**CALIFORNIA ENVIRONMENTAL QUALITY ACT**
**INITIAL STUDY**

The Department of Toxic Substances Control (DTSC) has completed the following document for this project in accordance with the California Environmental Quality Act (CEQA) [Pub. Resources Code, div. 13, § 21000 et seq] and accompanying Guidelines [Cal. Code Regs., tit. 14, § 15000 et seq].

## PROJECT INFORMATION

| | | |
|---|---|---|
| PROJECT TITLE: Whittier Narrows Operable Unit Treatment for Drinking Water End Use Project | | SITE CODING: N/A |
| PROJECT ADDRESS:<br><br>331 N Durfee Avenue<br><br>Existing right-of-way along Durfee Avenue<br><br>Workman Mill Road, immediately north of State Route 60 and east of Crossroads Parkway North | CITY:<br><br>South El Monte<br><br>Unincorporated Los Angeles County | COUNTY: Los Angeles |
| PROJECT SPONSOR: DTSC | CONTACT: Ajit Vaidya, P.E. | PHONE: (916) 255-3683 |
| APPROVAL ACTION UNDER CONSIDERATION BY DTSC:<br>☐ Initial Permit Issuance ☐ Permit Re-Issuance ☐ Permit Modification ☐ Closure Plan<br>☐ Removal Action Workplan ☐ Remedial Action Plan ☐ Interim Removal ☐ Regulations<br>☐ Corrective Measure Study/Statement of Basis ☒ Other (specify): Modification of existing Superfund interim remedy infrastructure. | | |
| STATUTORY AUTHORITY:<br>☐ California H&SC, Chap. 6.5 ☐ California H&SC, Chap. 6.8 ☒ Other (specify): California Environmental Quality Act (CEQA), Public Resources Code Section 21000et seq., and CEQA Guidelines Section 15070. | | |
| DTSC PROGRAM/ADDRESS:<br>Site Mitigation and Restoration Program<br>8800 Cal Center Drive, Sacramento, CA 95826 | CONTACT: Ajit Vaidya, P.E. | PHONE: (916) 255-3683 |

**PROJECT DESCRIPTION:**
The California Department of Toxic Substances Control (DTSC) proposes to implement the Whittier Narrows Operable Unit (WNOU) Treatment for Drinking Water End Use Project (proposed project), which involves the construction of a new 7,265-foot-long blend water supply pipeline, a new 20-foot-long blended water pipeline connection to the existing 30-inch San Gabriel Valley Water Company (San Gabriel) pipeline on Durfee Avenue, and a new off-site booster station (Plant B28 Booster Station). The implementation of the proposed project would provide additional water for blending with groundwater produced from the existing WNOU extraction wells, as well as boosting capacity to deliver this blended water to San Gabriel for distribution to its customers.

The purpose of the proposed project is to increase the pumping rate of the existing groundwater extraction wells to contain groundwater contamination within the Main San Gabriel Basin. The project would increase the capture of the contaminants and prevent further migration into the adjoining Los Angeles Central Groundwater Basin (Central Basin) and help protect nearby municipal water supply wells.

The proposed project would be located in the City of South El Monte and the Unincorporated Areas of Whittier Narrows and Avocado Heights, in the County of Los Angeles. All figures referenced in this discussion are attached to this document. Figure 1 shows the regional location of the proposed project and Figure 2 shows the location of the existing WNOU site and the proposed Blend Water Supply Pipeline, WNOU Blended Water Pipeline and the Plant B28 Booster Station.

The WNOU site is located at 331 North Durfee Avenue, approximately 3,000 feet east of Rosemead Boulevard, in the City of South El Monte. The WNOU site occupies an area of approximately 2.5 acres and is owned by the U.S. Army Corps of Engineers (USACE) (Assessor Parcel Identification 8119-004-901). The WNOU site is generally bound by Schneider International Intermodal Yard to the west, Legg Lake and the grounds and hardstand parking of Whittier Narrows Recreation Area to the north and east, and the Durfee Avenue public right-of-way (ROW) to the south. Legg Lake is a fishing and recreational lake located within the 1,492-acre Whitter Narrows Recreation Area.[1] Whittier Narrows Natural Area is located on the southern side of Durfee Avenue, approximately 50 feet from the WNOU site. Immediately adjacent to the Schneider International Intermodal Yard is an area of land approximately 3.2 acres in size that is used for agricultural purposes (strawberry farm), located approximately 850 feet west of the WNOU site. The WNOU site is fully fenced off from the public and can be accessed by workers via paved driveways and locked gates both on the east and west sides of the site.

The proposed Blend Water Supply Pipeline alignment comprises approximately 7,265 liner feet of 16-inch diameter welded steel pipe, fittings, and appurtenances. The Blend Water Supply Pipeline would be installed within the existing public ROW along Durfee Avenue for a distance of approximately 7,265 liner feet, from the intersection of Durfee Avenue and Peck Road to the existing WNOU site. Access to the proposed Blend Water Supply Pipeline site would be provided via the existing local roadway network.

The proposed WNOU Blended Water Pipeline comprises approximately 20 linear feet of 24-inch diameter welded steel pipe connection to the 30-inch San Gabriel distribution pipeline on Durfee Avenue. Figure 3 shows the location of the proposed WNOU Blended Water Pipeline and WNOU site improvements. Access to the proposed WNOU Blended Water Pipeline alignment site would be provided via the existing local roadway network.

The proposed Plant B28 Booster Station includes a 3,000 gallon-per-minute (gpm) off-site booster station and related site improvements. The Plant B28 Booster Station would be located at Workman Mill Road, immediately north of State Route 60 (SR-60) and east of Crossroads Parkway North. The proposed Plant B28 Booster Station would be located approximately one mile southeast of the terminus of the proposed Blend Water Supply Pipeline alignment at the intersection of Durfee Avenue and Peck Road. As part of the Plant B28 Booster Station installation, booster piping would be extended to discharge to the existing 16-inch diameter water main on Workman Mill Road, east of the Crossroads Parkway. Access to the proposed Plant B28 Booster site would be provided via the existing local roadway network. Figure 4 shows the location of the proposed Booster Station and related improvements.

Travelling in an easterly direction from the WNOU site, Durfee Avenue comprises one lane travelling in either direction (total of two lanes) and is not supported by any paved pedestrian sidewalks. There is a gravel shoulder on the south side of the street, and grassy areas including some mature trees border the street directly on the north side. Approximately 3,000 feet east of the WNOU site, near its intersection with Santa Anita Avenue, Durfee Avenue widens to accommodate two eastbound travel lanes, with only one westbound travel lane (total of three lanes). Approximately 1,300 feet east of Santa Anita Avenue, Durfee Avenue widens to accommodate two travel lanes in each direction (total of four lanes), with paved pedestrian sidewalks, designated bicycle lanes and street parking available up to the intersection of Durfee Avenue and Peck Road.

According to the Los Angeles County Department of Regional Planning land use zone designations, the existing WNOU site is zoned as Heavy Industrial. Areas adjacent to the proposed Blend Water Supply Pipeline alignment and WNOU Blended Water Pipeline alignment are zoned as Open Space and Recreation and Wildlife Preserve and Sanctuary, to the north and south of Durfee Avenue respectively. The USACE Facility located approximately 1,300 feet east of the existing WNOU site, is zoned as Maintenance Yards. Approximately 3,000 feet east of the WNOU site, land uses adjacent to the Blend Water Supply Pipeline alignment transition into Single Family Residential, Light Industrial, General Office Use, Other Commercial, Retail Stores and Commercial Services. The area that would be occupied by the proposed area of the new Plant B28 Booster Station is currently zoned as Vacant Undifferentiated.[2]

At a local level, according to the City of South El Monte Land Use Plan, land uses adjacent to the Blend Water Supply Pipeline alignment approximately 3,000 feet east of the WNOU site comprise Commercial-Manufacturing (C-M), Public Facilities (P-F), Commercial Residential (C-R).[3] According to the County of Los Angeles land use zone designations, the existing WNOU site is zoned as Heavy Manufacturing (M-2-BE) and Buffer Strip (B-1). Areas adjacent to the proposed Blend Water Supply Pipeline alignment and WNOU Blended Water Pipeline alignment are zoned as Open Space (O-S) and Recreation and Wildlife Preserve and Sanctuary, to the north and south of Durfee Avenue respectively.

Vegetation in the immediate vicinity of the proposed Blend Water Supply Pipeline and WNOU Blended Water Pipeline is primarily associated with the Whittier Narrows Natural Area and Whittier Narrows Recreation Area, which are directly adjacent on the south and north sides of Durfee Avenue, respectively. Whittier Narrows Natural Area is also classified as

a Significant Ecological Area. Based on review of Los Angeles County Office of the Assessor parcel information available within the Property Assessment Information System, the Durfee Avenue public ROW does include a small portion of the grassy area with some mature trees located on the north side of the street. Also, some mature vegetation associated with the Whittier Narrows Natural Area on the south side of Durfee Avenue has grown above the fence and hangs over into the public ROW. Further to the east along the Blend Water Supply Pipeline alignment to Peck Road, vegetation transitions to landscaped gardens and lawns of private residences and education facilities adjacent to sidewalks. Additionally, the existing WNOU site is paved and does not contain any vegetation. The proposed Plant B28 Booster Station site is currently unoccupied. The vegetation on this site consists of some grassy areas and two ornamental trees within the southeastern corner of the site.

The San Gabriel River generally flows in a southwesterly direction through the region. At its closest point, the San Gabriel River is located approximately 700 feet south of the Blend Water Supply Pipeline alignment and approximately 950 feet northeast of the Plant B28 Booster Station site. The land surrounding the proposed project is relatively flat with an elevation of approximately 200 feet to 250 feet above sea level.

**BACKGROUND:**
The on-site facilities currently located at the existing WNOU site include a water treatment system, a treated potable water storage tank, a booster station, sodium hypochlorite storage tanks, chlorination equipment, and related facilities.

Groundwater in the WNOU is impacted by a range of dissolved phase contaminants, primarily volatile organic compounds (VOCs), associated with historical industrial activities in the San Gabriel Valley upgradient and north of the WNOU in South El Monte, that subsequently migrated southwards into the WNOU.

The proposed project would utilize existing infrastructure, including:

- Liquid Phase Granular Activated Carbon (LPGAC) treatment system for removal of volatile organic compounds.
- Chlorination system using 12.5 percent sodium hypochlorite for disinfection.
- On-site 400,000-gallon storage tank to provide disinfection contact time to comply with Groundwater Rule and Total Dissolved Solids blending.
- On-site WNOU booster station to distribute water to San Gabriel's water system.
- Groundwater extraction wells and conveyance network including associated controls and interlocks.

Currently, groundwater extraction wells (EW4-5 and EW4-6) extract approximately 2,000 gpm of water, which is processed through the LPGAC treatment system and then discharged into Legg Lake. A substantial portion of the water discharged into the Legg Lake is overflowing to Mission Creek, which has a potential to transport water to the Central Basin.

Following the implementation of the proposed project, the existing groundwater extraction wells (EW4-5 and EW4-6) would be utilized and groundwater would be extracted at a total maximum combined rate of approximately 2,800 gpm. Of the 2,800 gpm, approximately 800 gpm would be discharged directly into Legg Lake following treatment through the LPGAC treatment system without chlorination. The remaining 2,000 gallons would be blended with 1,700 gpm of water from San Gabriel Plant 11 (located in El Monte), chlorinated and fed into San Gabriel's potable water distribution system. The reduction of discharge into Legg Lake from 2,000 gpm to 800 gpm is expected to eliminate the potential transport of water to Central Basin.

The proposed project would be implemented pursuant to a Proposition 1 Grant and would be funded by the California State Water Resources Control Board Division of Financial Assistance under Sections 79770-79774 of the Water Code, Proposition 1 Groundwater.

**PROJECT OBJECTIVES:**
The objectives of the proposed project are to:

- Increase the pumping rate of the existing groundwater extraction wells to contain groundwater contamination within the Main San Gabriel Groundwater Basin.
- Allow distribution of treated blended water to San Gabriel for distribution to the cities of Montebello and Whittier, and the unincorporated Los Angeles County community of Hacienda Heights, as potable drinking water.
- Increase the capture of the contaminants and prevent further migration into the adjoining Central Basin.

**PROJECT ACTIVITIES:**
A new Blend Water Supply Pipeline, WNOU Blended Water Pipeline and Plant B28 Booster Station are required to increase the pumping rate of the existing groundwater extraction wells to contain groundwater contamination within the Main San Gabriel Groundwater Basin, prevent further migration into the adjoining Central Basin, and protect nearby municipal water supply wells. Following initial design, permitting and construction, the distribution system will deliver potable water for 20 years. The three proposed project components would be implemented as described below.

***Blend Water Supply Pipeline.*** As shown on Figure 2, the Blend Water Supply Pipeline would comprise approximately 7,265 linear feet of 16-inch diameter welded steel pipe, fittings, and appurtenances.

The Blend Water Supply Pipeline would be installed from the Peck Road and Durfee Avenue intersection to the existing WNOU site. The Blend Water Supply Pipeline would be constructed within the WNOU site and within the ROW of Durfee Avenue. The new Blend Water Supply Pipeline would bring water from San Gabriel's water system, served by San Gabriel No. 11, to the WNOU site for blending. The blending water supply pipeline will be installed so that the low total dissolved solids water from San Gabriel's water system can be blended with water produced at the WNOU site to maintain TDS below 500 parts per million in the treated and blended water at the WNOU site.

Blending controls will include installation of control valves, conductivity sensors, and flow meters to measure and control the total dissolved solids. A control panel will be provided at the WNOU site to control blending and transmit information and control signals via the Supervisory Control and Data Acquisition System (SCADA).

***WNOU Blended Water Pipeline Connection.*** As shown on Figure 3, the WNOU Blended Water Pipeline connection would comprise approximately 20 linear feet of 24-inch diameter WNOU welded steel pipe, fittings and appurtenances. The WNOU Blended Water Pipeline would be installed from the existing WNOU booster discharge header to San Gabriel's existing 30-inch water main in Durfee Avenue ROW. This blended water pipeline will allow blended water from the WNOU site to be delivered to the off-site boosters and distributed to San Gabriel's customers in the area served by San Gabriel's Plant B5, which is located to the north in La Puente.

***Plant B28 Booster Station.*** As shown on Figure 4, the new off-site Plant B28 Booster Station will be located at Workman Mill Road, north of SR-60. The implementation of this component of the proposed project would include a number of components which are discussed in more detail below.

A building to house the booster pumps would be constructed on the site. The building would be approximately 17 feet tall and 32 feet by 29 feet in area and access for maintenance and larger equipment would be provided via a 10-foot-wide roller door. The building would be constructed using brick and the roof would comprise asphalt shingles. The building would also comprise decorative block walls to the east and south of the building. Landscaping would be provided on the north and east sides of the building.

A wrought iron fence approximately eight feet tall would be provided to enclose the site. The fence would include a wheel track guided gate to allow for egress. The fence would be supported using concrete footings approximately three feet deep. Additionally, a paved driveway allowing access to the Plant B28 Booster Station would be provided on Workman Mill Road.

The Plant B28 Booster Station would include four booster pumps, each rated at 1,000 gpm and 120-foot total dynamic head. A maximum of three pumps would operate at a time, with the fourth pump provided as a backup. The suction of the booster pumps would be connected to the existing 16-inch San Gabriel pipeline on Workman Mill Road and the discharge of the booster pumps will be connected to the existing 16-inch San Gabriel pipeline at the intersection of the Workman Mill Road and Crossroads Parkway North. A pipeline isolation valve would be installed at the intersection of Workman Mill Road and Crossroads Parkway North to isolate the low pressure and the high-pressure side of the distribution system.

The Plant B28 Booster Station would include an emergency backup generator installed outdoors on a concrete pad. A Southern California Edison transformer to supply power to the booster pumps would also be installed outdoors on a concrete pad.

**CONSTRUCTION SCHEDULE AND PROCEDURES**
Construction of the proposed project is anticipated to commence in the late summer or early fall of 2020 and would take approximately 10 to 12 months to complete.

Construction of the Blend Water Supply Pipeline and WNOU Blended Water Pipeline would occur throughout the duration of construction. Construction of the new Booster Station would occur concurrently at the off-site location. New pipeline

construction would require approximately 12 construction workers per day, peaking at 18 construction workers. Booster station construction would require approximately 6 construction workers per day, peaking at 10 construction workers.

Construction activities would occur Monday through Friday and workers would typically be onsite for approximately eight hours per day from 7:00 a.m. to 3:30 p.m. No work outside of these hours, or work on weekends or national holidays, is anticipated. Construction procedures for each of the project components are described below.

***Blend Water Supply Pipeline.*** Construction activities associated with the proposed Blend Water Supply Pipeline installation would take place along approximately 7,265 liner feet within the existing ROW of Durfee Avenue, between the existing WNOU site and the intersection of Durfee Avenue and Peck Road. Installation of the proposed Blend Water Supply Pipeline would occur at a rate of approximately 300 linear feet per day.

A construction laydown area would be established for the Blend Water Supply Pipeline and WNOU Blended Water Pipeline installation and would occupy an area of approximately 50 feet by 10 feet. The exact location of this area will be determined during final design prior to the commencement of construction activities and would be selected according to and in compliance with relevant permits and approvals as described subsequently below. However, it is likely that the existing Durfee Avenue ROW would be used for construction laydown. Removal of trees is not expected to be required.

The new Blend Water Supply Pipeline would be installed underground using an open trenching method. The excavated trench would be approximately 2 feet wide by 4 feet deep, and would span the approximately 7,265 feet length of the proposed pipeline alignment. The majority of this excavated material would be used to backfill the trench following pipe installation. As such, it is anticipated that only a minimal amount of excavated material would be generated for disposal. Construction equipment would remain within the designated laydown area and/or construction site for the duration of its use.

It is likely that temporary, partial road closures would be required for construction activities associated with the Blend Water Supply Pipeline, affecting Durfee Avenue and Peck Road. Vehicular and pedestrian detours would be provided to guide traffic around the construction sites and laydown areas.

Construction vehicle access (including dump trucks) for the Blend Water Supply Pipeline installation would be available via the existing road network around and including Durfee Avenue.

The estimated construction sequence for the proposed pipeline installation is as follows:

- Establishment of a temporary site compound at an appropriate location along the alignment (this may be relocated during the construction period).
- Establishment of erosion and sediment control measures such as retaining sediment within the construction area, stabilizing and protecting disturbed areas, utilizing gravel bag barriers, and others.
- Site preparation, including pavement, footpath and/or road surface removal.
- Provision of temporary access to properties where the trench route may impact driveways.
- Trench excavation, including stockpiling of spoil material on the upslope side of trench.
- Shoring and dewatering of trenches, depending upon trench depth and groundwater levels.
- Spreading of granular material such as sand or gravel along the bottom of the trench prior to pipe laying.
- Installation and testing of the pipeline.
- Construction of maintenance man holes.
- Backfilling of the trench with bedding material (e.g., imported soil or commercial byproduct) and excavated soil.
- Compacting of trench fill material and restoring areas disturbed by construction activities.

***WNOU Blended Water Pipeline.*** Construction activities associated with the proposed WNOU Blended Water Pipeline connection installation would be very similar to that of the proposed Blend Water Supply Pipeline installation. Construction activities for the proposed WNOU Blended Water Pipeline connection to the San Gabriel 30-inch distribution network will consist of 20 linear feet within the public ROW of Durfee Avenue.

A construction laydown area would be established for the WNOU Blended Water Pipeline and Blend Water Supply Pipeline installation that would occupy an area of approximately 50 feet by 10 feet. The exact location of this area will be determined during final design prior to the commencement of construction activities and would be selected according to and in compliance with relevant permits and approvals as described subsequently below. However, it is likely that the existing WNOU site would be used for construction laydown. Removal of trees is not expected to be required.

The new WNOU Blended Water Pipeline would be installed underground using an open trenching method. The majority of this excavated material would be used to backfill the trench following pipe installation. As such, it is anticipated that only a minimal amount of excavated material would be generated for disposal. Construction equipment would remain within the designated laydown area and/or construction site for the duration of its use.

It is likely that temporary, partial road closures would be required for construction activities associated with the WNOU Blended Water Pipeline, affecting Durfee Avenue. Vehicular and pedestrian detours would be provided to guide traffic around the construction sites and laydown areas.

Construction vehicle access (including dump trucks) for the WNOU Blended Water Pipeline installation would be available via the existing road network around and including Durfee Avenue.

The estimated construction sequence would be similar to that of the proposed Blend Water Supply Pipeline discussed above.

***Plant B28 Booster Station.*** Construction of the proposed new Plant B28 Booster Station is anticipated to begin in the late summer or early fall of 2020 with preparation of the site, including any grading activities. The construction of the proposed new Plant B28 Booster Station and the final and permanent connections to the new Booster Station equipment would begin immediately following site preparation. Following construction of the new Plant B28 Booster Station building, site finalization activities would include the installation of permanent fencing, driveways and paving, and any required reinstatement of sidewalks.

Construction activities would occur within the boundaries of the currently vacant Plant B28 Booster Station site, including the establishment of a construction laydown area. This laydown area will remain in this location for the duration of construction. It is anticipated that construction equipment would remain at the project site within the designated laydown area and/or construction site for the duration of its use. Vegetation and/or trees located adjacent to the Plant B28 Booster Station footprint are not anticipated to require removal during construction.

It is likely that temporary, partial road closures would be required for construction activities associated with the Plant B28 Booster Station, affecting Workman Mill Road. Vehicular and pedestrian detours would be provided to guide traffic around the construction sites and laydown areas.

Construction equipment, materials, and supplies would be delivered to the project site. Generally, construction equipment would be driven or delivered to the site once and remain on-site for the duration of construction activities for which they are required. The exception to this would be vehicles transporting construction workers, those making recurrent deliveries of consumable materials, and haul trucks. Construction vehicle access for the new Plant B28 Booster Station would be available via the existing road network. Any material that would be exported or removed from the site would follow a designated haul route for the proposed project, which commences at the intersection of Workman Mill Road and Crossroads Parkway North, initially travelling eastbound along Crossroads Parkway for approximately one mile until this road reaches the Puente Hills Landfill.

Recurrent deliveries would include the transport of material and components (including concrete and fill soil) required for the pump station construction. Deliveries would typically be made using haul trucks, and flatbed trucks. Grading and excavation activities during the construction would also create truck trips for transporting spoil for off-site disposal.
Excavation activities would be required at various stages of construction to allow for site preparation and the construction of the new Plant B28 Booster Station building.

***Best Management Practices.*** An appropriate combination of monitoring and resource impact avoidance would be employed during all phases of the proposed project, including implementation of the following Best Management Practices:

- The proposed project would implement Rule 403 dust control measures required by the South Coast Air Quality Management District (SCAQMD), which would include the following:
  - Water shall be applied to exposed surfaces at least two times per day to prevent generation of dust plumes.
  - All haul trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).
  - Construction activity on exposed or unpaved dirt surfaces shall be suspended when wind speed exceeds 25 miles per hour.
  - Ground cover in disturbed areas shall be replaced in a timely fashion when work is completed in the area.
  - Identify a community liaison concerning on-site construction activity including resolution of issues related to dust generation.

- Apply non-toxic soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for ten days or more).
- Traffic speeds on all unpaved roads to be limited to 15 miles per hour or less.
- Sweep streets at the end of the day if visible soil is carried onto adjacent public paved roads. If feasible, use water sweepers with reclaimed water.

- The construction contractor would develop and implement an erosion control plan and Storm Water Pollution Prevention Plan for construction activities. Erosion control and grading plans may include, but would not be limited to, the following:
  - Minimizing the extent of disturbed areas and duration of exposure;
  - Stabilizing and protecting disturbed areas;
  - Keeping runoff velocities low; and
  - Retaining sediment within the construction area.
  - Construction erosion control Best Management Practices may include the following:
    a. Temporary desilting basins;
    b. Silt fences;
    c. Gravel bag barriers;
    d. Temporary soil stabilization with mattresses and mulching;
    e. Temporary drainage inlet protection; and
    f. Diversion dikes and interceptor swales.
- The proposed project construction would incorporate source reduction techniques and recycling measures and maintain a recycling program to divert waste in accordance with applicable Los Angeles County and City of South El Monte requirements.

PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED: (e.g., State Agencies, Counties, Cities, or Air Quality Districts, granting permits, financing approval, or participation agreement.)

Numerous approvals and/or permits would be required to implement the proposed project. The environmental documentation for the project would be used to facilitate compliance with federal and state laws and the granting of permits by various state and local agencies having jurisdiction over one or more aspects of the project. These approvals and permits may include, but may not be limited to, the following:

***City of South El Monte***

- Encroachment Permit

***Caltrans***

- Encroachment Permit

**Los Angeles County**

- Encroachment Permit
- Grading Permit
- Building Permit

***State Water Resources Control Board, Division of Drinking Water***

- Wholesaler Permit for DTSC
- Amended Permit for San Gabriel to serve the treated water from WNOU for potable use

***U.S. Army Corps of Engineers***

- Permit or Notification for WNOU site work

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

On May 21, 2020, a meeting to initiate government-to-government consultation was held between DTSC and the Gabrieleño Band of Mission Indians – Kizh Nation as part of the ongoing consultation process. As a result of this meeting, the Gabrieleño Band of Mission Indians – Kizh Nation provided DTSC with written correspondence outlining recommended mitigation measures, such as Native American monitoring during ground-disturbing construction activities to address their concerns regarding the proposed project. This government-to-government consultation remains ongoing

and will be concluded prior to the adoption of this document. The mitigation measures have been incorporated into this document.

Note: Please see the Tribal Cultural Resources Section (Section 18) for additional information.

REFERENCES:

1 Los Angeles County Parks and Recreation, Whittier Narrows Recreation Area. Available at: https://parks.lacounty.gov/whittier-narrows-recreation-area/, accessed on December 30, 2019.

2 Los Angeles County Department of Regional Planning available at: http://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=GISNET_Public.GIS-NET_Public, accessed November 26, 2019.

3 City of South El Monte land use plan map http://www.ci.south-elmonte.ca.us/Portals/0/Planning%20Dept_Forms/zoning%20map/Zoning%20Oct%202012.pdf.

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## APPENDICES

## ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

All environmental topics below were analyzed in the document. The analysis resulted in either no impact, less than significant impacts, or less than significant impacts with implementation of mitigation. Any impacts identified as "potentially significant" would be checked in the table below. That is not applicable for this project.

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

## 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 EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. |

## CERTIFICATION

I hereby certify that the statements furnished above and in the attached documentation, present the data and information required for this initial study evaluation to the best of my ability and that the facts, statements and information presented are true and correct to the best of my knowledge and belief.

