

**PUBLIC REVIEW DRAFT**

**INITIAL STUDY/  
MITIGATED NEGATIVE DECLARATION**

**TASSAJARA HILLS PIPELINE PROJECT  
DUBLIN, CALIFORNIA**



**LSA**

March 2021

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**INITIAL STUDY/  
MITIGATED NEGATIVE DECLARATION**

**TASSAJARA HILLS PIPELINE PROJECT  
DUBLIN, CALIFORNIA**

Submitted to:

Dublin San Ramon Services District  
7051 Dublin Boulevard  
Dublin, California 94568

Prepared by:

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Project No. TBR2101



March 2021

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## LIST OF ABBREVIATIONS AND ACRONYMS

AB 52	Assembly Bill 52
ABAG	Association of Bay Area Governments
ACTC	Alameda County Transportation Commission
BAAQMD	Bay Area Air Quality Management District
bgs	below ground surface
BMP	Best Management Practices
CalFIRE	California Department of Forestry and Fire Protection
CAP	Clean Air Plan
CDFW	California Department of Fish and Wildlife
CDMG	California Department of Mines and Geology
CEC	California Energy Commission
CESA	California Endangered Species Act
CGS	California Geological Survey
CH <sub>4</sub>	methane
CMA	Congestion Management Agency
CMP	Congestion Management Program
CNDDDB	California Natural Diversity Data Base
CNEL	community noise equivalent level
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	CO <sub>2</sub> equivalents
CRPR	California Rare Plant Rank
db	decibel

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dba	A-weighted sound level
DbD	Diablo clay, 15 to 30 percent slopes
DdFcc	Diablo clay, 30 to 50 percent slopes
DSRSD	Dublin San Ramon Services District
EFZs	Earthquake Fault Zones
ESA	Endangered Species Act
ESCP	Erosion and Sediment Control Plan
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration's
GHGs	greenhouse gases
GWP	Global Warming Potential
HDPE	high-density polyethylene
HFCs	hydrofluorocarbons
I-580	Interstate 580
I-680	Interstate 680
L <sub>dn</sub>	day-night average level
L <sub>eq</sub>	equivalent continuous sound level
L <sub>max</sub>	maximum noise levels
LUST	Leaking Underground Tank Cleanup Site
MLD	Most Likely Descendant
MMI	Modified Mercalli Intensity
N <sub>2</sub> O	nitrous oxide



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NAHC	Native American Heritage Commission
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollutant Elimination System
NWIC	Northwest Information Center
O&M	operation and maintenance
Pb	lead
PFCs	perfluorocarbons
PG&E	Pacific Gas and Electric Company
PM <sub>2.5</sub> , PM <sub>10</sub>	particulate matter
PPV	peak particle velocity
PRC	Public Resources Code
RMS	root-mean-square
ROG	reactive organic gases
SF <sub>6</sub>	sulfur hexafluoride
SLF	Sacred Lands File
SO <sub>2</sub>	sulfur dioxide
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
USFWS	United States Fish and Wildlife Service

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## 1.0 PROJECT INFORMATION

**1. Project Title:**

Tassajara Hills Pipeline Project

**2. Lead Agency Name and Address:**

Dublin San Ramon Services District  
7051 Dublin Boulevard  
Dublin, CA 94568

**3. Contact Person and Phone Number:**

Jackie Yee, Associate Engineer  
(925) 875-2258

**4. Project Location:**

The Tassajara Hills Pipeline Project would extend from an unpaved extension of Cydonia Court to an existing pipeline within Delamar Drive in Dublin, Alameda County, California. The proposed pipeline alignment would be located on two parcels (Assessor Parcel Number [APN] 985-0028-003-02 and 985-127-002-00). Figures 1-1 and 1-2 show the regional location and aerial view of the project site, respectively.

**5. Project Sponsor's Name and Address:**

Dublin San Ramon Services District  
7051 Dublin Boulevard  
Dublin, CA 94568

**6. General Plan Designation:**

APN 985-0028-003-02: Open Space

APN 985-127-002-00: Single Family Residential (0.9-6.0 dwelling units/acre)

**7. Zoning:**

APN 985-0028-003-02: Planned Development, Ordinance 18-09

APN 985-127-002-00: Planned Development, Ordinance 1-13

**8. Description of Project:**

The Dublin San Ramon Services District (DSRSD) proposes to install approximately 1,110 linear feet of 8-inch-diameter high-density polyethylene (HDPE) pipeline to connect an existing 10-inch-diameter pipeline within an unpaved extension of Cydonia Court with an existing 8-inch-diameter pipeline within Delamar Drive in the Tassajara Hills Development in the City of Dublin. The proposed pipeline would provide a redundant potable water supply to the Tassajara Hills Development.

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FIGURE 1-1



0 500 1000  
FEET

SOURCE: ESRI World Street Maps (02/2020).

I:\DBR2101\GIS\Maps\Figure 1\_Regional Location.mxd (2/26/2021)

*Tassajara Hills Pipeline Project*  
*Dublin, Alameda County, California*  
**Regional Location**





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LEGEND

- Project Site
- Water Main Alignment
- Bore Pit or Receiving Pit
- Geotechnical Bore Hole



0 100 200  
FEET

SOURCE: MacKay & Soms (2/2021); Google (2020).

I:\DBR2101\GIS\Maps\Figure 2\_Project Vicinity (on aerial).mxd (3/4/2021)

FIGURE 1-2

*Tassajara Hills Pipeline Project*  
Dublin, Alameda County, California  
Proposed Project

**Project Background.** The Tassajara Hills Development is a new neighborhood of 370 single-family, detached residential units and a private clubhouse that is currently served by two 12-inch potable water mains connected to existing 16-inch and 20-inch water mains at the intersection of Tassajara Road and Palisades Drive. The neighborhood is located in hilly terrain that is served by two different water pressure zones. One 12-inch water main connects to the 16-inch water main on Tassajara Road and runs within Palisades Drive from Tassajara Road to Oak Ridge Court; this main provides potable water to 46 homes in Water Pressure Zone 2. The second 12-inch water main connects to the 20-inch water main on Tassajara Road and runs within Palisades Drive from Tassajara Road to Delamar Drive; this main provides potable water to 324 homes in Water Pressure Zone 3. If either of these two 12-inch potable water mains were to go out of service for repair, then the respective residential units would be without water. The addition of the proposed water main from Cydonia Court to the Tassajara Hills Development would improve the reliability of the water system, by providing redundancy to supply water in the event of an emergency.

**Project Components.** The proposed project would construct approximately 800 linear feet by horizontal directional drilling and 300 linear feet by standard trench construction methods for a total of approximately 1,100 linear feet of 8-inch HDPE pipeline to connect existing pipelines on Cydonia Court and Delamar Drive. The majority of the proposed pipeline would be installed using horizontal directional drilling, whereby a tunnel is drilled under the ground surface and the pipeline is then pulled through the underground tunnel. This portion of the pipeline would be installed beneath APN 985-0028-003-02 (open space) at depths from 5 to 85 feet below ground surface (bgs). The 300 linear feet to be installed using standard open trench construction would be located within existing graded areas associated with adjacent residential development. The approximate horizontal alignment of the pipeline is shown on Figure 1-3.

Access pits, approximately 20 feet wide by 20 feet long at the southern access point (APN 985-0028-003-02) and 10 feet wide by 20 feet long at the northern access point (APN 985-127-002-00), would be excavated at each end of the pipeline alignment. The southern access pit would be located within an unpaved extension of Cydonia Court and the northern access pit would be located within an unpaved emergency access road at the southern edge of the Tassajara Hills Development. The pipeline would be connected from the southern access pit to the existing potable water pipeline in Cydonia Court and from the northern access pit to the pipeline in Delamar Drive using standard trench construction methods. Proposed trenches would be approximately 2 feet wide and excavated to a depth of approximately 5 feet. Following construction, approximately 60 square feet of pavement, as well as sidewalk, curb and gutter would be replaced on Delamar Drive.

Proposed construction requirements, as well as the horizontal and vertical alignment of the proposed pipeline would be refined based on geotechnical investigations, which would include test borings. The borings would be limited to ten borings, not to exceed 8 inches in diameter, extending from 35 to 90 feet below the ground surface. Borings would be performed using either a wheel-mounted or a track-mounted drill rig. If a track-mounted drill rig is used the drill rig would not exceed 8 feet in width, measured from the outside edge of each track with each track no more than 2 feet wide and 15 feet long. The borings would require the drill rig to travel

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*Tassajara Hills Pipeline Project  
Dublin, Alameda County, California  
Proposed Pipeline*

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no more than 2,000 linear feet within a 200-foot-wide corridor along the proposed pipeline alignment. Upon completion, each boring would be backfilled and the soil cuttings spread on the ground in the vicinity of the boring locations.

**Construction.** Project construction is anticipated to start in August 2021 and last approximately 2 months. Construction activities would typically occur from 8:00 a.m. to 5:00 p.m., Monday through Friday. Proposed laydown areas for drilling would be located adjacent to the access pits at either end of the pipeline alignment. Construction staging would be confined to existing disturbed areas. Staging areas are proposed on the existing fire access road within the Tassajara Hills Development and along the northerly end of Cydonia Court. Access to the project site would likely be via Tassajara Road and Fallon Road. Once construction activities are complete, staging areas would be returned to existing conditions.

The contractor would employ the use of heavy construction machinery, likely including the following: wheel-mounted/track-mounted drill rig, horizontal drilling machine, excavator, backhoe, and roller compactor. All of the material excavated during pipeline installation would be used to fill in the access pits following pipeline installation. No import or export of soils would be required. During pipeline installation, water would be used to create the drilling fluid, a mixture of water and additives that facilitate both the soil borings and directional drilling. Water would be provided via a water truck during construction activities.

## 9. Surrounding Land Uses and Setting:

The proposed pipeline would be installed within an undeveloped hillside area, located between the existing residential development to the south and the Tassajara Hills Development to the north. The majority of the undisturbed grassland supports a species composition dominated by introduced annual grasses. As described above, the southern access pit would be located within an unpaved extension of Cydonia Court and the northern access pit would be located within an unpaved emergency access road at the southern edge of the Tassajara Hills Development. Both of these areas have been previously graded as part of the adjacent residential development. The majority of the pipeline alignment would be located within a proposed conservation easement. The project site is located within the East Dublin Specific Plan Area.

Lands to the south and east of the proposed pipeline alignment consist primarily of undeveloped lands located within a conservation easement (Northern Drainage Conservation Area) established as part of the larger Dublin Ranch development. This easement was established to provide protected habitat for California red-legged frog (*Rana draytonii*) and California tiger salamander (*Ambystoma californiense*). California red-legged frog are federally listed as threatened and California tiger salamander are federally- and State-listed as threatened. The site is not located within federally designated critical habitat for either species. The Dublin Ranch development is located further to the south. Dublin Ranch is a master planned community with single-family and multi-family residential uses, schools, a golf course, and parks.

Lands to the north include single-family residential development associated with the Tassajara Hills Development. Further to the north, the land consists predominantly of open space,

consisting of hilly, grass-covered grazing land with a small amount of rural residential development along Tassajara Road.

Lands immediately to the west consist of undeveloped open space. Single-family residential development is located further to the west, across Tassajara Road.

**10. Other Public Agencies Whose Approval is Required (e.g., permits, financial approval, or participation agreements):**

- California Department of Fish and Wildlife
- United States Department of Fish and Wildlife

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

On March 16, 2021, the DSRSD provided formal notification to those California Native American tribes that are traditionally and culturally affiliated with the geographic area within which the proposed project is located pursuant to the consultation requirements of AB 52. Letters were sent to all tribal representatives identified by the Native American Heritage Commission. To date, two tribes have requested consultation pursuant to Public Resources Code section 21080.3.1, as summarized below:

- Ms. Canyon Sayer-Roods, Most Likely Descendent Contact of the Indian Canyon Mutsun Band of Costanoan Tribe, responded via email on March 17, 2021, recommending that a Native American Monitor and an Archaeologist be present on-site at all times. On March 17, 2021, DSRSD responded via email to Ms. Sayer-Roods requesting a date and time to discuss the findings of the cultural study. On March 19, 2021, the DSRSD followed up with a voicemail message. No response from Ms. Canyon Sayer-Roods to the DSRSD's email or voicemail has been received to date.
- Ms. Katherine Perez, Chairperson of the North Valley Yokuts Tribe, responded via email on March 17, 2021, requesting consultation and additional information related to the project design. On March 17, 2021, DSRSD responded via email to Ms. Perez requesting a date and time to discuss the findings of the cultural study. On March 19, 2021, the DSRSD followed up with a phone call, but was unable to leave a voicemail message. No response from Ms. Katherine Perez to DSRSD's email has been received to date.

## 2.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist in Chapter 3.0.

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

### 2.1 DETERMINATION

On the basis of 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 in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “Potentially Significant Impact” or “Potentially Significant Unless Mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

  
Signature

\_\_\_\_\_  
Date

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### 3.0 CEQA ENVIRONMENTAL CHECKLIST

#### 3.1 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### a. *Would the project have a substantial effect on a scenic vista? (No Impact)*

A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. Aesthetic components of a scenic vista generally include: (1) scenic quality; (2) sensitivity level; and (3) view access. The proposed project is located in an area that is primarily characterized by urban development. Development in the project vicinity includes local roads and residential housing. The project area is visible from local roadways, including Delamar Drive, Palisades Drive, and Copper Peak Drive.

The Eastern Dublin Specific Plan identifies ridgelines and ridgeland, which are considered to be visually sensitive to future development. "Visually sensitive ridgelines" are defined as those ridgelines which form the horizon (i.e., skyline) when viewed from one or more existing scenic corridors. "Visually sensitive ridgeland" include those areas in which two-story development (i.e., 30-foot building height) would obstruct or extend above the ridgeline as seen from existing scenic corridors. As shown on Figure 6.3 in the Eastern Dublin Specific Plan,<sup>1</sup> portions of the project area are designated as visually sensitive ridgeland on which development can occur with certain restrictions, including: 1) that development will not obscure or appear to extend above the major ridgeline, 2) that development is not silhouetted against the horizon when viewed from designated scenic routes; and 3) that grading for such development does not visually scar sensitive ridgeland.

Interstate 580 (I-580) and Interstate 680 (I-680) are designated Alameda County scenic routes. In addition, San Ramon Road, Dougherty Road, and Tassajara Road are City-designated scenic routes. According to the City's General Plan, it is the City's intention that Fallon Road would also be

<sup>1</sup> Dublin, City of. 1994. Eastern Dublin Specific Plan. January 7. Updated April 21, 2020.

designated as a scenic route once it is extended north to connect with Tassajara Road. Consistent with the City of Dublin General Plan and the Eastern Dublin Specific Plan, design review would be required for all projects visible from a designated scenic route in order to enhance a positive image of Dublin as seen by through travelers.

While the proposed pipeline would be installed within the foothill area that is designated as a scenic resource, the proposed pipeline project would not alter views to or from the project site. Upon completion, the proposed project would be underground and out of view. As the proposed project would not result in new above-ground pipe or other facility construction that would be visible from publicly accessible roadways or adjacent uses, the project would not block, impair or substantially affect views on a permanent basis.

