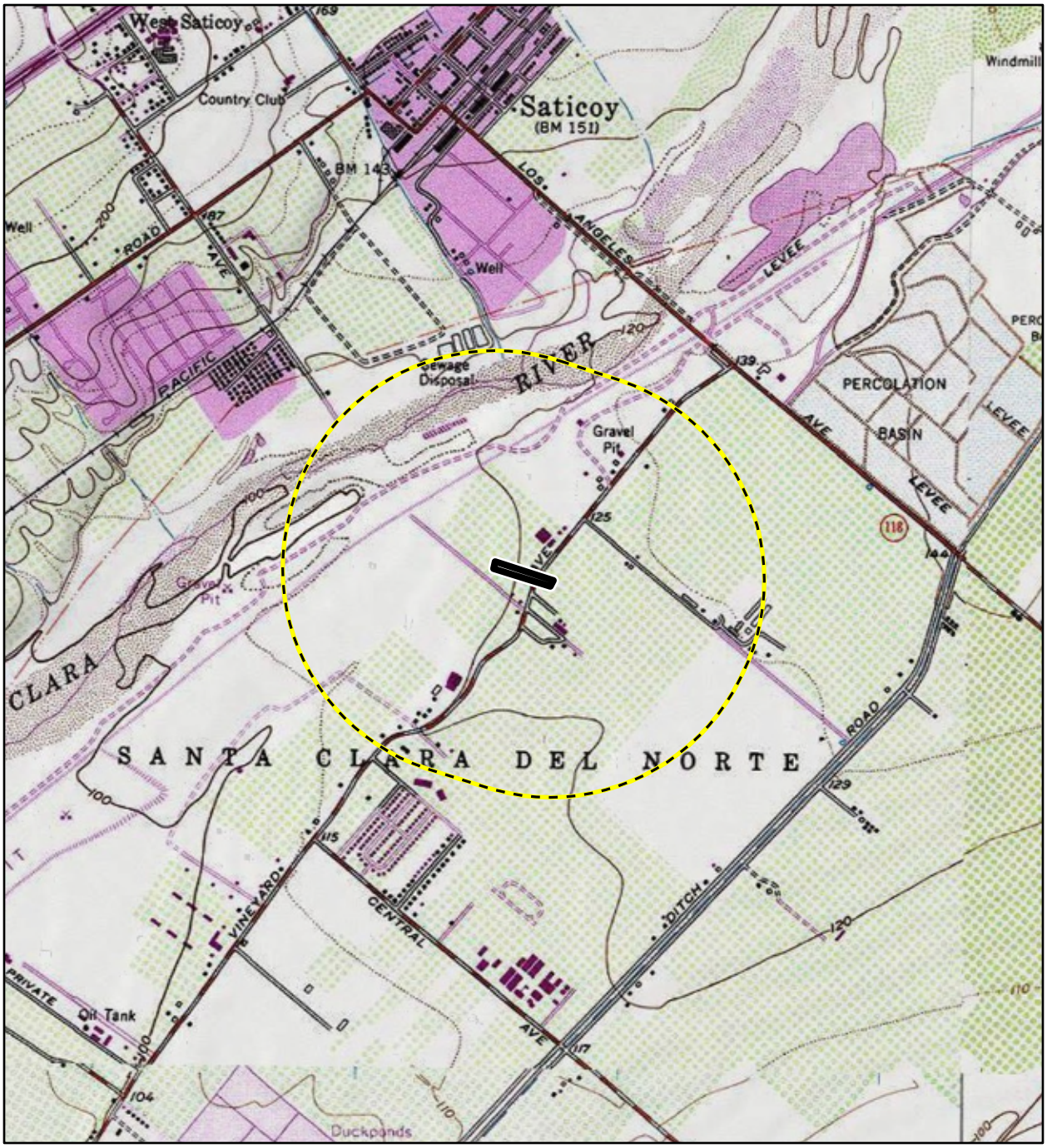
Street Address: 8825 Aero Drive

City: San Diego **Zip**: 92123

Phone: 619-241-9238

Email: mvader@rinconconsultants.com

Project Description: The United Water Conservation District proposes to construct an undercrossing to connect the Ferro Spreading Basin to the Noble Spreading Basin, which would enable the conveyance of water to the Ferro Basin for artificial groundwater recharge. The project would include construction of an undercrossing at State Route 232 (Vineyard Avenue) in unincorporated Ventura County, and installation of two reinforced concrete pipelines, 60 inches in diameter and approximately 550 feet in length, to connect the Noble Spreading Basin (located east of Vineyard Avenue) to the Ferro Spreading Basin (located west of Vineyard Avenue). The attached map depicts the project location.



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Half-Mile Buffer

Area of Potential Effects

0 1,000 2,000 Feet

0 250 500 Meters

1:24,000

Records Search Map

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

March 22, 2024

Michael Vader
Rincon Consultants, Inc.