Signature

August 11, 2020

Date

| Name | Title | Phone # |
|---|---|---|
| Ajit Vaidya, P.E. | DTSC Project Manager | (916) 255-3683 |

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## EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance

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# ENVIRONMENTAL IMPACT ANALYSIS

| 1. AESTHETICS | | | | |
|---|---|---|---|---|
| **Except as provided in Public Resources Code Section 21099, would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| a) Have a substantial adverse effect on a scenic vista? | ☐ | ☐ | ☐ | ☒ |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | ☐ | ☐ | ☐ | ☒ |
| c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? | ☐ | ☐ | ☒ | ☐ |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | ☐ | ☐ | ☒ | ☐ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

None applicable or available.

**ENVIRONMENTAL SETTING (BASELINE):**

WNOU Blended Water Pipeline:

The WNOU Blended Water Pipeline would be installed approximately 5 feet below ground surface. The existing WNOU site occupies an area of approximately 2.5 acres and is located along and north of Durfee Avenue, within the Whittier Narrows flood control basin. Legg Lake and the grounds and hardstand parking of the Whittier Narrows Recreation Area is located to the north and east of the plant site. Schneider International Intermodal Yard (a trucking facility) is located to the west of the of the plant site. Immediately adjacent to the Schneider International Intermodal Yard and approximately 850 feet west of the WNOU site is an approximately 3.2-acre piece of land used for agricultural purposes (strawberry farm). The Whittier Narrows Natural Area is located across Durfee Avenue to the south, approximately 50 feet from the WNOU site.

The existing WNOU site is surrounded by a chain-link fence and is predominantly paved. The WNOU site includes piping, inlet and discharge manifolds, holding tanks, a liquid-phase granular activated carbon (LPGAC) adsorption process, and a hypochlorite storage building. The LPGAC adsorption process includes a total of 40 LPGAC vessels configured as 20 parallel pairs of vessels, each approximately 20 feet high and 12 feet in diameter. The existing treatment plant infrastructure ranges from 20 to about 25 feet in height.

Collectively the existing WNOU site and trucking facility have a commercial/industrial appearance. Views of these facilities from the Whittier Narrows Recreation Area are obscured by trees.

A mixture of industrial and open space views are present in the vicinity of the WNOU site. Views north of Durfee Avenue and east of Rosemead Boulevard include: the USACE storage yard; the trucking facility; Legg Lake; a parking area associated with the Whittier Narrows Recreation Area; and commercial plant nursery. Views of the project site north of San Gabriel Boulevard and west of Rosemead Boulevard include: the Bosque del Rio Natural Area; a wastewater treatment plant; archery range, and commercial plant nursery. Existing and former oilfield facilities are present in the area surrounding the project site.

Blend Water Supply Pipeline:

The Blend Water Supply Pipeline would be installed approximately 5 feet below ground surface and would span approximately 7,265 feet along the existing Durfee Avenue public ROW. The surrounding area is similar to that of the WNOU Blended Water Pipeline, however, east of the WNOU site and along Durfee Avenue, there are recreational areas, a school, and commercial properties. Trees and vegetation mainly associated with the Whittier Narrows Recreation Area and Whittier Narrows Natural Area are visible along Durfee Avenue.

Plant B28 Booster Station:

The area that would be occupied by the new off-site Plant B28 Booster Station is currently zoned as Vacant Undifferentiated. The property is a vacant land currently owned by City of Industry. It is bound to the north by Workman Mill Road, to the southwest by SR-60, and to the west by Crossroads Parkway North. Properties to the north and east are zoned as residential-agricultural and have been developed with government facilities. To the southwest and across the SR-60 is a residential development.

The new building would be approximately 17 feet tall and 32 by 29 feet in area and access for maintenance and larger equipment would be provided via a 10-foot-wide roller door. The building would be constructed using brick and the roof would comprise asphalt shingles. The building would also comprise decorative block walls to the east and south of the building. Landscaping would be provided on the north and east sides of the building.

A wrought iron fence approximately eight feet tall would be provided to enclose the site. The fence would include a wheel track guided gate to allow for egress. The fence would be supported using concrete footings approximately three feet deep. Additionally, a paved driveway allowing access to the Plant B28 Booster Station would be provided on Workman Mill Road.

The Plant B28 Booster Station would include an emergency backup generator installed outdoors on a concrete pad. A Southern California Edison transformer to supply power to the booster pumps would also be installed outdoors on a concrete pad.

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

Aesthetics, or visual resources, are the natural and cultural features of the landscape that can be seen and that contribute to the public's appreciative enjoyment of the environment. Visual resource or aesthetic impacts are generally defined in terms of a project's physical characteristics and potential visibility, light, and glare and the extent to which the project's presence would change the perceived visual character and quality of the environment in which it would be located.

Based on the existing conditions, effects on aesthetics would be considered significant if the proposed project results in:

- A substantial change in the overall visual character or quality has an adverse effect on viewer response.

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

No environmental studies were performed for this resource. Readily available information was reviewed for this assessment.

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

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

   Impact Analysis: No new permanent aboveground elements are anticipated with the proposed WNOU Blended Water Pipeline and Blend Water Supply Pipeline and the public ROW would be returned to existing conditions following construction. New aboveground elements included with the proposed project consist of the 17-foot-tall Plant B28 Booster Station building, backup generator, transformer, and fencing to be installed on a currently unoccupied site directly adjacent to SR-60. However, no official or designated scenic vistas or viewpoints are located in the project area.[1,2] The construction and operation of the proposed project would not be a part of a scenic vista.

   Conclusion: No Impact

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

   Impact Analysis: The proposed project is not located within a state scenic highway, and therefore would not damage any scenic resources, including trees, rock outcroppings, historical buildings along such a highway. Any vegetation and/or trees impacted during construction of the proposed project would be replaced as feasible. The aboveground portions of the proposed booster station would occur within the existing fenced area. The proposed project would not substantially damage scenic resources.

Conclusion: No Impact

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

Impact Analysis: No new permanent aboveground elements are anticipated with the proposed WNOU Blended Water Pipeline and Blend Water Supply Pipeline. The visual character of Durfee Avenue may be altered temporarily during the construction phase; however, this public ROW would be returned to existing conditions following construction. New aboveground elements included with the proposed project consist of the 17-foot-tall Plant B28 Booster Station building, backup generator, transformer, and fencing to be installed on a currently unoccupied site directly adjacent to SR-60. Landscaping would be provided on the north and east sides of the building. The visual character of the proposed project would be visually compatible with existing environment, as such, viewers would have a low sensitivity to any visual changes resulting from the proposed project. The proposed project would not conflict with applicable zoning and other regulations governing scenic quality or visual character.

Conclusion: Less than Significant Impact

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

Impact Analysis: The proposed project will not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Nighttime construction activities are not required with the proposed project, as such, nighttime construction lighting would not occur. New permanent lighting included with the proposed project consists of standard building and security lighting associated with the new off-site Plant B28 Booster Station. This new lighting would comply with all applicable requirements regarding the type of lighting and lighting levels allowable on the site. The site is located adjacent to SR-60 and is located in an area with high levels of existing ambient lighting. Light-sensitive land uses, such as residential uses, would not be significantly affected.

Conclusion: Less than Significant Impact

REFERENCES

1 City of South El Monte, *City of South El Monte General Plan*, October 2000.

2 Los Angeles County, *Los Angeles County General Plan*, October 6, 2015.

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| 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 forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.** | | | | |
| **Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| 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? | ☐ | ☐ | ☐ | ☒ |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | ☐ | ☐ | ☐ | ☒ |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | ☐ | ☐ | ☐ | ☒ |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

Federal

- **Farmland Protection Policy Act:** The U.S. Department of Agriculture (USDA) administers the Farmland Protection Policy Act of 1981. The act is intended to minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses. The act also requires these programs to be compatible with state, local, and private efforts to protect farmland.

State

- **California Civil Code Section 3482.5 (Right to Farm Act):** The Right to Farm Act is designed to protect commercial agricultural operations from nuisance complaints that may arise when an agricultural operation is conducting business in a "manner consistent with proper and accepted customs." The code specifies that established operations that have been in business for three or more years that were not nuisances at the time they began are not to be considered a nuisance as a result of a new land use.
- **California Land Conservation Act (Williamson Act):** The Williamson Act of 1965 was designed as an incentive to retain prime agricultural land and open space in agricultural use, thereby slowing its conversion to urban and suburban development. The program requires a 10-year contract between the county and the landowner. While in contract, the land is taxed on the basis of its agricultural use rather than its market value. The land becomes

subject to certain enforceable restrictions, and certain conditions need to be met prior to approval of an agreement. The goal of the Williamson Act is to protect agriculture and open space. The project site is not covered by Williamson Act or Farmland Security Zone contract. Therefore, no such contract aimed at retaining prime agricultural land and/or open space as agricultural use in order to slow its conversion to urban and suburban development affects the project site.

- **California Land Evaluation Site Assessment Model (LESA):** The USDA National Resources Conservation Service (NRCS) developed the LESA to assist state and local officials in making sound decisions regarding land use. Combined with forest measures and rangeland parameters, a LESA can provide a technical framework to numerically rank land parcels through local resource evaluation. In determining whether impacts to agricultural resources are significant environmental effects, the CEQA Guidelines reference the California Agricultural LESA Model prepared by the California Department of Conservation (DOC) as an optional methodology that may be used to assess the relative value of agriculture and farmland. The project site does not include existing agriculture or farmland.
- **Farmland Mapping and Monitoring Program (FMMP):** The FMMP, established in 1982, and implemented by and mapped by the California DOC, produces maps and statistical data used for analyzing impacts to the state's agricultural resources. Agricultural land is rated according to soil quality and irrigation status, with the best quality land called Prime Farmland. Maps are updated every two years, with current land use information gathered from aerial photographs, a computer mapping system, public review, and field reconnaissance. The minimum mapping unit is 10 acres. The DOC Prime Farmlands, Farmlands of Statewide Importance, and Unique Farmlands are referenced in CEQA Guidelines Appendix G as resources to consider in an evaluation of agricultural impacts. The project site does not include existing agriculture or farmland.

**ENVIRONMENTAL SETTING (BASELINE):**

The existing WNOU site is zoned as Heavy Industrial. Areas adjacent to the proposed Blend Water Supply Pipeline alignment and WNOU Blended Water Pipeline alignment are zoned as Open Space and Recreation and Wildlife Preserve and Sanctuary, to the north and south of Durfee Avenue, respectively. The USACE Facility located approximately 1,300 feet east of the existing WNOU site, is zoned as Maintenance Yards. Approximately 3,000 feet east of the WNOU site, land uses adjacent to the Blend Water Supply Pipeline alignment transition into Single Family Residential, Light Industrial, General Office Use, Other Commercial, Retail Stores and Commercial Services. The new off-site Plant B28 Booster Station would be located on land that is currently zoned as Vacant Undifferentiated.

At a local level, according to the City of South El Monte Land Use Plan, land uses adjacent to the Blend Water Supply Pipeline alignment approximately 3,000 feet east of the WNOU site comprise Commercial-Manufacturing (C-M), Public Facilities (P-F), Commercial Residential (C-R).[2] According to the County of Los Angeles land use zone designations, the existing WNOU site is zoned as Heavy Manufacturing (M-2-BE) and Buffer Strip (B-1). Areas adjacent to the proposed Blend Water Supply Pipeline alignment and WNOU Blended Water Pipeline alignment are zoned as Open Space (O-S) and Recreation and Wildlife Preserve and Sanctuary, to the north and south of Durfee Avenue, respectively.

These project areas have not been mapped by the FMMP.[3] Neither farmlands nor areas zoned as forest land or timber land occur within the project site. Therefore, there is no impact and this topic is not evaluated further for proposed project.

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

According to Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact related to agricultural and forestry resources if it would:

- 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 nonagricultural use.
- Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- 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)).
- Result in the loss of forest land or conversion of forest land to non-forest use.
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use.

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

No environmental studies were performed for this resource. Readily available information was reviewed for this assessment.

**IMPACT ANALYSES AND CONCLUSIONS:**

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

Impact Analysis: Not applicable.

Conclusion: No impact.

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

Impact Analysis: Not applicable.

Conclusion: No impact.

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))?

Impact Analysis: Not applicable.

Conclusion: No impact.

d. Result in the loss of forest land or conversion of forest land to non-forest use?

Impact Analysis: Not applicable.

Conclusion: No impact.

e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural uses?

Impact Analysis: Not applicable.

Conclusion: No impact.

REFERENCES:

1 *Los Angeles County Department of Regional Planning available at:* http://rpgis.isd.lacounty.gov/Html5Viewer/index.html?viewer=GISNET_Public.GIS-NET_Public, accessed November 26, 2019.

2 *City of South El Monte land use plan map available at:* http://www.ci.south-elmonte.ca.us/Portals/0/Planning%20Dept_Forms/zoning%20map/Zoning%20Oct%202012.pdf.

3 *California Department of Conservation. 2017. Los Angeles County Important Farmland 2016, Division of Land Resource Protection, Farmland Mapping and Monitoring Program. July.* https://www.conservation.ca.gov/dlrp/fmmp/Pages/LosAngeles.aspx.

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

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

Air quality is defined by the concentration of pollutants in relation to their impact on human health. Concentrations of air pollutants are determined by the rate and location of pollutant emissions released by pollution sources, and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, and sunlight. Therefore, ambient air quality conditions within a local air basin are influenced by such natural factors as topography, meteorology, and climate, in addition to the amount of air pollutant emissions released by existing air pollutant sources.

The project site is located within the South Coast Air Basin (SCAB). The SCAB includes Orange County and portions of Los Angeles, Riverside, and San Bernardino counties. Air quality in the SCAB is regulated at the federal level by U.S. Environmental Protection Age (USEPA), at the state level by California Air Resources Board (CARB), and at the local level by the South Coast Air Quality Management District (SCAQMD). Although USEPA regulations may not be superseded, both state and local regulations may be more stringent.

Air Pollutants of Concern

Individual air pollutants at certain concentrations may adversely affect human or animal health, reduce visibility, damage property, and reduce the productivity or vigor of crops and natural vegetation. Six air pollutants have been identified by the USEPA and the CARB as being of concern both on a nationwide and statewide level: ozone; carbon monoxide (CO); nitrogen dioxide ($NO_2$); sulfur dioxide ($SO_2$); lead; and particulate matter (PM), which is subdivided into two classes based on particle size: PM equal to or less than 10 micrometers in diameter ($PM_{10}$) and PM equal to or less than 2.5 micrometers in diameter ($PM_{2.5}$). Because the air quality standards for these air pollutants are regulated using human health and environmentally based criteria, they are commonly referred to as "criteria air pollutants."

Attainment of Federal and State Air Quality Standards

Areas are classified under the Federal Clean Air Act and California Clean Air Act as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the federal and state air quality standards have been achieved. With respect to National Ambient Air Quality Standards (NAAQS), the SCAB is designated nonattainment area for ozone and $PM_{2.5}$, and as an attainment or unclassified area for all other pollutants. With respect to the California Ambient Air Quality Standards (CAAQS), the SCAB is designated as a nonattainment area for ozone, $PM_{10}$, and $PM_{2.5}$, and as an attainment area for all other pollutants.[1]

Toxic Air Contaminants

In addition to criteria air pollutants, USEPA and CARB regulate hazardous air pollutants, also known as toxic air contaminants (TACs). TACs collectively refer to a diverse group of air pollutants that are capable of causing chronic (i.e.,

long-duration) and acute (i.e., severe but short-term) adverse effects on human health, including carcinogenic effects. TAC can be separated into carcinogens and noncarcinogens based on the nature of the effects associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which health impacts would not occur. Any exposure to a carcinogen poses some risk of contracting cancer. Noncarcinogens differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

Federal Clean Air Act and National Ambient Air Quality Standards

National air quality policies are regulated through the Federal Clean Air Act (CAA). Pursuant to the CAA, the USEPA has established nationwide air quality standards to protect public health and welfare with an adequate margin of safety. The NAAQS represent safe levels of each criteria pollutant to avoid specific adverse effects to human health and the environment. Two types of NAAQS have been established, primary and secondary standards. Primary standards set limits to protect public health, especially that of sensitive populations such as asthmatics, children, and seniors. Secondary standards set limits to protect public welfare, including protections against decreased visibility and damage to animals, crops, and buildings.

The CAA was amended in 1977 to require each state to maintain a State Implementation Plan (SIP) for achieving compliance with the NAAQS. In 1990, the CAA was amended again to strengthen regulation of both stationary and motor vehicle emission sources. Conformity to the SIP is defined under the 1990 CAA amendments as conformity with the SIP's purpose in eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of these standards.

California Clean Air Act and California Ambient Air Quality Standards

In 1988, the state legislature adopted the California CAA, which established a statewide air pollution control program. The California CAA requires all air districts in the state to endeavor to meet CAAQS by the earliest practical date. Unlike the federal CAA, the California CAA does not set precise attainment deadlines. Instead, the California CAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. CAAQS are generally more stringent than NAAQS and incorporate additional standards for sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride. CAAQS and NAAQS are listed together in Table 3-1.

CARB and local air districts bear responsibility for achieving California's air quality standards, which are to be achieved through district-level air quality management plans to be incorporated into the SIP. In California, the USEPA has delegated authority to prepare SIPs to CARB, which, in turn, has delegated that authority to individual air districts. CARB establishes state air quality standards, maintains oversight authority in air quality planning, develops programs for reducing emissions from motor vehicles, develops air emission inventories, collects air quality and meteorological data, and approves SIPs.

South Coast Air Quality Management District

In the SCAB, the SCAQMD is the agency responsible for protecting public health and welfare through the administration of federal and state air quality laws and policies. Included in the SCAQMD's tasks are monitoring of air pollution, preparation of air quality plans, and promulgation of rules and regulations.

Under the California CAA, the SCAQMD is required to develop an air quality attainment plan for nonattainment criteria pollutants within the air district. The most recent air quality plan developed by the SCAQMD is the 2016 Air Quality Management Plan (AQMP). The 2016 AQMP is the legally enforceable blueprint for how the region will meet and maintain the NAAQS and CAAQS. The 2016 AQMP identifies strategies and control measures needed to achieve attainment of the 8-hour ozone standard and federal annual and 24-hour standard for $PM_{2.5}$ in the SCAB.[3]
SCAQMD rules relevant to the proposed project include, but are not limited to:

- Regulation IV: Prohibitions; Rule 401: Visible Emissions. Prohibits the generation of particulate matter emissions that exceed the visible emissions threshold.
- Regulation IV: Prohibitions; Rule 402: Nuisance. Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property.
- Regulation IV: Prohibitions; Rule 403: Fugitive Dust. Regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site.
- Regulation XI: Source Specific Standards; Rule 1113: Architectural Coatings. Requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce volatile organic

compound (VOC) emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

- Regulation XIV: Toxics and Other Non-Criteria Pollutants; Rule 1403 Requires notification and work practice standards to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.

The proposed project is required to comply with these rules, and conformance would be incorporated into project specifications and procedures.

**Table 3-1: National and California Ambient Air Quality Standards**

| Pollutant | Averaging Time | CAAQS[b] | NAAQS[a] | |
|---|---|---|---|---|
| | | | Primary[c] | Secondary[d] |
| Ozone | 8 hours<br>1 hour | 0.070 ppm<br>0.09 ppm | 0.070 ppm<br>– | 0.070 ppm<br>– |
| $PM_{10}$ | Annual arithmetic mean<br>24 hours | 20 µg/m$^3$<br>50 µg/m$^3$ | –<br>150 µg/m$^3$ | –<br>150 µg/m$^3$ |
| $PM_{2.5}$ | Annual arithmetic mean<br>24 hours | 12 µg/m$^3$<br>– | 12 µg/m$^3$<br>35 µg/m$^3$ | 15 µg/m$^3$<br>35 µg/m$^3$ |
| CO | 8 hours<br>1 hour | 9.0 ppm<br>20 ppm | 9 ppm<br>35 ppm | –<br>– |
| $NO_2$ | Annual arithmetic mean<br>1 hour | 0.03 ppm<br>0.18 ppm | 0.053 ppm<br>0.100 ppm | 0.053 ppm<br>– |
| $SO_2$ | 24 hours<br>3 hours<br>1 hour | 0.04 ppm<br>–<br>0.25 ppm | –<br>–<br>0.075 ppm[e] | –<br>0.5 ppm<br>– |
| Lead[f] | Calendar quarter<br>Rolling 3-month average<br>30-day average | –<br>–<br>1.5 µg/m$^3$ | 1.5 µg/m$^3$ (certain areas)<br>0.15 µg/m$^3$<br>– | 1.5 µg/m$^3$<br>–<br>– |
| Visibility-reducing particles | 8 hours | – [g] | – | – |
| Sulfates | 24 hours | 25 µg/m$^3$ | – | – |
| Hydrogen sulfide | 1 hour | 0.03 ppm | – | – |
| Vinyl chloride[f] | 24 hours | 0.01 ppm | – | – |

Source: CARB 2016.[2]

[a] NAAQS other than ozone, PM, and those based on annual averages or annual arithmetic means are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For $PM_{10}$, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m$^3$ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, is equal to or less than the standard.

[b] CAAQS for ozone, CO (except Lake Tahoe), $SO_2$ (1-hour and 24-hour), $NO_2$, and suspended particulate matter ($PM_{10}$, $PM_{2.5}$, and visibility-reducing particles) are not to be exceeded. All others are not to be equaled or exceeded.

[c] NAAQS Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[d] NAAQS Secondary Standards: The levels of air quality necessary to protect the public welfare from known or anticipated adverse effects of a pollutant.

[e] Final rule signed June 2, 2010. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 parts per billion.

[f] CARB has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. CARB made this determination following the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[g] In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.

µg/m$^3$ = micrograms per cubic meter
CAAQS = California Ambient Air Quality Standards
CARB = California Air Resources Board
CO = carbon monoxide
NAAQS = National Ambient Air Quality Standards
$NO_2$ = nitrogen dioxide
PM = particulate matter
$PM_{10}$ = particulate matter equal to or less than 10 micrometers in aerodynamic diameter
$PM_{2.5}$ = particulate matter equal to or less than 2.5 micrometers in aerodynamic diameter
ppm = parts per million (by volume)
$SO_2$ = sulfur dioxide

**ENVIRONMENTAL SETTING (BASELINE):**

The proposed project is located within the SCAB. Ambient air pollutant concentrations in the SCAB are measured at air quality monitoring stations operated by CARB and the SCAQMD. The closest SCAQMD air quality monitoring station to the projects site is the Pico Rivera-4144 San Gabriel River Parkway station, located approximately one mile south of the existing WNOU site and three miles southwest of the proposed Plant B28 Booster Station. Air quality monitoring data for ozone, CO, $NO_2$, and $PM_{2.5}$ were obtained from the SCAQMD Historical Data by Year tables for the South San Gabriel Valley source receptor area (SRA 11). Data for $PM_{10}$ were obtained from East San Gabriel Valley 2 source receptor area (SRA 9).

Table 3-2 presents three years of the most recent information available, summarizing the exceedances of standards and the highest recorded pollutant. These concentrations represent the existing, or baseline conditions, for the proposed project sites, based on the most recent information that is available.

**Table 3-2: Ambient Air Quality Summary**

| Pollutant Standards | 2016 | 2017 | 2018 |
|---|---|---|---|
| **Ozone** | | | |
| Maximum 1-hour concentration (ppm) | 0.111 | 0.118 | 0.115 |
| Maximum 8-hour concentration (ppm) | 0.081 | 0.086 | 0.082 |
| Number of Days Standard Exceeded | | | |
| CAAQS 1-hour (>0.09 ppm) | 9 | 7 | 3 |
| CAAQS 8- hour (>0.070 ppm)/NAAQS 8-hour(>0.070 ppm) | 6/6 | 9/9 | 5/5 |
| **Carbon Monoxide (CO)** | | | |
| Maximum 8-hour concentration (ppm) | 1.7 | 2.2 | 1.8 |
| Maximum 1-hour concentration (ppm) | 2.8 | 2.5 | 2.0 |
| **Nitrogen Dioxide ($NO_2$)** | | | |
| Maximum 1-hour concentration (ppb) | 63.2 | 75.0 | 76.8 |
| Annual Average (ppb) | 20.0 | 19.6 | 18.3 |
| Number of Days Standard Exceeded | | | |
| NAAQS 1-hour | 0 | 0 | 0 |
| CAAQS 1-hour | 0 | 0 | 0 |
| **Particulate Matter ($PM_{10}$)** | | | |
| Maximum 24-hour concentration ($\mu g/m^3$) | 74 | 140 | 101 |
| Annual average concentration ($\mu g/m^3$) | 29.8 | 31.7 | 27.1 |
| Measured Number of Days Standard Exceeded | | | |
| NAAQS 24-hour (>150 $\mu g/m^3$) | 0 | 0 | 0 |
| CAAQS 24-hour (>50 $\mu g/m^3$) | 21 | 36 | 20 |
| **Particulate Matter ($PM_{2.5}$)** | | | |
| Maximum 24-hour concentration ($\mu g/m^3$) | 46.59 | 49.50 | 35.40 |
| Annual average concentration ($\mu g/m^3$) | 11.75 | 12.23 | 12.31 |
| Measured Number of Days Standard Exceeded | | | |
| NAAQS 24-hour (>35 $\mu g/m^3$) | 2 | 1 | 0 |

Notes: $\mu g/m^3$ = micrograms per cubic meter; CAAQS = California Ambient Air Quality Standards; NAAQS = National Ambient Air Quality Standards; ppb = parts per billion; ppm = parts per million
Source: SCAQMD 2019a.[4]

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

As stated in Appendix G of the CEQA Guidelines, the significance criteria established by the applicable air quality management board or air pollution control district may be relied on to make the impact determinations for specific program elements. The SCAQMD has established recommended screening level thresholds of significance for regional and localized pollutant emissions. The significance thresholds are shown in Tables 3-3 and 3-4.

Regional Thresholds

The regional thresholds of significance were designed to identify those projects that would result in significant levels of air pollution and to assist the region in attaining the applicable state and federal ambient air quality standards, which were established using health-based criteria to protect the public with a margin of safety from adverse health impacts due to exposure to air pollution. Because regional air quality standards have been established for these criteria pollutants to protect the public with a margin of safety from adverse health impacts due to exposure to air pollution, these thresholds of significance can also be used to assess project emissions and inform the project's impacts to regional air quality and health risks under CEQA.