During construction of the project, activities such as trucks hauling materials and machinery would be temporarily visible to some viewers along local roadways and from adjacent residential uses. Construction equipment and materials would be staged at each end of the pipeline alignment near the bore/receiving pits. The construction period would be temporary; therefore, the presence of construction equipment would result in minor short-term changes in the views from public vantage points. As such, implementation of the proposed project would not result in a substantial adverse effect on a scenic vista and no impact would occur.

*b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (No Impact)*

Caltrans Landscape Architecture Program administers the Scenic Highway Program, contained in Streets and Highways Code Sections 260–263. In Alameda County, State Route 84 (Niles Canyon Road) from Mission Boulevard to I-680 near Sunol, and I-680 from Mission Boulevard in Fremont to the Contra Costa County line are officially designated State Scenic Highways. I-580 from Route 5 to I-80 is designated as an eligible State Scenic Highway.<sup>2</sup> Neither of these State Scenic Highways are located in proximity to the project site and views from these highways would not be affected by project activities.

As described above, San Ramon Road, Dougherty Road, and Tassajara Road are designated scenic routes. The project site is not located along any of these County- or City-designated scenic routes. However, the project site is located near Tassajara Road and Fallon Road. No historic buildings or rock outcroppings are located on the project site or in the surrounding vicinity. Furthermore, implementation of the proposed project would not result in the removal of or damage to scenic resources. As discussed above in Section 3.1.a, the proposed project would result in the installation of an underground pipeline and would not result in any visible improvements at the project site. Therefore, implementation of the proposed project would not damage scenic resources within a State or locally designated scenic roadway and no impact would occur.

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<sup>2</sup> California Department of Transportation. 2021. California State Scenic Highways. Website: [dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways](https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways) (accessed February 23, 2021)



- c. In non-urbanized areas, would the project 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? (No Impact)*

The existing visual character in the vicinity of the project site consists of undeveloped open space areas of annual grassland and residential development. As described in Section 3.1.a, these undeveloped hillsides/ridgelines visually dominate the character of the project area and define the visual character and quality of the project site. The project site location is visible from surrounding public roadways, including Delamar Drive, Palisades Drive, and Copper Peak Drive.

The proposed project would install a new underground pipeline from an unpaved extension of Cydonia Court to Delamar Drive in the Tassajara Hills Development. Upon completion, the proposed project would be underground and out of view.

Construction activities associated with the pipeline installation would be visible from public roadways and adjacent residential development. However, all temporary construction-related visual impacts such as construction equipment, staging areas, stockpile locations, and construction fencing would be removed following completion of construction. Therefore, implementation of the proposed project would have no impact associated with degrading the existing visual character or quality of the project site and its surroundings.

- d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (No Impact)*

No permanent sources of lighting would be installed as part of the project. Temporary construction-related sources of light (if any) would be removed upon construction completion. The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area and no impact would occur.

### 3.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

	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 the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? (No Impact)*

The project site is classified as "Grazing Land" on maps prepared by the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP).<sup>3</sup> Grazing Land includes land on which the existing vegetation is suited to the grazing of livestock. No Farmland is mapped on or near the project site. Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use and no impact would occur.

<sup>3</sup> California Department of Conservation. 2016. California Farmland Conservancy. California Important Farmland Finder. Website: [maps.conservation.ca.gov/dlrp/ciff/](https://maps.conservation.ca.gov/dlrp/ciff/) (accessed February 23, 2021).

*b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract? (No Impact)*

The project site is zoned Planned Development. The project site is not zoned for agricultural use and is not under a Williamson Act contract. Therefore, implementation of the project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. No impact would occur.

*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))? (No Impact)*

The project is not located on forest land or timberland, and would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. Therefore, implementation of the project would not result in any impacts to forestland.

*d. Would the project result in the loss of forest land or conversion of forestland to non-forest use? (No Impact)*

The project is not located on forest land or timberland, and would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. Therefore, implementation of the project would not result in any impacts to forestland.

*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? (No Impact)*

Refer to Sections 3.2.1.a and 3.2.1.c. The proposed project would result in the installation of an underground water pipeline. The proposed project would not involve any other changes to the existing environment, which due to their location or nature, could result in conversion of Farmland to a non-agricultural use, or conversion of forest land to a non-forest use. Therefore, the proposed project would have no impact.

### 3.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**a. *Would the project conflict with or obstruct implementation of the applicable air quality plan? (Less-Than-Significant Impact)***

The proposed project is located in the City of Dublin, and is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), which regulates air quality in the San Francisco Bay Area. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen substantially. In Dublin, and the rest of the air basin, exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

Within the BAAQMD, ambient air quality standards for ozone, carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>), and lead (Pb) have been set by both the State of California and the federal government. The State has also set standards for sulfate and visibility. The BAAQMD is under State non-attainment status for ozone and particulate matter standards. The BAAQMD is classified as non-attainment for the federal ozone 8-hour standard and non-attainment for the federal PM<sub>2.5</sub> 24-hour standard.

The applicable air quality plan is the BAAQMD 2017 Clean Air Plan (CAP),<sup>4</sup> which was adopted on April 19, 2017. In addition, the Regional Climate Protection Strategy is included in the 2017 Clean Air Plan, which identifies potential rules, control measures, and strategies that the BAAQMD can pursue to reduce greenhouse gases throughout the Bay Area. The 2017 Clean Air Plan/Regional Climate Protection Strategy serves as a roadmap for the BAAQMD to reduce air pollution and protect public

<sup>4</sup> Bay Area Air Quality Management District. 2017. *Clean Air Plan*. April 19.

health and the global climate. The 2017 Clean Air Plan also includes measures and programs to reduce emissions of fine particulates and toxic air contaminants.

Consistency with the 2017 Clean Air Plan is determined by whether or not the proposed project would result in significant and unavoidable air quality impacts or hinder implementation of control measures (e.g., excessive parking or preclude extension of transit lane or bicycle path). The proposed project would result in the installation of approximately 1,100 linear feet of 8-inch HDPE pipeline to connect existing pipelines on Cydonia Court and Delamar Drive. The proposed project, as indicated in the analysis that follows, would not result in significant operational or construction-period emissions. The proposed project would not conflict with any of the control measures identified in the plan or measures designed to bring the region into attainment. Additionally, the proposed project would not increase the population, vehicle trips, or vehicle miles traveled. The proposed project would not hinder the region from attaining the goals outlined in the Clean Air Plan. Therefore, the proposed project would not inhibit or disrupt implementation of any control measures from the applicable Clean Air Plan and impacts would be less than significant.

*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? (Less Than Significant with Mitigation Incorporated)*

The BAAQMD is currently designated as a nonattainment area for State and national ozone standards and national particulate matter ambient air quality standards. The BAAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

According to BAAQMD's CEQA Guidelines, to meet air quality standards for operational-related criteria air pollutant and air precursor impacts, the project must not:

- Generate average daily construction emissions of reactive organic gases (ROG), NO<sub>x</sub>, or PM<sub>2.5</sub> greater than 54 pounds per day or PM<sub>10</sub> exhaust emissions greater than 82 pounds per day;
- Contribute to CO concentrations exceeding the State ambient air quality standards; or
- Generate operation emissions of ROG, NO<sub>x</sub>, or PM<sub>2.5</sub> of greater than 10 tons per year or 54 pounds per day or PM<sub>10</sub> emissions greater than 15 tons per year or 82 pounds per day.

The following analysis assesses the potential project-level construction- and operation-related air quality impacts and CO impacts.

**Construction Emissions.** During construction, short-term degradation of air quality may occur due to the release of particulate matter emissions (i.e., fugitive dust) generated by drilling, trenching, and other activities. Emissions from construction equipment are also anticipated and would include CO, nitrogen oxides (NO<sub>x</sub>), ROG, directly emitted particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>), and toxic air contaminants (TACs) such as diesel exhaust particulate matter.

Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM<sub>10</sub> emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM<sub>10</sub> emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The BAAQMD has established standard measures for reducing fugitive dust emissions (PM<sub>10</sub>). With the implementation of these Basic Construction Mitigation Measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM<sub>10</sub> emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO<sub>2</sub>, NO<sub>x</sub>, ROG, and some soot particulate (PM<sub>2.5</sub> and PM<sub>10</sub>) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using the Sacramento Metropolitan Air Quality Management District Road Construction Emissions Model, Version 9.0.0 (RoadMod) as recommended by the BAAQMD for linear projects. As described in Section 1.0, Project Information, project construction is anticipated to start in August 2021 and last approximately 2 months. The contractor would employ the use of heavy construction machinery, likely including the following: wheel-mounted/track-mounted drill rig, horizontal drilling machine, excavator, backhoe, and roller compactor. All of the material excavated during pipeline installation would be used to fill in the access pits following pipeline installation. No import or export of soils would be required.

RoadMod results are estimated in terms of maximum daily emissions and total emissions. For consistency with BAAQMD Guidelines, total emissions were averaged over the 2-month construction period to determine average daily emissions for comparison to the average daily emissions threshold. Construction-related emissions for the project are shown in Table 3.3-A. Detailed calculations are provided in Appendix A.

**Table 3.3-A: Project Construction Emissions in Pounds Per Day**

Project Construction	ROG	NO <sub>x</sub>	Exhaust PM <sub>10</sub>	Fugitive Dust PM <sub>10</sub>	Exhaust PM <sub>2.5</sub>	Fugitive Dust PM <sub>2.5</sub>
Average Daily Emissions	1.0	8.7	0.3	13.7	0.3	3.0
BAAQMD Average Daily Emission Thresholds	54.0	54.0	82.0	BMP	54.0	BMP
<b>Exceed Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>NA</b>	<b>No</b>	<b>NA</b>

Notes: BMP = Best Management Practices  
Source: LSA (March 2021).

As shown in Table 3.3-A, construction emissions associated with the project would be less than significant for ROG, NO<sub>x</sub>, and PM<sub>2.5</sub> and PM<sub>10</sub> exhaust emissions. The BAAQMD also requires the implementation of BAAQMD Basic Construction Mitigation Measures (Best Management Practices), as outlined in Mitigation Measure AIR-1 below, to reduce construction fugitive dust impacts to a less-than-significant level.

**Mitigation Measure AIR-1:**

In order to meet the BAAQMD fugitive dust threshold, the following BAAQMD Basic Construction Mitigation Measures shall be implemented:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered once a day.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt tracked out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of the California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and

determined to be running in proper condition prior to operation.

- A publicly visible sign shall be posted with the telephone number and person to contact at Dublin San Ramon Services District (DSRSD) or DSRSD's representative regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.

Construction emissions associated with the project would be less than significant with implementation of Mitigation Measure AIR-1. Therefore, construction of the proposed project would not result in 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 standards.

**Operational Emissions.** Long-term air emission impacts are associated with stationary sources and mobile sources. Stationary source emissions result from the consumption of natural gas and electricity. Mobile source emissions result from vehicle trips and result in air pollutant emissions affecting the entire air basin. As discussed above, the proposed project would result in the installation of approximately 1,100 linear feet of 8-inch HDPE pipeline to connect existing pipelines on Cydonia Court and Delamar Drive. Once operational, the project would not result in a significant increase in the generation of vehicle trips or vehicle miles traveled that would increase air pollutant emissions. The project would not be a source of stationary source emissions. Therefore, operation of the proposed project would not result in a cumulatively considerable net increase of PM<sub>10</sub> or any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard and impacts would be less than significant.

**Localized CO Impacts.** The BAAQMD has established a screening methodology that provides a conservative indication of whether the implementation of a proposed project would result in significant CO emissions. According to the BAAQMD CEQA Guidelines, a proposed project would result in a less-than significant impact related to localized CO concentrations if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, and the regional transportation plan and local congestion management agency plans.
- Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, or below-grade roadway).



Implementation of the project would not conflict with the Alameda County Transportation Commission (ACTC) Congestion Management Program (CMP) for designated roads or highways, a regional transportation plan, or other agency plans. The project site is not located in an area where vertical or horizontal mixing of air is substantially limited. In addition, the proposed project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour and would not result in localized CO concentrations that exceed State or federal standards. Therefore, this impact would be less than significant.

*c. Would the project expose sensitive receptors to substantial pollutant concentrations? (Less Than Significant with Mitigation Incorporated)*

Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. Exposure from diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks.

The closest sensitive receptors include residential uses located adjacent to the southern access pit (cul-de-sac of Cydonia Court) and the northern access pit at the southern edge of the Tassajara Hills Development. Construction of the proposed project may expose these surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement BAAQMD Basic Construction Mitigation Measures, as required by Mitigation Measure AIR-1 above. With implementation of Mitigation Measure AIR-1, project construction emissions would be below BAAQMD significance thresholds. Additionally, due to the linear nature of the project, construction activities at any one receptor location would occur for a limited duration. Once the project is constructed, the project would not be a source of substantial emissions. Therefore, sensitive receptors are not expected to be exposed to substantial pollutant concentrations during project construction or operation, and potential impacts would be considered less than significant.

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

During construction, the various diesel-powered vehicles and equipment in use on the site would create localized odors. These odors would be temporary and are not likely to be noticeable for extended periods of time beyond the project site. The potential for diesel odor impacts is therefore considered to be less than significant. In addition, once the project is operational, it would not be a source of odors. Therefore, the proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people, and potential impacts would be considered less than significant.

### 3.4 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 Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project site is located along a moderately steep west-facing hillside, which supports a vegetative cover of non-native grassland. The most commonly distributed species are introduced annual grasses including wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*) and soft chess (*Bromus hordeaceus*). Introduced broadleaf herbaceous species are also present in the non-native grassland. The most common species in this group include mustard (*Brassica spp.*), yellow starthistle (*Centaurea solstitialis*), cutleaf geranium (*Geranium dissectum*) and milk thistle (*Silybum marianum*). Large patches of mustard are present where ground squirrel burrows are concentrated. A few native herbaceous plants are also present including soap plant (*Chlorogalum pomeridianum*) and lupine (*Lupinus sp.*)

Plant cover at the locations of the proposed boring and receiving pit locations is more ruderal, reflecting the disturbed nature of these areas, which have been graded in the past and the native soil removed. Many of the same species found in the adjacent non-native grassland are also present at these locations and visually they appear to be extensions of the non-native grassland. No woody plant species are found within the project footprint.

The project area grassland provides habitat for a variety of grassland associated wildlife species. Small rodents and birds provide a prey base for larger predators. Prey species found in this area include sierra tree frog (*Pseudacris sierra*), savannah sparrow (*Passerculus sandwichensis*), western meadowlark (*Sturnella neglecta*), Botta pocket gopher (*Thomomys bottae*), western harvest mouse (*Reithrodontomys megalotis*) and California ground squirrel (*Otospermophilus beecheyi*). Ground squirrel burrows are scattered along the project alignment with a few locations with numerous burrows. Ground squirrel burrows provide retreat habitat for a number of small vertebrates including California tiger salamander (CTS), which breed in a seasonal stockpond located approximately 0.20 mile west of the project site.

Larger predatory species observed, or sign of their presence detected in the project area include white-tailed kite (*Elanus leucurus*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*) and coyote (*Canis latrans*). It is also likely golden eagle (*Aquila chrysaetos*) forage in the area. An active golden eagle nest is located approximately 0.37 mile south of the Cydonia Court end of the site and ground squirrels are a primary prey species for golden eagles.

Other wildlife species present include rock pigeon (*Columba livia*), American crow (*Corvus brachyrhynchos*), desert cottontail (*Sylvilagus audubonii*) and black-tailed deer (*Odocoileus hemionus*).