Via Email to: mvader@rinconconsultants.com

Re: 24-15820 United Groundwater Recharge Capacity Expansion Project, Ventura County

To Whom It May Concern:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

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

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

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

Sincerely,

Cody Campagne

Cody Campagne
Cultural Resources Analyst

Attachment

Appendix D

RCNM Modeling Outputs

Report date: 5/7/2024
Case Description: United Groundwater Recharge Project - Mobilization

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	60	60	60

			Equipment			
			Spec	Actual	Receptor	Estimated
		Impact	Lmax	Lmax	Distance	Shielding
Description		Device	(dBA)	(dBA)	(feet)	(dBA)
Dozer		No	40	81.7	50	0

				Results				
		Calculated (dBA)		Noise Limits (dBA)				
				Day		Evening		Night
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Dozer		81.7	77.7	N/A	N/A	N/A	N/A	N/A
	Total	81.7	77.7	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/13/2024
Case Description: United Groundwater Recharge Project - Mobilization

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	60	60	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Drill Rig Truck	No	20		79.1	50	0

		Results						
		Calculated (dBA)		Noise Limits (dBA)				
				Day		Evening		Night
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Drill Rig Truck		79.1	72.2	N/A	N/A	N/A	N/A	N/A
	Total	79.1	72.2	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 5/13/2024
Case Description: United Groundwater Recharge Project - Open-cut Trenching

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Residential	Residential	60	60	60

			Equipment			
	Impact		Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Crane	No	16		80.6	50	0
Excavator	No	40		80.7	50	0
Excavator	No	40		80.7	50	0

		Results						
		Calculated (dBA)		Noise Limits (dBA)				
				Day		Evening		Night
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Crane		80.6	72.6	N/A	N/A	N/A	N/A	N/A
Excavator		80.7	76.7	N/A	N/A	N/A	N/A	N/A
Excavator		80.7	76.7	N/A	N/A	N/A	N/A	N/A
	Total	80.7	80.5	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/7/2024
Case Description: United Groundwater Recharge Project - Noble Basin

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	60	60	60

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Dozer	No	40		81.7	50	0
Front End Loader	No	40		79.1	50	0
Scraper	No	40		83.6	50	0

			Results				
	Calculated (dBA)			Noise Limits (dBA)			
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A
Scraper	83.6	79.6	N/A	N/A	N/A	N/A	N/A
Total	83.6	82.6	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/7/2024
Case Description: United Groundwater Recharge Project - Gates

				---- Receptor #1 ----
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residentia	60	60	60

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Crane	No	16		80.6	50	0
Front End Loader	No	40		79.1	50	0
Generator (<25KVA, VMS signs)	No	50		72.8	50	0

			Results				
	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A
Generator (<25KVA, VMS signs)	72.8	69.8	N/A	N/A	N/A	N/A	N/A
Total	80.6	77.8	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/7/2024
Case Description: United Groundwater Recharge Project - Trash Racks

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	60	60	60

			Equipment				
			Spec	Actual	Receptor	Estimated	
		Impact	Lmax	Lmax	Distance	Shielding	
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Crane		No	16		80.6	50	0
Front End Loader		No	40		79.1	50	0
Generator		No	50		80.6	50	0

				Results				
		Calculated (dBA)		Noise Limits (dBA)				
				Day		Evening		Night
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Crane		80.6	72.6	N/A	N/A	N/A	N/A	N/A
Front End Loader		79.1	75.1	N/A	N/A	N/A	N/A	N/A
Generator		80.6	77.6	N/A	N/A	N/A	N/A	N/A
	Total	80.6	80.4	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 5/13/2024
Case Description: United Groundwater Recharge Project - Start of Project Operation

		---- Receptor #1 ----		
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	60	60	60

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Crane	No	16		80.6	50	0
Crane	No	16		80.6	50	0
Excavator	No	40		80.7	50	0
Excavator	No	40		80.7	50	0
Drill Rig Truck	No	20		79.1	50	0

				Results				
		Calculated (dBA)		Noise Limits (dBA)				
				Day		Evening		Night
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Crane		80.6	72.6	N/A	N/A	N/A	N/A	N/A
Crane		80.6	72.6	N/A	N/A	N/A	N/A	N/A
Excavator		80.7	76.7	N/A	N/A	N/A	N/A	N/A
Excavator		80.7	76.7	N/A	N/A	N/A	N/A	N/A
Drill Rig Truck		79.1	72.2	N/A	N/A	N/A	N/A	N/A
	Total	80.7	81.7	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/7/2024
Case Description: United Groundwater Recharge Project - Ferro Basin

				---- Receptor #1 ----
		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residentia	60	60	60

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Scraper	No	40		83.6	50	0
Scraper	No	40		83.6	50	0
Scraper	No	40		83.6	50	0
Scraper	No	40		83.6	50	0
Scraper	No	40		83.6	50	0

			Results				
	Calculated (dBA)			Noise Limits (dBA)			
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Scraper	83.6	79.6	N/A	N/A	N/A	N/A	N/A
Scraper	83.6	79.6	N/A	N/A	N/A	N/A	N/A
Scraper	83.6	79.6	N/A	N/A	N/A	N/A	N/A
Scraper	83.6	79.6	N/A	N/A	N/A	N/A	N/A
Scraper	83.6	79.6	N/A	N/A	N/A	N/A	N/A
Total	83.6	86.6	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 7/23/2024
Case Description: United Groundwater Recharge Project - Nighttime

		Baselines (dBA)		---- Receptor #1 ----
Description	Land Use	Daytime	Evening	Night
Residential	Residential	65	65	65

			Equipment			
			Spec	Actual	Receptor	Estimated
		Impact	Lmax	Lmax	Distance	Shielding
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Auger Drill Rig		No	20		84.4	50	0

		Results	
		Calculated (dBA)	
Equipment		*Lmax	Leq
Auger Drill Rig		84.4	77.4
	Total	84.4	77.4

*Calculated Lmax is the Loudest value.