**Table 3-3: SCAQMD Air Quality Significance Thresholds**

| **Mass Daily Thresholds [a]** | | |
|---|---|---|
| **Pollutant** | **Construction** | **Operation** |
| $NO_x$[1] | 100 lbs/day | 55 lbs/day |
| VOC[1] | 75 lbs/day | 55 lbs/day |
| $PM_{10}$ | 150 lbs/day | 150 lbs/day |
| $PM_{2.5}$ | 55 lbs/day | 55 lbs/day |
| SOx | 150 lbs/day | 150 lbs/day |
| CO | 550 lbs/day | 550 lbs/day |

Notes:
lbs/day = pounds per day
[a] Source: SCAQMD 2019b.[5]
[1] Ozone is a secondary pollutant (i.e., ozone is not directly emitted, but results from chemical reactions in atmosphere from precursor pollutants (NOx and VOC). As such, air quality impacts associated with ozone are evaluated using thresholds identified for its precursor pollutants.

Localized Thresholds

Localized emissions of criteria air pollutants and precursors were assessed in accordance with SCAQMD's local significance thresholds (LST) guidance.[6] SCAQMD recommends that lead agencies perform project-specific air quality modeling for projects larger than five acres. For projects less than five acres, the SCAQMD has developed look-up tables showing the maximum mass emissions that would not cause an exceedance of any LST for $NO_2$, CO, $PM_{10}$, and $PM_{2.5}$ based on distance to the nearest receptor location at distances between 25 to 500 meters (82 to 1,640 feet) from the proposed project sites. For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be to be a receptor such as a residence, hospital, or convalescent facility where it is possible that an individual could remain for 24 hours.

Installation of the WNOU Blended Water Pipeline would occur at a rate of approximately 300 linear feet per day. The pipeline would be installed underground using an open trenching method. The excavated trench would be approximately 5 feet wide. This would result in approximately 0.03 acres of construction work per day. Sensitive receptors are located at varying distances along the project alignment with the nearest receptors being residences approximately 50 feet from the project site along Durfee Avenue. The SCAQMD recommends that projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters. Since the total project area and daily project construction area would not exceed five acres, this analysis conservatively used the LSTs provided in the SCAQMD's mass rate look-up tables for a one-acre project site and a receptor distance of 25 meters in Source Receptor Area 11 (South San Gabriel Valley).

The LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards. The LSTs are developed based on the ambient concentrations of that pollutant for each source receptor area. Since the LSTs consider the ambient air quality, LSTs can also be used to identify those projects that would result in significant levels of air pollution and impact sensitive receptors. Table 3-4 presents the LSTs applicable to the proposed project.

**Table 3-4: SCAQMD Localized Significance Thresholds**

| **Threshold** | **NOx (lbs/day)** | **CO (lbs/day)** | **$PM_{10}$ (lbs/day)** | **$PM_{2.5}$ (lbs/day)** |
|---|---|---|---|---|
| Construction | 83 | 673 | 5 | 4 |
| Operation | 83 | 673 | 1 | 1 |

Notes: Based on a 1-acre project site for Source Receptor Area 11 (South San Gabriel Valley) for a 25-meter receptor distance.
NOx = nitrogen oxides; CO = carbon monoxide; $PM_{10}$ = particulate matter less than 10 microns in diameter; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; lbs/day = pounds per day
Source: SCAQMD 2008.[6]

## ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

Construction emissions are short-term or temporary but have the potential to result in a significant impact on air quality. Construction activities for the proposed project would generate temporary emissions of precursors to ozone (VOC and NOx), CO, $PM_{10}$, and $PM_{2.5}$. VOC, $NO_X$, and CO emissions are associated primarily with mobile equipment exhaust, including off-road construction equipment and on-road motor vehicles. Fugitive particulate matter dust emissions are associated primarily with site preparation and travel on unpaved roads and vary as a function of parameters such as soil silt content, soil moisture, wind speed, acreage of disturbance area, and miles traveled by construction vehicles.

Emissions generated by construction activities were modeled using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2. This model allows the user to enter project-specific construction information, such as the

types, number and horsepower of construction equipment, and the number and length of off-site motor vehicle trips. Construction emissions were estimated for worker commutes, haul trucks, and the use of off-road equipment. Emissions were calculated using the construction schedule, project specific equipment lists, and haul truck trips provided by the San Gabriel Valley Water Company.

Construction of the proposed project was assumed to begin in the late summer or early fall of 2020 and would last approximately 12 months. The estimated construction workforce is a maximum of 18 workers per day. In addition, the proposed project anticipates approximately 5,700 cubic yards of material would be imported/exported for construction of the pipeline and booster station. Additional modeling details and assumptions are provided in Appendix A.

Following construction, operation of the proposed project is anticipated to be limited to minor maintenance activities and remain similar to existing conditions. The analysis conservatively assumed a new backup generator would be required (160 horsepower) to serve as emergency power for the electric booster pumps. The analysis assumed the generator would run 50 hours per year for maintenance and testing. CalEEMod Version 2016.3.2 was also used to estimate operational emissions.

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

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

Impact Analysis: Air quality plans describe the air pollution control strategies to be implemented by a city, county, or regional air district. As previously discussed, the 2016 AQMP is the applicable air quality plan in the SCAB. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, the CARB, the Southern California Association of Governments (SCAG), and the USEPA.

Consistency with the AQMP is determined through evaluation of whether the project would exceed the estimated emissions used as the basis of the AQMP, which are based, in part, on population projections developed by the SCAG. The SCAG forecasts are based on local general plans and other related documents, such as housing elements, that are used to develop population projections and traffic projections.

Construction of the proposed project would involve the use of off-road equipment, haul trucks, and worker commute trips. Assumptions for off-road equipment emissions in air quality plans are developed based on hours of activity and equipment population reported to CARB for rule compliance. The use of construction equipment in the AQMP is estimated for the region on an annual basis, and construction-related emissions are estimated as an aggregate in the AQMP. Since project construction is limited to short-term activities and construction activities would not involve unusual characteristics that would necessitate the use of extensive off-road equipment usage, the proposed project would not increase the assumptions for off-road equipment use in the AQMP. In addition, the proposed project would result in emissions that would be below the SCAQMD regional and localized thresholds during construction (as shown below in Section 3[b]). The thresholds were developed to assist the region in attaining the applicable state and federal ambient air quality standards; therefore, the proposed project would not result in an increase in the frequency or severity of existing air quality violations and would not have the potential to cause or affect a violation of the ambient air quality standards. The proposed project would also comply with the applicable SCAQMD rules and regulations, which are developed to implement AQMP control measures.

As described in Section 11, Land Use and Planning, the proposed project does not conflict with any applicable land use plan, policy, or regulation. Further, the purpose of the proposed project is to allow distribution of treated blended water to San Gabriel, increase the pumping rate of the existing groundwater extraction wells, increase the capture of the contaminants, and protect nearby municipal water supply wells from contamination. As such, maintenance-related trips associated with the proposed project are anticipated to remain similar to existing conditions and would not involve any uses that would increase population or vehicle trips beyond that considered in the General Plan. Further, the back-up generator that would be required for the new booster pumps would be permitted per SCAQMD rules and regulations and the booster pumps would be electric-powered. As shown in Section 3(b) below, the proposed project would result in operational emissions that would be below the SCAQMD regional and localized thresholds. Therefore, the intensity of operational emissions has been accounted for in the AQMP and would not exceed the current assumptions used to develop the AQMP. The proposed project would not conflict with or obstruct implementation of the applicable air quality plan.

Conclusion: Less than significant impact.

b. Result in 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?

Impact Analysis: By its very nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development within the SCAB, and this regional impact is cumulative rather than being attributable to any one source. A project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects. The thresholds identified in Tables 3-3 and 3-4 above are designed to identify those projects that would result in significant levels of air pollution and to assist the region in attaining the applicable state and federal ambient air quality standards. Projects that would not exceed the thresholds of significance would not contribute a considerable amount of criteria air pollutant emissions to the region's emissions profile and would not impede attainment and maintenance of ambient air quality standards.

Table 3-5 shows the maximum daily emissions associated with construction of the proposed project compared to the SCAQMD regional thresholds of significance. Additional modeling assumptions and details are provided in Appendix A.

**Table 3-5: Maximum Daily Regional Construction-Related Emissions**

| Description | VOC (lbs/day | NOx (lbs/day) | CO (lbs/day) | SOx (lbs/day) | $PM_{10}$[1] (lbs/day) | $PM_{2.5}$[1] (lbs/day) |
|---|---|---|---|---|---|---|
| Daily Project Emissions | 2.86 | 26.37 | 25.40 | 0.05 | 1.56 | 1.22 |
| SCAQMD Regional Thresholds[2] | 75 | 100 | 550 | 150 | 150 | 55 |
| Exceed Regional Threshold? | No | No | No | No | No | No |

Notes:
Modeled by AECOM in 2019.
[1] Fugitive dust emissions of $PM_{10}$ and $PM_{2.5}$ include reductions associated with implementation of Best Management Practices per SCAQMD Rule 403.
[2] SCAQMD 2019a.[4]
VOC = volatile organic compounds; NOx = nitrogen oxides; CO = carbon monoxide; $PM_{10}$ = particulate matter less than 10 microns in diameter; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; lbs/day = pounds per day.

Table 3-6 shows the maximum daily emissions associated with construction of the proposed project compared to the SCAQMD LSTs. Although SCAQMD LSTs only consider the amount of on-site emissions generated by construction activities, this analysis conservatively compares the total construction-related emissions to the LSTs. Emissions associated with vehicle trips to and from the proposed project site during construction would be dispersed throughout the region and would have a nominal localized impact in the project site vicinity.

**Table 3-6: Maximum Daily Localized Construction-Related Emissions**

| Source/Description | NOx (lbs/day) | CO (lbs/day) | $PM_{10}$[1] (lbs/day) | $PM_{2.5}$[1] (lbs/day) |
|---|---|---|---|---|
| Daily Project On-Site Emissions | 26.37 | 25.40 | 1.56 | 1.22 |
| SCAQMD Localized Thresholds[2] | 83 | 673 | 5 | 4 |
| Exceed Regional Threshold? | No | No | No | No |

Notes:
Modeled by AECOM in 2019.
[1] Fugitive dust emissions of $PM_{10}$ and $PM_{2.5}$ include reductions associated with implementation of Best Management Practices per SCAQMD Rule 403.
[2] SCAQMD 2008.[6]
NOx = nitrogen oxides; CO = carbon monoxide; $PM_{10}$ = particulate matter less than 10 microns in diameter; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; lbs/day = pounds per day.

As shown in Tables 3-5 and 3-6, the peak daily construction emissions would not exceed any of the SCAQMD regional thresholds or LSTs. 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 non-attainment under an applicable federal or state ambient air quality standard.

As described previously, the purpose of the proposed project is to increase the pumping rate of the existing groundwater extraction wells to contain groundwater contamination and increase the capture of contaminants. As such, operational and maintenance activities associated with the proposed project are anticipated to remain similar to existing conditions. The analysis conservatively assumed a new back-up generator would be required for the new booster pumps at the Plant B28 Booster Station. The pumps (approximately 40 horsepower each) were assumed to be electric and generate indirect greenhouse gas emissions (greenhouse gas emissions are discussed in Section 8 below). As shown in Table 3-7, operational criteria air pollutant emissions would be minimal.

**Table 3-7: Maximum Daily Operational Emissions**

| Source/Description | VOC (lbs/day | NOx (lbs/day) | CO (lbs/day) | $PM_{10}$ (lbs/day) | $PM_{2.5}$ (lbs/day) |
|---|---|---|---|---|---|
| Daily Project Emissions | 0.98 | 4.87 | 5.23 | 0.22 | 0.22 |
| SCAQMD Regional Thresholds[1] | 55 | 55 | 550 | 150 | 55 |
| SCAQMD Localized Thresholds[2,3] | N/A | 83 | 673 | 1 | 1 |
| Exceed Thresholds? | No | No | No | No | No |

Notes:
Modeled by AECOM in 2019.
[1]SCAQMD 2019b.[5]
[2]SCAQMD 2008 [6]; Assumes a 1-acre project site for Source Receptor Area 11 at a 25-meter receptor distance. Please note that this is a conservative assumption as the operational emissions are likely to occur at distances greater than 25 meters from sensitive receptors.
[3]No LST threshold available for VOC emissions.
VOC = volatile organic compounds; NOx = nitrogen oxides; CO = carbon monoxide; $PM_{10}$ = particulate matter less than 10 microns in diameter; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; lbs/day = pounds per day.

As shown in Table 3-5 through Table 3-7, the maximum daily construction-related and operational emissions would not exceed any of the SCAQMD regional or localized thresholds. Therefore, construction and operation of the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Conclusion: Less than significant impact.

c. Expose sensitive receptors to substantial pollutant concentrations?

Impact Analysis: Some members of the population are especially sensitive to air pollutant emissions and should be given special consideration when evaluating air quality impacts from projects. For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be to be a receptor such as a residence, hospital, or convalescent facility where it is possible that an individual could remain for 24 hours.[6] Sensitive receptors also include facilities that house or attract children, the elderly, and people with illnesses or others who are especially sensitive to the effects of air pollutants. As described earlier, sensitive receptors are located at varying distances from the proposed project alignment. The nearest sensitive receptors are residences approximately 50 feet from the Blend Water Supply Pipeline project site along Durfee Avenue. Other sensitive receptors in the vicinity include South El Monte High School and hotels near the intersection of Durfee Avenue and Peck Road.

**Criteria Pollutants**

As shown in Table 3-5 through Table 3-7, construction-related and operational activities would result in emissions of criteria air pollutants, but at levels that would not exceed the SCAQMD regional or localized thresholds of significance. The regional thresholds of significance were designed to identify those projects that would result in significant levels of air pollution and to assist the region in attaining the applicable state and federal ambient air quality standards, which were established using health-based criteria to protect the public with a margin of safety from adverse health impacts due to exposure to air pollution. In addition, the LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards and are developed based on the ambient concentrations of that pollutant for each source receptor area. As such, the criteria air pollutant emissions associated with the proposed project would not expose sensitive receptors to substantial criteria pollutant concentrations.

**Toxic Air Contaminants**

The greatest potential for TAC emissions during construction would be related to diesel particulate matter (diesel PM) emissions associated with heavy-duty equipment operations. The Office of Environmental Health Hazard Assessment (OEHHA) developed a Guidance Manual for Preparation of Health Risk Assessments.[7] According to OEHHA methodology, health effects from carcinogenic TACs are usually described in terms of individual cancer risk, which is based on a 30-year lifetime exposure to TACs. As stated previously, construction activities for the proposed project are anticipated to last approximately 12 months and would cease following completion. In addition, pipeline construction would be completed in segments; similar to a moving assembly line. Therefore, trucks and off-road equipment would not operate in the immediate vicinity of the sensitive receptors for an extended period of time.

Because off-road, heavy-duty equipment would be used for a relatively short time period and would not be in the immediate proximity of sensitive receptors, construction activities would not be anticipated to expose sensitive receptors to substantial TAC concentrations.

As discussed previously, following construction, operation and maintenance of the proposed project is anticipated to remain similar to existing conditions. As such, the proposed project is not anticipated to result in an increase in vehicle trips and off-road equipment usage associated with staff or maintenance. The new booster pumps associated with the proposed Plant B28 Booster Station project would be electric and therefore, would not generate TAC emissions or expose sensitive receptors to substantial pollutant concentrations. If a new diesel-fueled emergency generator is required as back-up power for the pumps, the generator would be a source of TAC emissions. However, the generator would be installed at the proposed Plant B28 Booster Station located at Workman Mill Road north of SR-60. The nearest sensitive receptors to this site would be approximately 300 feet away, south of SR-60. Studies indicate that diesel PM emissions and the relative health risk can decrease substantially within 300 feet.[8,9] Further, the emergency generator would not be operated for extended periods of time and emissions would be limited to operation during maintenance and testing and infrequent power outages. Therefore, the proposed project would not result in an increase in TAC emissions beyond existing conditions and the proposed project would not expose sensitive receptors to substantial pollutant concentrations.

Conclusion: Less than significant impact.

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

Impact Analysis: The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose individuals to objectionable odors are deemed to have a significant impact. Typical facilities that generate odors include wastewater treatment facilities, sanitary landfills, composting facilities, petroleum refineries, chemical manufacturing plants, and food processing facilities.

Construction activities associated with the proposed project could result in short-term odor emissions from diesel exhaust associated with construction equipment. However, the proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary in nature. In addition, construction activities would occur in segments along the alignment and would not be in the immediate proximity of people for extended periods of time. Since the purpose of the proposed project is to increase the pumping rate of groundwater, operational activities are anticipated to remain similar to existing conditions. The proposed project would utilize existing infrastructure from the existing groundwater treatment system; therefore, the proposed project would not introduce new odors. In addition, the proposed pipeline would be installed so that the high-quality water from San Gabriel's water system can be blended with water produced at the WNOU site to maintain Total Dissolved Solids below 500 parts per million in the treated water at the WNOU site, reducing the potential for odors. Thus, the proposed project would not create objectionable odors affecting a substantial number of people.

Conclusion: Less than significant impact.

REFERENCES:

1 SCAQMD (South Coast Air Quality Management District). 2016. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin. Available: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf.

2 CARB .2016. Ambient Air Quality Standards. Available: https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf?_ga=2.133791883.484522487.1543866444-1828960224.1543456803.

3 SCAQMD. 2017. 2016 Air Quality Management Plan. Available: http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp.

4 SCAQMD. 2019a. Historical Data Tables By Year. Available: https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year

5 SCAQMD. 2019b. SCAQMD Air Quality Significance Thresholds. Availablehttp://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

6 SCAQMD. 2008. Final Localized Significance Threshold Methodology. Available: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

7 Office of Environmental Health Hazard Assessment (OEHHA). 2015. *Air Toxics Hot Spots Program, Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments.* Available: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

8 CARB (California Air Resources Board). 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. Available: http://www.arb.ca.gov/ch/landuse.htm.

9 Zhu, Y., W. C. Hinds, S. Kim, and S. Shen. 2002. Study of Ultrafine Particles Near a Major Highway with Heavy-duty Diesel Traffic. Atmospheric Environment. 36:4323–4335.

| 4. BIOLOGICAL RESOURCES | | | | |
|---|---|---|---|---|
| **Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries? | ☐ | ☒ | ☐ | ☐ |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? | ☐ | ☒ | ☐ | ☐ |
| c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | ☐ | ☒ | ☐ | ☐ |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | ☐ | ☒ | ☐ | ☐ |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☐ | ☐ | ☒ |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | ☐ | ☐ | ☐ | ☒ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

Federal

***Federal Endangered Species Act (16 U.S.C. 1531–1543)***

The U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) Fisheries oversee the Federal Endangered Species Act (FESA). The USFWS has jurisdiction over plants, wildlife, and resident fish; NOAA Fisheries has jurisdiction over anadromous fish, marine fish, and marine mammals. The FESA prohibits the take of any fish or wildlife species listed as endangered or threatened; requires that all federal agencies consult with the USFWS and/or NOAA Fisheries to ensure that federal agencies' actions do not jeopardize the continued existence of a listed species or adversely modify critical habitat for listed species; and issues permits to authorize the incidental take of listed species.

A federally endangered species is a species of invertebrate, plant, or wildlife formally listed under the FESA as facing extinction throughout all or a significant portion of its geographic range. A federally threatened species is one formally listed by the USFWS as likely to become endangered within the foreseeable future throughout all or a significant portion of its range. A proposed threatened or endangered species is one officially proposed by the USFWS for addition to the federal threatened or endangered species lists. Candidate species and species that are proposed for listing receive no protection under the FESA.

***Migratory Bird Treaty Act (MBTA)***

Congress passed the MBTA in 1918 to prohibit the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA (U.S.C. Title 16, Chapter 7, Subchapter II, Sections 703–712). All birds, except European starlings, English house sparrows, rock doves (pigeons), and non-migratory game birds such as quail, pheasant, and grouse are protected under the MBTA. Game birds are regulated under state hunting permit programs.

***Clean Water Act Sections 404 and 401 (33 U.S.C. 1251-1376)***

USACE and USEPA regulate the discharge of dredged or fill material into "waters of the U.S.," including wetlands, under Section 404 of the Clean Water Act (CWA). The USACE has defined the term "wetlands" as follows: "Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstance do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (40 CFR 116.3). Some classes of fill activities may be authorized under general permits if specific conditions are met. Projects that would result in the placement of dredged or fill material into waters of the U.S. (WoUS) require a Section 404 permit from the USACE.

Section 401 of the CWA requires the issuance of a water quality certification or waiver thereof for all Section 404 nationwide or individual permits issued by the USACE. The EPA has deferred water quality certification authority to the State Water Resources Control Board (SWRCB). Most projects are regulated by Regional Water Quality Control Boards (RWQCBs). The SWRCB directly regulates multi-regional projects and supports and coordinates the program statewide.

State

***California Fish and Game Code (CFGC)***

California Endangered Species Act (Section 2050 et seq.)

California implemented its own Endangered Species Act (CESA) in 1984. The state act prohibits the take of state-listed endangered and threatened species; however, unlike the federal definition, habitat destruction or modification is not included in the state's definition of take. Section 2090 of CESA requires state agencies to comply with endangered species protection and recovery and to promote conservation of these species. The California Department of Fish and Wildlife (CDFW) administers the CESA and authorizes take through Section 2081 agreements (except for designated "fully protected species").

California Species of Special Concern (SSC) is an informal designation used by the CDFW for specific declining fish, amphibian, reptile, bird, and mammal species that are not listed as endangered, threatened, or rare under CESA. Other species in California for which there is conservation concern are tracked by in the California Natural Diversity Data Base (CNDDB). These designations do not provide legal protection but signifies that these species are recognized as vulnerable by CDFW and may receive special consideration during a CEQA review process.

In regards to listed rare and endangered plant species, the CESA defers to the California Native Plant Protection Act (NPPA) of 1977. The NPPA prohibits importing of rare and endangered plants into California, and the taking and selling of rare and endangered plants. The CESA includes an additional listing category for threatened plants which are not regulated under the NPPA. In this case, plants listed as rare or endangered under the NPPA are not protected under CESA, but can be protected under CEQA. In addition, plants that are not state listed but meet the state standards for listing, are also protected under CEQA (Guidelines, Section 15380). In practice, this is generally interpreted to mean that all plant species designated with a California Rare Plant Rank (CRPR) of 1B and 2 by the California Native Plant Society (CNPS), qualify for protection under CEQA, as well as some species of plants with CRPR of 3 and 4. Species are ranked by CNPS in their Inventory of Rare and Endangered Plants of California.

Bird Protections

CFGC Section 3503, 3503.5, and 3505 set forth limits on take, possession, and destruction of certain avian species, their nests and eggs. Section 3503 of the CFGC prohibits destruction of the nests or eggs of most native resident and migratory bird species. Section 3503.5 specifically prohibits the taking of raptors or destruction of their nests or eggs. CFGC 3511(a)(1) establishes that fully-protected birds may not be taken or possessed at any time with the exception of permits granted for scientific research.

Under these sections of the CFCG, the project proponent is not allowed to conduct activities that would result in the taking, possessing, or destroying of any birds-of-prey, taking or possessing of any migratory non-game bird as designated in the

MBTA or the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or non-game birds protected by the MBTA, or the taking of any non-game bird pursuant to CFGC Section 3800.

***Natural Community Conservation Plan/Habitat Conservation Plan Programs***

The CDFW's Natural Community Conservation Planning (NCCP) Program promotes collaborative planning efforts designed to provide for the region-wide conservation of plants, animals, and their habitats, while allowing for compatible and appropriate economic activity. Similarly, and generally in parallel, the USFWS implements the Habitat Conservation Plan program which are planning documents required as part of an application for an incidental take permit. These plans describe the anticipated effects of the proposed take; how those impacts will be minimized or mitigated; and how the HCP is to be funded. HCPs can apply to both listed and non-listed species, including those that are candidates or have been proposed for listing. Conserving species before they are in danger of extinction or are likely to become so can also provide early benefits and prevent the need for listing.

**Local**

***Significant Ecological Area Program***

The primary mechanism used by Los Angeles County to conserve biological diversity is a planning overlay called Significant Ecological Areas (SEAs) designated in the County's General Plan Conservation/Open Space Element. SEAs are ecologically important land and water systems that support valuable habitat for plants and animals, often integral to the preservation of rare, threatened, or endangered species and the conservation of biological diversity in Los Angeles County. While SEAs are not preserves, they are areas where Los Angeles County deems it important to facilitate a balance between development and resource conservation. Development activities in the SEAs are reviewed closely in order to conserve water and biological resources such as streams, oak woodlands, and Threatened or Endangered species and their habitat.

***Los Angeles County Oak Tree Ordinance***

The Los Angeles County Oak Tree Ordinance (County of Los Angeles Code of Ordinances Section 22.56.2050) recognizes oak trees as significant historical, aesthetic, and ecological resources. The goal of the ordinance is to create favorable conditions for the preservation and propagation of this unique and threatened plant heritage. By making this part of the development process, healthy oak trees will be preserved and maintained. The Los Angeles County Oak Tree Ordinance applies to all unincorporated areas of the County. Under the ordinance, a person shall not cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone of any tree of the oak tree genus, which is 8 inches or more diameter at breast height (dbh), 4.5 feet above natural grade, or, in the case of oaks with multiple trunks, a combined dbh of 12 inches or more of the two largest trunks, without first obtaining a permit from the Los Angeles County Fire Department.

**ENVIRONMENTAL SETTING (BASELINE):**

Biological Study Area

The Biological Study Area (BSA) includes the footprint of the proposed 1) Blend Water Supply Pipeline alignment along Durfee Avenue, 2) WNOU Blended Water Pipeline, and 3) Plant B28 Booster Station, plus a 500-foot survey buffer around each of these three components. A buffer around the project components was evaluated in order to capture potential indirect effects to biological resources from implementation of the project. Indirect effects could include elevated noise and dust levels, soil compaction, and increased human activity within the BSA. A 500-foot survey buffer is standard for capturing potential indirect impacts from a project on biological resources. It is anticipated that indirect impacts beyond 500 feet would be diffuse and would not significantly impact biological resources.

Vegetation Communities and Plants

Vegetation communities are assemblages of plant species that commonly coexist. The classification of vegetation communities is based on the life form of the dominant species within that community and the associated species. No native plant communities occur within the footprint of the project components and throughout most of the BSA; however, natural communities occur within the BSA of the Blend Water Supply Pipeline. The vegetation communities and species documented in the BSA are described below.

The Durfee Avenue ROW consists of the paved surface of the road, a shoulder of compacted soils along the south side of Durfee Avenue, and other disturbed areas void of vegetation. The BSA around the alignment includes developed areas

along the north side of Durfee Avenue and riparian and developed areas along the south side of Durfee Avenue. Elevation along the alignment ranges from approximately 220 feet above mean sea level (amsl) at the WNOU site to 235 feet amsl at the tie into an existing pipeline at the intersection of Durfee Avenue and Peck Road.