There are no wetland or other sensitive habitat on the project site.

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

For the purpose of this report, special-status species are defined as follows:

- Species that are listed, formally proposed for listing, or designated as candidates for listing as threatened or endangered under the federal Endangered Species Act (ESA);
- Species that are listed, or designated as candidates for listing, as rare, threatened, or endangered under the California Endangered Species Act (CESA);
- Plant species on California Rare Plant Rank (CRPR) Lists 1A, 1B, and 2 in the CNPS Inventory of Rare and Endangered Plants;
- Animal species designated as Species of Special Concern or Fully Protected by the California Department of Fish and Wildlife (CDFW);
- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the CEQA guidelines; and
- Species considered being a taxon of special concern by the relevant local agencies.

The project area contains potential habitat for three special status species: California red-legged frog (CRLF), San Joaquin kit fox (*Vulpes macrotis mutica*), and CTS. A fourth species, Alameda striped racer (whipsnake) (*Coluber lateralis euryxanthusi*) was also evaluated; however, no potential habitat is present for this species.

**California Red-legged Frog.** CRLF is federally listed as threatened and is a California Species of Special Concern. The project site is located within the southwestern corner of the Mount Diablo CRLF Critical Habitat Unit (CCS-2B).<sup>5</sup> CRLF occur in and along freshwater marshes, streams, ponds, and other semi-permanent water bodies. Adult CRLF are primarily aquatic and for successful breeding require ponded water from March to July/August. Adjacent uplands are also important for providing aestivation and dispersal habitat.

CRLF are known to be present in the Tassajara Hills project open space to the north,<sup>6</sup> and Tassajara Creek and Dougherty Valley Open Space lands to the west, northwest of the project site. They are also present in the conservation easement (Northern Drainage Conservation Area [NDCA]) established as part of the larger Dublin Ranch development to the south and grazing lands to the east, northeast of the project site east of Tassajara Road.

There are 45 California Natural Diversity Data Base (CNDDDB) occurrences within 5 miles of the project site.<sup>7</sup> The nearest CNDDDB record is a 2018 record from the NDCA 0.34 mile from the project site (CNDDDB Occurrence #251).

The proposed project is not likely to adversely affect the CRLF due to the absence of impact on suitable aquatic habitat and the distance to suitable aquatic habitat. There is no breeding habitat on or immediately adjacent to the site. However, the proposed project could result in indirect effects to CRLF and increased construction traffic on roads in the vicinity of the project site could lead to direct mortality. Implementation of Mitigation Measure BIO-1, described below for California Tiger Salamander (CTS), would also reduce potential impacts to CRLF to a less-than-significant level.

**San Joaquin Kit Fox.** The San Joaquin kit fox (SJKF) is federally listed as endangered and State listed as threatened. Critical habitat has not been designated for this species. SJKF in its northern range are most commonly found in open valley and foothill areas with a grassland plant cover. They are dependent on dens for breeding, rest and cover which in the northern range are most commonly provided by enlarged ground squirrel burrows.

There are two SJKF CNDDDB occurrences within 5 miles of the project site. The nearest occurrence was a 1975 sighting from Camp Parks, 2.9 miles from the project site (CNDDDB Occurrence #1031).

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<sup>5</sup> United States Fish and Wildlife Service (USFWS). 2010. Endangered and Threatened Wildlife and Plants: Revised designation of Critical Habitat for the California Red-legged Frog; Final Rule. Federal Register 75 (51): 12816-12959.

<sup>6</sup> Pacific Gas and Electric Company (PG&E). 2010. Tri-Valley Capacity Increase Project, Wetland Mitigation Monitoring, Year 5. Report No. 001.3.10.1.

<sup>7</sup> California Department of Fish and Wildlife (CDFW). 2021. California Natural Diversity Data Base. California Natural Diversity Data Base (CNDDDB), Commercial Version, Updated February 2, 2021. California Department of Fish and Game, Biogeographic Data Branch, Sacramento, California

This record from Morrell<sup>8</sup> has since been determined upon examination of photos of the animals to be gray fox.<sup>9</sup> The remaining occurrence within 5 miles was a 1989 sighting 4.48 miles from the project site (CNDDDB occurrence #544). There is currently no known occupied SJKF habitat in Alameda, Contra Costa, and San Joaquin counties.<sup>10</sup> Given the lack of recent records in the project vicinity, the project is not likely impact SJKF. This impact would be less than significant.

**California Tiger Salamander.** CTS is a federally and State listed threatened species. The project site is not located within federally designated Critical Habitat.

CTS occur in grassland, oak savanna, sparse deciduous oak woodland, and occasionally, chaparral. The adults and juveniles remain below ground in the burrows of California ground squirrels, pocket gophers and other available underground retreats during the dry period of the year. They breed during the wet season in vernal pools, stock ponds, other temporary bodies of water, and occasionally intermittent creeks.

CTS occupy grassland habitat containing suitable breeding ponds to the north, east, and west of the project site alignment. CTS breed in a stock pond approximately 0.20 mile to the west. West of Tassajara Road and Tassajara Creek they are present on Camp Parks and the Dougherty Valley Open Space lands. CTS are present throughout the area east of the project site, which is almost all contiguous grassland habitat. There are 46 CTS CNDDDB records within 5 miles of the project site.<sup>11</sup> Given that the project site is located within potential dispersal distance of a known breeding site and contains suitable upland habitat, the project may impact CTS.

Directional drilling associated with pipeline installation would have minor impacts on special-status species. Surface disturbance would be limited to the access pits (600 square feet), open cut trench (approximately 1,500 square feet) within the existing graded area, and in the immediate vicinity where equipment would be staged and drill cuttings would be stockpiled for removal/re-use. Both of these locations have previously been graded and support a ruderal herbaceous plant cover. As outlined in Section 1.0, Project Information, the proposed pipeline would be located 5 to 85 feet bgs, with the majority of the pipeline located a minimum of 20 feet bgs. The drilled pipeline route would be located in bedrock with the exception of the previously graded area in the unpaved extension of Cydonia Court. The 20-foot depth is deeper than ground squirrels are known to burrow<sup>12</sup> and ground squirrel burrowing in bedrock is unlikely. Therefore, drilling and installation of the water main would not impact CTS.

Proposed geotechnical investigations, which would include exploratory borings, could impact CTS and other small vertebrates, which may be present during boring activities. The drill rig would need

<sup>8</sup> Morrell, S. 1975. San Joaquin Kit Fox Distribution and Abundance in 1975. California Department of Fish and Game, Wildlife Management Branch Administrative Report No. 75-3.

<sup>9</sup> Green, M. 1983. Letter to John Gustafson, California Department of Fish and Game.

<sup>10</sup> United States Fish and Wildlife Service (USFWS). 2020. Species Status Assessment, Report for the San Joaquin kit fox (*Vulpes macrotis mutica*). Sacramento Fish and Wildlife Office. 74pp.

<sup>11</sup> CDFW. 2021, op. cit.

<sup>12</sup> Linsdale, J.M. 1946. The California Ground Squirrel. University of California Press. Berkeley and Los Angeles, California.

to access each test bore site by driving over the ground surface. Ground squirrel burrows are present along the entire length of the project site alignment, including proposed boring locations and access routes. Burrow mouths could be collapsed by the rig, trapping CTS and other small vertebrates, if present. The potential take of CTS would be a significant impact. Implementation of the following mitigation measure would reduce potential impacts to CTS to a less-than-significant level.

**Mitigation Measure BIO-1**

The following conservation measures shall be implemented prior to and during pipeline installation to avoid impacts to CTS and CRLF:

- Prior to initial ground disturbance, the DSRSD shall submit the name(s) and credentials of biologists who will conduct activities specified in the following measures. No ground disturbance activities shall begin until proponents have received written approval from the CDFW and/or USFWS that the biologist(s) is/are qualified to conduct the work.
- A qualified biologist shall train all project staff regarding habitat sensitivity, identification of listed species, and required practices before the start of construction. The training shall include the measures described in this mitigation measure to conserve this species as they relate to the project, the penalties for non-compliance, and the boundaries of the project site. A fact sheet or other supporting materials containing this information shall be prepared and distributed.
- A qualified biologist shall monitor all ground disturbing construction activities. After initial ground disturbing activities are complete, the qualified biologist shall train an individual to act as the on-site construction monitor. The on-site monitor shall have attended the training described above. Both the qualified biologist and the construction monitor shall have the authority to stop and/or redirect project activities to ensure protection of resources and compliance with all environmental permits and conditions of the project. The biologist and construction monitor shall complete daily logs summarizing activities and environmental compliance.
- A preconstruction survey for CRLF and CTS shall be conducted in and adjacent to the bore and receiving pits by a qualified biologist. The survey shall be conducted within 24 hours prior to the start of construction. During the pre-construction survey, the entire construction area shall be inspected. If any CRLF or CTS are found, CDFS and/or USFWS shall be contacted and the qualified biologist shall be allowed sufficient time to move any individuals from the work site before work activities begin. Only

qualified biologists shall participate in activities associated with the capture, handling, and monitoring of CRLF or CTS. All relocations shall be reported to CDFW and/or USFWS. Any biologist involved with the surveying/handling shall employ sterilization techniques appropriate to avoid the transmission of diseases to and from the site. If no CRLF or CTS are found during this survey, survey results shall be provided in writing to the CDFW and/or USFWS.

- The boundaries of the bore and receiving pits shall be delineated prior to the initiation of construction activities, and exclusion fencing shall be installed around their boundary. Exclusion fencing would keep CRLF and CTS from crossing into the construction area during the construction period and would prevent inadvertent disturbance of additional areas by construction activities. Exclusion fencing shall consist of silt fabric at least 3 feet high. The base of the fence shall be buried in the ground a minimum of 6 inches to prevent animals from crawling under. The remainder of the fence shall be above ground to serve as a barrier for animals moving on the ground surface. The fence shall be pulled taut at each support to prevent folds or snags.
- The bore and receiving pits shall be inspected for entrapped wildlife before commencement of drilling activities every morning. Any special-status species discovered shall be removed by a qualified biologist and relocated to an area outside the exclusion fence before construction activities resume. All other species of entrapped wildlife shall be moved by the on-site construction monitor if the qualified biologist is not on-site. Pipes that are stored on the site shall be inspected for trapped animals before the pipe is used in any way. Pipes in or adjacent to trenches left overnight shall be capped.
- Permanent and temporary construction disturbances and other types of project-related disturbance to habitat shall be minimized to the maximum extent practicable and confined to the sites of any exploratory geotechnical investigation and the bore pits. To minimize temporary disturbances, all project-related vehicle traffic shall be restricted to established roads, construction areas, and specifically designated access areas. These areas should be included in preconstruction surveys and, to the maximum extent possible, should be established in locations disturbed by previous activities to prevent further adverse effects.



- Exploratory drill rig access routes shall be identified prior to drill rig entry into the project area and shall be surveyed for ground squirrel burrows, other small mammal burrows and potential kit fox dens. All burrows detected along these routes shall be marked with pin flags.
- The drill rig shall be accompanied by the project biologist who would walk in front of the rig as it approaches and leaves all test bore sites, directing it to avoid the identified burrows.
- Tightly woven fiber netting or similar material used for erosion control or other purposes at the project site shall not contain plastic monofilament netting to ensure that California tiger salamanders do not become entangled in the mesh. Coconut coir matting is an acceptable erosion control material.
- A litter control program shall be instituted at the project site. All workers shall ensure their food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project site are deposited in covered or closed trash containers. Containers shall be removed from the project site at the end of each working day.
- To avoid entrapment of listed species and prevent injury or mortality of listed species resulting from drilling activities, all open excavated areas more than 6 inches deep (the bore and receiving pits) shall be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday. The qualified biologist or construction personnel designated by the biologist shall be responsible for thoroughly inspecting the bore and receiving pits for listed species at the beginning of each workday. If any listed species have become trapped, the qualified biologist shall be contacted to relocate the animal, and no work shall occur in that area until approved by the biologist. Relocation of other wildlife species may be done by the on-site construction monitor. CDFW and/or USFWS shall be notified of all species relocations.
- All construction vehicle parking shall be restricted to existing disturbed areas. Necessary vehicles belonging to the biological monitors and construction workers shall be parked at the nearest point of entry on existing access roads and streets.
- A qualified biologist shall ensure that the spread or introduction of invasive exotic plant species would be avoided to the



maximum extent possible. When practicable, invasive exotic plants in the project site shall be removed.

Impacts to CTS and CRLF associated with proposed geotechnical borings and pipeline installation would be less than significant with implementation of Mitigation Measure BIO-1. Therefore, the proposed project would not result in 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.

- 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, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (No Impact)*

As described above, the proposed project site alignment is located along a moderately steep west-facing hillside, which supports a vegetative cover of non-native grassland. Plant cover at the locations of the proposed bore and receiving pits is more ruderal, reflecting the disturbed nature of these locations, which have been graded in the past, and the native soil removed. No riparian habitat or other sensitive natural communities are located within the project site. Therefore, the proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community. No impact would occur.

- 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? (No Impact)*

The project site is located in the Tassajara Creek watershed and drains to Moller Creek, a tributary to Tassajara Creek. As described in Section 3.3.b, no wetlands or other sensitive habitat (e.g., marsh, vernal pool, etc.) are located on the project site. Therefore, the proposed project would not have a substantial adverse effect on state or federally protected wetlands. No impact would occur.

- 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? (Less Than Significant with Mitigation Incorporated)*

The proposed project site alignment is located along a moderately steep west-facing hillside, which supports a vegetative cover of non-native grassland. This grassland provides habitat for a variety of grassland associated wildlife species. Implementation of the proposed project would not create any significant new permanent barriers to terrestrial or aquatic wildlife movement, as the proposed pipeline would be located underground. Because the pipeline would be installed via directional drilling, limited surface ground disturbance would be required for pipeline installation. Implementation of Mitigation Measure BIO-1, described above, would ensure that temporary impacts to migrating special-status wildlife species, including CRLF and CTS, as well as other small vertebrates, would be less than significant.

The project would not impact any known wildlife nursery sites, such as heron rookeries or bat roosts. This impact would be less than significant.

*e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (No Impact)*

Heritage trees and approved street trees are protected under the Dublin Municipal Code, specifically Sections 7.56, Street Trees, and 5.60, Heritage Trees. A permit is required from the City for the removal of any heritage tree and the removal/pruning of any approved street tree. In addition, for any property containing one or more heritage trees, a plan to protect heritage trees must be prepared and submitted to the City prior to the issuance of a demolition, grading, or building permit.

As outlined in Section 1.0, Project Information, the proposed pipeline alignment would be largely installed via directional drilling, which would require minimal ground disturbance for excavation of the access pits at each end of the pipeline alignment. Minimal trenching would be required to connect the drilled portion of the pipeline alignment to the existing pipelines with Delamar Drive and Cydonia Court. The proposed project is not expected to require the removal/pruning of any trees, as no trees are located in the areas where ground disturbance would be required. Therefore, the proposed project would not conflict with any local policies or ordinances protecting biological resources. No impact would occur.

*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? (No Impact)*

The project area is not subject to any adopted habitat conservation plan or natural community conservation plan. Therefore, the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Plan, or other approved local, regional, or State habitat conservation plan and no impact would occur.

### 3.5 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? (Less Than Significant with Mitigation Incorporated)*

For a cultural resource to be considered a historical resource (i.e., eligible for listing in the California Register of Historical Resources), it generally must be 50 years or older. Under CEQA, historical resources can include precontact (i.e., Native American) archaeological deposits, historic-period archaeological deposits, historic buildings, and historic districts. To identify cultural resources at the project site, the following tasks were completed: (1) a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System; (2) a review of historical maps and aerial photographs to assess the potential for buried precontact and historic-period archaeological deposits; and (3) a field survey of the project site by a qualified archaeologist. The DSRSD also undertook consultation outreach with California tribal organizations pursuant to the requirements of AB 52 (refer to Section 3.18, Tribal Cultural Resources).

**Records Search.** The NWIC records search was conducted on March 3, 2021. The search indicated that there are no recorded cultural resources in the project area or within a 500-foot radius of the project alignment. A total of 19 studies have been conducted in the project area.

**Field Survey.** A field survey of the project site was conducted on March 3, 2021. The entire project site was surveyed; however, the survey area was covered in thick weeds and grasses, resulting in an average 5 to 10 percent visibility. Approximately six spot checks were conducted by clearing a portion of the alignment to expose and examine the surface soils. Rodent burrows and the adjacent back soil in the project area were also examined. The survey area was located on steep and sloping hill areas, and was covered by matted grasses and weeds. No cultural resources were found in the project area during the survey. The results of this research and survey indicate that intact cultural resources are highly unlikely to exist within the project area.

**Native American Heritage Commission.** LSA requested a review of the Native American Heritage Commission (NAHC) Sacred Lands File on February 19, 2021, for any Native American cultural resources located within the project area. LSA received a response on March 4, 2021, from Ms. Sarah Fonseca, Associate Governmental Program Analyst, stating that “A record search of the NAHC Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative.”

**Summary of Results.** The NWIC records search and

field survey did not identify cultural resources in the project area or within 500 feet of the project site. Despite the negative results of the field survey, it cannot be entirely ruled out that archaeological cultural resources could be encountered during project construction at the project sites. Should archaeological deposits be encountered during project ground disturbance, a substantial adverse change in the significance of a historical resource would occur from its demolition, destruction, relocation, or alteration such that the significance of the resource would be materially impaired (CEQA Guidelines Section 15064.5(b)(1)). To mitigate this potential impact, the DSRSD would be required to implement Mitigation Measure CULT-1, below. With implementation of Mitigation Measure CULT-1, potential impacts to historical resources would be reduced to less than significant.

**Mitigation Measure CULT-1:** Should an archaeological deposit be encountered during project subsurface construction activities, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology contacted to assess the situation, determine if the deposit qualifies as a historical resource, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. If the deposit is found to be significant (i.e., eligible for listing in the California Register of Historical Resources), the DSRSD shall be responsible for funding and implementing appropriate mitigation measures. Mitigation measures may include recording the archaeological deposit, data recovery and analysis, and public outreach regarding the scientific and cultural importance of the discovery. Upon completion of the selected mitigations, a report documenting methods, findings, and recommendations shall be prepared by the qualified archaeologist and submitted to the DSRSD for review, and the final report shall be submitted to the Northwest Information Center at Sonoma State University. Significant archaeological materials shall be submitted to an appropriate local curation facility and used for future research and public interpretive displays, as appropriate.

Potential impacts to previously undiscovered historical or archaeological resources would be less than significant with implementation of Mitigation Measure CULT-1. Therefore, ground disturbing activities associated with the proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.

*b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? (Less Than Significant with Mitigation Incorporated)*

According to the CEQA Guidelines, "When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource" (CEQA Guidelines Section 15064.5(c)(1)). Those archaeological sites that do not qualify as historical resources shall be assessed to determine if these qualify as "unique archaeological resources" (California PRC Section 21083.2).

Archaeological deposits identified during project construction shall be treated by the DSRSD—in consultation with a qualified archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards for Archeology—in accordance with Mitigation Measure CULT-1. With implementation of Mitigation Measure CULT-1, identified above, impacts to archaeological resources would be less than significant. Therefore, ground disturbing activities associated with the proposed project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.

*c. Would the project disturb any humans remains, including those interred outside of formal cemeteries? (Less-Than-Significant Impact)*

Based on previous archaeological investigation and analysis, there is a low potential for the disturbance of archaeological cultural resources or human remains at the project site. However, if human remains are encountered at the project site, State Health and Safety Code Section 7050.5 and State CEQA Guidelines Section 15064.5(e)(1) state that no further disturbance shall occur to the area of the find until the County Coroner has made a determination of origin and disposition of the human bone pursuant to PRC Section 5097.98. The County Coroner must be notified of the find immediately and shall make a determination within two working days of being notified. If the remains are determined to be Native American, the County Coroner shall notify the NAHC by phone within 24 hours, and the NAHC shall then immediately determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection and make recommendations or preferences for treatment of the remains within 48 hours of being granted access to the site. The MLD’s recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials, preservation of Native American human remains and associated items in place, relinquishment of Native American human remains and associated items to the descendants for treatment, or any other culturally appropriate treatment.

Compliance with Section 7050.5 of the California Health and Safety Code and Public Resources Code Section 5097.98 regarding the treatment of human remains would ensure that potential impacts to human remains would be less than significant.

### 3.6 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*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? (Less-Than-Significant Impact)*

This analysis evaluates energy consumption for both construction and operation of the proposed project, including diesel fuel use for construction off-road equipment.

**Construction.** Construction activities associated with the proposed project would require the use of energy to fuel construction equipment and vehicles. All or most of this energy would be derived from non-renewable resources. Construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. Energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources. As such, construction energy usage would be less than significant. In addition, implementation of Mitigation Measure AIR-1 (refer to Section 3.3) would restrict equipment idling times to 5 minutes or less and construction workers would be required to shut off idle equipment, which would increase energy efficiency on the site during project construction. Therefore, impacts would be less than significant.

**Operation.** Typically, energy consumption is associated with fuel used for vehicle trips and electricity and natural gas use. The proposed project would result in the installation of approximately 1,100 linear feet of 8-inch HDPE pipeline to connect existing pipelines on Cydonia Court and Delamar Drive. The project would not generate additional vehicle trips through the project area and, as such, would not increase fuel usage. In addition, implementation of the proposed project would not include lighting or features that could contribute to a significant new source of electricity and natural gas usage. Therefore, implementation of the proposed project would not result in a long-term demand for electricity and natural gas nor would the project require new service connections or construction of new off-site service lines or substations to serve the project. The nature of proposed improvements would not require substantial amounts of energy for either construction or maintenance purposes and, as such the proposed project would not use non-renewable resources in a wasteful or inefficient manner. Therefore, operational energy impacts would be less than significant.

*b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? (Less-Than-Significant Impact)*

In 2002, the Legislature passed Senate Bill 1389, which required the California Energy Commission (CEC) to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels, for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. The CEC recently adopted the 2019 Integrated Energy Policy Report.<sup>13</sup> The 2019 Integrated Energy Policy Report provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs.

As indicated above, energy usage in the project area during construction would be relatively small in comparison to the State's available energy sources and energy impacts would be negligible at the regional level. Once operational, the proposed project would not increase energy use. Because California's energy conservation planning actions are conducted at a regional level, and because the project's total impact to regional energy supplies would be minor, the proposed project would not conflict with California's energy conservation plans as described in the 2019 Integrated Energy Policy Report. Thus, as shown above, the project would avoid or reduce the inefficient, wasteful, and unnecessary consumption of energy and not result in any irreversible or irretrievable commitments of energy. Impacts would be less than significant.

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<sup>13</sup> California Energy Commission. 2020. *2019 Integrated Energy Policy Report*. California Energy Commission. Docket # 19-IEPR-01. February.

### 3.7 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:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

- i. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (No Impact)*

Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. The location of surface rupture generally can be assumed to be along an active or potentially active major fault trace.

The State of California enacted the Alquist-Priolo Fault Zoning Act in 1972, requiring the State Geologist to delineate Earthquake Fault Zones (EFZs) along known active faults that have high potential for fault rupture. The project site is not located within a designated EFZ.<sup>14</sup> Therefore, the

<sup>14</sup> California Geological Survey. 2016. California Earthquake Hazards Zone Application. Website: [maps.conservation.ca.gov/cgs/EQZApp/app/](https://maps.conservation.ca.gov/cgs/EQZApp/app/) (accessed February 25, 2021).



proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault.

*ii. Strong seismic ground shaking? (Less-Than-Significant Impact)*

The project site and the entire San Francisco Bay Area is in a seismically active region subject to strong seismic ground shaking. Ground shaking is a general term referring to all aspects of motion of the earth's surface resulting from an earthquake and is normally the major cause of damage in seismic events. The extent of ground-shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions. The magnitude of a seismic event is a measure of the energy released by an earthquake; it is assessed by seismographs that measure the amplitude of seismic waves. The intensity of an earthquake is a subjective measure of the perceptible effects of a seismic event at a given point. The Modified Mercalli Intensity (MMI) scale is the most commonly used scale to measure the subjective effects of earthquake intensity. It uses values ranging from I to XII.<sup>15</sup> The closest faults to the project site are the Calaveras Fault, located approximately 5 miles to the west, and the Pleasanton Fault, located approximately 3 miles to the west.

Mapping has been performed by the Association of Bay Area Governments (ABAG) for the likely shaking intensities in the Bay Area that would have a 10 percent chance of occurring in any 50-year period. A large earthquake (magnitude 6.7 or greater) on one of the major active faults in the region would generate severe (MMI 8) ground shaking at the project site.<sup>16</sup>

Buried pipelines, like the proposed project, are generally less susceptible to damage from strong ground shaking than above ground structures since below ground pipelines are typically embedded in compacted backfill that can tolerate more seismic movement. Accepted procedures for placement of the water lines and construction measures necessary to minimize potential adverse effects have been incorporated into the project design. As outlined in Section 1.0, Project Information, proposed construction requirements, as well as the horizontal and vertical alignment of the proposed pipeline would be refined based on geotechnical investigations, which would include test borings. No businesses or residences would be constructed as part of the proposed project and people would not regularly access the project site upon completion. Therefore, the proposed project would not expose people or structures to substantial effects related to ground-shaking and this impact would be less than significant.

*iii. Seismic-related ground failure, including liquefaction? (Less-Than-Significant Impact)*

Liquefaction is the transformation of saturated, loose, fine-grained sediment to a fluid-like state because of earthquake shaking or other rapid loading. Soils most susceptible to liquefaction are

<sup>15</sup> United States Geological Survey. 2018. The Modified Mercalli Intensity Scale. Website: [www.usgs.gov/natural-hazards/earthquake-hazards/science/modified-mercalli-intensity-scale?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](http://www.usgs.gov/natural-hazards/earthquake-hazards/science/modified-mercalli-intensity-scale?qt-science_center_objects=0#qt-science_center_objects) (accessed February 25, 2021).

<sup>16</sup> Association of Bay Area Governments (ABAG). 2020a. Shaking Scenarios Map. Available online at: [mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8](http://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8) (accessed February 25, 2021).

loose to medium dense, saturated sands, silty sands, sandy silts, non-plastic silts and gravels with poor drainage, or those capped by or containing seams of impermeable sediment.

The California Geological Survey (CGS) has mapped Seismic Hazard Zones that delineate areas susceptible to liquefaction and/or landslides that require proposed new developments in these areas to conduct additional investigation to determine the extent and magnitude of potential ground failure. According to mapping by CGS, the project site is not located within a Seismic Hazard Zone for liquefaction.<sup>17</sup> Mapping performed by ABAG indicates that the project site is in an area of very low liquefaction susceptibility.<sup>18</sup> Therefore, the impact of seismic-related ground failure, including liquefaction, is less than significant.

#### *iv. Landslides? (Less-Than-Significant Impact)*

The proposed pipeline would be installed within hilly terrain, connecting existing pipelines on Cydonia Court and Delamar Drive. The proposed pipeline would be installed using horizontal directional drilling, whereby a tunnel is drilled under the ground surface and the pipeline is then pulled through the underground tunnel. According to CGS, the project site is located within a Seismic Hazard Zone for landslide.<sup>19</sup> The project site is also located within a rainfall-induced landslide zone, according to ABAG.<sup>20</sup> As described in Section 3.7.a.iii., accepted procedures for placement of the water lines and construction measures necessary to minimize potential adverse effects have been incorporated into the project design. Proposed construction requirements, as well as the horizontal and vertical alignment of the proposed pipeline would be refined based on geotechnical investigations, which would include test borings. Conformance with these project design features and geotechnical recommendations would reduce the effects of landslide to a less-than-significant level.

#### *b. Would the project result in substantial soil erosion or the loss of topsoil? (Less-Than-Significant Impact)*

Construction of the proposed project, including excavation of access pits, and trenching and backfilling of pipeline connections could destabilize the soil surface and increase erosion potential from water and wind. As outlined in the Section 1.0, Project Information, the potential for soil erosion has been minimized through the implementation of directional drilling to install the proposed pipeline. Given the limited extent of ground disturbance, the potential for substantial soil erosion or the loss of topsoil that could result from construction of the proposed project is low.

Soil erosion would also be minimized with implementation of Best Management Practices (BMPs) during construction activities, including the use of sediment barriers (e.g., soil berms, silt fences,

<sup>17</sup> California Geological Survey. 2016, op. cit.

<sup>18</sup> Association of Bay Area Governments (ABAG). 2020b. Liquefaction Susceptibility Map. Available online at: [mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8](https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8) (accessed September 1, 2020).

<sup>19</sup> California Geological Survey. 2016, op. cit.

<sup>20</sup> Association of Bay Area Governments (ABAG). 2020c. Interactive Landslide Hazards Map. Available online at: [mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8](https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8) (accessed September 1, 2020).

staked hay or straw bales, or sandbags), and trench barriers and breakers (constructed of materials such as sandbags or polyurethane foam). Soil erosion would also be minimized by limiting the time of soil disturbance, avoiding construction during periods of maximum runoff, hydroseeding of disturbed surface areas, and reestablishing pavement as soon as possible.

Consistent with Section 7.16.580, Erosion and Sediment Control of the City of Dublin Municipal Code, DSRSD would be required to prepare an Erosion and Sediment Control Plan (ESCP) that would indicate proposed methods for control of runoff, erosion and sediment movement. Soil erosion and loss of topsoil would also be minimized through implementation of Mitigation Measure AIR-1 (BAAQMD Basic Construction Mitigation Measures, which regulate fugitive dust). Implementation of these project design features and the ESCP would reduce potential impacts to soil erosion or the loss of topsoil to a less-than-significant level.

*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? (Less-Than-Significant Impact)*

As discussed in Section 3.7.a, site soils would not be subject to lateral spreading or liquefaction but could be subject to landslide. The proposed pipeline would be designed and constructed with adequate foundations and bedding in accordance with the California Uniform Building Code, standard engineering practices and the recommendations of the geotechnical investigation. The project site is not anticipated to become unstable as a result of the proposed project, or potentially result in on- or off-site landslides, liquefaction, or lateral spreading. Therefore, the proposed project would not result in a geologic hazard from landslide, lateral spreading, subsidence, liquefaction or collapse and the impact is less than significant.

*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? (Less-Than-Significant Impact)*

Expansion and contraction of volume can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). During these cycles, the volume of the soil changes markedly. Changes in soil volume could result in significant expansion pressure on any structures proposed as part of future development of the project site. Expansive soils are common throughout California and can cause damage to foundations and slabs unless properly treated during construction.