Along the north side of Durfee Avenue, the developed cover type within the BSA includes areas that are part of Whittier Narrows Recreation Area, including lawn and parking areas at Legg Lake Park and the Group Picnic Area, a trucking company yard, a complex of buildings housing USACE personnel and equipment, South El Monte High School, a hotel, and an apartment complex. Vast areas of lawn and mature ornamental pine (*Pinus* sp.), sycamore (*Plantanus* sp), eucalyptus (*Ecalpytus* spp.), and other trees are common in these developed areas.

The Whittier Narrows Natural Area (natural area), managed by Los Angeles County Parks and Recreation, and the Puente Hills SEA coincide with a portion of the BSA. These local overlays cover habitats occurring along the south side of Durfee Avenue, which lie below the inundation level of the flood control basin encompassed by the Whittier Narrows Dam County Recreation Area (WNDCRA). This natural area includes riparian habitat associated with the Rio Honda and San Gabriel Rivers which confluence in the flood control basin, and adjacent upland scrub areas. Flood control basin lands are owned by the USACE and are separated from Durfee Avenue by a fence and along some portions by a 4 to 5-foot tall berm. Habitat in the flood control basin generally occurs along the entire alignment of the Blend Water Supply Pipeline, from the WNOU site east for approximately 1.2 miles to an area where the WNDCRA nature center and a few small commercial business and homes lie along Durfee Avenue

Natural area habitat occurring in the BSA along the south side of Durfee Avenue can generally be classified as mulefat scrub; however, a variety of native, non-native, and ornamental plant species at varying densities occur within the BSA, creating pockets of habitats dominated by different plant species. Areas of human use and intrusion from Durfee Avenue into the natural area are evident, and portions of the natural area that coincide with the BSA have recently burned.

Prominent tree species that were observed in the BSA of the Blend Water Supply Pipeline that coincide with the south side of Durfee Avenue included blue elderberry (*Sambucus mexicana*), arroyo willow (*Salix lasiolepis*), black walnut (*Juglans californica*), eucalyptus, and fruit trees (*Prunus* spp.). An occasional coast live oak (*Quercus agrifolia*) tree was also observed. An often-dense understory is dominated by mulefat and/or blue elderberry. Common shrub species also observed include coyote brush (*Baccharis pilularis*), thick-leaved yerba santa (*Eriodictyon crassifolium*), holly-leaved cherry (*Prunus. ilicifolia*), golden currant (*Ribes aureum*), and coffee berry (*Rhamnus californica*). The herbaceous understory is dominated by non-native species, including poison hemlock (*Conium maculatum*), black mustard (*Brassica nigra*), horehound (*Marrubium vulgare*), and wild radish (*Raphanus sativus*). Southern California grape (*Vitis girdiana*) is very dense in some areas, overgrowing other vegetation. Much of the area south of Durfee Avenue was used as home sites and for agricultural purposes prior to acquisition by USACE in the late 1930s. The presence of non-native species, as well as walnut and fruit trees, likely dates back to when this area was used for home sites and agriculture.

The BSA around this proposed WNOU Blended Water Pipeline includes additional developed and paved areas associated with the WNOU site and a trucking company yard to the west, lawn and parking areas in Legg Lake Park with mature ornamental trees to the east, and a portion of the natural area across Durfee Avenue from the WNOU site to the south. A portion of the natural area across the road from the WNOU site recently burned, with only the charred woody trunks of black walnut trees and grape vines remaining; all herbaceous and shrub vegetation was completely burned. Elevation at the WNOU site where the WNOU Blended Water Pipeline will be installed is approximately 220 feet amsl.

The footprint of the proposed Plant B28 Booster Station does not include any existing vegetation. Piping from the booster station would run north to tie-in to a water main located within the paved Workman Mill Road. Elevation at the proposed Plant B28 Booster Station site is 265 feet amsl.

Included within the booster station BSA, and located directly adjacent and southwest of the proposed Plant B28 Booster Station footprint is an existing substrate of thick mulch and ornamental plantings including, a sycamore tree, olive tree, two oak (*Quercus* sp.) trees, bougainvillea (*Bougainvillea spectabilis*) shrubs, a lantan shrub (*Lantana camara*), a small patch of ice plant (*Carpobrotus edulis*), and Peruvian pepper (*Schinus mole*) shrubs. The booster station BSA also captures additional developed areas including SR-60, residential development south of SR-60, Workman Mill Road, Crossroads Parkway North, and the San Jose Creek Water Reclamation Plant property. A line of mature red gum eucalyptus (*Eucalyptus camaldulensis*), Peruvian pepper, and additional ornamental shrubs occur as landscaping on the embankment of SR-60.

Special-Status Plant Species

Special-status plant species include those listed as Endangered, Threatened, Rare or those species proposed for listing (Candidates) by the USFWS, CDFW, and the CNPS.[1,2,3] A list of regional special-status plant species was obtained to evaluate the potential for such species to occur in the BSA of the project components by conducting a review of the CNDDB, the CNPS's Inventory of Rare and Endangered Plants, and the USFWS's online IPaC review process. A total of 61 plant species were identified during reviews of the CNDDB and CNPS inventories to have historically been recorded from the El Monte and surrounding eight quadrangles, and from a search of IPaC for the project area, including 4 federally and/or state-listed species, or candidates for listing. Results of the CNDDB, CNPS, and IPaC reviews are included in Appendix B. Special-status plants also include species protected under local regulation or ordinance, such as the Los Angeles County Tree Ordinance.

The footprint of the project components consists of paved and landscaped areas which do not provide the specific habitat requirements needed to support special-status plant species. The BSA of the project components also primarily includes urban developed areas unsuitable for special-status plants; however, habitat along the south side of Durfee Avenue coinciding with the BSA of the Blend Water Supply Pipeline does provide habitat potentially suitable for special-status plant species. Habitat suitability is however limited by anthropogenic edge effects from Durfee Avenue (i.e. vehicle traffic and human intrusion into this habitat) and the presence of often dense non-native plants and wild grape vines which dominate and can suppress the establishment of native vegetation communities.

No records of special-status plant species coincide with the BSA of the WNOU Blended Water Pipeline or the Plant B28 Booster Station; however, three CNDDB records of special-status plant species coincide with the BSA of the Blend Water Supply Pipeline, along the south side of Durfee Avenue. These include two records of Parish's gooseberry (*Ribes divaricatum* var. *parishii*), a species with a CRPR of 1A (a species presumed extirpated in California, and rare or extinct elsewhere), and one of Nevin's barberry (*Berberis nevinii*), a federally and state-listed endangered species. The records of Parish's gooseberry are from 1979 and 1981, roughly 40 years ago, and as reflected by its CRPR of 1A, this species is likely extirpated from the area. The occurrence of Nevin's barberry is from 2009 and consists of three specimens detected within a native woodland habitat on the nature center property.

No listed or otherwise special-status plant species were observed in the BSA of any of the project components during the field survey. Coast live oak trees meeting the size specifications to fall under protection of the county oak tree ordinance were observed along the south side Durfee Avenue in the BSA of the Blend Water Supply Pipeline. Oak trees were also observed adjacent to the footprint of the Plant B28 Booster Station; however, those trees do not attain the size specifications to qualify as protected trees under county ordinance, and appear to have been recently planted in the past few years as landscaping.

Wildlife

Wildlife species detected during the field survey included a few bird species that are common in and adapted to urban environments, including white-crowned sparrow (*Zonotrichia leucophrys*), black phoebe (*Sayornis nigricans*), rock dove (*Columba livia*), American crow (*Corvus brachyrhynchos*), house sparrow (*Passer domesticus*), and western gull (*Larus occidentalis*).

Due to the urban developed nature of the BSA of the WNOU Blended Water Pipeline and Plant B28 Booster Station, wildlife species expected to occur at these locations are likely limited to common urban bird species and an occasional reptile or small mammal. However, within the BSA of the Blend Water Supply Pipeline, the natural area along the south side of Durfee Avenue provides habitats that support a more diverse population of wildlife. More than 300 bird species, and numerous reptile and mammal species have been documented at the nature center,[4] including the federally and state-listed endangered least Bell's vireo (*Vireo bellii pusillus*), and the state-listed endangered coastal California gnatcatcher (*Polioptila californica californica*).[5] Fish and amphibian species whose life cycles are dependent on aquatic resources are not expected to occur in the BSA. Although aquatic features associated with the Rio Honda River and San Gabriel River are present within the natural area south of Durfee Avenue, such features lie further south and outside the BSA of the Blend Water Supply Pipeline.

Special-Status Wildlife Species

Special-status wildlife species include those listed by the USFWS under the FESA and by CDFW under CESA. USFWS and CDFW officially list species as either Threatened, Endangered, or as Candidates for listing. Additional species receive federal protection under the MBTA, and state protection under the CFGC and CEQA Section 15380(d). A list of regional special-status wildlife species was obtained by conducting a review of the CNDDB for the El Monte and surrounding eight quadrangles, and from a search of IPaC for the project area. A total of 42 wildlife species were identified during reviews of the CNDDB on-

line inventories to have historically been recorded from the El Monte and surrounding eight quadrangles, and from a search of IPaC for the project area, including 11 federally and/or state-listed species, or candidates for listing. Results of the CNDDB and IPaC reviews are included in Appendix B.

No listed or otherwise special-status wildlife species were observed in the BSA of the project components during the field survey. The footprint of the proposed components consist of paved and landscaped areas which do not provide the specific habitat requirements needed to support special-status wildlife species. The BSA of the project components also includes primarily urban developed areas unsuitable for special-status wildlife; however, habitat along the south side of Durfee Avenue coinciding with the BSA of the Blend Water Supply Pipeline does provide habitat potentially suitable for special-status wildlife and common bird species protected by the MBTA and CFGC. Habitat suitability is however limited by anthropogenic edge effects from Durfee Avenue (i.e. vehicle traffic and human intrusion into this habitat) and the presence of often dense non-native plants and wild grape vines which suppress the suitability of on-site habitats to support special-status wildlife.

No records of special-status wildlife species coincide with the BSA of the WNOU Blended Water Pipeline or the Plant B28 Booster Station; however, CNDDB records of three federally and/or state-listed wildlife species coincide with the BSA of the Blend Water Supply Pipeline. These include records of least Bell's vireo (*Vireo bellii pusillus*; federally and state-listed endangered), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*; federally-listed threatened, state-listed endangered), and bank swallow (*Riparia riparia*; state-listed threatened). A CNDDB record of southwestern pond turtle (*Emys marmorata*; CDFW SSC) also coincides with the BSA of the Blend Water Supply Pipeline. Additionally, a record in the CNDDB of coastal California gnatcatcher (*Polioptila californica californica*; federally-listed threatened, CDFW SSC) occurs 0.5 mile west of the BSA of the Blend Water Supply Pipeline. The potential for these species to occur within the BSA of the Blend Water Supply Pipeline is discussed below.

***Least Bell's Vireo***

Historically, this subspecies was a common summer visitor to riparian habitat throughout much of California. Currently, the least Bell's vireo is found only in riparian woodlands in southern California, with the majority of breeding pairs in San Diego, Santa Barbara, and Riverside Counties. The least Bell's vireo is restricted to riparian woodland and is most frequent in areas that combine an understory of dense young willows or mulefat with a canopy of tall willows. The estimated number of least Bell's vireo territories in Los Angeles County has increased from six, from 1977 to 1985, to 56 from 2001 to 2005, comprising approximately 2 percent of the total least Bell's vireo population.[6] The CNDDB record of this species coinciding with the BSA indicates that as many as 13 territories have been detected within multi-layer riparian habitats along the Rio Honda River and San Gabriel River within the WNDCRA during surveys between 1985 and 2011. Riparian habitat potentially suitable to support nesting least Bell's vireo is absent from the BSA of the Blend Water Supply Pipeline; however, with known past occurrences in the natural area, this species could occur as a transient across the BSA.

***Western Yellow-Billed Cuckoo***

This species breeds in scattered locations where suitable habitat is available throughout California, Idaho, Utah, Arizona, New Mexico, extreme western Texas, and possibly Nevada and western Colorado. Historically, it was a common breeding species in riparian habitat throughout much of lowland California, including coastal valleys from the Mexican border to Sebastopol, Sonoma County, and in the Central Valley from Bakersfield and Weldon, Kern County, north to Redding, Shasta County. Western yellow-billed cuckoo nests in broad riparian forests and lower flood-bottoms of large rivers, predominately in thick willow with a lower layer of blackberry, nettles, or wild grape.7 It is historically known from the San Gabriel River; however, the CNDDB record of this species coinciding with the BSA of the Blend Water Supply Pipeline is from 1951 and it is believed that development and channelization of the river have destroyed suitable habitat for this species, and it no longer occurs in this area of the San Gabriel River. As a result, this species is not expected to occur in the BSA.

***Bank Swallow***

This species occurs as a breeding species in California in a hundred or so widely distributed nesting colonies in alluvial soils along rivers, streams, lakes, and ocean coasts. Nesting colonies are located in vertical banks or bluffs in friable soils, where colonies can support dozens to thousands of nesting bank swallows. Most of the historical information indicates this species mostly occurred as a localized breeder along coastal areas and rivers in central and southern California.[8] Many historical colonies in southern California are from Santa Barbara County south to central San Diego County. These southern California colonies are extinct, primarily due to habitat changes from channelization. The CNDDB record of this species is 100 plus years old and suitable nesting habitat is not present within, or in the vicinity of the BSA of the Blend Water Supply Pipeline. As a result, this species is not expected to occur in the BSA.

***Southwestern Pond Turtle***

Southwestern pond turtle inhabits slow-moving rivers, streams, and ponds of coastal California from the San Francisco Bay area and the central valley south and into northern Baja California. Its elevational distribution is from sea level to

1,430 meters (4,690 feet amsl) and it most often occurs in smaller pools and permanent or intermittent streams. Depending on the topography, it has been suggested that habitats up to 500 meters (1,640 feet) on either side of a populated watercourse be considered potential nesting habitat.[9] Much of the habitat of the southwestern pond turtle has been altered by urban and agricultural development, and introduced aquatic predators such as bullfrogs, bass, and catfish pose a threat to hatchlings and young turtles. Turtles occupying habitat adjacent to urbanized areas are vulnerable to collection for pets, predation by other wildlife, including domestic dogs, and competition with introduced exotic turtles. Nest sites and overland routes between the nest site and the water are especially vulnerable to disturbance. The CNDDB record of this species coinciding with the BSA of the Blend Water Supply Pipeline is from 1987 when an individual was detected within a small pond on the nature center property. A source of permanent water suitable for this species is absent from the BSA of the Blend Water Supply Pipeline, as the river channel occurs further south and outside the BSA. Additionally, the BSA is adjacent to urban developed areas where domesticated dogs, human intrusions, and often thick vegetation restricts nesting suitability in the BSA. As a result, this species in not expected to occur in the BSA.

***Coastal California Gnatcatcher***

This species generally inhabits Diegan coastal sage scrub and Riversidian coastal sage scrub dominated by California sagebrush (*Artemesia californica*) and flat-topped buckwheat (*Eriogonum fasciculatum*) generally below 457 meters (1,500 feet) in elevation along the coastal slope. When nesting, this species typically avoids slopes greater than 25 percent and areas with dense, tall vegetation. The CNDDB record of this species indicates occurrences in the Montebello Hills Oil Field approximately 0.6 miles west of the WNOU site. It has also been documented in the natural area. Coastal sage scrub habitat preferred by this species is generally absent from the Blend Water Supply Pipeline BSA; however, with known occurrences in the vicinity, there is some potential for this species to occur as a transient across the BSA of the Blend Water Supply Pipeline.

<u>Sensitive Natural Communities</u>

Sensitive natural communities are habitats that are designated by CDFW as rare in the region in the CNDDB, support special-status plant or wildlife species, or receive regulatory protection (i.e., Section 404 of the CWA and/or Sections 1600 et seq. of the CFGC). Rare communities are given the highest inventory priority. Local regulatory overlays that protect natural communities are also discussed below.

***CDFW Sensitive Natural Communities***

A list of regional sensitive natural communities was obtained by conducting a review of the CNDDB for the El Monte and surrounding eight quadrangles. A total of 8 sensitive vegetative communities were identified. Results of the CNDDB review is included in Appendix B. None of the communities identified during the CNDDB review occur within the BSA. Most are known from seven plus miles to the north in the San Gabriel Mountains and to the southeast in the Puente Hills.

***USFWS-Designated Critical Habitats***

Critical Habitats designated by USFWS are specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection. These features, or Primary Constituent Elements (PCE), are the physical and biological features that are essential to the conservation of a species, which the designated Critical Habitat is based upon. A review of USFWS's Critical Habitat Mapper[10] indicated that critical Habitat for coastal California gnatcatcher occurs approximately 250 feet south of Durfee Avenue, covering much of the natural area as well as the Montebello Hills Oil Field to the west, where the species is known to occur. No designated Critical Habitats coincide with the BSA of the WNOU Blended Water Pipeline or Plant B28 Booster Station.

***Wetlands and Other Waters***

Reviews of the El Monte quadrangle, aerial imagery of the project areas, and the USFWS National Wetlands Inventory (NWI)[11] were conducted to determine if aquatic communities (i.e. wetlands or other waters) under regulatory jurisdiction of the USACE, CDFW, and/or RWQCB occur within proximity of the project components. No such features were determined to occur within the BSA of the WNOU Blended Water Pipeline and Plant B28 Booster Station. No such features occur within the footprint of the Blend Water Supply Pipeline; however, based on information obtained during a review of the NWI, wetlands are mapped within the BSA of the Blend Water Supply Pipeline, specifically in the area south of Durfee Avenue south from the WNOU site. The online NWI Mapper indicates that Freshwater Forested/Shrub Wetland and seasonally-flooded Freshwater Pond habitats occur approximately 160 to 200 feet south of Durfee Avenue. These wetland features occur within area that was observed during the field survey to have recently burned, leaving little to no vegetation.

***Natural Community Conservation Plan/Habitat Conservation Plan Areas (NCCP/HCP)***

A review of adopted HCP and NCCP areas[12] occurring in California was conducted to determine if the BSA of the project components fall within the boundary of any such plans. Results of the review indicate that no BSA falls within the boundary of a NCCP/HCP area.

***Significant Ecological Areas (SEA)***
A review of the Los Angeles County Department of Regional Planning (LADRP) SEA and Coastal Resource Areas Policy Map[13] indicated that none of the project components coincide with a SEA. However, the boundary of the Puente Hills SEA captures habitats along the south side of Durfee Avenue that fall within the BSA of the Blend Water Supply Pipeline.

Wildlife Corridor

In an urban context, a wildlife migration corridor can be defined as a linear landscape feature of sufficient width and buffer to allow animal movement between two comparatively undisturbed habitat fragments, or between a habitat fragment and some vital resource that encourages population growth and diversity. Habitat fragments are isolated patches of habitat separated by otherwise foreign or inhospitable areas, such as urban tracts or highways. Two types of wildlife migration corridors seen in urban settings are regional corridors, defined as those linking two or more large areas of natural open space, and local corridors, defined as those allowing resident wildlife to access critical resources (food, cover, and water) in a smaller area that might otherwise be isolated by urban development.

The BSA of the WNOU Blended Water Pipeline and Plant B28 Booster Station occur in an urbanized area and the BSA of these project components does not occur within or intersect a recognized/established regional wildlife corridor. Ornamental trees within and adjacent to these BSA provide some opportunities for cover, resting, foraging, and nesting to localized bird populations; however, they do not provide functions as a significant wildlife movement corridor.

The natural area occurring along the south side of Durfee Avenue, within the BSA of the Blend Water Supply Pipeline, serves as a wildlife movement corridor extending from the WNDCRA and Puente Hills south and east to the Chino Hills in Orange and Riverside Counties. These areas of Puente Hills and Chino Hills are a natural, physical link between the Santa Ana Mountains and the San Gabriel River. By virtue of this linkage, the complex of interconnected habitat units throughout Puente Hills and Chino Hills are recognized as both an important wildlife linkage and resident habitat area for regional wildlife populations.[14] The linkage between Puente Hills and Chino Hills falls within the Puente Hills SEA. This SEA covers the Los Angeles County portion of a continuous series of natural open spaces connecting Puente Hills and Chino Hills.

## APPLICABLE THRESHOLDS OF SIGNIFICANCE:

In accordance with Appendix G of the State CEQA Guidelines, impacts to biological resources are considered significant if the project would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service;
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
4. 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;
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

## ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:

### Methodology

In order to determine the impacts to biological resources, existing data on special-status species and sensitive natural communities were reviewed as part of a literature search. The following agency resources were reviewed to provide a list of regional special-status and sensitive biological resources and are identified in the impact evaluation below:

- CDFW California Natural Diversity Database (CNDDB)
- CNPS Inventory of Rare and Endangered Plants

- USFWS Information for Planning and Conservation (IPaC)
- USFWS National Wetlands Inventory (NWI)
- USFWS Critical Habitat Mapper
- Los Angeles County Department of Regional Planning's (LADRP) Significant Ecological Areas (SEA)

A reconnaissance-level field survey of the BSA was conducted on December 6, 2019. Existing conditions were recorded to document the biological resource baseline. Results of the literature search and field survey were utilized to document existing baseline conditions and to evaluate the Project's compliance with applicable regulations that function to conserve and protect biological resources.

Biological resources may be either directly or indirectly impacted by a project. Direct and indirect impacts may be either permanent or temporary in nature. These impact categories are defined below.

*Direct:* Any alteration, physical disturbance, or destruction of biological resources that would result from project-related activities is considered a direct impact. Examples include clearing vegetation, loss of individual species and/or their habitats, and encroaching into wetlands or a river.
*Indirect:* As a result of project-related activities, biological resources may also be affected in a manner that is ancillary to physical impacts. Examples include elevated noise and dust levels, soil compaction, increased human activity, decreased water quality, and the introduction of invasive wildlife (domestic cats and dogs) and plants.

*Permanent:* All impacts that result in the long-term or irreversible removal of biological resources are considered permanent. Examples include constructing a building or permanent road on an area containing biological resources.

*Temporary:* Any impacts considered to have reversible impacts on biological resources can be viewed as temporary. Examples include the generation of fugitive dust during construction, or removing vegetation for the preparation of construction activities, and either allowing the natural vegetation to recolonize or actively revegetating impacted areas. Surface disturbance that removes vegetation and disturbs the soil is considered a long-term temporary impact because of slow natural recovery in arid ecosystems.

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

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?

   Impact Analysis: Trenching and excavation for each project component would occur within the paved WNOU site and Durfee Avenue ROW, and would also occur at the Plant B28 Booster Station site directly adjacent to mature trees and landscaping. Such conditions do not provide the habitat requirements to support special-status species. As a result, direct impacts to special-status plant and wildlife species or their habitats would not occur as such species are not anticipated within the footprints of the project components.

   Due to the urban developed nature of the WNOU Blended Water Pipeline and Plant B28 Booster Station and surrounding areas, habitat for special-status species is absent from the BSA of these components; however, riparian habitat occurring within the BSA of the Blend Water Supply Pipeline along the south side of Durfee Avenue, provides potentially suitable habitat for special-status species. As a result, indirect impacts to special-status plant and wildlife species could occur during construction, if they are present in this habitat.

   Indirect impacts to special-status plant species occurring outside the footprint of the Blend Water Supply Pipeline could result from dust, stormwater runoff, and through the potential spread of noxious and invasive plant species into these communities during construction. Such impacts would be considered significant; however, by implementing and adhering to standard construction BMP's regarding dust and stormwater runoff and the avoidance and minimization measures outlined in Mitigation Measure BIO-1, indirect impacts to special-status plants potentially occurring in riparian habitat along the south side of Durfee Avenue would not occur.

   As presented above, CNDDB records of special-status wildlife coincide with the BSA of the Blend Water Supply Pipeline. Habitats coinciding with the BSA in proximity of these records regularly experience human intrusions and include a significant amount of non-native plant species, creating conditions generally unsuitable for special-status wildlife. However, the federally and/or state-listed least Bell's vireo and coastal California gnatcatcher are known from the natural area along the south side of Durfee Avenue and have some potential to occur as a transient across the

BSA but are not expected to nest within the BSA. Additionally, mature ornamental trees occurring within the BSA of all project components provide, potentially suitable nesting habitat for common bird species protected by the MBTA and CFGC. Indirect impacts to listed bird species and those protected by the MBTA and CFGC could occur during construction as a result of noise, vibrations, dust, and increased human presence, leading to species avoiding the area and for those nesting, a potential increase in nestling mortality due to nest abandonment or decreased feeding frequency. Such impacts would be considered significant; however, by implementing and adhering to standard construction BMP's and the avoidance and minimization measures outlined in Mitigation Measures BIO-1, BIO-2, and BIO-3 indirect impacts to special-status wildlife and nesting birds protected by the MBTA and CFGC would be less than significant.

Operation of the project components would occur within paved areas and ornamental landscaped areas generally surrounded by urban development. As a result, conditions would not significantly change from those currently present and significant direct and indirect impacts to special-status species and their habitats are not expected during operation and routine maintenance of the project.

Conclusion: Direct impacts to special-status species and their habitats would not occur. Indirect impacts to special-status species potentially occurring in habitats along the south side of Durfee Avenue would be less than significant upon implementation and adherence to standard construction BMPs and the avoidance and minimization measures outlined in Mitigation Measures BIO-1, BIO-2, and BIO-3.

Mitigation Measures:

**BIO-1:** The following measures shall be implemented during construction of the Blend Water Supply Pipeline to avoid and minimize impacts to sensitive habitats and special-status species:

1. The construction contractor(s) shall be informed regarding the biological resources occurring in the natural area along the south side of Durfee Avenue prior to the start of construction. The existing fence line separating the Durfee Avenue ROW from habitats in the natural area along the south side of Durfee Avenue shall be clearly marked on project maps provided to the construction contractor(s) and the natural area shall be designated as a "no construction" zone. A construction manager shall be present during all construction activities to ensure that work is limited to the Durfee Avenue ROW and does not intrude beyond the fence line in to the natural area.

2. During construction of the Blend Water Supply Pipeline, workers shall strictly limit their activities, vehicles, equipment, and construction materials to the designated construction limits, staging areas, and routes between the construction limits and staging areas, and remain outside the fence line separating the natural area from the Durfee Avenue ROW.

3. During construction, all equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities shall occur in designated areas outside of the natural area along the south side of Durfee Avenue. These designated areas shall be located in previously compacted and disturbed areas, as identified by a qualified biologist, in such a manner to prevent any runoff from entering protected wetlands or waters occurring off the south side of Durfee Avenue and shall be shown on the construction plans. Fueling of equipment shall take place on level surfaces greater than 100 feet from the natural area be identified on the construction staging plan. Contractor equipment shall be checked daily for leaks prior to operation and repaired as necessary.

4. During construction, the construction work zone shall be kept as clean of debris as possible to avoid attracting predators of sensitive wildlife. All food-related trash items shall be enclosed in sealed containers and removed daily from the construction work zone.

5. In order to avoid unnecessary impacts, should any non-listed wildlife species be found within the property, a qualified biologist shall relocate them outside of the project site or they shall be avoided and allowed to leave the project site of their own volition.

6. Pets of project personnel shall not be allowed on the project site during construction.

7. Disposal or temporary placement of excess fill, brush, or other debris shall be strictly prohibited in the natural area along the south side of Durfee Avenue construction. Stockpile areas shall be

designated by a qualified biologist prior to the start of construction and shall be located in disturbed areas presently lacking native vegetation and delineated on project plans.

**BIO-2:** A qualified biologist shall monitor construction during initial excavation and trenching activities associated with the Blend Water Supply Pipeline, as needed. The biological monitor shall ensure that construction workers stay within the designated footprint of the construction work zone (i.e. the Durfee Avenue ROW) to avoid trespass on foot or in vehicles into sensitive habitats along the south side of Durfee Avenue.

**BIO-3:** Should construction of any of the project components coincide with the nesting bird season (generally February 15 through September 15), the following measures shall be employed:

1. A pre-construction nesting survey shall be conducted by a qualified biologist within 3 days prior to the start of construction of the activities to determine whether active nests are present within or directly adjacent to the construction zone. All nests found shall be recorded.

2. If construction activities must occur within 300 feet of an active nest of any passerine bird or within 500 feet of an active nest of any raptor, with the exception of an emergency, a qualified biologist shall monitor the nest on a weekly basis and the construction activity shall be postponed until the biologist determines that the nest is no longer active.

3. If the recommended nest avoidance zone is not feasible, the qualified biologist shall determine whether an exception is possible and obtain concurrence from the appropriate resource agency before construction work can resume within the avoidance buffer zone. All work shall cease within the avoidance buffer zone until either agency concurrence is obtained or the biologist determines that the adults and young are no longer reliant on the nest site.

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

Impact Analysis: Trenching and excavation for each project component would occur within the paved WNOU site and Durfee Avenue ROW, and would also occur at the Plant B28 Booster Station site directly adjacent to mature trees and landscaping. As described above, these areas do not contain any riparian habitat or other sensitive natural communities and as a result, direct impacts to any riparian or other sensitive natural community would not occur. However, riparian habitat occurs within the BSA of the Blend Water Supply Pipeline, along the south side of Durfee Avenue, and as a result, indirect impacts from dust, stormwater runoff, and through the potential spread of noxious and invasive plant species into these communities during construction could occur. Such impacts would be considered significant; however, by implementing and adhering to standard construction BMPs and the avoidance and minimization measures outlined in Mitigation Measures BIO-1 and BIO-2, indirect impacts to riparian habitat occurring with the BSA of the Blend Water Supply Pipeline, along the south side of Durfee Avenue, would be less than significant.

Operation of the project components would occur within paved areas and ornamental landscaped areas generally surrounded by urban development. As a result, conditions would not significantly change from those currently present and significant direct and indirect impacts to riparian habitat along the south side of Durfee Avenue are not expected during operation and routine maintenance of the proposed project.

Conclusion: Direct impacts to riparian habitats would not occur. Indirect impacts to riparian habitat occurring along the south side of Durfee Avenue would be less than significant by implementing and adhering to standard construction BMP's and the avoidance and minimization measures outlined in Mitigation Measures BIO-1 and BIO-2.

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?

Impact Analysis: Trenching and excavation for each project component would occur within the paved WNOU site and Durfee Avenue ROW, and would also occur at the Plant B28 Booster Station site directly adjacent to mature trees and landscaping. As described above, these areas do not contain any state or federally protected wetlands and as a result, direct impacts to such features would not occur. Results of the NWI review; however, indicate the presence of such features coinciding with the BSA of the Blend Water Supply Pipeline, off the south side of Durfee Avenue. As a result, indirect impacts to protected wetlands occurring in the BSA could occur from dust, stormwater runoff, and through the potential spread of noxious and invasive plant species into these communities during construction. Such impacts

would be considered significant; however, by implementing and adhering to standard construction BMP's and the avoidance and minimization measures outlined in Mitigation Measures BIO-1 and BIO-2, indirect impacts to protected wetlands occurring off the south side of Durfee Avenue would be less than significant.

Operation of the project components would occur within paved areas and ornamental landscaped areas generally surrounded by urban development. As a result, conditions would not significantly change from those currently present and significant direct and indirect impacts to protected wetlands occurring along the south side of Durfee Avenue would not occur during operation and routine maintenance of the proposed project.

Conclusion: Direct impacts to protected wetlands would not occur. Indirect impacts to protected wetlands occurring off the south side of Durfee Avenue would be less than significant by implementing and adhering to standard construction BMP's and the avoidance and minimization measures outlined in Mitigation Measures BIO-1 and BIO-2.

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?

Impact Analysis: Trenching and excavation for each project component would occur within the paved WNOU site and Durfee Avenue ROW, and would also occur at the Plant B28 Booster Station site directly adjacent to mature trees and landscaping. As described above, these areas do not contain habitats that support 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 a native wildlife nursery site. However, riparian habitat in the natural area along the south side of Durfee Avenue provides habitat that supports wildlife movement between the Puente Hills in Los Angeles County and Chino Hills in Orange and Riverside Counties south and west of the proposed project. As a result, indirect impacts to wildlife movement and habitats in the natural area that support wildlife movement could occur from dust, noise, vibrations, increased human presence, stormwater runoff, and through the potential spread of noxious and invasive plant species into these habitats during construction. Such impacts would be temporary in nature and restricted to the construction time period, but would be considered significant. However, by implementing and adhering to standard construction BMP's and the avoidance and minimization measures outlined in Mitigation Measures BIO-1, BIO-2, and BIO-3, indirect impacts to wildlife movement, a wildlife movement corridor, or a native wildlife nursery site potentially occurring along the south side of Durfee Avenue would be reduced.

Operation of the project components would occur within paved areas and ornamental landscaped areas generally surrounded by urban development. As a result, conditions would not significantly change from those currently present and significant direct and indirect impacts to wildlife movement, a wildlife movement corridor, or native wildlife nursery site would not occur during operation and routine maintenance of the proposed project.

Conclusion: Direct impacts to wildlife movement, a wildlife movement corridor, or native wildlife nursery site would not occur. Indirect impacts to wildlife movement, a wildlife movement corridor, or a native wildlife nursery would be less than significant by implementing and adhering to standard construction BMP's and the avoidance and minimization measures outlined in Mitigation Measures BIO-1, BIO-2, and BIO-3.

e. Conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact Analysis: Trenching and excavation for each project component would occur within the paved WNOU site and Durfee Avenue ROW, and would also occur at the Plant B28 Booster Station site directly adjacent to mature trees and landscaping. As described above occasional coast live oak trees occur within the BSA of the Blend Water Supply Pipeline along the south side of Durfee Avenue. Additionally, two small ornamental oak trees occur adjacent to the footprint of the Plant B28 Booster Station. No vegetation would be removed or trimmed during trenching within the Durfee Avenue ROW and the two ornamental oaks located adjacent to the proposed booster station site do not meet the size requirements for trees protected under the ordinance. As a result, no impacts to oak trees protected under county ordinance would occur. Should it be determined that a protected oak would be impacted, the proposed project would adhere to the terms and conditions specified in the county oak tree ordinance.

Operation of the project components would occur within paved areas and ornamental landscaped areas generally surrounded by urban development. As a result, conditions would not significantly change from those currently present and significant direct and indirect impacts to oak trees protected under county ordinance occurring along the south side of Durfee Avenue would not occur during operation and routine maintenance of the proposed project.

Conclusion: No direct or indirect impacts to oak trees protected under county ordinance would occur.

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?

Impact Analysis: As previously described, the project components do not occur within the boundary of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan. Additionally, project components do not occur within any Los Angeles County SEA. The natural area along the south side of Durfee Avenue occurs within the Puente Hills SEA; however, project implementation would occur within the Durfee Avenue ROW, outside the boundary of the Puente Hills SEA. As a result, the proposed project is not anticipated to conflict with the provisions of an HCP, NCCP, or any other such plans.

Conclusion: No conflicts with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan would occur. No Impact would occur.

*REFERENCES:*


1 Species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (Title 50 Code of Federal Regulations [CFR] 17.12 [listed plants], Title 50 CFR 17.11 [listed animals] and includes notices in the Federal Register for proposed species).

2 Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (Title 14 California Code of Regulations 670.5).

3 Plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code Section 1900 *et seq*.).

4 Whittier Narrows Nature Center. 2019. Our History. Available at: http://www.wnnca.org/history/. Accessed December 19, 2019.

5 Whittier Narrows Nature Center. 2019. Plants & Wildlife. Available at: http://www.wnnca.org/plants_animals/. Accessed December 19, 2019.

6 U.S. Fish and Wildlife Service. 2006. *Least Bell's Vireo 5-Year Review Summary and Evaluation.* Carlsbad Fish and Wildlife Service Office, Carlsbad, California. September.

7 Gaines, D. and S.A. Laymon. 1984. *Review of the status of the Yellow-billed Cuckoo in California: Sacramento Valley populations.* Condor 76: 204-209.

8 Ginnell, J. and A.H. Miller. 1944. *The distribution of the birds of California.* Pacific Coast Avifauna 27.

9 Rathbun, G.B., N. Seipel, and D. Holland. 1992. *Nesting behavior and movements of western pond turtles. Clemmys marmorata.* Southwestern Naturalist 37 (3): 319-324.

10 U.S. Fish and Wildlife Service. 2019. Critical Habitat for Threatened & Endangered Species. Available at: https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77. Accessed December 20, 2019.

11 U.S. Fish and Wildlife Service (USFWS). 2019. National Wetlands Inventory, Surface Waters and Wetlands. Available at: https://www.fws.gov/wetlands/data/mapper.html. Accessed December 19, 2019.

12 California Department of Fish and Wildlife (CDFW). 2019. NCCP Plan Summaries. April. Available at: https://www.wildlife.ca.gov/Conservation/Planning/NCCP/Plans. Accessed December 17, 2019.

13 Los Angeles Department of Regional Planning (LADRP). 2019. Significant Ecological Areas Program. Maps. Available at http://planning.lacounty.gov/site/sea/maps/. Accessed December 17, 2019.

14 Los Angeles Department of Regional Planning (LADRP). Significant Ecological Areas. Puente Hills SEA. Available at: http://planning.lacounty.gov/sea/regional_habitat_linkages_and_wildlife_corridors/. Accessed December 19, 2019.

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| 5. CULTURAL RESOURCES | | | | |
|---|---|---|---|---|
| **Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5? | ☐ | ☐ | ☐ | ☒ |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | ☐ | ☐ | ☒ | ☐ |
| c) Disturb any human remains, including those interred outside of dedicated cemeteries? | ☐ | ☐ | ☒ | ☐ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

Cultural resources in California are protected by a number of federal, state, and local regulations, statutes, and ordinances. Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. State and federal laws use different terms for cultural resources. California state law discusses significant cultural resources as “historical resources,” whereas federal law uses the terms “historic properties” and “historic resources.” In all instances where the term “resource” or “resources” is used, it is intended to convey the sense of both state and federal law.

California Register of Historical Resources

The California Register was created to identify resources deemed worthy of preservation on a state level and was modeled closely after the National Register of Historic Places. Resources listed on the National Register are automatically listed on the California Register. The criteria for eligibility for listing in the California Register are based on National Register criteria but are identified as 1 through 4 instead of A through D. To be eligible for listing in the California Register, a property must be at least 50 years of age and possess significance at the local, state, or national level, under one or more of the following four criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important in the prehistory or history of the local area, California, or the nation.

In addition to meeting one or more of the above criteria, historic resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be able to convey the reasons for their significance. Such integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

**ENVIRONMENTAL SETTING (BASELINE):**

The project area was controlled by Mission San Gabriel up until the 1830s. In 1841, a group of settlers came to California by way of New Mexico under the leadership of John A. Rowland and William Workman. Rowland and Workman petitioned Governor Juan Bautista Alvarado to grant them Ranch La Puente, which had been one of Mission San Gabriel’s important ranchos. In 1845, Pico granted them the land. The Booster Station parcel is located on the former Rancho La Puente.[1] Similarly, in 1845, Pio Pico granted the land that includes the Durfee Avenue alignment to the merchant Henry Dalton as part of the Rancho San Francisquito.[2] Native Americans continued to reside on and work the ranchos, forming the majority of their labor force in the middle nineteenth century.[3]

The discovery of gold in northern California led to an enormous influx of American citizens in the 1850s and 1860s, and these settlers rapidly displaced the old rancho families. Expansion of the Southern Pacific Railroad from San Francisco to Los Angeles in 1876, caused the population of Los Angeles to nearly doubled between 1870 and 1880. Low train fares

in 1886 resulted in more settlers heading west and the demand for real estate skyrocketed. The city's population rose from 11,000 in 1880 to 50,000 by 1890.[4]

The beginning of the twentieth century saw the florescence of a uniquely suburban metropolis, where a vast network of residential communities overshadowed city centers, where the single-family home was valued over the high-rise, and where private space took precedence over public space.[5] This landscape demanded an innovative transportation solution, and Los Angeles embraced automobiles and freeways like no other city had. Dozens of freeways were constructed in the post-World War II years, radically altering the character of Los Angeles by simultaneously dividing local neighborhoods and connecting outlying communities.

A detailed discussion of the prehistoric and historic overview related to the project area is located in Appendix C.

Previously Recorded Cultural Resources

The South Central Coastal Information Center (SCCIC) records search identified 30 previously recorded cultural resources mapped within 0.5 mile of the proposed project area. Five of the resources are archaeological sites ranging from ceramic scatters to foundations, one is a railroad, seven are transmission lines or towers, and 17 are buildings or building complexes. None of the resources enter into the proposed project area or footprint itself.

California Historical Landmarks

California Historical Landmarks are buildings, structures, sites, or places that have been determined to have statewide historical interest. A search of the California Historical Landmarks list revealed no California Historic Landmarks within 0.5 mile of the proposed project area.

Archaeological Survey

A reconnaissance-level archaeological field survey was conducted on December 6, 2019. The majority of the proposed project area is paved, built over, or otherwise obscured. No archaeological or historical resources meeting the age criterion of 45 years or more were identified at the proposed project site.

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

An impact is considered significant if the project would:

- Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5; and/or
- Disturb any human remains, including those interred outside of dedicated cemeteries;

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

A Paleontological, Historical, and Archaeological Resources Technical Memorandum (Appendix C) was prepared for the proposed project by AECOM in December 2019. The screening was conducted to identify known cultural resources in the proposed project area, provide context for the evaluation of cultural resources within this area that are 45 years or older, and inform interpretations regarding the potential to encounter previously unidentified cultural resources in the course of ground-disturbing work associated with the proposed project.

An archival search was conducted and included a records search at the South Central Coastal Information Center (SCCIC), inventories of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California State Historic Resources Inventory (HRI), and California Historical Landmarks and Points of Interest were also reviewed to identify cultural resources within a 0.5-mile radius of the project area. Supplemental research in published and unpublished sources was also conducted to provide prehistoric and historic contexts for the project area.

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

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

Impact Analysis: No historical built resources were identified in the study area that would be eligible for the National Register of Historic Places, the California Register of Historical Resources, California Historical

Landmarks, or local listing (Section 15064.5(a), State CEQA Guidelines). Because no historical resources were identified in the proposed project area, there would be no construction or operational impacts on historical resources resulting from the implementation of the proposed project.

Conclusion: No impact.

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

Impact Analysis: Thirty previously recorded cultural resources were mapped within a 0.5-mile radius of the project site; however, no archaeological resources have been recorded within the project site.

In addition, the sensitivity of the proposed project to encounter archaeological resources appears low. Excavations for the proposed project are limited to 5 feet within the existing roadway, and 10 feet at the Plant B28 Booster Station location. Most excavations for the proposed project will take place within Durfee Avenue, which has been a major thoroughfare since at least the early twentieth century.

Based on the results of the archival research and survey, there is low potential that paleontological or archaeological resources will be encountered during ground-disturbing activities for the proposed project. If archaeological resources are encountered during ground-disturbing activities, work will temporarily be halted in the vicinity of the find and a qualified archaeologist or paleontologist would be contacted to evaluate and determine appropriate treatment for the resource in accordance with California Public Resource Code (PRC) Section 21083.2(i).

Conclusion: Less than significant impact.

c. Disturb any human remains, including those interred outside of dedicated cemeteries?

Impact Analysis: No known human remains are present on the project site or in the immediate vicinity. However, ground disturbance related to development projects have, in the past, resulted in the inadvertent discovery of previously unrecorded human remains. Although not anticipated, if human remains are identified during construction activities, work will temporarily be halted in the vicinity of the find and a qualified archaeologist or paleontologist would be contacted to evaluate and determine appropriate treatment for the resource in accordance with California Public Resource Code (PRC) Section 21083.2(i). As such, impacts on human remains would be considered less than significant.

Conclusion: Less than significant impact.

*REFERENCES:*

1 Spitzzeri, Paul R. 2007. The Workman & Temple Families of Southern California, 1830-1930. Dallas: Seligson Publishing, Inc.
2 Robinson, W.W. 1948. Land in California. Berkeley: University of California Press.
3 Phillips, George Harwood. 2010. Vineyards and Vaqueros: Indian Labor and the Economic Expansion of Southern California, 1771-1877. Norman, OK: Arthur H. Clark Co.
4 Meyer, L. 1981. Los Angeles, 1781–1981. A special bicentennial issue of California history, Spring 1981. California Historical Society, Los Angeles.
5 Hawthorne, Christopher. 2006. Hooray for Sprawlywood. Los Angeles Times. 3 December:S6. Los Angeles.

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| 6. ENERGY | | | | |
|---|---|---|---|---|
| **Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | ☐ | ☐ | ☒ | ☐ |
| b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | ☐ | ☐ | ☒ | ☐ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

The regulatory background of energy plans, policies, regulations, and laws is presented below. Generally, these plans, policies, regulations, and laws do not directly apply to the proposed project but are presented to provide context to the regulatory setting.

**Energy Policy and Conservation Act of 1975.** The Energy Policy and Conservation Act of 1975 established the first fuel economy standards for on-road motor vehicles sold in the United States.

**National Energy Act of 1978.** The National Energy Act of 1978 includes the Public Utility Regulatory Policies Act (Public Law 95-617), Energy Tax Act (Public Law 95-318), National Energy Conservation Policy Act (Public Law 95-619), Power Plant and Industrial Fuel Use Act (Public Law 95-620), and Natural Gas Policy Act (Public Law 95-621). The intent of the National Energy Act was to promote greater use of renewable energy, provide residential consumers with energy conservation audits to encourage slower growth of electricity demand, and promote fuel efficiency.

**Energy Policy Acts of 1992 and 2005.** The Energy Policy Act of 1992 was enacted to reduce dependence on imported petroleum and improve air quality by addressing all aspects of energy supply and demand, including alternative fuels, renewable energy, and energy efficiency. The Energy Policy Act of 2005 was enacted to set federal energy management requirements for energy-efficient product procurement, energy savings performance contracts, building performance standards, renewable energy requirements, and use of alternative fuels.

**Energy Independence and Security Act of 2007.** The Energy Independence and Security Act was enacted to increase the production of clean renewable fuels; increase the efficiency of products, buildings, and vehicles; improve the federal government's energy performance; and increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy.

**Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance (Title 3, Section 13514 of the Code of Federal Regulations).** The executive order set sustainability goals for federal agencies and focuses on improving their environmental, energy, and economic performance. The executive order required agencies to meet a number of energy, water, and waste reduction targets.

**Renewable Fuel Standard Program.** Created by the Energy Policy Act of 2005, which amended the Clean Air Act, the Renewable Fuel Standard Program established requirements to replace certain volumes of petroleum-based fuels with renewable fuels. The 2007 Energy Independence and Security Act expanded the program and its requirements to include long-term goals of using 36 billion gallons of renewable fuels and extending annual renewable-fuel volume requirements to year 2022.

**Senate Bills 1078 and 107, Executive Orders S-14-08 and S-21-09, and Senate Bill 100.** Senate Bill (SB) 1078 (Chapter 516, Statutes of 2002) required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. Executive Order S-14-08 expanded the state's Renewables Portfolio Standard (RPS) to 33 percent renewable power by 2020. Executive Order S-21-09 directs the CARB, under its AB 32 authority, to enact regulations to help the state meet its RPS goal of 33 percent renewable energy by 2020. This was followed by SB 100 in 2018, which further increased the RPS to 60 percent by 2030 and added the requirement that all state's electricity come from carbon-free resources by 2045.

**California Green Building Standards Code.** In January 2010, the State of California adopted the California Green Building Standards Code (CALGreen), which establishes mandatory green building standards for all buildings in California. These standards include a set of minimum requirements and more rigorous voluntary measures for new construction projects to achieve specific green building performance levels. This code went into effect as part of local jurisdictions' building codes on January 1, 2011. The latest standards, 2019 CalGreen, becomes effective January 1, 2020.

There are no specific regulations or policies that relate to construction energy consumption or efficiency other than construction waste recycling policies and regulations that are related to the State's Climate Change Scoping Plan that may indirectly reduce energy consumption related to the proposed project's fuel or materials use. Compliance and conformance with these waste recycling regulations and policies is discussed in Section 8, Greenhouse Gas Emissions.

**ENVIRONMENTAL SETTING (BASELINE):**

Electrical power at the existing WNOU site is provided by Southern California Edison (SCE). A central electrical power facility distributes electricity from the SCE power grid to the groundwater treatment plant through below ground transmission facilities. The existing plant annual usage is 578,800 kWh.[1]

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

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

   Impact Analysis: Energy efficiency is a possible indicator of environmental impacts. The actual adverse physical environmental effects of energy use and the efficiency of energy use are detailed throughout this Initial Study in the environmental topic–specific sections. For example, the use of energy for electricity consumption leads to greenhouse gas emissions, the impacts of which are addressed in Section 8, "Greenhouse Gas Emissions." There is no physical environmental effect associated with energy use that is not addressed in the environmental topic–specific sections of this Initial Study.

   Energy consumption during construction of the proposed project would involve energy used by construction equipment, haul trucks, and workers' commute vehicles. Construction of the proposed project would take approximately 12 months. Heavy-construction equipment, such as loaders, backhoes, forklifts, cranes, and heavy trucks, would primarily use diesel fuel, while work trucks (pickups) and personal vehicles used for commuting would primarily be gasoline-fueled. Based on the anticipated phasing of the proposed project, anticipated equipment and construction work staff, temporary nature of construction, and project type, the proposed project would not include unusual characteristics that would necessitate the use of construction equipment that is less energy-efficient than at comparable construction sites.

   In addition, construction contractors are required, in accordance with the CARB Airborne Toxic Control Measure for Diesel-Fueled Commercial Motor Vehicle Idling, to minimize idling time of construction equipment by shutting equipment off when not in use or reducing the time of idling to five minutes. The proposed project would also implement BMPs, including source reduction techniques and recycling measures and maintain a recycling program to divert waste in accordance with the Recycling of Construction and Demolition Debris Ordinance.[2] These required practices limit wasteful and unnecessary energy consumption. Therefore, it is expected that fuel consumption associated with construction of the proposed project would not be inefficient, wasteful, or unnecessary.

   As discussed previously, operation of the proposed project would primarily utilize existing infrastructure, in addition to the new Plant B28 Booster Station. It is anticipated that the new booster station would consist of four new booster pumps. Although the proposed project would increase the pumping rate of the existing groundwater wells and increase electricity demand, existing power supplies are considered adequate to serve the proposed project. Electricity distributed from the SCE power grid would power the booster pumps. Maintenance of the proposed pipeline and booster station is anticipated to remain similar to existing conditions. As such, operation of the proposed project would not be inefficient, wasteful, or unnecessary.

   Conclusion: Less than significant impact.

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

   Impact Analysis: The proposed project is not using land that was otherwise slated for renewable energy production and does not otherwise conflict with any state or local renewable energy plans. Therefore, this project's construction would not obstruct any state or local plans for renewable energy and would conform with state and local plans for energy efficiency. The proposed project will require the construction of new water pipeline to distribute the increase in water flow. However, the construction of new wastewater treatment, electric power, or natural gas, is not required as a result of the proposed project. In addition, the purpose of the proposed project is to contain groundwater

contamination within the Main San Gabriel Groundwater Basin, prevent further migration into the adjoining Los Angeles Central Groundwater Basin, and protect nearby municipal water supply wells, reducing the need for extensive water treatment and the associated energy consumption. Therefore, this project's operation and maintenance would not obstruct any state or local plans for renewable energy and or energy efficiency.

Conclusion: Less than significant.

*REFERENCES:*

1 USACE. 2013. Whittier Narrows Operable Unit Construction of Supplemental Facilities and Transition of WNOU Responsibility Environmental Assessment and FONSI. May 2013.

2 City of South El Monte. 1999. Recycling of Construction and Demolition Debris. Available at: https://library.municode.com/ca/south_el_monte/codes/code_of_ordinances?nodeId=TIT13PUSE_CH13.12SOWAHARESE_ARTXRECODEDE.

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| 7. GEOLOGY AND SOILS | | | | |
|---|---|---|---|---|
| **Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| 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. | ☐ | ☐ | ☒ | ☐ |
| ii) Strong seismic ground shaking? | ☐ | ☐ | ☒ | ☐ |
| iii) Seismic-related ground failure, including liquefaction? | ☐ | ☐ | ☒ | ☐ |
| iv) Landslides? | ☐ | ☐ | ☒ | ☐ |
| b) Result in substantial soil erosion or the loss of topsoil? | ☐ | ☐ | ☒ | ☐ |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | ☐ | ☐ | ☒ | ☐ |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property? | ☐ | ☐ | ☐ | ☒ |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | ☐ | ☐ | ☐ | ☒ |
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | ☐ | ☐ | ☐ | ☒ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

The following subsections discuss the various codes, regulations and policies applicable to geology and soils at the federal, state and local levels.

**National Earthquake Hazards Reduction Program Reauthorization Act of 2004:** The Earthquake Hazards Reduction Act {(Public Law 95-124, 42 U.S.C. 7701 et. seq.), as amended by Public Laws 101614, 105-47, 106-503, and 108-360.} was enacted in 1977 to "reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program." To accomplish this, the Act established the National Earthquake Hazards Reduction Program.