Soil types found on the project site include Diablo clay, 15 to 30 percent slopes (DbD) and Diablo clay, 30 to 50 percent slopes (DdFcc), according to the Natural Resources Conservation Service web soil survey.<sup>21</sup> The shrink-swell potential for these types of clay soil is high.<sup>22</sup> The proposed project would be designed and constructed using standard construction methods. Standard construction

<sup>21</sup> United States Department of Agriculture Soil Conservation Service. 2019. Web Soil Survey. Available online at: [websoilsurvey.sc.egov.usda.gov/App/HomePage.htm](http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm) (accessed February 25, 2021).

<sup>22</sup> United States Department of Agriculture Soil Conservation Service. 1975. Soil Survey of Alameda County, California, Western Part. Available online at: [www.nrcs.usda.gov/Internet/FSE\\_MANUSCRIPTS/california/CA610/0/alameda.pdf](http://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/california/CA610/0/alameda.pdf) (accessed February 25, 2021).

methods for pipelines include appropriate selection of backfill materials that do not exhibit expansive behavior. In addition, proposed construction requirements, as well as the horizontal and vertical alignment of the proposed pipeline would be refined based on geotechnical investigations to ensure appropriate placement of the pipeline based on geologic conditions. Therefore, impacts associated with expansive soils would be less than significant.

*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 waste water? (No Impact)*

Implementation of the project would not include installation of septic tanks or alternative wastewater disposal systems. Therefore, there would be no impact to soils and wastewater disposal.

*f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (Less Than Significant with Mitigation Incorporated)*

As outlined in Section 1.0, Project Information, the proposed pipeline would be installed at depths from 5 to 85 feet bgs within bedrock underlying the pipeline alignment. In the event that fossil remains are encountered, or paleontologically sensitive bedrock (Monterey Formation or Briones Sandstone) are exposed, impacts to paleontological resources could occur. Implementation of Mitigation Measure GEO-1 would reduce potential impacts to paleontological resources to a less-than-significant level.

**Mitigation Measure GEO-1:** If fossil remains or paleontologically sensitive bedrock is exposed during project construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified paleontologist shall be contacted to review the find. The project team (the DSRSD and the paleontologist) shall develop and implement a plan for impact avoidance. Should avoidance be infeasible due to engineering requirements, the project team shall develop and implement a plan to offset the loss of paleontological data through the implementation of a data recovery project, including paleontological recovery. If determined to be a unique paleontological resource, the potentially significant impacts caused by construction may be mitigated through monitoring during construction activity (beyond the area of the initial find), and, if warranted by potential finds, recovery of fossils; preservation, stabilization, and identification of collected resources; curation of resources into a museum repository; and preparation of a final report documenting the monitoring methods and results, to be submitted to the DSRSD.

Potential impacts to previously undiscovered paleontological resources would be less than significant with implementation of Mitigation Measure GEO-1. Therefore, the proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

### 3.8 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (Less-Than-Significant Impact)*

Greenhouse gases (GHGs) are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO<sub>2</sub>);
- Methane (CH<sub>4</sub>);
- Nitrous oxide (N<sub>2</sub>O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs); and
- Sulfur Hexafluoride (SF<sub>6</sub>).

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO<sub>2</sub>, methane, and N<sub>2</sub>O, some gases, like HFCs, PFCs, and SF<sub>6</sub> are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of Global Warming Potential (GWP), a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of

each gas is measured relative to CO<sub>2</sub>, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO<sub>2</sub> over a specified time period. GHG emissions are typically measured in terms of pounds or tons of “CO<sub>2</sub> equivalents” (CO<sub>2</sub>e).

This section describes the proposed project’s construction- and operational-related GHG emissions and contribution to global climate change.

**Construction Greenhouse Gas Emissions.** The BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. Construction activities would produce combustion emissions from various sources. During construction of the project, GHGs would be emitted through the operation of construction equipment and from worker vehicles, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. Furthermore, CH<sub>4</sub> is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change. According to the results of the RoadMod analysis (refer to Section 3.3, Air Quality), the project would generate 62.6 metric tons of CO<sub>2</sub>e construction emissions. Implementation of Mitigation Measure AIR-1 would further reduce construction GHG emissions by limiting construction idling emissions. Therefore, construction emissions would not be considered significant.

**Operational Greenhouse Gas Emissions.** Long-term GHG emissions are typically generated from mobile sources (e.g., cars, trucks and buses), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). Mobile-source GHG emissions would include project-generated vehicle trips to and from the project. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site. Energy source emissions would be generated at off-site utility providers as a result of increased electricity demand generated by the project. Waste source emissions generated by the proposed project include energy generated by land filling and other methods of disposal related to transporting and managing project generated waste. In addition, water source emissions associated with the proposed project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

The proposed project would result in the installation of approximately 1,100 linear feet of 8-inch HDPE pipeline to connect existing pipelines on Cydonia Court and Delamar Drive. The project would not generate additional vehicle trips through the project area and, therefore, would not increase mobile source emissions. In addition, the project would not be a source of energy or area source emissions. As such, the proposed project would not generate any GHG emissions or result in any new vehicle trips that would contribute to an increase in GHG emissions. GHG emissions generated by the proposed project would be less than significant.

*b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (Less-Than-Significant Impact)*

The City of Dublin Climate Action Plan 2030 and Beyond (CAP 2030) establishes a vision for the City to reach carbon neutrality by 2045 and includes quantified actions the City will take to GHG

emissions by 65,090 metric tons CO<sub>2</sub>e by 2030. The CAP 2030 identifies additional actions that will need to be implemented to reach carbon neutrality. Dublin adopted its first Climate Action Plan (CAP 2020) in 2010 and is on track to meet the 2020 GHG emissions target. The purpose of the CAP 2030 is to meet the State's 2030 GHG emissions reductions target of at least 40 percent below 1990 levels by 2030. The CAP 2030 identifies GHG reduction strategies and measures that relate to renewable and carbon-free energy, building efficiency and electrification, sustainable mobility and land use, materials and waste management, and municipal leadership. As discussed above, the proposed project would result in the installation of approximately 1,100 linear feet of 8-inch HDPE pipeline to connect existing pipelines on Cydonia Court and Delamar Drive. The GHG reduction strategies identified in the CAP relate to land use development projects and municipal operations and are not applicable to the proposed project. Therefore, the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. This impact would be less than significant.

### 3.9 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? (Less-Than-Significant Impact)*

The proposed project would result in the installation of a new underground water pipeline. Hazardous materials would not be routinely transported, used or disposed of during the operation and maintenance (O&M) phase of the proposed project. The DSRSD would be required to comply with existing government regulations in the use and disposal of any hazardous materials necessary for maintenance of the project pipeline, and such materials would not be used in sufficient strength or quantity to create a substantial risk to human or environmental health. Therefore, the proposed project would have a less-than-significant impact related to the routine transport, use, or disposal of hazardous materials.



*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? (Less-Than-Significant Impact)*

As described in 3.9.a above, operation of the project would not require routine use of hazardous materials; therefore, no hazards or hazardous materials impacts related to long-term operation of the project are anticipated.

The hazardous materials most likely to be used during construction include typical construction materials such as gasoline, diesel, motor oil, lubricants, solvents, and adhesives, as well as drilling fluids used for trenchless construction activities. Drips and small spills would be the most likely potential hazardous materials releases to occur, however any release that occurs in close proximity to sensitive habitat (e.g., a stream) could have a significant impact on the environment, if not properly controlled.

While gas and diesel fuel would typically be used by construction vehicles, BMPs would be utilized to ensure that no construction-related fuel hazards occur. Such materials would be kept at construction staging areas, and would be secured when not in use. In the unlikely event of a spill, fuels would be controlled and disposed of in accordance with applicable regulations. The DSRSD would be required to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the State Water Resources Control Board's National Pollutant Elimination System (NPDES) General Permit for Storm Water Discharge Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, as amended by Orders No. 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002) (Construction General Permit), permitting requirements, which would reduce the potential for hazardous materials releases to occur during construction, and would reduce the potential for spills to impact sensitive habitat or human health, to less than significant. SWPPPs are required for construction sites over one acre that do not qualify for a waiver. Therefore, development of the proposed project would not create a significant hazard to the public or environment. This impact would be less than significant.

*c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (No Impact)*

No public schools are located within 0.25 mile of the project site. The closest school to the project site is the John Green Elementary School, located 1.2 miles to the south of the project site. The proposed project would result in the installation a water pipeline and would not result in the routine use, transport or disposal of substantial quantities of hazardous materials. Therefore, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No impact would occur.

- d. *Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (Less-Than-Significant Impact)*

Government Code Section 65962.5 states that the California Department of Toxic Substances shall compile and maintain annually a list of hazardous waste facilities subject to corrective action as part of the Health and Safety Code. This list is commonly referred to as the Cortese List. The project site is not located on the Regional Water Quality Control Board's Leaking Underground Tank Cleanup Site (LUST) or any other Cleanup Program Sites (formerly known as spills, leaks, investigations, and cleanups or SLIC). These two components comprise the State Cortese List of known hazardous materials sites compiled pursuant to Government Code Section 65962.5.

According to the California State Water Resources Control Board (SWRCB) Geotracker website,<sup>23</sup> no State-listed hazardous materials clean-up sites are located within 1,000 feet of the project site. One site, a private residence, located southwest of the project site on Branding Iron Place, is listed as a LUST site. This site is designated "closed." A closed site indicates that regulatory requirements for response actions, such as site assessment and remediation, have either been completed or were not necessary and, therefore, potential migration of residual contaminants in groundwater beneath the project corridor (if any) does not likely pose a risk to human health and the environment. Therefore, no significant hazard to the public or environment would be associated with this listed site, and this impact would be less than significant.

- e. *Would the project be located within an airport land use plan or, where such a plan has not been adopted, within 2 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? (No Impact)*

The project site is not located within an airport land use plan, or within 2 miles of a public airport or public use airport. The closest airports to the project site are the Livermore Municipal Airport, located approximately 3.5 miles to the southeast, and the Hayward Executive Airport, located approximately 15 miles to the west of the project site. Therefore, the project would not result in a safety hazard for people residing or working in the project area.

- f. *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (Less-Than-Significant Impact)*

The Tri-Valley Local Hazard Mitigation Plan<sup>24</sup> was developed in compliance with State requirements and also meets the requirements of the Federal Emergency Management Agency (FEMA) as the City's local hazard mitigation plan. The Tri-Valley Local Hazard Mitigation Plan provides a uniform hazard mitigation strategy for the Tri-Valley area, addressing a range of hazards including, but not

<sup>23</sup> State Water Resources Control Board. 2021. Geotracker Website Application. Available online at: <https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=delamar+drive+dublin#> (accessed February 23, 2021).

<sup>24</sup> TetraTech. 2018. Tri-Valley Local Hazard Mitigation Plan, Volume 1: Planning Area-Wide Elements. September. Available online at: [dublin.ca.gov/DocumentCenter/View/20467/2018-09-04\\_HMP-Volume-1-\\_Tri-Valley\\_FINAL](http://dublin.ca.gov/DocumentCenter/View/20467/2018-09-04_HMP-Volume-1-_Tri-Valley_FINAL) (accessed September 1, 2020).

limited to, earthquakes, floods and wildland fire. The City of Dublin also has an adopted Comprehensive Emergency Management Plan and a Local Hazard Mitigation Plan to assess hazards and mitigate risks prior to a disaster event.

The proposed project would result in the installation of a new underground pipeline from an unpaved extension of Cydonia Court to Delamar Drive in the Tassajara Hills Development. As outlined in Section 1.0, Project Information, the access pits would be excavated at each end of the pipeline alignment. The southern access pit would be located within an unpaved extension of Cydonia Court and the northern access pit would be located within an unpaved emergency access road at the southern edge of the Tassajara Hills Development. Because the proposed project would not alter or block adjacent roadways, implementation of the proposed project would not be expected to impair the function of nearby emergency evacuation routes. Therefore, the proposed project would have a less-than-significant impact on implementation of an adopted emergency response plan or emergency evacuation plan.

*g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? (Less Than Significant with Mitigation Incorporated)*

The project area is located in a moderate fire hazard zone as determined by the California Department of Forestry and Fire Protection (CalFIRE)<sup>25</sup> CalFIRE implements fire safety regulations in the State. Implementation of the project would not change the degree of exposure to wildfires because no new aboveground structures or housing would be constructed, and people would not regularly access the project site. However, construction of the pipeline would occur within an undeveloped hillside area. During construction, the most likely source of ignition would be by mechanical activities such as operation of backhoes, mini excavators, or rolled compactors. The California Public Resources Code includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas. Due to the abundance of dry vegetation in and surrounding the project area, there is a risk of a wildland fire occurrence at the site, if regulatory requirements are not properly implemented during construction. Implementation of Mitigation Measure HAZ-1 would reduce the potential for construction activities to cause a wildland fire to a less-than-significant level.

**Mitigation Measure HAZ-1:** The DSRSD shall ensure that appropriate measures be taken to minimize the risk of fire during construction activities. Specifically, the DSRSD shall require that all fire safety regulations cited in the California Public Resources Code be incorporated into construction bid documents and contracts for the project, including regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction

<sup>25</sup> CalFire. 2020. California Fire Hazard Severity Zone Viewer. Website: [gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414](https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414) (accessed February 23, 2021).

equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas. Additionally, special precautions shall be identified and taken to minimize the potential for fires resulting from the welding and fusing processes necessary for linking sections of pipeline together. BMPs shall be implemented during construction to reduce the potential for accidental spills or fires involving the use of hazardous materials.

The potential for construction activities to cause a wildland fire would be less than significant with implementation of Mitigation Measure HAZ-1. Therefore, construction of the proposed project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

### 3.10 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 groundwater quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. Result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? (Less-Than-Significant Impact)*

Implementation of the proposed project would not result in a net increase in the amount of impervious surface area or an associated increase in the rate and volume of stormwater runoff, as the proposed pipeline would be located underground. Continued long-term operation and maintenance of the proposed pipeline would not violate any water quality standards or waste discharge requirements.

Ground disturbance during construction could result in erosion and associated discharge of additional sediment and/or other pollutants from disturbed areas into streams. Trenching spoils generated during construction would be stored on the site for a short time and DSRSD would backfill or cover open trenches at the end of each workday to minimize the transport of soil to stormwater drainage facilities. Where backfilling or covering open trenches is not feasible, proper erosion control practices would be established to eliminate or minimize transport of sediment and other pollutants to stream channels. As outlined in Section 1.0, Project Information, the potential for soil erosion has been minimized through the implementation of directional drilling to install the proposed pipeline.

Consistent with Section 7.16.580, Erosion and Sediment Control of the City of Dublin Municipal Code, the construction contractor would be required to prepare an Erosion and Sediment Control Plan (ESCP) that would indicate proposed methods for control of runoff, erosion and sediment movement. Soil erosion and loss of topsoil would also be minimized through implementation of Mitigation Measure AIR-1 (BAAQMD Basic Construction Mitigation Measures, which regulate fugitive dust). With implementation of these project design features and the ESCP, the project would result in a less than significant impact associated with the violation of water quality standards or waste discharge requirements during construction.

*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? (Less-Than-Significant Impact)*

The pipeline installation would not result in any changes to impervious surface area. Groundwater would not be extracted during operation of the proposed pipeline. Because the project would not result in the development of large areas of impervious surfaces that would prevent water from infiltrating into the groundwater nor would it result in direct additions or withdrawals to existing groundwater, operation of the project would result in a less-than-significant impact associated with depleting groundwater supplies or substantially interfering with groundwater recharge.

*c. 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:*

- 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? (Less-Than-Significant Impact)*

Project construction would not substantially alter existing drainage patterns or alter the course of a stream or river such that substantial erosion or siltation would occur. As outlined in Section 1.0, Project Information, the potential for soil erosion has been minimized through the implementation of directional drilling to install the proposed pipeline. After installation of the proposed pipeline, soils that have been excavated would be compacted and recovered to be consistent with current topography.

The proposed project would result in the installation of an underground water transmission pipeline. Implementation of the proposed project would not significantly alter existing drainage patterns, including alteration of the course of a stream or river or substantial increase in the rate/amount of surface runoff that could lead to on-site or off-site flooding.

The proposed project would not result in a substantial increase in impermeable surfaces that could lead to a significant amount of runoff. It would not affect drainage capacity, nor would it lead to a substantial addition of sources of polluted runoff.

The proposed project would result in the installation of an underground water transmission pipeline, which would not impede or redirect flood flows. This impact is less than significant.

*d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation? (No Impact)*

The project site is not located within a 100-year flood hazard zone as mapped by FEMA<sup>26</sup> and is not located within a mapped dam failure inundation area. There are no levees protecting the site from flooding and as a result, no risk of failure.

The project site is not located within a mapped tsunami area<sup>27</sup> and no seismically induced seiche waves have been documented in the San Francisco Bay throughout history.<sup>28</sup>

Implementation of the project involves installing an underground pipeline; no structures would be installed aboveground. Therefore, the project would not increase the risk of pollutants due to project inundation. No impact would occur.

*e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (Less-Than-Significant Impact)*

As discussed above, due to the size and nature of the proposed project (e.g., an underground pipeline), construction and operation of the project would be subject to local requirements related to stormwater runoff. Required compliance with local regulations regarding stormwater during construction would ensure that the proposed project would not conflict or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Following construction, the proposed pipeline would be located underground with limited potential to affect groundwater or water quality. As a result, this impact would be less than significant.

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<sup>26</sup> Federal Emergency Management Agency. Flood Map Service Center (map) Website: [msc.fema.gov/portal/search?AddressQuery=delamar%20drive%2C%20dublin%2C%20ca#searchresultsanchor](https://msc.fema.gov/portal/search?AddressQuery=delamar%20drive%2C%20dublin%2C%20ca#searchresultsanchor) (accessed March 3, 2021).

<sup>27</sup> California, State of. 2019. California Official Tsunami Inundation Maps. Website: [www.conservation.ca.gov/cgs/tsunami/maps](http://www.conservation.ca.gov/cgs/tsunami/maps) (accessed March 3, 2021).

<sup>28</sup> Association of Bay Area Governments and Metropolitan Transportation Commission. 2013. *Plan Bay Area*. July 18.

### 3.11 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*a. Would the project physically divide an established community? (No Impact)*

The physical division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying areas. Implementation of the project would provide a new water pipeline to provide a redundant source of water supply for an existing residential development. Therefore, implementation of the project would not physically divide an established community and no impact would occur.

*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? (Less Than Significant Impact)*

The City of Dublin General Plan, the City of Dublin Municipal Code, and the Eastern Dublin Specific Plan are the primary land use plans containing policies and regulations applicable to the project. The project would be located within an existing undeveloped hillside area between an unpaved extension of Cydonia Court to the south and the Tassajara Hills Development to the north. The proposed access pits would be located in areas that have been previously graded as part of the adjacent residential development. The proposed project would not change existing land use within the project area and would not result in the conversion of adjacent land uses or conflicts with applicable City land use designations or zoning standards. The proposed project would not conflict with any applicable land use plan, policy or regulation with jurisdiction over the project.

As described in Section 1.0, Project Information, lands to the south and east of the proposed pipeline alignment consist primarily of undeveloped lands located within a conservation easement (Northern Drainage Conservation Area) established as part of the larger Dublin Ranch development. The majority of the pipeline alignment would be located within a proposed conservation easement, which will establish allowable uses within the project area.

The City of Dublin General Plan, the Eastern Dublin Specific Plan and relevant sections of the City's Municipal Code outline relevant policies and regulations applicable to the proposed project, including policies to preserve visual, cultural, and natural resources and to protect the health and safety of their citizens. Consistent with the goals and policies of these relevant planning documents, the project has been designed to minimize impacts to natural and cultural resources. Project



conformance and/or potential conflicts with these ordinances are described in the relevant resource sections of this Initial Study. Where potentially significant environmental impacts have been identified in this Initial Study/Mitigated Negative Declaration, they have been mitigated to less than significant with implementation of appropriate mitigation measures. Therefore, the project would be consistent with applicable land use plans, policies and regulations, and no additional mitigation is required.

### 3.12 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*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? (No Impact)*

Neither the State Geologist nor the California Department of Mines and Geology (CDMG) have classified any areas in the City of Dublin as containing mineral deposits that are either of Statewide significance or the significance of which requires further evaluation.<sup>29</sup> The project site has been classified by the CDMG as being located in MRZ-4, indicating that the project site is located in an area where inadequate information is available for assignment to any other MRZ zone.<sup>30</sup> The project site is not designated or zoned for the extraction of mineral deposits. Therefore, the proposed project would not result in the loss of availability of a known mineral resource that would be of value of the region and the residents of the state and no impact would occur.

*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? (No Impact)*

As stated in Response 3.12.a., the project site is classified as MRZ-4. As stated in the City of Dublin General Plan, Dublin is an inland city which contains no mineral extraction areas.<sup>31</sup> No mineral extraction activities occur on the project site, and it is not located within an area known to contain locally important mineral resources. Therefore, the proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan and no impact would occur.

<sup>29</sup> State of California, Division of Mines and Geology. 1996. Generalized Mineral Land Classification Map of the South San Francisco Bay Production Consumption Region. Open File Report 96-03, Plate 1.

<sup>30</sup> Ibid.

<sup>31</sup> Dublin, City of. 1985. City of Dublin General Plan. February 11. (Amended as of November 21, 2017)

### 3.13 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following provides an overview of the characteristics of sound and vibration as well as the regulatory framework that applies to noise within the vicinity of the project site. The existing noise environment in and around the project site is also described.

**Characteristics of Sound.** Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep.

Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; and similarly, each 10 dB decrease in sound level is perceived as half as loud.

Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements that better represent human sensitivity to sound at night. As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level ( $L_{eq}$ ) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the  $L_{eq}$ , the community noise equivalent level (CNEL), and the day-night average level ( $L_{dn}$ ) based on dBA.  $L_{dn}$ ,

sometimes denoted as DNL, represents the time varying noise over a 24-hour period, with a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours).  $L_{dn}$  is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours of 7:00 p.m. to 10:00 p.m.

**Characteristics of Vibration.** Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may be discernible. Typically, there is more adverse reaction to effects associated with the shaking of a building. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibration of walls, floors, and ceilings that radiate sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with both ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 feet from the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 feet.<sup>32</sup> When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed for most projects that the roadway surface will be smooth enough that ground-borne vibration from street traffic will not exceed the impact criteria; however, both the construction of the project could result in ground-borne vibration that may be damaging.

Ground-borne vibration has the potential to damage buildings. Although it is very rare for typical construction activities to cause even cosmetic building damage, it is not uncommon for construction processes such as blasting and pile driving to cause vibration of sufficient amplitudes to damage nearby buildings. Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). The PPV is used to characterize potential for damage.

**Regulatory Framework.** A project would have a significant noise effect if it would substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals of applicable regulatory agencies. While the proposed project is located within the East Dublin Specific Plan, there are no policies specific to noise that would be applicable. The following analysis compares the potential impacts to the criteria within the Alameda County and City of Dublin Municipal Codes. Because the City of Dublin does not provide vibration assessment criteria for

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<sup>32</sup> California Department of Transportation. 2013. *Caltrans Transportation and Construction Vibration Guidance Manual*. September.

damage related to construction, the guidelines within the Federal Transit Administration's (FTA) Transit Noise and Vibration Impact Assessment Manual (FTA Manual)<sup>33</sup> have been used.

**Alameda County Municipal Code.** The Alameda County Municipal Code (Section 4-10.7 - Special Provisions)<sup>34</sup> sets allowable hours for construction activity to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and between 8:00 a.m. and 5:00 p.m. on Saturdays and Sundays.

**The City of Dublin Municipal Code.** The City of Dublin's Municipal Code (Section 5.28.020)<sup>35</sup> prohibits any person within the City from making any loud, or disturbing, or unnecessary, or unusual or habitual noise or any noise which annoys or disturbs or injures or endangers the health, repose, peace, or safety of any reasonable person of normal sensitivity present in the area.

**Federal Transit Administration.** The criteria for environmental impacts resulting from ground-borne vibration are based on the maximum levels for a single event. The guidelines within the *FTA Manual* have been used to determine vibration impacts (refer to Table 3.13-A, below).

**Table 3.13-A: Construction Vibration Damage Criteria**

Building Category	PPV (in/sec)
Reinforced concrete, steel, or timber (no plaster)	0.50
Engineered concrete and masonry (no plaster)	0.30
Non-engineered timber and masonry buildings	0.20
Buildings extremely susceptible to vibration damage	0.12

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018), Table 12-3.

FTA = Federal Transit Administration

PPV = peak particle velocity

in/sec = inches per second

The FTA Manual guidelines show that a vibration level of up to 0.2 in/sec PPV is considered safe for non-engineered timber and masonry buildings and would not result in any construction vibration damage. Therefore, in order to be conservative, the 0.2 in/sec PPV threshold has been used when evaluating vibration impacts at the nearest structures to the site.

**Existing Noise Environment.** The project site is located approximately 2.4 miles north of I-580. Access to the site is from Delamar Drive to the north or from an extension of Cydonia Court to the south. Each access point is in existing or zoned residential area, although the majority of the proposed pipeline alignment would be located on undeveloped land. The existing noise environment is generally quiet as the nearest arterial roadways is over 2,500 feet away.

**Sensitive Land Uses in the Vicinity.** Certain land uses are considered more sensitive to noise than others. Examples of these include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The closest sensitive receptors to the project site are existing

<sup>33</sup> Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment Manual, FTA Report No. 0123. September.

<sup>34</sup> Alameda County. 2020. *Code of Ordinances*. October.

<sup>35</sup> Dublin, City of. 2020. *Municipal Code*. December.

residential properties located 30 feet from the proposed trenching activities and 55 feet from the drilling and boring activities as shown on Figure 1-2.

- 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? (Less-Than-Significant with Mitigation Incorporated)*

The following section addresses the short-term construction and long-term operational noise impacts of the proposed project.

**Short-Term Construction Noise Impacts.** Project construction would result in short-term noise impacts on the nearby sensitive receptors. Maximum construction noise would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of noise impacts generally would be from one day to several days depending on the phase of construction. The level and types of noise impacts that would occur during construction are described below.

Table 3.13-B lists typical construction equipment noise levels ( $L_{\max}$ ) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor, obtained from the Federal Highway Administration (FHWA) Roadway Construction Noise Model. Construction related short-term noise levels would be higher than existing ambient noise levels currently in the project area but would no longer occur once construction of the project is completed.

Two types of short-term noise impacts could occur during construction of the proposed project. The first type involves construction crew commutes and the transport of construction equipment and materials to the site, which would incrementally increase noise levels on roads leading to the site. As shown in Table 3.13-B, there would be a relatively high single-event noise exposure potential at a maximum level of 84 dBA  $L_{\max}$  with trucks passing at 50 feet. Because there is no hauling associated with the proposed project, the trips associated with construction traffic would be minimal.

The second type of short-term noise impact is related to noise generated during construction on the project site. Construction is performed in discrete steps, or phases, each with its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Table 3.13-B lists maximum noise levels recommended for noise impact assessments for typical construction equipment, based on a distance of 50 feet between the equipment and a noise receptor.

**Table 3.13-B: Typical Construction Equipment Noise Levels**

Equipment Description	Acoustical Usage Factor (%)	Maximum Noise Level ( $L_{max}$ ) at 50 Feet <sup>1</sup>
<b>Backhoes</b>	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
<b>Excavators</b>	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Jackhammers	20	85
Pick-up Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
<b>Rock Drills</b>	20	85
<b>Rollers</b>	20	85
Scrapers	40	85
Tractors	40	84
Welder	40	73

Source: Roadway Construction Noise Model (FHWA 2006).

Note: Noise levels reported in this table are rounded to the nearest whole number.

Equipment in **bold** represents equipment proposed for this project.

<sup>1</sup> Maximum noise levels were developed based on Spec 721.560 from the Central Artery/Tunnel (CA/T) program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.

$L_{max}$  = maximum instantaneous sound level

As discussed in Section 1.0, Project Information, the contractor would employ the use of heavy construction machinery, likely including the following: wheel-mounted/track-mounted drill rig, horizontal drilling machine, excavator, backhoe, and roller compactor. This analysis assumes that an excavator and either a drill or roller would be operating simultaneously during construction of the proposed project. Based on the typical construction equipment noise levels shown in Table 3.13-B, noise levels associated with these pieces of construction equipment operating simultaneously would be approximately 88 dBA  $L_{max}$  at 50 feet.

The closest sensitive receptors include single-family residences located along Delmar Drive, approximately 30 feet from proposed trenching activities and 55 feet from the northern access pit, resulting in short-term construction noise levels approaching 92.5 dBA  $L_{max}$  and 87.2 dBA  $L_{max}$ , respectively. However, construction equipment would operate at various locations along the proposed 1,100-foot alignment and, due to the linear nature of the project, construction activities at any one receptor location would occur for a limited duration. Construction noise is permitted by Alameda County when activities occur between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday and between 8:00 a.m. and 5:00 p.m. on Saturdays and Sundays. In addition, while construction-related short-term noise levels have the potential to be higher than existing ambient

noise levels in the project area, the noise impacts would no longer occur once project construction is completed.

Implementation of Mitigation Measure NOI-1 would ensure that construction noise does not disturb the residential uses during hours when ambient noise levels are likely to be lower (i.e., at night). With implementation of Mitigation Measure NOI-1, construction noise impacts would be less than significant.

- Mitigation Measure NOI-1:** Prior to commencement of construction activities, DSRSD staff shall verify that grading and construction plans include the following requirements to ensure that the greatest distance between noise sources and sensitive receptors during construction activities has been achieved:
- Construction activities occurring as part of the project shall be subject to the limitations and requirements of the Alameda County Municipal Code, which states that construction activities are restricted to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday and between 8:00 a.m. and 5:00 p.m. on Saturdays and Sundays.
  - During all project area excavation and on-site grading, the project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
  - Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site.
  - Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all construction activities.
  - Designate a "disturbance coordinator" at the DSRSD who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem.

Construction noise associated with the project would be less than significant with implementation of Mitigation Measure NOI-1. Therefore, construction of the proposed project would not 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.

**Operational Noise Impacts.** The proposed project would consist of installing approximately 1,100 linear feet of 8-inch-diameter HDPE pipeline below the ground surface to connect to existing pipelines within Cydonia Court and Delamar Drive. Once construction activities are complete, staging areas would be returned to existing conditions. Thus, no operational noise would be associated with the new pipeline.