**Alquist-Priolo Earthquake Fault Zoning Act:** The Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621-2624, Division 2, Chapter 7.5) was enacted in 1972 to address the hazard of surface faulting to structures for human occupancy. The primary purpose of the Alquist-Priolo Earthquake Fault Zoning Act is to prevent the

construction of buildings intended for human occupancy on the surface traces of active faults. Local agencies must enforce the Alquist-Priolo Earthquake Fault Zoning Act in the development permit process, where applicable, and may be more restrictive than state law requires. A 50-foot building setback from any known trace of an active fault is required. The Alquist-Priolo Earthquake Fault Zoning Act and its regulations are presented in California Department of Conservation, California Geological Survey, Special Publications (SP) 42, Fault-rupture Hazard Zones in California.

**Seismic Hazards Mapping Act:** The Seismic Hazards Mapping Act of 1990 (Public Resources Code Section 2690-2699) addresses the effects of strong ground shaking, liquefaction, landslides, and other ground failures due to seismic events. Under the Seismic Hazards Mapping Act, the State Geologist is required to delineate "seismic hazard zones." Under Public Resources Code Section 2697, cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard.

**Title 24 California Building Standards Code:** The California Buildings Standards Commission is responsible for coordinating, managing, adopting, and approving building codes in California. On July 1, 2014, the 2013 California Building Standards Code (CBSC) became effective and updated all prior codes under California Code of Regulations (CCR) Title 24. The State of California provides minimum standards for building design through the 2013 California Building Code (CBC), a component of the 2013 CBSC. Chapters 16 through 18 of the 2013 CBC regulate structural design, structural tests and inspections, and soils and foundations. The CBC applies to building design and construction in the state and is based on the federal Uniform Building Code (UBC), which is used widely throughout the country (generally adopted on a state by state or district by district basis). The CBC, which has been modified for California conditions, contains numerous provisions that are more stringent than those in the UBC because of California's seismic and environmental conditions.

**Los Angeles County General Plan Update (2035):** The Los Angeles County General Plan Update (2035) Safety Element addresses hazards which must be considered in the physical development of the County, including seismic, geologic, erosion; flooding; hazardous materials; noise control; and emergency/disaster preparedness. Applicable goals and polices from the Safety Element are identified below:

- **Goal S1:** An effective regulatory system that prevents or minimizes personal injury, loss of life and property damage due to seismic and geotechnical hazards.
  - Policy S1.1: Discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones.
  - Policy S1.2: Prohibit the construction of most structures for human occupancy adjacent to active faults until a comprehensive fault study that addresses the potential for fault rupture has been completed.
  - Policy S1.3: Require developments to mitigate geotechnical hazards, such as soil instability and landsliding, in Hillside Management Areas through siting and development standards.
  - Policy S1.4: Support the retrofitting of unreinforced masonry structures to help reduce the risk of structural and human loss due to seismic hazards.

- **Goal S2:** An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to flood and inundation hazards.
  - Policy S2.1: Discourage development in the County's Flood Hazard Zones.
  - Policy S2.2: Discourage development from locating downslope from aqueducts.
  - Policy S2.3: Consider climate change adaptation strategies in flood and inundation hazard planning.
  - Policy S2.4: Ensure that developments located within the County's Flood Hazard Zones are sited and designed to avoid isolation from essential services and facilities in the event of flooding.
  - Policy S2.7: Locate essential public facilities, such as hospitals and fire stations, outside of Flood Hazard Zones, where feasible.

**ENVIRONMENTAL SETTING (BASELINE):**[1]

The San Gabriel Basin is located in eastern Los Angeles County, California and covers about 255 square miles. The basin is bounded on the north by the San Gabriel Mountains, on the southeast by the San Jose and Puente Hills, and on the west by the Montebello, Merced, and Repetto Hills. The basin slopes from north to south at approximately 35 to 65 feet per mile, and from northeast to southwest at a similar gradient. Valley floor elevations range from about 200 feet amsl at the Whittier Narrows Dam to about 900 feet amsl at the base of the San Gabriel Mountains. Topography in the northern areas near the mountains is typical of alluvial fans, and in the southern area (near Whittier Narrows) is dominated by the San Gabriel River system.

The San Gabriel Basin is a Pliocene and Pleistocene structural basin created by regional compressional geological forces that uplifted the San Gabriel Mountains and folded the rocks in the adjacent hills. The basin filled with alluvium during the Pleistocene, when a much wetter and cooler climate prevailed. The basin contains alluvium and assorted deposits of Recent

and Pleistocene age and is underlain by crystalline basement rocks. Young and Old Alluvium (Holocene, Pleistocene) occurs in the Whittier Narrows area to depths of 400 feet below ground surface (bgs) to more than 800 feet bgs. Alluvium is primarily unconsolidated gravel, sand, and silt deposited by streams and alluvial fans. The stratigraphy within the proposed project areas is generally flat lying. Several active faults are present in the vicinity of the proposed project, including the East Montebello fault, the Whittier fault, the Walnut Creek fault, and the Raymond fault.[2]

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

Based on the existing conditions discussed above, effects related to geology and soils would be considered adverse if the proposed project would result in any of the following:

- Effects on a geologic unit or soil unit from construction or O&M
- Effects on soil erosion and loss of topsoil from construction or O&M
- Risks to life and property from construction or O&M on expansive soil

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

No environmental studies were performed for this resource. Readily available information was reviewed for this assessment.

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

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.
ii) Strong seismic ground shaking?
iii) Seismic-related ground failure, including liquefaction?
iv) Landslides?

<u>Impact Analysis:</u> The proposed project will not expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death. The proposed construction activities would take 10 to 12 months to complete. On-going operations do not require continuous occupancy.

The proposed project is located in a seismically active region. There are several active and potentially active faults that could affect the project site, including the San Andreas, San Gabriel, Newport-Inglewood, Palos Verdes, Whittier, Santa Monica, Sierra Madre, Puente Hills Blind Thrust, Raymond Hill, Workman Hill, and the Clamshell-Sawpit Canyon faults.[3] The nearest active fault considered capable of producing strong ground shaking is the East Montebello fault mapped approximately one-mile northwest of the WNOU Blended Water Pipeline alignment and approximately 4.5 miles south west of the Plant B28 Booster Station. [4] No active faults are known to transect the site and the site is not located within an Alquist-Priolo Fault Zone. [4] Therefore, the possibility of primary surface rupture or deformation at the site is considered low.

The proposed project is located within the El Monte Liquefaction Zone.[5] Historically, the highest depth to groundwater in the WNOU Blended Water Pipeline alignment was at the surface and at the Plant B28 Booster Station the highest depth to groundwater was recorded at approximately 10 feet below ground surface. The proposed project is underlain by alluvial fan deposits, therefore, there is the potential for liquefaction to occur at the proposed project. [6] A previous study conducted at the WNOU site identified isolated layers of sandy soils that would be expected to liquefy during a strong seismic event; however, the maximum seismically induced settlement was estimated to be approximately 1.8 inches. [6] Lateral spreading was not expected to be a concern at the WNOU site because of the discontinuous nature of the sandy soils. Landslides are not a concern for the proposed project sites because topography at the sites and the surrounding areas are relatively flat.

Water pipelines at the proposed project site could potentially break as a result of rupture along one of the faults within the region. However, the proposed project pipelines will only contain water and flow could be turned off quickly in the event of a rupture, therefore, no adverse effects would occur. Seismicity could impact the treatment plant during a large seismic event. If this occurs, monitoring, maintenance, and repair of facilities would be performed. Impacts from seismicity to the treatment plant would result in no adverse effects.

<u>Conclusion:</u> Less than significant impact.

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

Impact Analysis: In accordance with California's General Industrial Stormwater Permit for Construction Sites under USEPA's National Pollutant Discharge Elimination System (NPDES) program, during construction activities the potential for surface erosion from wind and water will be managed through best management practices (BMPs), which are expected to minimize impacts from water and wind erosion of soils. Examples of measures to control erosion and the loss of topsoil are minimizing the extent of disturbed areas and duration of exposure, retaining sediment within the construction area and construction of erosion control. Therefore, impacts related to erosion and topsoil loss are expected to be less than significant.

The WNOU site and pipeline alignment sites are predominantly paved and thus would not have substantial soil erosion or loss of topsoil in association with operations. The Plant B28 Booster Station will be paved once completed thus would not have substantial soil erosion or loss of topsoil in association with operations.

Conclusion: Less than significant impact.

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?

Impact Analysis: As discussed under the Environmental Setting for Geology and Soils, the proposed project is not located on a geologic unit or soil that is unstable and would not cause the geologic unit or soil to become unstable. However, the potential for liquefaction exists at the proposed project sites. The proposed project would not result in a landslide, lateral spreading, subsidence, or collapse. Impacts from liquefaction could rupture proposed project pipelines causing the release and flow of water. However, the source of water could be turned off quickly in the event of a rupture, therefore, no adverse effects would occur.

Conclusion: Less than significant impact

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?

Impact Analysis: Soils a the WNOU plant consist of predominantly non-plastic fine- to coarse-grained gravelly silty sand.[6] These soils are considered to have a very low to low expansive potential. The Plant B28 Booster Station is located on similar geologic units (alluvium); therefore, soils are expected to have similar characteristics as those at the WNOU site. No special design is required to mitigate the potential expansive characteristics of the soil. Native onsite soils are considered suitable for backfilling excavations and trenches in the vicinity of the proposed structures and pipelines.[6]

Conclusion: No impact.

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

Impact Analysis: No septic tanks or alternative wastewater disposal systems are proposed for the proposed project.

Conclusion: No impact.

f. Directly or indirectly destroy a unique paleontological resources or site unique geologic feature?

Impact Analysis: No unique geologic feature exists at the proposed project sites. The sandy soils at the proposed project sites are not conducive to fossil preservation, therefore, the potential for the presence of paleontological resources to be present at the proposed project sites is unlikely.

Conclusion: No impact.

*REFERENCES:*


1 *2013. Department of Toxic Substances Control, California Environmental Quality Act, Initial Study, Groundwater Treatment Plant Modifications, Whittier Narrows Operable Unit (WNOU), San Gabriel Valley Area 1 Superfund Site.*

2 *2014. California Department of Conservation California Geological Survey. Preliminary Geologic Map of the Los Angeles 30' x 60' Quadrangle, California, Version 2.1, Scale 1:100,000.*

3 *2011. City of El Monte. General Plan, June. Accessed at:* https://www.ci.el-monte.ca.us/DocumentCenter/View/565/General-Plan-2011-PDF?bidId= on December 6, 2019.

4 *2010. California Department of Conservation, California Geological Survey. Fault Activity Map of California. Accessed at:* http://maps.conservation.ca.gov/cgs/fam/ on December 5, 2019.

5 *2019. California Department of Conservation California Geological Survey. Earthquake Zones of Required Investigation. Access at:* https://maps.conservation.ca.gov/cgs/EQZApp/app/ on December 5, 2019.
6 *2012. CH2MHill. Final Performance Evaluation Plan, Whittier Narrows Operable Unit, San Gabriel Valley Superfund Sites, June.*

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| 8. GREENHOUSE GAS EMISSIONS | | | | |
|---|---|---|---|---|
| **Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | ☐ | ☐ | ☒ | ☐ |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | ☐ | ☐ | ☒ | ☐ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

The USEPA is the federal agency responsible for implementing the federal CAA. The Supreme Court of the United States ruled on April 2, 2007, that USEPA must consider regulation of motor vehicle emissions, and that the USEPA had the authority to regulate greenhouse gas (GHG) emissions. In California, CARB is the agency responsible for coordination and oversight of state and local air pollution control programs regulating GHG emissions and for implementing the California CAA.

**Assembly Bill 1493.** AB 1493, signed in July 2002, requires CARB to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with model year 2009. In June 2009, the USEPA Administrator granted a CAA waiver of preemption to California. This waiver allowed California to implement its own GHG emissions standards for motor vehicles beginning with model year 2009. California agencies worked with federal agencies to conduct joint rulemaking to reduce GHG emissions for passenger car model years 2017 through 2025. On September 19, 2019, the USEPA issued a press release announcing the formal waiver revocation. In response, California and 23 other states and the cities of Los Angeles and New York in filed a lawsuit against the National Highway Traffic Safety Administration.[1]

**Executive Order S-3-05.** Executive Order S-3-05, signed in June 2005, proclaimed that California is vulnerable to the impacts of climate change. Executive Order S-3-05 declared that increased temperatures could reduce the Sierra Nevada's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the executive order established total GHG emissions targets. Specifically, emissions were to be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below the 1990 levels by 2050. The statewide GHG emissions in 2000 were approximately 466 MMT CO2e.[2] In 2010, overall statewide GHG emissions were approximately 453 MMT CO2e, exceeding the 2010 goal established by Executive Order S-3-05. [2] California is currently on track to decrease emissions below the 2020 climate target.[3]

**Assembly Bill 32.** In 2006, California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500, et seq.). AB 32 further details and puts into law the mid-term GHG reduction target established in Executive Order S-3-05: reduce GHG emissions to 1990 levels by 2020. AB 32 also identifies CARB as the state agency responsible for the design and implementation of emissions limits, regulations, and other measures to meet the target. AB 32 also established several programs to achieve GHG emission reductions, including the Low Carbon Fuel Standard and the Cap-and-Trade program. As of 2017, the state has reduced emissions below the revised AB 32 limit of 427 MMT CO2e.

**Senate Bill 32.** In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, and both were signed by Governor Brown (Office of Governor Edmund G. Brown Jr., 2016). SB 32 establishes a new climate pollution reduction target of 40 percent below 1990 levels by 2030.

**ARB Climate Change Scoping Plans.** In December 2008, CARB adopted its Climate Change Scoping Plan. A Framework for Change (Scoping Plan), which contains the main strategies California will implement to achieve the required GHG reductions required by AB 32.[4] The Scoping Plan also includes CARB recommended GHG reductions for each emissions sector of California's GHG inventory.

CARB is required to update the Scoping Plan at least once every 5 years to evaluate progress and develop future inventories that may guide this process. CARB approved First Update to the Climate Change Scoping Plan: Building on the Framework

in June 2014.[10] The Scoping Plan update includes a status of the 2008 Scoping Plan measures and other federal, state, and local efforts to reduce GHG emissions in California, and potential actions to further reduce GHG emissions by 2020.

In November 2017, CARB released the 2017 Climate Change Scoping Plan, which establishes a framework of action for California to reduce statewide emissions by 40 percent by 2030, compared to 1990 levels.[3] The 2017 Scoping Plan builds upon the framework established by the 2008 Scoping Plan and the 2014 Scoping Plan Update, while also identifying new, technologically feasible and cost-effective strategies to ensure that California meets its GHG reduction targets.

**Executive Order S-1-07.** Executive Order S-1-07, which was signed by then California governor Arnold Schwarzenegger in 2007, proclaims that the transportation sector is the main source of GHG emissions in California, at more than 40 percent of statewide emissions. Executive Order S-1-07 establishes a goal that the carbon intensity of transportation fuels sold in California should be reduced by a minimum of 10 percent by 2020. CARB adopted the low carbon fuel standard (LCFS) on April 23, 2009. In November 2015, the Office of Administrative Law approved re-adoption of the LCFS.

**Executive Order B-30-15.** In April 2015, Governor Edmund Brown issued an executive order establishing a statewide GHG reduction goal of 40 percent below 1990 levels by 2030. The emission reduction target acts as an interim goal between the AB 32 goal (i.e., achieve 1990 emission levels by 2020) and Governor Brown's Executive Order S-3-05 goal of reducing statewide emissions 80 percent below 1990 levels by 2050. In addition, the executive order aligns California's 2030 GHG reduction goal with the European Union's reduction target (i.e., 40 percent below 1990 levels by 2030) that was adopted in October 2014.

**Senate Bill 350.** California's RPS was established in 2002 under SB 1078 and accelerated in 2006 under SB 107, by requiring that 20 percent of electricity retail sales be served by renewable energy sources by 2010. Subsequent recommendations in California energy policy reports advocated a goal of 33 percent by 2020, and on November 17, 2008, then governor Arnold Schwarzenegger signed Executive Order S-14-08 requiring retail sellers of electricity to serve 33 percent of their load with renewable energy by 2020. In April 2011, SB X1-2 codified Executive Order S-14-08, setting the new RPS targets at 20 percent by the end of 2013, 25 percent by the end of 2016, and 33 percent by the end of 2020 for all electricity retailers. In October 2015, Governor Edmund Brown signed SB 350, which extended the RPS target by requiring retail sellers to procure 50 percent of their electricity from renewable energy resources by 2030. This was followed by SB 100 in 2018, which further increased the RPS target to 60 percent by 2030, along with the requirement that all of the state's electricity come from carbon-free resources by 2045.

**Los Angeles County Community Climate Action Plan 2020.** The County of Los Angeles adopted a Climate Change Action Plan (CCAP) in August 2015.[5] The CCAP identifies emissions related to community activities, establishes a GHG reduction target consistent with AB 32 and provides a roadmap for successfully implementing GHG reduction measures selected by the County. The GHG reduction measures are grouped into five strategy areas: green building and energy; land use and transportation; water conservation and wastewater; waste reduction, reuse, and recycling; and land conservation and tree planting.

**ENVIRONMENTAL SETTING (BASELINE):**

GHG emissions play a critical role in determining the earth's surface temperature. A portion of the solar radiation that enters earth's atmosphere is absorbed by the earth's surface, and a smaller portion of this radiation is reflected back toward space. Infrared radiation (i.e., thermal heat) is absorbed by GHGs; as a result, infrared radiation released from the earth that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on Earth.

GHGs are present in the atmosphere naturally, are released by natural sources, and are formed from secondary reactions taking place in the atmosphere. The following are GHGs that are widely seen as the principal contributors to human-induced global climate change: carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride ($SF_6$).

Global warming potential (GWP) is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to $CO_2$. The GWP of a GHG is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time (i.e., lifetime) that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to $CO_2$, the most abundant GHG. GHGs with lower emissions rates than $CO_2$ may still contribute to climate change because they are more effective at absorbing outgoing infrared radiation than $CO_2$ (i.e., high GWP). The concept of $CO_2$-equivalents ($CO_2e$) is used to account for the different GWP potentials of GHGs to absorb infrared radiation.

CARB performs an annual GHG inventory for emissions and sinks of the six major GHGs. California produced 424.1 million metric tons (MMT) $CO_2e$ in 2017.[6] Combustion of fossil fuel in the transportation category was the single largest source of California's GHG emissions in 2017, accounting for 41 percent of total GHG emissions in the state. The

transportation category was followed by the industrial and electric power (including in-state and out-of-state sources) categories, which account for 24 and 15 percent of the state's total GHG emissions, respectively.[6]

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

The geographic scope of consideration for GHG emissions is on a global scale as such emissions contribute, on a cumulative basis, to global climate change. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies evaluate the cumulative impacts of GHGs, even relatively small additions, on a global basis. By their nature, GHG evaluations under CEQA are a cumulative study. (See *Center for Biological Diversity v. California Department of Fish and Wildlife* [2015] 62 Cal.4th 204.) According to Appendix G of the 2019 CEQA Guidelines, implementation of a project and its incremental contribution to global climate change would be considered significant if it would do either of the following:

- Impact GHG-1: generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or
- Impact GHG-2: conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

As stated in the CEQA Guidelines, these questions are "intended to encourage thoughtful assessment of impacts and do not necessarily represent thresholds of significance" (Title 14, Division 6, Chapter 3 Guidelines for Implementation of the CEQA, Appendix G, VII Greenhouse Gas Emissions). The CEQA Guidelines encourage but do not require lead agencies to adopt thresholds of significance (CEQA Guidelines, §15064.7). When developing these thresholds, and consistent with the December 2018 CEQA and Climate Change Advisory published by the California Office of Planning and Research,[7] the Guidelines allow lead agencies to develop their own significance threshold and/or to consider thresholds of significance adopted or recommended by other public agencies, or recommended by experts, provided that the thresholds are supported by substantial evidence. Individual lead agencies may also undertake a case-by-case approach for the use of significance thresholds for projects consistent with available guidance and current CEQA practice.[7]

As DTSC has not established screening thresholds for GHG emissions, the analysis uses the applicable significance thresholds developed by the SCAQMD. The SCAQMD has adopted a significance threshold of 10,000 MT of $CO_2e$ per year for industrial (stationary source) projects. The GHG CEQA Significance Threshold Stakeholder Working Group also recommended options for evaluating non-industrial projects, including thresholds for residential and commercial projects. These draft thresholds include a threshold 3,000 MT $CO_2e$ per year for residential and commercial projects.[8]

The SCAQMD recommends that construction emissions associated with a project be amortized over the life of the project (typically assumed to be 30 years). Therefore, this analysis includes a quantification of the total modeled construction-related GHG emissions. Those emissions are then amortized and evaluated over the life of the project (assumed to be 30 years). The proposed project type is closest to an industrial project (i.e., doesn't include residential and commercial land uses); therefore, this analysis compares the construction-related and operational emissions to the SCAQMD threshold of 10,000 MT $CO_2e$ per year. The 10,000 MT $CO_2e$ threshold was developed in 2008 and was intended to ensure at least 90 percent of new GHG emissions would be reviewed and assessed for mitigation, thereby contributing to GHG emissions reduction goals of AB 32. However, the proposed project would begin construction in 2020; thus, construction-related GHG emissions should also be analyzed in the SB 32 statewide framework (which established a 2030 GHG emissions reduction target of 40 percent below 1990 levels).

However, the SCAQMD has not adopted a threshold of significance consistent with SB 32 goals. To provide this additional information to put the project-generated GHG emissions in the appropriate statewide context, this analysis presumes that a 40 percent reduction in the SCAQMD's existing threshold (resulting in 6,000 MT $CO_2e$) is necessary to achieve the State's 2030 GHG reduction goal (which is a 40 percent reduction below 1990 GHG emissions levels). This analysis also reviewed guidelines used by other public agencies. For example, the Sacramento Metropolitan Air Quality Management District (SMAQMD) has identified an annual threshold of 1,100 MT $CO_2e$ for the construction phase of projects.[9] Although the SMAQMD recognizes that, although there is no known level of emissions that determines if a single project will substantially impact overall GHG emission levels in the atmosphere, a threshold must be set to trigger a review and assessment of the need to mitigate project GHG emissions. The threshold set by the SMAQMD was developed to allow lead agencies to assess the consistency of proposed projects with the AB 32 and SB 32 reduction goals. Therefore, this analysis utilizes the 1,100 MT $CO_2e$ threshold developed by SMAQMD for the construction phase of all project types for conservative purposes.

It is not the intent of this CEQA document to cause the adoption of these thresholds as mass emissions limits for this or other projects, but rather to provide this additional information to put the project-generated GHG emissions in the appropriate statewide context.

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

Construction-related and operational GHG emissions were estimated using the methodology discussed earlier under Section 3, Air Quality. The analysis also included indirect GHG emissions associated with energy consumption from the proposed four pumps at the Plant B28 Booster Station. The analysis assumed the pumps would be electric-powered and approximately 40 horsepower (hp) each.

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Heavy-duty off-road equipment, materials transport, and worker commutes during construction of the proposed project would result in exhaust-related GHG emissions. Construction of the proposed project would result in the generation of approximately 351 metric tons of $CO_2e$. Amortized over an assumed 30-year life of the project, annual construction emissions would be approximately 12 MT $CO_2e$ per year.

As described previously, the purpose of the proposed project is to increase the pumping rate of the existing groundwater extraction wells. As such, the proposed project is not anticipated to result in an increase in vehicle trips associated with operations or maintenance. Therefore, operational emissions associated with the proposed project would be limited to stationary source exhaust emissions from the emergency generator and indirect emissions from energy consumption from the four new booster pumps. Table 8-1 summarizes the operational emissions and amortized construction GHG emissions associated with the proposed project.

**Table 8-1. Annual GHG Emissions**

| Emissions Category | Metric Tons $CO_2e$ per year |
|---|---|
| Total Construction Emissions | 351 |
| Amortized Construction Emissions [1] | 12 |
| Operations | 101 |
| Total GHG Emissions [2] | 113 |

Notes:
Modeled by AECOM in 2019.
Totals may not add due to rounding.
[1]Amortized emissions calculated assuming a 30-year project lifetime.
[2]Total GHG emissions calculated using sum of amortized construction emissions and operations.

As shown in Table 8-1, the amortized construction-related and operational emissions of the proposed project would not exceed SCAQMD's adopted significance threshold of 10,000 MT $CO_2e$ per year, the adjusted SB 32 threshold of 6,000 MT $CO_2e$ per year, nor the SMAQMD threshold of 1,100 MT $CO_2e$. Therefore, the proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

Conclusion: Less than significant impact.

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

As discussed above, in response to AB 32 and SB 32, CARB has approved a series of Climate Change Scoping Plans and Scoping Plan updates. While the Scoping Plan updates do include measures that would indirectly address GHG emissions associated with construction and operational activities, including the phasing in of cleaner technology for diesel engine fleets (including construction equipment) and Low Carbon Fuel Standard, successful implementation of these measures predominantly depends on the development of laws and policies at the state level. As such, none of these statewide plans or policies constitutes a regulation to adopt or implement a regional or local plan for reduction or mitigation of GHG emissions. Thus, it is assumed that any requirements or policies formulated under the mandate of AB 32 and SB 32 that would be applicable to the project, either directly or indirectly, would be implemented consistent with statewide policies and laws.

In August 2015, Los Angeles County adopted the CCAP. The CCAP includes GHG reduction measures grouped into five strategy areas: green building and energy; land use and transportation; water conservation and wastewater; waste reduction, reuse, and recycling; and land conservation and tree planting. Since one of the objectives of the proposed project is to increase the pumping rate of existing groundwater extraction wells to contain groundwater contamination and help protect nearby municipal water supply wells, the proposed project would be consistent with Measure WAW-2, which calls for reducing potential treatment and protection of local groundwater supplies.[5]

Thus, the proposed project would not conflict with the County of Los Angeles CCAP, AB 32 and SB 32 Scoping Plan; or any other relevant plans, policies, or regulations for the purpose of reducing GHG emissions. Therefore, the proposed project's contribution to cumulatively significant impacts to global climate change would not be considerable.

Conclusion: Less than significant impact.

*REFERENCES:*


1 CARB. 2019a. California Waiver Timeline. Available: https://ww2.arb.ca.gov/resources/documents/carb-waiver-timeline.

2 CARB. 2012. California Greenhouse Gas Emission Inventory 2000–2012. Available: https://www.arb.ca.gov/cc/inventory/pubs/reports/ghg_inventory_00-12_report.pdf.

3 CARB .2017. 2017 Climate Change Scoping Plan. Available: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed January 2019.

4 CARB (California Air Resources Board). 2008. Climate Change Scoping Plan: A Framework for Change. Pursuant to AB 32 the California Global Warming Solutions Act of 2006. December 2008. Available: https://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm.