As described above, with the incorporation of Mitigation Measure NOI-1, the project would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the proposed project in excess of standards established in the local general plan or noise ordinance, or any other applicable standards. Therefore, this impact would be less than significant.

*b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels? (Less-Than-Significant with Mitigation Incorporated)*

Construction of the proposed project could result in the generation of groundborne vibration. This construction vibration impact analysis assesses the potential for building damages using vibration levels in peak particle velocity (in/sec PPV). The FTA Manual guidelines indicate that a vibration level up to 0.2 in/sec PPV is considered safe for non-engineered timber and masonry buildings.

Table 3.13-C shows the PPV values at 25 feet from a construction vibration source. As shown in Table 3.13-C, bulldozers and other heavy-tracked construction equipment (except for vibratory rollers) generate approximately 0.089 in/sec PPV of groundborne vibration when measured at 25 feet.

**Table 3.13-C: Vibration Source Amplitudes for Construction Equipment**

Equipment	Reference PPV (in/sec) at 25 feet
Vibratory Roller	0.210
Hoe Ram	0.089
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer	0.003

Sources: *Transit Noise and Vibration Impact Assessment* (FTA 2018).

in/sec = inches per second

PPV = peak particle velocity

Construction vibration, similar to vibration from other sources, would not have any significant effects on outdoor activities (e.g., those outside of residential buildings in the project vicinity). The proposed project is expected to include the use of heavy equipment similar to a large bulldozer. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-

site buildings and the project disturbance areas because vibration impacts occur normally within the buildings. The formula for vibration transmission is provided below.

$$PPV_{\text{equip}} = PPV_{\text{ref}} \times (25/D)^{1.5}$$

As identified above, residential structures are located 30 feet away from the proposed trenching activities and would experience vibration levels approaching 0.073 in/sec PPV. Although the proposed construction activities are located 30 feet from existing structures based on preliminary plans, construction vibration levels at these structures could exceed the FTA threshold of 0.2 in/sec PPV for non-engineered timber and masonry building damage if heavy equipment were to operate within 15 feet of the structures. For example, vibration levels at a distance of 14 feet would be 0.212 in/sec PPV. Therefore, construction that would occur within 15 feet of existing homes would exceed the FTA vibration damage thresholds resulting in a potentially significant impact. Implementation of Mitigation Measure NOI-1 would be required to maintain a minimum distance of 15 feet between the heavy construction equipment and the adjacent structures. Implementation of Mitigation Measure NOI-1 would ensure that construction vibration level would be below the FTA threshold of 0.2 in/sec PPV for building damage, reducing potential vibration impacts to less than significant. In addition, due to the linear nature of the project, construction activities at any one receptor location would occur for a limited duration.

**Mitigation Measure NOI-2:** The use of heavy construction equipment, such as large bulldozers or excavators, within 15 feet of existing structures shall be prohibited.

Construction vibration associated with the project would be less than significant with implementation of Mitigation Measure NOI-2. Therefore, construction of the proposed project would not result in 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 2 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? (No Impact)*

The proposed project is not located within 2 miles of a public or public use airport. Aircraft noise is occasionally audible at the project site; however, no portion of the project site lies within the 60 dBA CNEL noise contours of any public airport nor does any portion of the project site lie within 2 miles of any private airfield or heliport. Therefore, the proposed project would not result in the exposure of people residing or working in the project area to excessive noise levels. No impact would occur.

### 3.14 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 (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- 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)? (No Impact)*

The proposed project would result in the installation of a new underground pipeline to provide a redundant potable water supply to the Tassajara Hills Development. The proposed pipeline would be installed within an undeveloped hillside area, located between the existing residential development to the south and the Tassajara Hills Development to the north. Surrounding land uses consist primarily of undeveloped lands and residential uses. As described above, the proposed pipeline would be installed to provide a redundant water supply. It would not provide additional major infrastructure or increase the capacity of the existing water system to accommodate new development nor would the project extend or expand infrastructure or services to existing undeveloped areas in the vicinity of the proposed alignment. Because the proposed water line would be installed to provide a redundant supply for the existing water system, and is not anticipated to serve demand generated by future development around the project site, it would not substantially induce growth. The project would not expand the capacity of the current water system or provide additional major infrastructure so as to encourage population growth or new development. The project would not include any new housing, commercial or industrial space. Therefore, the project would not directly or indirectly induce substantial population growth and no impact would occur.

- b. *Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? (No Impact)*

The project would be constructed within an undeveloped hillside area. No housing or people would be displaced as a result of implementation of the project and no impact would occur.

### 3.15 PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii. Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv. Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v. Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

- i. *Fire protection?*
- ii. *Police protection?*
- iii. *Schools?*
- iv. *Parks?*
- v. *Other public facilities? (No Impact)*

Public services in the area are provided by the Alameda County Fire Department, the Alameda County Sheriff's Office, the Dublin Unified School District, and the City of Dublin Parks and Community Services Department. Development of the project would improve the reliability of the DSRSD system by installing a new water pipeline to provide a redundant water supply to the Tassajara Hills Development. The project does not include the construction of structures that would increase the population in the area or that would generate a higher demand for fire or police services, schools, parks, or other public facilities. Therefore, the demand for public services for the project would be the same as under existing conditions and no impact would occur.

### 3.16 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- 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? (No Impact)*

The City of Dublin Parks and Community Services Department operates and maintains a variety of outdoor recreational sites, neighborhood parks, community parks, community facilities, open space areas and a series of trail networks.<sup>36</sup> As discussed in Section 3.14, Population and Housing, and Section 3.15, Public Services, development of the project would improve the reliability of the DSRSD's system by installing a new water pipeline that would provide a redundant water supply. No housing would be constructed as part of the project. Therefore, the proposed project would not result in impacts related to the use of the existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. No impact would occur.

- 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? (No Impact)*

The project does not include nor require the construction or expansion of new or existing public recreational facilities. Therefore, the proposed project would not result additional environmental effects associated with recreation beyond those described in this document.

<sup>36</sup> Dublin, City of. 1985. op. cit.

### 3.17 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*a. Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? (Less-Than-Significant Impact)*

The Alameda County Transportation Commission (ACTC), which is Alameda County's designated Congestion Management Agency (CMA), has established a 100 peak-hour trip threshold for requiring preparation of a Traffic Impact Analysis. ACTC has determined that projects that would generate fewer than 100 peak hour trips are unlikely to generate enough change in the circulation system to result in a conflict with a program plan, ordinance or policy addressing the circulation system. The peak trip generation potential associated with the proposed project during the construction and operational periods is described below.

**Short-Term Construction.** As discussed in the project description, project construction is anticipated to start in August 2021 and last approximately two months. Construction activities would typically occur from 8:00 a.m. to 5:00 p.m., Monday through Friday. Construction personnel may arrive on site and depart approximately one hour prior to or after regular construction times. Staging areas are proposed on the existing fire access road within the Tassajara Hills Development and along the northerly end of Cydonia Court. Access to the project site would likely be via Tassajara Road or Fallon Road and I-580. Once construction activities are complete, staging areas would be returned to existing conditions.

The contractor would employ the use of heavy construction machinery, likely including the following: wheel-mounted/track-mounted drill rig, horizontal drilling machine, excavator, backhoe, and roller compactor. All of the material excavated during pipeline installation would be used to fill in the access pits following pipeline installation. No import or export of soils would be required. The equipment would likely be delivered when the construction begins and removed when it ends. Therefore, on a typical day, heavy equipment related to construction activities would not affect the roadway network.

The on-site construction workforce would consist of laborers, craftsmen, supervisory personnel, support personnel, and construction management personnel. The number of construction employees will vary by site and activity. It is conservatively assumed that up to approximately 40 workers would be on-site during construction activities. Even if no carpooling occurs, these 40 workers would generate fewer than 100 trips during either morning or afternoon peak commute hour.

The trip generation is expected to be less than 100 peak hour trips, which is less than the established thresholds. Therefore, the project would not conflict with a program plan, ordinance or policy addressing the circulation system and the impact would be less than significant.

**Operational Trips.** Upon completion of construction, the proposed pipeline would be located underground. No daily or peak hour trips are anticipated to be attracted to or generated by the project site. Therefore, the project would not conflict with a program plan, ordinance or policy addressing the circulation system and the impact would be less than significant.

*b. Would the project conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)? (Less-Than-Significant Impact)*

According to the screening threshold for small projects, defined in the State of California Governor's Office of Planning and Research Technical Advisory On Evaluating Transportation Impacts in CEQA dated December 2018, "projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact."

Upon construction, the proposed pipeline would be located underground and would not generate any vehicle trips to/from the project site, except to perform periodic maintenance or repairs. During the short-term construction activity, less than 100 daily trips are anticipated. Therefore, in accordance with the Technical Advisory, impacts related to CEQA Guidelines section 15064.3, subdivision (b) can be assumed to be less than significant.

*c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (No Impact)*

The proposed project would not change the existing roadway design. During construction, construction vehicles would be staged within the off-roadway construction sites, at each end of the pipeline alignment. Heavy vehicles may travel along major arterials and I-580 during construction; however, no lane closures or detours would be required for the proposed project. In addition, the proposed project does not include any design features that may increase hazards as the pipeline would be underground. Therefore, no impacts associated with hazardous design features would result from the proposed project.

*d. Would the project result in inadequate emergency access? (No Impact)*

The proposed project would install a water pipeline between two existing residential developments. Once completed, the proposed project would not interfere or encroach onto an emergency access route. Construction activities may temporarily restrict vehicular traffic; however construction

activities would not result in road closures or similar activities that would cause significant delay to emergency vehicles. Therefore, the proposed project would not result in inadequate emergency access. No impact would occur.



### 3.18 TRIBAL 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 tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*
- i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or*
  - ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

Assembly Bill 52 (AB 52), which became law on January 1, 2015, provides for consultation with California Native American tribes during the CEQA environmental review process, and equates significant impacts to “tribal cultural resources” with significant environmental impacts. Public Resources Code (PRC) Section 21074 states that “tribal cultural resources” are:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe and are one of the following:
  - Included or determined to be eligible for inclusion in the California Register of Historical Resources.
  - Included in a local register of historical resources as defined in subdivision (k) of PRC Section 5020.1.
  - 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

A “historical resource” (PRC Section 21084.1), a “unique archaeological resource” (PRC Section 21083.2(g)), or a “nonunique archaeological resource” (PRC Section 21083.2 (h)) may also be a tribal cultural resource if it is included or determined to be eligible for inclusion in the California Register.

The consultation provisions of the law require that a public agency consult with local Native American tribes that have requested placement on that agency’s notification list for CEQA projects. Within 14 days of determining that a project application is complete, or a decision by a public agency to undertake a project, the lead agency must notify tribes of the opportunity to consult on the project, should a tribe have previously requested to be on the agency’s notification list. California Native American tribes must be recognized by the NAHC as traditionally and culturally affiliated with the project site, and must have previously requested that the lead agency notify them of projects. Tribes have 30 days following notification of a project to request consultation with the lead agency.

The purpose of consultation is to inform the lead agency in its identification and determination of the significance of tribal cultural resources. If a project is determined to result in a significant impact on an identified tribal cultural resource, the consultation process must occur and conclude prior to adoption of a Negative Declaration or Mitigated Negative Declaration, or certification of an Environmental Impact Report (PRC Sections 21080.3.1, 21080.3.2, 21082.3). As described in Section 1.0, Project Information, DSRSD has notified California Native American tribes of the proposed project and have reached out to the two tribes that requested consultation for follow-up. To date, no additional responses have been received by DSRSD.

As discussed in Section 3.5, Cultural Resources, the NWIC records search and the archaeological survey completed for the project did not identify evidence of Native American archaeological deposits or ancestral remains. The proposed project would not impact known tribal cultural resources that are listed or eligible for listing in the California Register of Historical Resources or a local register of historical resources, nor has the DSRSD identified a tribal cultural resource at the project site. As noted in Section 3.5, Cultural Resources, implementation of Mitigation Measures CULT-1 and CULT-2 would ensure that potential impacts related to previously undiscovered historic or archaeological resources and human remains, including tribal cultural resources, would be less than significant.

### 3.19 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 stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? (Less-Than-Significant Impact)*

The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities. The proposed project would install a new, underground water pipeline for the Tassajara Hills Development. Development of the proposed project would provide beneficial effects by improving the DSRSD's water distribution system reliability by providing a redundant water supply. Implementation of the proposed project would not affect the amount of on-site runoff and; therefore, would not require the expansion of stormwater facilities. No new wastewater, gas, electricity or telecommunications facilities would be required to serve the proposed project. Measures (e.g., Best Management Practices, Best Available Control Technologies) have been incorporated into the project design along with conformance with appropriate guidelines and policies to reduce possible environmental impacts to the extent practicable. Potentially significant environmental impacts associated with installation of the proposed pipeline would be reduced to less than significant with implementation of the mitigation measures included in this Initial Study. This impact would be less than significant.

*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? (Less-Than-Significant Impact)*

The project would not result in an increase in the amount of water that is distributed to the site currently. New or expanded water supply entitlements would not be required to serve the project. During pipeline installation, water would be used to create the drilling fluid, a mixture of water and additives that facilitate both the soil borings and directional drilling. Water would be provided via a water truck during construction activities. The amount of water required would be relatively small and would only be needed during the construction period. Therefore, the proposed project would result in a less-than-significant impact related to water supplies.

*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? (Less-Than-Significant Impact)*

Refer to Section 3.19.a above. Implementation of the project would not result in a change in the wastewater treatment needed. Impacts related to wastewater treatment would be less than significant.

*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? (Less-Than-Significant Impact)*

Implementation of the project would generate solid waste associated with construction activities, including construction materials and general refuse. As outlined in Section 1.0, Project Information, all of the material excavated during pipeline installation would be used to fill in the access pits following pipeline installation. No import or export of soils would be required. Therefore, minimal non-hazardous waste would be hauled to local disposal centers for recycling or taken to landfills.

The closest landfill to the project site is the Vasco Road Landfill (approximately 7.5 miles east). As of October 2016, the Vasco Road Sanitary landfill had remaining capacity of approximately 7.4 million cubic yards, with a total capacity of 32.9 million cubic yards.<sup>37</sup> The quantity of solid waste materials associated with construction would be limited to the construction period, and would not pose a significant impact upon existing landfills. No additional solid waste would be generated by long-term operations of the proposed project. Impacts related to solid waste disposal are considered less than significant.

*e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? (Less-Than-Significant Impact)*

As described in Section 3.19.d., implementation of the project would generate solid waste associated with construction activities. To the extent possible, solid waste would be recycled either

<sup>37</sup> CalRecycle. 2019. SWIS Facility/Site Activity Details Vasco Road Sanitary Landfill (01-AA-0010). Website: [www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/9?siteID=8](http://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/9?siteID=8) (accessed March 2, 2021).

on-site or transported to a local disposal center for recycling. Solid waste generation would be limited to the construction period; no solid waste would be generated from long-term operation of the proposed project. The proposed project would comply with federal, State, and local statutes and regulations related to solid waste. This impact would be less than significant.

### 3.20 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan? (Less-Than-Significant Impact)*

The project area is located in a moderate fire hazard zone as determined by the California Department of Forestry and Fire Protection (CalFire).<sup>38</sup> As noted in Section 3.9.f, the proposed project would not impair the implementation of, or physically interfere with, and adopted emergency response plan as the pipeline would be installed underground. Therefore, this impact would be less than significant.