5 County of Los Angeles. 2015. Community Climate Action Plan 2020. Available: http://planning.lacounty.gov/CCAP.

6 CARB. 2019b. California Greenhouse Gas Inventory for 2000–2017. Available: https://ww2.arb.ca.gov/ghg-inventory-data.

7 Office of Planning and Research (OPR). 2018. CEQA and Climate Change Advisory. Available: http://opr.ca.gov/docs/20181228-Discussion_Draft_Climate_Change_Adivsory.pdf.

8 South Coast Air Quality Management District (SCAQMD). 2008. Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans. Available: http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2.

9 Sacramento Metropolitan Air Quality Management District (SMAQMD). 2018. Guide to Air Quality Assessment in Sacramento County. Available: http://www.airquality.org/LandUseTransportation/Documents/Ch6GHGFinal5-2018.pdf.

10 CARB. 2014. First Update to the AB 32 Climate Change Scoping Plan. May 2014. Available: https://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm.

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| 9. HAZARDS AND HAZARDOUS MATERIALS | | | | |
|---|---|---|---|---|
| **Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | ☐ | ☐ | ☒ | ☐ |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | ☐ | ☐ | ☒ | ☐ |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | ☐ | ☐ | ☒ | ☐ |
| 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? | ☐ | ☐ | ☒ | ☐ |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? | ☐ | ☐ | ☐ | ☒ |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☒ | ☐ |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? | ☐ | ☐ | ☐ | ☒ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

The U.S. Department of Transportation (DOT): The U.S. DOT regulates the transport of hazardous materials under Title 49 of the Code of Federal Regulations (CFR, Title 49). Title 49 prohibits the release of hazardous materials to the environment and requires all containers to meet strict standards for impact resistance, strength, and packing compatibility. In addition, Title 49 contains specific requirements for the training of drivers in inspection, operation of vehicles, loading and unloading of materials, the properties and hazards of the materials transported, and the use of vehicle controls and equipment, including operation of emergency equipment. The proposed project would be subject to DOT requirements related to the use, generation, storage, and disposal of hazardous wastes.

Titles 22, 23, and 27 of the California Code of Regulations: In California, Titles 22 and 23 of the California Code of Regulations (CCR) address hazardous materials and wastes. Title 22 defines, categorizes, and lists hazardous materials and wastes, including universal wastes. Title 23 addresses public health and safety issues related to hazardous materials and wastes, and it specifies disposal options. Title 27 of the CCR addresses landfill closure standards and landfill-related public health and safety issues. The proposed 2009 Master Plan would be subject to requirements of this law related to the use, generation, storage, and disposal of hazardous wastes.

Contaminated Soil and Groundwater: Under Water Code, Division 7, Section 13304 the Los Angeles RWQCB oversees investigation and mitigation of sites contaminated from USTs, wells, or other sources. Oversight by the Los

Angeles RWQCB is not limited to specific pollutants or specific media but is focused on determining whether an unauthorized release may result in pollution of regional water bodies. In addition, SCAQMD Rule 1166 sets control requirements for volatile organic compound (VOC) emissions from excavating, grading, handling, or treating contaminated soil and SCAQMD Rule 1150 requires implementation of an approved Excavation Management Plan for excavations of landfill material. Requirements include development and approval of a mitigation plan, notification to SCAQMD, monitoring, and handling requirements for the contaminated soil.

Regulation 29, CFR, Section 19 10.120, Hazardous Waste Operations and Emergency Response: The Los Angeles Fire Department (LAFD) regulates storage and disposal of hazardous materials through enforcement and education programs. The LAFD manages the Hazardous Waste Generator Inspection Program and California Accidental Risk Prevention (CalARP) Program, which requires facilities with greater than threshold levels of hazardous materials to file a hazardous materials inventory that includes storage locations and emergency contact information for the facility. The LAFD oversees the Hazardous Materials Inspection/Business Plan Program to monitor compliance with hazardous materials storage requirements. The Hazardous Materials Division also works with the LAFD to respond to chemical emergencies to ensure proper containment and clean up.

Regulation 29, CFR, Section 19 10.120, Hazardous Waste Operations and Emergency Response, under the authority of the federal Occupational Safety and Health Administration (OSHA) and Cal/OSHA, outlines methods and requirements for workers who handle or are potentially exposed to hazardous wastes and materials.

**ENVIRONMENTAL SETTING (BASELINE):**

Potential hazardous materials that will be used during construction include gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, pavement patching materials (such as lime, asphalt), welding flux, various lubricants, paint, and paint thinner. No acutely hazardous materials would be used or stored onsite during construction. Impacts associated with long-term operation and maintenance of the treatment plant are the same as the current conditions.

During project operations (both currently and after the proposed modifications), several hazardous materials are stored at the WNOU plant and used continuously by the treatment process. Others are brought on site and used for specific plant maintenance activities. The following hazardous materials may be used and/or stored at the project site during operation:

- Sodium hypochlorite - used to chlorinate treated water (two 750-gallon tank, 12.5% solution)
- Coatings - used for touch-up painting of plant infrastructure exteriors and for lining the interior of the tank vessels.

Materials associated with the treatment plant are stored, used, transported, and disposed of in accordance with applicable local, state, and federal requirements. The carbon in the granular activated carbon vessels adsorbs naturally-occurring radon. Radon concentrations in the spent carbon may be present at hazardous waste levels, and will require appropriate handling, transport, and disposal in accordance with applicable state and federal requirements.

There are limited health hazards or safety risks due to hazardous material or waste discharge that could potentially impact the surrounding community. The land use surrounding the treatment plant is largely open space. Current operations have health and safety measures in place as well as a contingency plan for responding to spills.

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

Based on the existing conditions discussed above, adverse effects would occur if the proposed project results in:

- An acute or adverse public health hazard through the release of hazardous materials into the environment
- Long-term exposure of humans, wildlife, wildlife habitat, and the general environment to hazardous materials

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

No environmental studies were performed for this resource. Readily available information was reviewed for this assessment.

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

a. Create a significant hazard to the public or the environment throughout the routine transport, use, or disposal of hazardous materials?

Impact Analysis: The proposed project will not create a significant hazard to the public or the environment throughout the routine transport, use or disposal of hazardous materials. The only additional hazardous materials for activities associated with the proposed project would include those needed for construction of the new infrastructure. The most likely possible incidents associated with hazardous materials would involve dripping of fuels, oil, and grease from construction equipment. The small quantities released during such an incident would have low toxicity and concentrations. Measures would be in place, such as through the use of containment areas, to minimize any impacts of such an incident. Hazardous materials would be transported to the site in accordance with applicable local, state, and federal requirements. The materials would be stored and used with appropriate safety precautions and containment measures for releases would be in place. Personnel would be trained to handle the hazardous materials and would receive general health and safety training for the hazards that may be encountered during construction activities.

Conclusion: Less than significant impact.

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?

Impact Analysis: The proposed project will not create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Containment measures will be in place to capture any releases of hazardous materials during the proposed construction activities and plant operations. There are limited health hazards or safety risks that could potentially impact the surrounding community or environment due to hazardous material or waste discharge.

Conclusion: Less than significant impact.

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

Impact Analysis: Construction activities for the proposed project and on-going operations will not have significant hazardous emissions. An existing or proposed school is not present within one-quarter mile of the treatment plant.[1]

Conclusion: Less than significant impact.

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?

Impact Analysis: The proposed project is located within the Whittier Narrows San Gabriel Valley Superfund Site which is included on the list of Hazardous Waste and Substances Site List (Cortese) compiled pursuant to Government Code Section 65962.5.[2] The proposed project will increase the pumping rate of the existing groundwater extraction wells, increase the capture of contaminants, and allow distribution of treated blended water to San Gabriel for distribution to its customers as potable drinking water to contain the regional groundwater contaminant plume located at depths between about 160 to 700 feet below ground surface. The hazardous materials needed to construct the proposed infrastructure and to operate the system (see above) would not create a significant hazard to the public or the environment.

Conclusion: Less than significant impact.

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

Impact Analysis: Not applicable. The proposed project is not located within an airport land use plan.[3]

Conclusion: No impact.

f. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

Impact Analysis: Construction of the proposed WNOU Blended Water Pipeline alignment project will occur along approximately 20 linear feet within the existing WNOU site and would connect to the main pipeline within the ROW of Durfee Avenue. The proposed Blend Water Supply Pipeline will occur along approximately 7,265 linear feet within

the existing ROW of Durfee Avenue, between the exiting WNOU site and the intersection of Durfee Avenue and Peck Road. It is likely that temporary, partial road closures would be required for construction activities associated with the WNOU Blended Water Pipeline and Blend Water Supply Pipeline, affecting Durfee Avenue and Peck Road.

Construction of the proposed new Plant B28 Booster Station would occur within the San Gabriel property boundaries. Suction and discharge pipe connecting the booster station will require work on Workman Mill Road. It is likely that temporary, partial road closures would be required for construction activities associated with the Plant B28 Booster Station, affecting Workman Mill Road.

During construction, vehicular and pedestrian detours would be provided to guide traffic around the construction sites and laydown areas. Street closures would occur daily (Monday through Friday), typically from 7 a.m. to 3:30 p.m. during construction hours or throughout the construction period, unless there is an emergency. Prior to initiating construction, the construction contractor would obtain a permit from the Los Angeles County Department of Public Works which would include a traffic control plan that addresses potential impacts to emergency response or evacuation.

Road closures are not anticipated during operation of the proposed project.

Conclusion: Less than significant impact.

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

Impact Analysis: The proposed project will not expose people or structures to a significant risk of loss, injury or death involving wildland fires. The proposed modifications will be within paved areas, along existing rights-of-way, and boundaries of the currently vacant site for the Plant B28 Booster Station.

Conclusion: No impact.

*REFERENCES:*


1 *2019. California School Directory. Accessed at:* https://www.cde.ca.gov/SchoolDirectory/ on December 6, 2019.

2 *2019. Department of Toxic Substances Control, EnviroStor, Hazardous Waste and Substances Site List (Cortese). Accessed at:* https://www.envirostor.dtsc.ca.gov/public/search/ on December 6, 2019.

3 *2019. County of Los Angeles, Airport Land Use Commission, A-NET Application, Accessed at: http://planning.lacount.gov/aluc on December 6, 2019.*

| **10. HYDROLOGY AND WATER QUALITY** | | | | |
|---|---|---|---|---|
| **Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | ☐ | ☐ | ☒ | ☐ |
| b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin? | ☐ | ☐ | ☒ | ☐ |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: | ☐ | ☐ | ☒ | ☐ |
| (i) result in substantial erosion or siltation on- or off-site; | ☐ | ☐ | ☒ | ☐ |
| (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; | ☐ | ☐ | ☒ | ☐ |
| (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or | ☐ | ☐ | ☒ | ☐ |
| (iv) impede or redirect flood flows? | ☐ | ☐ | ☒ | ☐ |
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | ☐ | ☐ | ☒ | ☐ |
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | ☐ | ☐ | ☐ | ☒ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

Clean Water Act of 1977 (Including 1987 Amendments) – Sections 401, and 402: The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulates quality standards for surface waters. Under the CWA, the United States Environmental Protection Agency (EPA) has implemented many pollution control standards for industries, as well as water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutants from a point source into navigable waters, unless a National Pollutant Discharge Elimination System (NPDES) permit is obtained.

- Section 401: This section of the CWA requires certification from one of California's nine RWQCB's that the proposed project is in compliance with established water quality standards and including the implementation of Best Management Practices (BMPs) during site grading activities and other activities associated with construction of the proposed project.

- Under the CWA, USACE Section 404 permits are subject to RWQCB Section 401 Water Quality Certification (Title 23 CCR Sections 3830 through 3869). As such, a determination of "federal waters" under Section 404 is required by the USACE. While there is not a direct requirement under a 404 jurisdiction, the RWQCB has

authority under the Porter-Cologne Water Quality Control Act (Porter-Cologne)to regulate discharge of waste to waters of the state. The definition of the waters of the state is broader than that for waters of the U.S. in that all waters are considered to be a water of the state regardless of circumstances or condition. The term "discharge of waste" is also broadly defined in Porter-Cologne, such that discharges of waste include fill, any material resulting from human activity, or any other "discharge" that may directly or indirectly impact waters of the state relative to implementation of Section 401 of the CWA.

- Porter-Cologne authorizes the RWQCB to regulate discharges of waste and fill material to waters of the state, including "isolated" waters and wetlands, through the issuance of waste discharge requirements (WDRs). Under Porter-Cologne all parties proposing to discharge waste that could affect the quality of waters of the state, other than into a community sewer system, shall file with the appropriate RWQCB a Report of Waste Discharge (ROWD) containing such information and data as may be required by the RWQCB. As such, the proposed project will file or amend the ROWD for evaluation of 401 water quality impacts and in association with the proposed project.

- Section 402: This section sets forth regulations for direct and indirect discharges and storm water discharges into waters of the United States pursuant to a NPDES permit (CWA Section 402). NPDES permits contain industry-specific, technology-based limits and may also include additional water quality-based limits, and establish pollutant-monitoring requirements. A NPDES permit may also include discharge limits based on Federal or State water quality criteria or standards.

- In 1987, the CWA was amended to include a program to address storm water discharges for industrial and construction activities. Storm water discharge is covered by an NPDES permit, either as an individual or general permit. The Los Angeles RWQCB administers the NPDES permit program under the CWA in the proposed project area.

National Flood Insurance Act: The National Flood Insurance Act of 1968 established the National Flood Insurance Program. The National Flood Insurance Program is a federal program administered by the Flood Insurance Administration of FEMA. It enables individuals who have property (a building or its contents) within the 100-year floodplain to purchase insurance against flood losses. Community participation and eligibility, flood hazard identification, mapping, and floodplain management aspects are administered by state and local programs and support programs within FEMA itself. FEMA works with the states and local communities to identify flood hazard areas and publishes a flood hazard boundary map of those areas. The proposed project site is not located in the 100-year flood hazard zone; therefore, is not subject to this Act.

State of California Constitution prohibits the waste or unreasonable use of water, regulates the method of use and method of diversion of water and requires all water users to conserve and reuse available water supplies to the maximum extent possible.

Porter-Cologne Water Quality Control Act: Porter-Cologne is California's comprehensive water quality control law. The Porter-Cologne Act regulates both surface water and groundwater and gives the RWQCB authority to issue Waste Discharge Requirements to recycled water producers. This Act is promulgated in the California Code of Regulations Title 22. Title 22 includes requirements for treatment and reuse tertiary-treated recycled water projects throughout California.

The Act also requires the adoption of water quality control plans (basin plans) by the RWQCBs for watersheds within their regions. The basin plans are reviewed triennially and amended as necessary by the RWQCB, subject to the approval of the California Office of Administrative Law, the SWRCB, and ultimately the USEPA. Moreover, pursuant to Porter-Cologne, these basin plans become part of the California Water Plan.

State Water Resources Control Board Policies:

Recycled Water Policy (Resolution No. 2009-0011). With Resolution No. 2009-0011, the SWRCB adopted the Recycled Water Policy for the State of California. This policy encourages increased use of recycled water and local stormwater and requires local water. The policy specifically identifies the use of recycled water as having a beneficial impact because it supports the sustainable use of groundwater and/or surface water and substitutes for the use of potable water. It encourages local and regional water agencies to optimize their use of local water sources by emphasizing water recycling, water conservation, and the maintenance of supply infrastructure and use of stormwater (including dry-weather urban runoff). In addition, the policy requires and wastewater entities to develop a Salt and Nutrient Management Plan (SNMP) for the groundwater basins in California. A SNMP is currently being prepared for the WRD service area (i.e., the Central and West Coast basins) and will include measures to manage salts and nutrients in the basins and will propose groundwater monitoring for salts and nutrients.

Anti-Degradation Policy (Resolution No. 68-16): Requires the RWQCB, in regulating the discharge of waste, to: (a) maintain existing high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum

benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses, and will not result in water quality less than that described in State or Regional Water Boards policies; and (b) require that any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters, must meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that: a) a pollution or nuisance will not occur and b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

California Water Code: The use of water in the state is governed by the California Water Code or Title 23 of the California Code of Regulations. Title 23 requires that water resources must be put to beneficial use to the fullest extent of which they are capable, and that the waste, unreasonable use, or unreasonable method of use of water is illegal. The conservation of water is encouraged as a reasonable and beneficial in the interest of the people and for the public welfare.

Los Angeles Regional Water Quality Control Board: The SWRCB, with its regional water boards, is the primary agency responsible for implementing the CWA and issuing NPDES permits. The SWRCB carries out its water quality protection authority through the adoption of basin plans. These plans establish water quality standards for particular bodies of water. California water quality standards are composed of three parts: the designation of beneficial uses of water, water quality objectives to protect those uses, and implementation programs designed to achieve and maintain compliance with the water quality objectives. The Los Angeles RWQCB is responsible for enforcing the Los Angeles Basin Plan, which is described below.

The RWQCB implements management plans to modify and adopt standards under provisions set forth in Section 303(c) of the Clean Water Act and California Water Code (Division 7, Section 13240).

The SWRCB Resolution 2005-0019 adopted amendments to the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California in 2005. This policy provides implementation measures for numerical criteria contained in the California Toxics Rule, promulgated in May 2000 by USEPA. When combined with the beneficial use designations in the Los Angeles Basin Plan, these documents establish statewide water quality standards for toxic constituents in surface waters. Order Nos. 91-100 & R4-2009-0048: These orders (as amended), established by the Los Angeles RWQCB, are the permits that regulate the volume and type of recharge in the Montebello Forebay. WRD is responsible for obtaining all recharge water in the Montebello Forebay and regularly testing the groundwater. LACDPW is responsible for operations of the spreading grounds once WRD secures the water. LACSD produces and supplies the recycled water. The current permit specifies that the maximum quantity of recycled water spread in any 10-year period cannot exceed 35 percent of the total amount spread.

Los Angeles Basin Plan: The Los Angeles Basin Plan establishes water quality objectives for constituents that could potentially cause an adverse effect or impact on the beneficial uses of water. Specifically, basin plans are designed to accomplish the following:

1. Designate beneficial uses for surface and ground waters,
2. Set the narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to California's anti-degradation policy,
3. Describe implementation programs to protect the beneficial uses of all water in the region, and
4. Describe surveillance and monitoring activities to evaluate the effectiveness of the basin plans.

**ENVIRONMENTAL SETTING (BASELINE):**

The WNOU Blended Water Pipeline alignment and Blend Water Supply Pipeline are located in the Whittier Narrows flood control basin at an approximate elevation of 200 feet North American Datum of 1983 (NAD83). Plant B28 Booster Station also has an elevation of 200 feet NAD83 but it is not located in the Whittier Narrows flood control basin. The proposed project sites are not within a 100-year flood plain, however, they are in the 500-year flood plain and a dam inundation zone.[2]

As proposed, the WNOU Blended Water Pipeline alignment and Blend Water Supply Pipeline do not impede or redirect flows within the flood control basin. These proposed project sites are predominantly paved and are not a source of on- going sedimentation to nearby surface water features. The Plant B28 Booster Station is surrounded by existing paved streets and the SR-60, as such, drainage flows for this site have already been established and the proposed project site will not impede or redirect flows.

<u>Surface Water Features</u>

The San Gabriel Valley is drained by two main rivers, the San Gabriel River and the Rio Hondo, both of which exit the valley via Whittier Narrows. Flow in these rivers is seasonal and controlled to prevent flooding and to conserve water.[3] The Rio Hondo flows into the Los Angeles River; therefore, the portion of the San Gabriel Valley and surrounding highlands drained by that river are included as part of the Los Angeles River watershed.

Surface water features in Whittier Narrows include the San Gabriel River and Rio Hondo channels, Legg Lakes, Mission Creek, and a man-made bypass channel that runs between the Rio Hondo and San Gabriel River to control surface water used for downstream groundwater recharge.[3] Legg Lakes is located directly north of the WNOU Blended Water Pipeline alignment and the western portion of the Blend Water Supply Pipeline sites. It is comprised of three interconnected lakes with a total surface area of approximately 77 acres. [3] Overflow from the lake system drains to the west to Mission Creek.[4] The lakes are mostly supplied by extracted groundwater with minor contribution from seasonal storm water runoff, and runoff from parkland irrigation.[4]

Surface Water Quality

Legg Lake is listed as impaired by ammonia, copper, lead, odor, and pH.[4] The USEPA has subsequently recommended removal of copper and lead from this list.[4] USEPA's recent total maximum daily load (TMDL) report indicates that nutrient load reductions are required to achieve the chlorophyll target and that these reductions are also expected to alleviate ammonia, odor and pH problems.[4] Implementation measures to provide reasonable assurances that water quality standards will be met may be developed in the future by the Los Angeles Regional Water Quality Control Board through an implementation plan, NPDES permits, or non-point source enforcement. [4]

Groundwater and Groundwater Usage

Shallowest groundwater is generally encountered at depths of 10 to 20 feet bgs in the Whittier Narrows, South El Monte, and Puente Valley Operating Units, and is unconfined at the water table and increasingly confined at greater depths. [5] Groundwater in the WNOU occurs in the alluvium between less than approximately 150 feet bgs and 600 feet bgs. [5] Groundwater within Whittier Narrows generally flows to the south, southeast, and southwest into the Montebello Forebay area of the Central Basin.[3]

Approximately 80% of the groundwater discharge from the San Gabriel Basin is by production wells with the remaining groundwater discharge consisting of subsurface outflow through the Whittier Narrows.[5] In the Whittier Narrows, factors including converging groundwater outflows, channel recharge, and the hydraulic influence of the Legg Lakes result in relatively minimal observable changes or responses in water levels that can be attributed to remedy well pumping alone. [5]

Groundwater in the Whittier Narrows and immediately downgradient in the Montebello Forebay currently and historically has been used extensively for drinking water. In addition, groundwater is pumped from multiple locations for irrigation and to maintain Legg Lakes and the former Nature Center Lake. Since 2002, USEPA has pumped groundwater from the WNOU interim remedy extraction wells in order to control groundwater contamination migrating through Whittier Narrows. Collectively, these pumping activities have not resulted in significant changes in groundwater elevation within Whittier Narrows.[3]

Groundwater Quality

Chlorinated VOCs and 1,4-dioxane are the primary groundwater contaminants found in groundwater beneath the WNOU. Tetrachloroethene (PCE) is the most prevalent VOC exceeding drinking water standards and currently exceeds the Maximum Contaminant Level at depths between about 150 and 700 feet bgs within Whittier Narrows. USEPA has not identified any significant sources of VOCs and 1,4-dioxane contamination in the WNOU. Hence, groundwater contamination present within Whittier Narrows is migrating into the area from upgradient industrial sources within the San Gabriel Basin.[3]

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

The project would result in an impact if it would violate water quality standards, substantially degrade water quality, substantially decrease groundwater supplies, alter drainage patterns, release pollutants, or conflict with a water quality control plan or sustainable groundwater management plan.

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

No environmental studies were performed for this resource. Readily available information was reviewed for this assessment.

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

   Impact Analysis: During construction of the proposed project, soil disturbance associated with grading and excavation would increase the potential for sediment and pollution loading. Accidental discharge of waste products and water could occur during construction and operations. During construction, a Stormwater Pollution Prevention Plan and construction BMPs will be used to address the potential impacts on water quality, in compliance with the Construction General Permit (Order No. 2009- 2009-DWQ). The proposed project will not cause any changes to existing treatment plant operations and the new Plant B28 Booster Station that would cause a violation of any

water quality standards or waste discharge requirements. Therefore, the proposed project will not violate any water quality standards or waste discharge requirements.

Conclusion: Less than significant impact.

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

Impact Analysis: Following the implementation of the proposed project, existing remedy extraction wells EW4-5 and EW4-6 would be utilized and groundwater would be increased to extract a total maximum combined rate of approximately 2,800. Of the 2,800 gpm, approximately 800 gpm would be discharged directly into Legg Lakes following treatment through the Liquid Phase Granular Activated Carbon treatment system and the remainder would be chlorinated the fed into San Gabriel's potable water distribution system. Currently, the combined average extraction rate from the remedy wells is administratively capped at approximately 2,000 gpm. The proposed project would increase pumping rates by 800 gpm; however, only minimal observable changes or responses in water levels that can be attributed to remedy well pumping have been observed. The minimal increase in pumping rates is not expected to substantially decrease groundwater supplies in the basin.

Groundwater infiltration conditions at the proposed WNOU Plant will not change with the construction and operation of the WNOU Blended Water Pipeline alignment and Blend Water Supply Pipeline sites. The majority of these sites are paved which preventing groundwater recharge at those locations. The proposed Plant B28 Booster Station is currently not paved but portions of the site will be paved or covered with the booster station building after construction. These new conditions will prevent groundwater infiltration at the site; however, the footprint of the new paved or covered areas is very small and therefore will not substantially interfere with groundwater recharge.

Conclusion: Less than significant impact.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. result in substantial erosion or siltation on or off-site;

Impact Analysis: Grading associated with the proposed project will not substantially alter the existing drainage pattern of the site or area. The proposed project will not result in substantial erosion or siltation, either on or off-site.

Conclusion: Less than significant impact.

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or offsite;

Impact Analysis: The proposed project will not substantially alter the existing drainage pattern of the site or area and does not include plans to substantially alter the current drainage pattern of the properties. Therefore, the proposed project would not result in flooding on or off site.

Conclusion: Less than significant impact.

(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

Impact Analysis: The proposed project will not create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems. Construction activities are not expected to generate significant amounts of runoff water. BMPs will be utilized to control excess water during grading and construction. During on-going operation of the proposed project, unplanned releases of water would be collected to the extent possible, treated as necessary, and discharged along with treated groundwater to maintain the water level in Legg Lakes.

Conclusion: Less than significant impact.

(iv) impede or redirect flood flows?

Impact Analysis: Grading associated with the proposed project will not substantially alter the existing drainage pattern of the site or area. Therefore, the proposed project will not impede or redirect flood flows.

Conclusion: Less than significant impact.

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

Impact Analysis:

The possibility exists for the proposed project sites to be flooded and for the release of pollutants. However, existing structures and improvements within the Whitter Narrows Dam Basin are either floodable, flood-proofed, or above the base flood (100-year) water surface elevation.[6] Appropriate design measures and BMPs will be implemented during construction and operation to minimize the release of pollutants in the event of inundation.

Conclusion: Less than significant.

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact Analysis: The proposed project is being implemented to enhance the existing water quality control plan, therefore, it does not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Conclusion: No impact.

*REFERENCES:*


1 *2018. United States Geological Survey. El Monte Quadrangle, California – Los Angeles County, 7.5-Minute Series, Scale 1:24,000, Contour Interval 20 feet,*

2 *2019. Los Angeles County. GIS Viewer, Flood Hazards, Accessed at: https://apps.gis.lacounty.gov on December 10, 2019.*

3 *2013. Department of Toxic Substances Control, California Environmental Quality Act, Initial Study, Groundwater Treatment Plant Modifications, Whittier Narrows Operable Unit (WNOU), San Gabriel Valley Area 1 Superfund Site.*

4 *2012. USEPA. Los Angeles Area Lakes TMDLs, Section9 North, Center and Legg Lakes TMDLs, March. Accessed at:* https://19january2017snapshot.epa.gov/www3/region9/water/tmdl/la-lakes/LALakesTMDLsSection9LeggLakes.pdf on December 10, 2019.