*b. 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? (Less Than Significant with Mitigation Incorporated)*

The proposed project is located in hilly, undeveloped terrain; however, as described in Section 3.9.g, implementation of the project would not change the degree of exposure to wildfires because no new aboveground structures or housing would be constructed and people would not regularly access the project site. Implementation of Mitigation Measure HAZ-1, identified in Section 3.9., Hazards and Hazardous Materials, would reduce the potential for construction activities to cause a wildland fire to less than significant.

<sup>38</sup> CalFire. 2020, op. cit.

- c. *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? (No Impact)*

The proposed project would install an underground water pipeline within hilly terrain via directional drilling. No infrastructure, such as roads, fuel breaks, emergency water sources, or power lines would be required to serve the proposed pipeline. Therefore, the proposed project would not require the installation or maintenance of associated infrastructure. No impact would occur.

- d. *Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? (No Impact)*

The proposed project would install an underground water pipeline within hilly terrain via directional drilling. The pipeline would be installed at depths from 5 to 85 feet bgs. Because the proposed pipeline would be located underground, it would not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. No impact would occur.

### 3.21 MANDATORY FINDINGS OF SIGNIFICANCE

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

- 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? (Less Than Significant with Mitigation Incorporated)*

Implementation of the mitigation measures recommended in this Initial Study would ensure that the construction and operation of the proposed project would not substantially degrade the quality of the environment; reduce the habitat, population, or range of a plant or animal species; or eliminate important examples of California history or prehistory. As described in Section 3.4, the proposed project could result in impacts to special-status species, including CRLF and CTS. With implementation of the mitigation measures identified in this IS/MND, potential impacts to these species would be reduced to less than significant. Mitigation is provided in Section 3.5, Cultural Resources and Section 3.7, Geology and Soils, in the event that unanticipated archeological or paleontological resources and/or human remains are identified in the project area during construction. With implementation of these mitigation measures, impacts to these resources would be less than significant.



- 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)? (Less Than Significant Impact)*

The CEQA Guidelines require a discussion of significant environmental impacts that would result from project-related actions in combination with "closely related past, present, and probably future projects: located in the immediate vicinity (CEQA Guidelines Section 15130[b][1][A]). Cumulative environmental impacts are those impacts that by themselves are not significant, but when considered with impacts occurring from other projects in the vicinity would result in a cumulative impact. Related projects considered to have the potential of creating cumulative impacts in association with the proposed project consist of projects that are reasonably foreseeable and that would be constructed or operated during the life of the proposed project.

The proposed project would be located in an undeveloped area, that is largely protected under existing and/or proposed conservation easements. The Tassajara Hills Development, which would be served by the proposed pipeline is largely built out. No other construction projects are anticipated in the immediate area of the proposed project. As described in this Initial Study/Mitigated Negative Declaration, impacts associated with the proposed project would be temporary, construction-related and would be reduced to less than significant with implementation of the mitigation measures contained herein. Therefore, the proposed project would not make a considerable contribution towards a cumulative impact related to construction impacts. Additionally, the proposed project would not generate a significant amount of greenhouse gas emissions and would therefore not result in a cumulatively considerable impact to global climate change. The proposed project would improve the reliability of the existing water distribution system by providing a redundant water supply.

- c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? (Less Than Significant with Mitigation Incorporated)*

As described in this IS/MND, any potential environmental impacts from the project would be reduced to less than significant with the implementation of the recommended mitigation measures. With implementation of measures both incorporated into the project design and recommended as mitigations to reduce the impacts associated with air quality, biological resources, cultural resources, geology and soils, and noise, the project would not result in substantial adverse effects on human beings.

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## **APPENDIX A**

### **AIR QUALITY MODELING RESULTS**

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<b>Road Construction Emissions Model</b>		<b>Version 9.0.0</b>			
<b>Data Entry Worksheet</b>					
<p><small>Note: Required data input sections have a yellow background.</small></p> <p><small>Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.</small></p> <p><small>The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.</small></p> <p><small>Please use "Clear Data Input &amp; User Overrides" button first before changing the Project Type or begin a new project.</small></p>				<p>To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.</p>	
					
<b>Input Type</b>					
Project Name	Tassajara Hills Pipeline Project				
Construction Start Year	2021	Enter a Year between 2014 and 2040 (inclusive)			
Project Type	4	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction			
<small>For 4: Other Linear Project Type, please provide project specific off-road equipment population and vehicle trip data</small>					
Project Construction Time	2.00	months			
Working Days per Month	22.00	days (assume 22 if unknown)			
Predominant Soil/Site Type: Enter 1, 2, or 3	1	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the lone formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)			
<small>(for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)</small>		miles			
Project Length	0.21	acres			
Total Project Area	2.19	acres			
Maximum Area Disturbed/Day	2.19	1. Yes			
Water Trucks Used?	1	2. No			
<b>Material Hauling Quantity Input</b>					
Material Type	Phase	Haul Truck Capacity (yd <sup>3</sup> ) (assume 20 if unknown)	Import Volume (yd <sup>3</sup> /day)	Export Volume (yd <sup>3</sup> /day)	
Soil	Grubbing/Land Clearing				
	Grading/Excavation				
	Drainage/Utilities/Sub-Grade				
	Paving				
Asphalt	Grubbing/Land Clearing				
	Grading/Excavation				
	Drainage/Utilities/Sub-Grade				
	Paving				
<b>Mitigation Options</b>					
On-road Fleet Emissions Mitigation			Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer		
Off-road Equipment Emissions Mitigation			Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure ( <a href="http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation">http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation</a> ).		
			Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard		
<b>The remaining sections of this sheet contain areas that require modification when 'Other Project Type' is selected.</b>					

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.  
  
[http://www.conservation.ca.gov/cgs/information/geologic\\_mapping/Pages/googlemaps.aspx#regionalseries](http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries)

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		0.20		1/1/2021
Grading/Excavation		0.80		1/8/2021
Drainage/Utilities/Sub-Grade		0.70		2/2/2021
Paving		0.30		2/24/2021
Totals (Months)	2			

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT					
User Input										
Miles/round trip: Grubbing/Land Clearing				0	0.00					
Miles/round trip: Grading/Excavation				0	0.00					
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00					
Miles/round trip: Paving				0	0.00					
Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grading/Excavation (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Paving (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions		User Override of	Program Estimate of	User Override of Truck	Default Values	Calculated				
User Input	Miles/Round Trip	Miles/Round Trip	Round Trips/Day	Round Trips/Day	Round Trips/Day	Daily VMT				
Miles/round trip: Grubbing/Land Clearing				0	0.00					
Miles/round trip: Grading/Excavation				0	0.00					
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00					
Miles/round trip: Paving				0	0.00					
Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grading/Excavation (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Paving (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions		User Override of Worker									
User Input	Commute Default Values		Default Values								
Miles/ one-way trip	20			Calculated							
One-way trips/day	2			Daily Trips	Calculated						
No. of employees: Grubbing/Land Clearing	5				Daily VMT						
No. of employees: Grading/Excavation	20			10	200.00						
No. of employees: Drainage/Utilities/Sub-Grade	14			40	800.00						
No. of employees: Paving	10			28	560.00						
				20	400.00						
Emission Rates		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)		0.02	1.10	0.10	0.05	0.02	0.00	339.80	0.00	0.01	342.28
Grading/Excavation (grams/mile)		0.02	1.10	0.10	0.05	0.02	0.00	339.80	0.00	0.01	342.28
Draining/Utilities/Sub-Grade (grams/mile)		0.02	1.10	0.10	0.05	0.02	0.00	339.80	0.00	0.01	342.28
Paving (grams/mile)		0.02	1.10	0.10	0.05	0.02	0.00	339.80	0.00	0.01	342.28
Grubbing/Land Clearing (grams/trip)		1.18	2.95	0.34	0.00	0.00	0.00	72.81	0.08	0.04	85.39
Grading/Excavation (grams/trip)		1.18	2.95	0.34	0.00	0.00	0.00	72.81	0.08	0.04	85.39
Draining/Utilities/Sub-Grade (grams/trip)		1.18	2.95	0.34	0.00	0.00	0.00	72.81	0.08	0.04	85.39
Paving (grams/trip)		1.18	2.95	0.34	0.00	0.00	0.00	72.81	0.08	0.04	85.39
Emissions		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Pounds per day - Grubbing/Land Clearing		0.03	0.55	0.05	0.02	0.01	0.00	151.43	0.00	0.00	152.80
Tons per const. Period - Grubbing/Land Clearing		0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.34

Pounds per day - Grading/Excavation	0.14	2.20	0.20	0.08	0.03	0.01	605.72	0.02	0.02	611.21
Tons per const. Period - Grading/Excavation	0.00	0.02	0.00	0.00	0.00	0.00	5.33	0.00	0.00	5.38
Pounds per day - Drainage/Utilities/Sub-Grade	0.10	1.54	0.14	0.06	0.02	0.00	424.00	0.01	0.01	427.85
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.01	0.00	0.00	0.00	0.00	3.26	0.00	0.00	3.29
Pounds per day - Paving	0.07	1.10	0.10	0.04	0.02	0.00	302.86	0.01	0.01	305.60
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.01
Total tons per construction project	0.00	0.04	0.00	0.00	0.00	0.00	9.93	0.00	0.00	10.02

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions										
User Input	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Round Trips/Vehicle/Day	Default Values Round Trips/Vehicle/Day	Calculated Trips/day	User Override of Miles/Round Trip	Default Values Miles/Round Trip	Calculated Daily VMT		
Grubbing/Land Clearing - Exhaust	1		5.00			8.00		40.00		
Grading/Excavation - Exhaust	1		5.00			8.00		40.00		
Drainage/Utilities/Subgrade	1		5.00			8.00		40.00		
Paving	1		5.00			8.00		40.00		
Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grading/Excavation (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Paving (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Pounds per day - Grubbing/Land Clearing	0.00	0.04	0.31	0.01	0.00	0.00	156.91	0.00	0.02	164.26
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.36
Pounds per day - Grading/Excavation	0.00	0.04	0.31	0.01	0.00	0.00	156.91	0.00	0.02	164.26
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	1.38	0.00	0.00	1.45
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.04	0.31	0.01	0.00	0.00	156.91	0.00	0.02	164.26
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	1.21	0.00	0.00	1.26
Pounds per day - Paving	0.00	0.04	0.31	0.01	0.00	0.00	156.91	0.00	0.02	164.26
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.54
Total tons per construction project	0.00	0.00	0.01	0.00	0.00	0.00	3.45	0.00	0.00	3.61

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing	2.19		21.90	0.05	4.56	0.01
Fugitive Dust - Grading/Excavation	2.19		21.90	0.19	4.56	0.04
Fugitive Dust - Drainage/Utilities/Subgrade	2.19		21.90	0.17	4.56	0.04

Values in cells D195 through D228, D246 through D279, D297 through D330, and D348 through D381 are required when 'Other Project Type' is selected.

Off-Road Equipment Emissions																
Grubbing/Land Clearing	Default		Mitigation Option		Default	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e	
	Number of Vehicles	Override of														
Override of Default Number of Vehicles		Program-estimate	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)		Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	
					Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.00					Model Default Tier	Bore/Drill Rigs	0.26	2.07	3.02	0.09	0.08	0.01	912.06	0.30	921.92	
					Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.00					Model Default Tier	Excavators	0.23	3.27	2.15	0.10	0.10	0.01	500.19	0.16	505.59	
					Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.00					Model Default Tier	Other Construction Equipment	0.42	4.06	4.38	0.23	0.21	0.01	598.52	0.19	604.99	
					Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Other Material Handling Equiprn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.00					Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	34.65	
					Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.00					Model Default Tier	Tractors/Loaders/Backhoes	0.19	2.26	1.90	0.11	0.10	0.00	300.90	0.10	304.14	
					Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
User-Defined Off-road Equipment																
Number of Vehicles		If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab					ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
	0.00		Equipment Tier	Type	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Grubbing/Land Clearing				pounds per day	1.13	11.87	11.70	0.55	0.50	0.02	2,346.16	0.75	0.02	2,371.29
		Grubbing/Land Clearing				tons per phase	0.00	0.03	0.03	0.00	0.00	0.00	5.16	0.00	0.00	5.22
Grading/Excavation																
Grading/Excavation	Default		Mitigation Option		Default	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e	
	Number of Vehicles	Override of														
Override of Default Number of Vehicles		Program-estimate	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)		Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	
					Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.00					Model Default Tier	Bore/Drill Rigs	0.26	2.07	3.02	0.09	0.08	0.01	912.06	0.30	921.92	
					Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.00					Model Default Tier	Excavators	0.23	3.27	2.15	0.10	0.10	0.01	500.19	0.16	505.59	
					Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.00					Model Default Tier	Other Construction Equipment	0.42	4.06	4.38	0.23	0.21	0.01	598.52	0.19	604.99	
					Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Other Material Handling Equiprn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1.00					Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	34.65	
					Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	



0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			pounds per day	1.13	11.87	11.70	0.55	0.50	0.02	2,346.16	0.75	0.02	2,371.29	
			tons per phase	0.01	0.10	0.10	0.00	0.00	0.00	20.65	0.01	0.00	20.87	

Drainage/Utilities/Subgrade		Default Number of Vehicles	Mitigation Option Override of	Default	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
		Override of Default Number of Vehicles	Program-estimate	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
				Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00				Model Default Tier	Bore/Drill Rigs	0.26	2.07	3.02	0.09	0.08	0.01	912.06	0.30	921.92
				Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00				Model Default Tier	Excavators	0.23	3.27	2.15	0.10	0.10	0.01	500.19	0.16	505.59
				Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00				Model Default Tier	Other Construction Equipment	0.42	4.06	4.38	0.23	0.21	0.01	598.52	0.19	604.99
				Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00				Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	34.65
				Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00				Model Default Tier	Tractors/Loaders/Backhoes	0.19	2.26	1.90	0.11	0.10	0.00	300.90	0.10	304.14
				Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment		If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
		Number of Vehicles	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			pounds per day	1.13	11.87	11.70	0.55	0.50	0.02	2,346.16	0.75	0.02	2,371.29	
			tons per phase	0.01	0.09	0.09	0.00	0.00	0.00	18.07	0.01	0.00	18.26	

Paving		Default Number of Vehicles	Mitigation Option Override of	Default	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
		Override of Default Number of Vehicles	Program-estimate	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
				Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00				Model Default Tier	Pavers	0.25	2.90	2.60	0.13	0.12	0.00	455.06	0.15	459.97
1.00				Model Default Tier	Paving Equipment	0.19	2.54	1.94	0.10	0.09	0.00	394.46	0.13	398.71
				Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00				Model Default Tier	Rollers	0.19	1.88	1.92	0.12	0.11	0.00	254.09	0.08	256.83
				Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.19	2.26	1.90	0.11	0.10	0.00	300.90	0.10	0.00	0.00	304.14
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>User-Defined Off-road Equipment</b>															
Number of Vehicles		If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e	
		Equipment Tier	Type		pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Paving	pounds per day		0.82	9.59	8.36	0.45	0.41	0.01	1,404.51	0.45	0.01	1,419.64	
		Paving	tons per phase		0.00	0.03	0.03	0.00	0.00	0.00	4.63	0.00	0.00	4.68	
Total Emissions all Phases (tons per construction period) =>					0.02	0.25	0.25	0.01	0.01	0.00	48.51	0.02	0.00	49.03	



Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