5 *2019. URS. San Gabriel Valley Area 1 Superfund Site, Whittier Narrows Operable Unit, September. Accessed at: https://www.envirostor.dtsc.ca.gov/public/deliverable_documents/9612658441/WNOU%202018%20PER_20190927.pdf on December 10, 2019.*

6 *2011, USACE. Whittier Narrows Dam Basin Master Plan and Environmental Assessment, Los Angeles County, California, September.*

7 *Regional Water Quality Control Board. Water Quality Control Plan for the Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. June 1994.*

| 11. LAND USE AND PLANNING | | | | |
|---|---|---|---|---|
| **Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| a) Physically divide an established community? | ☐ | ☐ | ☐ | ☒ |
| b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☐ | ☐ | ☒ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

Land use and planning regulations are provided in the general plans and/or community plans adopted for the City of South El Monte and the County of Los Angeles, as well as adopted regional planning documents.

**ENVIRONMENTAL SETTING (BASELINE):**

The WNOU Blended Water Pipeline project is located on federal lands that are controlled by the USACE and is primarily used for flood risk management. The USACE allows recreation and other uses to occur in the Whittier Narrows Dam Basin.[1] The WNOU Blended Water Pipeline site is fenced and paved, except for a vegetated area located on the northern end of the site. According to the Southern California Association of Governments (SCAG) land use zone designations, the existing WNOU site is zoned as Heavy Industrial. Areas adjacent to the proposed Blend Water Supply Pipeline alignment and WNOU Blended Water Pipeline alignment are zoned as Open Space and Recreation and Wildlife Preserve and Sanctuary, to the north and south of Durfee Avenue respectively. The USACE Facility located approximately 1,300 feet east of the existing WNOU site, is zoned as Maintenance Yards. Approximately 3,000 feet east of the WNOU site, land uses adjacent to the Blend Water Supply Pipeline alignment transition into Single Family Residential, Light Industrial, General Office Use, Other Commercial, Retail Stores and Commercial Services. The zoning and land use designation for this area of the site has not changed since the original construction (i.e., heavy manufacturing, buffer zone, open space), other than the area is now also designated as a Billboard Exclusion combining zone.[2]

The area that would be occupied by the proposed area of new Plant B28 Booster Station is currently zoned as Vacant Undifferentiated. The property is a vacant land currently owned by City of Industry. It is bound to the north by Workman Mill Road, to the southwest by the SR-60, and to the west by Crossroads Parkway. Properties to the north and east are developed with government facilities, and to the southwest and across the SR-60 is a residential area.

At a local level, according to the City of South El Monte Land Use Plan, land uses adjacent to the Blend Water Supply Pipeline alignment approximately 3,000 feet east of the WNOU site comprise Commercial-Manufacturing (C-M), Public Facilities (P-F), Commercial Residential (C-R). According to the County of Los Angeles land use zone designations, the existing WNOU site is zoned as Heavy Manufacturing (M-2-BE) and Buffer Strip (B-1). Areas adjacent to the proposed Blend Water Supply Pipeline alignment and WNOU Blended Water Pipeline alignment are zoned as Open Space (O-S) and Recreation and Wildlife Preserve and Sanctuary, to the north and south of Durfee Avenue respectively.

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

For the purposes of this analysis, the proposed project would result in an adverse effect on land use if it would result in any of the following:

- Physical division of an established community
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the proposes project.
- Changes in land use as a result of implementing the alternatives that are considered to be incompatible with the existing land uses at and adjacent to the proposed facilities

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

No environmental studies were performed for this resource. Readily available information was reviewed for this assessment.

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

a. Physically divide an established community?

Impact Analysis: Not applicable. The proposed project would be located within the fenced area of the existing WNOU plant, the existing ROW along Durfee Avenue, and on a parcel surrounded by SR-60, Workman Mill Road, and Crossroads Parkway.

Conclusion: No impact.

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?

Impact Analysis: The proposed project is a continuation of the existing land use and does not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project, adopted for the purpose of avoiding or mitigating an environmental effect.

Conclusion: No impact.

*REFERENCES:*

*1 2011. USACE. Whittier Narrow Dam Basin, Los Angeles County, California, Master Plan and Environmental Assessment, September. Accessed at:* https://usace.contentdm.oclc.org/digital/collection/p16021coll7/id/2808/ *on December 6, 2019.*

*2 2013. Department of Toxic Substances Control, California Environmental Quality Act, Initial Study, Groundwater Treatment Plant Modifications, Whittier Narrows Operable Unit (WNOU), San Gabriel Valley Area 1 Superfund Site.*

| 12. MINERAL RESOURCES | | | | |
|---|---|---|---|---|
| **Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | ☐ | ☐ | ☐ | ☒ |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | ☐ | ☐ | ☐ | ☒ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

Federal

- No federal regulations related to mineral resources would be applicable to the proposed project.

State

Surface Mining and Reclamation Act of 1975: The State Mining and Reclamation Act of 1975 (SMARA) requires that the State Mining and Geology Board (SMGB) map areas throughout the State of California that contain regionally significant mineral resources. Aggregate mineral resources within the state are classified by the SMGB through application of the Mineral Resource Zone (MRZ) system. The MRZ system is used to map all mineral commodities within identified jurisdictional boundaries. The MRZ system classifies lands that contain mineral deposits and identifies the presence or absence of substantial sand and gravel deposits and crushed rock source areas (i.e., commodities used as, or in the production of, construction materials). The State Geologist classifies MRZs within a region based on the following factors:

- MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- MRZ-2: Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- MRZ-3: Areas containing mineral deposits for which the significance cannot be determined from available data.
- MRZ-4: Areas where available information is inadequate for assignment of any other MRZ category.

Mining operations and mine reclamation activities are required to be performed in accordance with laws and regulations adopted by the SMGB. The State Department of Conservation's Office of Mine Reclamation (OMR) oversees reclamation requirements.

Local

- No local regulations related to mineral resources would be applicable to the proposed project.

**ENVIRONMENTAL SETTING (BASELINE):**

The proposed project is located within the San Gabriel Production-Consumption Region but not within an area mapped as MRZ-2.[1] Areas mapped as MRZ-2 are areas where geologic data indicate that significant portland cement concrete-grade aggregate resources are present, or where it is judged that a high likelihood for their presence exists.[1] However, no active aggregate mines are present at the proposed project sites.[1] Several active, idle, and abandoned oil wells are located within one mile of the WNOU Blended Water Pipeline alignment and the Blend Water Supply Pipeline.[2] Only one abandoned well is located within one mile of the Plant B28 Booster Station.[2] The general plans for the City of El Monte and City of Whittier do not include specific plans for mineral resources present within their city boundaries. No further analysis of mineral resources is deemed necessary.

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

For the purposes of this analysis, the proposed project would result in an adverse effect on mineral resources if it would result in any of the following:

- The loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- The loss of availability of a locally important mineral resources recovery site identified in a general plan, specific plan, or other land use plan.

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

No environmental studies were performed for this resource. Readily available information was reviewed for this assessment.

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

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?

   Impact Analysis: Not applicable.

   Conclusion: No impact.

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

   Impact Analysis: Not applicable.

   Conclusion: No impact.

*REFERENCES:*

1 *2010. Kohler, S.L. California Department of Conservation, Special Report 209, Update of Mineral Land Classification for Portland Cement Concrete-Grade Aggregate in the San Gabriel Valley Production-Consumption Region, Los Angeles County, California. Access at:* https://maps.conservation.ca.gov/cgs/informationwarehouse/mlc/

2 *2019. California Department of Conservation, Well Finder (WellSTAR). Accessed at:* www.conservation.ca.gov/dog/pages/wellfinder.aspx *on December 9, 2019.*

| 13. NOISE | | | | |
|---|---|---|---|---|
| **Would the project result in:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | ☐ | ☐ | ☒ | ☐ |
| b) Generation of excessive groundborne vibration or groundborne noise levels? | ☐ | ☐ | ☐ | ☒ |
| c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | ☐ | ☐ | ☐ | ☒ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

With respect to potential noise impacts, the proposed project generally can be separated into two elements, the new off-site Plant B28 Booster Station and the new pipeline installation. The new booster station (near the intersection of Workman Mill Road and Crossroads Parkway) and nearby Noise Sensitive Receptor (NSR) locations would all be located in unincorporated Los Angeles County. The new pipeline construction and associated NSRs, situated along Durfee Avenue between Peck Road and the existing WNOU site on Durfee Avenue, would be located in parts of unincorporated Los Angeles County and the City of South El Monte. The applicable noise policies for both municipalities are summarized below.

Los Angeles County Noise Regulations

**Construction Noise.** The noise-sensitive areas of the project which are in the unincorporated areas of Los Angeles County that would be subjected to construction noise, would fall under the Los Angeles County Code of Ordinances, Chapter 12.08 – Noise Control, Section 12.08.440 Construction Noise. This regulation outlines the approved hours for operating construction equipment, noise restrictions for construction contractors, and restriction for the use of both stationary and mobile construction equipment.

**Operational Noise.** The noise-sensitive areas of the project which are in unincorporated Los Angeles County that would be subjected to operational noise, would fall under the Los Angeles County Code of Ordinances, Chapter 12.08 – Noise Control, Section 12.08.390 – Exterior Noise Standards. This regulation outlines exterior noise standards at noise sensitive areas, residential properties and other land uses.

City of South El Monte Noise Regulations

The noise-sensitive areas of the project located in the City of South El Monte that would be subjected to construction noise, would fall under the City of South El Monte Code of Ordinances, Title 8 – Health and Safety, Chapter 8.20 – Noise Regulations. This regulation outlines adopted exterior noise limits for single- and multi-family residential zones, as well as commercial and manufacturing zones. City of South El Monte code also includes an exemption for the construction or operation of essential public services, which appears to apply to this project, as described in Section 8.20.040, which states.

> *"Special Exemption. The provisions of this chapter shall not preclude the construction, operation, maintenance and repairs of equipment, apparatus or facilities of park and recreation departments, public works projects, or essential public services and facilities, including those of public utilities subject to the regulatory jurisdiction of the Public Utilities Commission."*

Federal and State

No specific federal or state noise regulations would apply directly to this project. However, as a point of reference it is noted that the Occupational Safety and Health Administration (OSHA) requires employers to implement a hearing conservation program when noise exposure is at or above 85 decibels averaged over 8 working hours, or an 8-hour time-weighted average (TWA), and this could be seen as a maximum allowable level for essentially any land use.

With regard to ground-borne vibration, the Federal Transit Administration – Transit Noise and Vibration Impact Assessment Manual[1] does offer guidance for assessing potential damage from ground borne vibration for various types of buildings, as summarized in the following Table 13-1.

**Table 13-1 Construction Vibration Damage Criteria**

| Building/Structural Category | PPV, in/sec | Approximate $L_v$ |
|---|---|---|
| *I. Reinforced-concrete, Steel or timber (no plaster)* | *0.5* | *102* |
| *II. Engineered concrete and Masonry (no plaster)* | *0.3* | *98* |
| *III. Non-engineered Timber and Masonry buildings* | *0.2* | *94* |
| *IV. Buildings extremely susceptible to damage* | *0.12* | *90* |
| *Notes:*<br>*PPV = Peak Particle Velocity (maximum instantaneous positive or negative peak of the vibration signal)*<br>*$L_v$ = Vibration Velocity Level (RMS velocity in decibels, VdB re: 1 micro-in/sec).* | | |

Source: FTA 2018.[1]

Most wood-frame construction would be defined as Building Category III (0.2 PPV, or 94 $L_v$)

FTA also defines a Vibration Velocity level ($L_v$) of 75 VdB or greater as distinctly perceptible and potentially annoying to some people.[1]

**ENVIRONMENTAL SETTING (BASELINE):**

The standard unit of measurement for sound is the decibel (dB). The human ear is not equally sensitive to sound at all frequencies. The A-weighted scale, abbreviated dBA, reflects the normal hearing sensitivity range of the human ear. On this scale, the range of human hearing extends from approximately 3 to 140 dBA. This noise analysis discusses sound levels in terms of equivalent noise level ($L_{eq}$). $L_{eq}$ is the average noise level on an energy basis for any specific time period. The $L_{eq}$ for one hour is the average energy noise level during the hour.

NSRs were identified within a screening distance of up to 500 feet of either the proposed booster station or pipeline alignment. No noise measurements were conducted for this analysis, however existing noise levels for the NSRs were estimated according to their approximate distance to existing known noise sources in a manner consistent with methods described in the Federal Transit Administration - Transit Noise and Vibration Impact Assessment Manual.[1] The identified NSRs, assumed noise sources and existing (baseline) daytime and nighttime noise levels are provided in Tables 13-2 and 13-3 for NSRs near the proposed booster station and pipeline alignment, respectively.

**Table 13-2 Existing NSRs and Noise Levels near Proposed Booster Station**

| **NSR** | **Noise Sources** | **Existing level (Leq Day/night)** |
|---|---|---|
| Whitter Woods Condos (Multifamily) 400 feet east of site, Unincorp. LA County | Traffic on Crossroads Pkwy. (with existing noise wall) Workman Mill Road, SR-60, rail noise | 59/49 |
| Single Family Homes on Cambray Dr. 350 feet SW of site, Unincorp. LA County | Traffic on SR-60 (existing noise wall), rail noise | 60/50 |

**Table 13-3 Existing NSRs and Noise Levels near Proposed Pipeline Alignment**

| NSR | Noise Sources | Existing level (Leq Day/night) |
|---|---|---|
| Starlight Inn (motel), SW corner of Peck Durfee, S. El Monte | Traffic on Durfee Ave., Peck Rd., SR-60 | 68/58 |
| Commercial/professional buildings, south of Durfee/west of Peck, S. El Monte | Traffic on Durfee Ave., Peck Rd., SR-60 | 66/56 |
| Large condo/apartment complex, north of Durfee at Goldwyn, S. El Monte | Traffic on Durfee Ave., Peck Rd., SR-60 | 66/56 |
| Sierra Inn (Motel), 1171 Durfee Ave, S. El Monte | Traffic on Durfee Ave., Peck Rd., SR-60 | 66/56 |
| S. El Monte High School (school buildings, sports fields), north of Durfee, S. El Monte | Traffic on Durfee Ave., Peck Rd., SR-60 | 62/52 |
| Whittier Narrows Nature and Equestrian Center, 1000 N Durfee, S. El Monte | Traffic on Durfee Ave., Peck Rd., SR-60 | 60/50 |
| 2 Single Family Homes, 870/876 Durfee Ave, S. El Monte | Traffic on Durfee Ave., SR-60 | 65/55 |
| Whittier Narrows Recreation Area, North of Durfee Ave, Unincorp. LA County | Traffic on Durfee Ave., SR-60 | 56/46 |

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

Based on the review of the project extents and elements and applicable noise policies in the surrounding municipalities, the following thresholds of significance have been identified.

For NSRs in Unincorporated Los Angeles County, a significant noise impact would occur when:

For daytime construction noise lasting less than ten days at any single location, the daytime equivalent noise level ($Leq_{(day)}$) exceeds 75 dBA at any single-family residence, 80 dBA at any multifamily residence, or 85 dBA at any semi-residential or commercial structure.

Or

For daytime construction noise lasting more than ten days at any single location, the daytime equivalent noise level ($Leq_{(day)}$) exceeds 60 dBA at any single-family residence, 65 dBA at any multifamily residence, or 70 dBA at any semi-residential or commercial structure.

Or

For steady-state operational noise levels at residential properties exceeding 45 dBA at night (10 pm to 7 am) or 50 dBA during the day (7 am to10 pm), or at commercial properties exceeding 55 dBA at night or 60 dBA during the day, or at industrial properties exceeding 70 dBA at any time.

For NSRs in the City of South El Monte, a significant noise impact would occur when:

For daytime construction noise, 8-hour Equivalent level (Leq) exceeds 85 dBA.

Or

For steady-state operational noise levels at one or two-family residences exceeding 45 dBA at night (10:00 p.m. to 7:00 a.m.) or 50 dBA during the day (7:00 a.m. to 10:00 p.m.), or at multiple family residences exceeding 50 dBA at night or 60 dBA during the day, or at commercial properties exceeding 50 dBA at night or 60 dBA during the day, or at manufacturing properties exceeding 70 dBA any time.

For NSRs in either Unincorporated Los Angeles County or City South El Monte, a significant ground-borne vibration impact would occur when:

Construction-related ground-borne vibration exceeds 0.2 PPV in/sec for any structure (potential damage) or $L_v$ exceeding 75 Vdb at the nearest part of a residential structural foundation (annoyance).

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

The noise impact analysis for this project included two phases, construction noise (for both the booster station and pipeline), and operation noise (which would only apply to the booster station). The methodologies for both analyses are described below.

Construction Noise

Potential construction noise impacts were determined by predicting construction noise levels using methods consistent with the FHWA Roadway Construction Noise Model (RCNM).[2] This methodology starts with reference noise level and usage factor for each piece of construction equipment to be used, adjusted for the distance from source to receiver, the fractional portion of time that the equipment is operating at full power, and any acoustical shielding that may be present, and then summing together the contributed noise from all sources.

The acoustical contribution for each piece of equipment at each activity area is calculated using the following equation.

$$L_{eq} = L_{max(ref)} - 20*\log(D/D_{ref}) + 10*\log(AUF\%/100) + 10*\log(N) - S$$

Where:

$L_{eq}$ = the equivalent sound level energy-averaged over the period of time over which the equipment is operating, in dBA

$L_{max(ref)}$ = the maximum operating equipment sound level operating at full power as measured at the reference distance

D = the typical distance between the operating equipment and the predicted receiver location (typically the distance to the center of the equipment's operating area)

$D_{ref}$ = the reference distance for the Lmax(ref), typically 50 feet

AUF = the Acoustic Use factor (typical fractional value of time that equipment is operating at full power)

N = number of similar pieces of equipment operating in the same area

S = the estimated noise reduction shielding value between that source and receiver, in dBA

The acoustic contribution for all equipment assumed to be operating during the defined activity is summed together on an energy basis as the estimated combined noise level for each specific receiver location.

The equipment to be used for the various construction phases of the projects, including closest RCNM equivalent equipment type, Max Noise Level (Lmax) and AUF are shown in Table 13-4 below.

**Table 13-4 Acoustical Properties of Equipment**

| Equipment | RCNM Equivalent | Lmax Ref dBA (50 feet) | AUF% |
|---|---|---|---|
| Backhoe | Backhoe | 77.6 | 40 |
| Excavator | Excavator | 80.7 | 40 |
| Loader | Front End Loader | 79.1 | 40 |
| Dump Truck | Dump Truck | 76.5 | 40 |
| Paver | Paver | 77.2 | 50 |
| Skip Loader | Front End Loader | 79.1 | 40 |
| Concrete truck | Concrete mixer truck | 78.8 | 40 |
| Crane | Crane | 80.6 | 16 |
| Man Lift | Man Lift | 74.7 | 20 |
| Fork Lift | Front End Loader | 79.1 | 40 |

In addition to the construction equipment identified above, there would be some additional movement on the local roadway network to and from the construction sites associated with construction equipment movements, worker trips, and material delivery and removal. However, the additional noise contributed by the additional project-related vehicle movements would be insignificant compared to noise generated from existing traffic,

Construction Vibration

Construction related vibration is assessed using too different metrics, Peak Particle Velocity (PPV) in inches per second (in/sec) is used to assess potential structural damage, and Vibration Velocity Level ($L_v$) in VdB for human annoyance. These are calculated using the following equations.

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

Where

PPV = Peak Particle Velocity at the nearest structure
$PPV_{ref}$ = the reference PPV value for a piece of equipment at reference distance of 25 feet
D = the distance from the construction equipment to the structure

$L_v = L_{v\text{-}ref} - 30 \times \log(D/25)$

Where

$L_v$ = the Vibration Velocity Level at the nearest residential structure
$L_{v\text{-}ref}$ = the reference $L_v$ value for a piece of equipment at a reference distance of 25 feet
D = the distance from the construction equipment to the structure

Not all construction equipment produces significant ground borne vibration. Of the equipment listed to be used on this project as shown in Table 13-4, the equipment with the highest reference vibration level would be the "Dump Truck" which has reference values of $PPV_{ref}$ equal to 0.076 in/sec at 25 feet, and Lv-ref equal to 86 Vdb at 25 feet.[1]

Operational Noise

The operational noise produced by the proposed booster station would be quantified by the acoustical contribution of each piece of noise producing equipment at the booster station less any noise reducing component of the station. The proposed booster station would include four booster pumps, each with a 1,000 gpm capacity, and 120-foot total dynamic head (TDH), located within a Concrete block building, plus a transformer on the outside of the building, all surrounded by a masonry block wall. The sound pressure levels of the combined components are summarized in Table 13-5 below.

**Table 13-5 Booster Station Assumed Acoustical Sources**

| ***Source*** | ***Reference Level, Leq*** | ***Reference/Comment*** |
|---|---|---|
| Booster Pump (1000 gpm), each | 92 dBA @ 3 feet[1] | Four units total inside building |
| Transformer | 93 dBA @ 3 feet[2] | One unit outside building, inside wall |
| Pump station building TL | 30 dBA reduction | Applies to booster pumps |
| Pump Station wall IL | 10 dBA reduction | Applies to transformer |

Notes:
1. Per B&H 2005, assumed similar to Flowserve 4HPX13A, centrifugal pump, 140 HP, 952 GPM, 3575 RPM, 448 TDH
2. Per EEI 1985, assumed 200 MVA unit

The sound pressure level at the receptor location was calculated from reference sound pressure levels provided in Table 13-5 and propagated to the receptor location using the following formula:

$L_{eq} = L_{ref} + 10*\log(N) - 20*\log(D/D_{ref}) - TL - IL$

Where

$L_{eq}$ = Predicted equivalent sound pressure level at receptor location
$L_{ref}$ = Sound pressure level at reference distance
N = number of pieces of equipment
D = Receptor Distance
$D_{ref}$ = reference distance
TL = source transmission loss from source building or wall, (estimated)
IL = Insertion loss from intervening buildings, walls or obstructions (estimated)

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would 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?

Impact Analysis:

**Construction Noise.** Estimated existing noise levels, predicted construction noise levels, combined existing and predicted levels, noise level increase and assessed impact for Plant B28 Booster Station (excavation and grading and general construction) and pipeline construction are shown in Table 13-6, 13-7 and 13-8 respectively.

**Table 13-6 Construction Noise, Booster Station (Excavation and Grading), dBA**

| NSR | Existing Level | Project Level | Significance Threshold | Impact |
|---|---|---|---|---|
| Whittier Woods Condos | 59 | 56 | 65 | Less than Significant |
| Homes on Cambray | 60 | 51 | 60 | Less than Significant |

**Table 13-7 Construction Noise, Booster Station (General Construction), dBA**

| NSR | Existing Level | Project Level | Significance Threshold | Impact |
|---|---|---|---|---|
| Whittier Woods Condos | 59 | 51 | 65 | Less than Significant |
| Homes on Cambray | 60 | 49 | 60 | Less than Significant |

According to project information, construction activity would occur only during daytime hours (typically between 7:00 a.m. and 4:00 p.m.). The construction activity at the booster station would result in a less than significant impact because the resulting noise levels from construction activity at the identified NSRs are well below the 60 and 65 dBA significance thresholds for single- and multi-family residential areas.

**Table 13-8 Construction Noise, Pipeline Construction, dBA**

| NSR | Existing Level | Project Level | Significance Threshold | Impact |
|---|---|---|---|---|
| Starlight Inn | 68 | 78 | 85 | Less than Significant |
| Com/Prof. Bldgs on Durfee Ave. | 66 | 84 | 85 | Less than Significant |
| Condos on Durfee Ave. | 66 | 82 | 85 | Less than Significant |
| Sierra Inn on Durfee Ave. | 66 | 78 | 85 | Less than Significant |
| S. El Monte High Sch. | 62 | 70 | 85 | Less than Significant |
| Whittier Narrows Nature Center | 60 | 78 | 85 | Less than Significant |
| Single-family res. on Durfee Ave. | 65 | 82 | 85 | Less than Significant |
| Whittier Narrows Rec. Area | 56 | 64 | 85 | Less than Significant |

The pipeline construction activity along Durfee Avenue would result in substantially higher noise levels at nearby NSRs (78 to 84 dBA) due to the closer proximity of the construction activities. These would be considered less than significant due to the City of South El Monte's Special Exemption on construction for public utility projects and because levels are still below the 85 dBA OHSA limit. However, the following noise reduction Best Management Practices are highly recommended related to pipeline construction along Durfee Avenue:

- Turn off idling equipment when not required to be in operation.
- Use portable 12-foot high acoustical barriers or blankets between noise-generating construction activity and NSRs, as feasible.
- Where possible, maximize the distance between noisy construction equipment and nearby NSRs or minimize the amount of time that noise equipment must operate in close proximity to NSRs.
- Ensure that all noise generating equipment is in proper repair and includes all original noise reduction equipment in good working order.

**Operational Noise.** Operational noise was only considered for the proposed booster station. The completed pipeline would be buried underground and would be assumed to produce no audible noise during regular operation. Assessed operational noise included the equipment indicated in Table 13-4. The results of the operational noise impact analysis are presented in Table 13-9.

**Table 13-9 Operational Noise, Booster Station, (day/night) dBA**

| NSR | Existing Level | Project Level | Significance Threshold | Impact |
|---|---|---|---|---|
| Whittier Woods Condos | 59/49 | 31 | 50/45 | No impact |
| Homes on Cambray | 60/50 | 34 | 50/45 | No impact |

Conclusion:

Construction Noise: Less than Significant Impact
Operational Noise: No Impact

b. Generation of excessive groundborne vibration or groundborne noise levels?

Impact Analysis:

The methodology described in the previous section provided the following construction vibration results shown in Table 3-10.

**Table 13-10 Construction Vibration Impact Summary**

| Location | Distance Feet | Predicted Value | Significance Threshold | Impact |
|---|---|---|---|---|
| 948 Durfee (commercial) | 30 | 0.06 in/sec | 0.2 in/sec | No Impact |
| 964 Durfee (residential) | 70 | 0.02 in/sec | 0.2 in/sec | No Impact |
| 964 Durfee (residential) | 70 | 72.6 VdB | 75.0 VdB | No Impact |

It is also noted that, although the vibration levels calculated to assess possible vibration impacts assumed that the most significant construction-related vibration sources would be movements of loaded dump trucks, Durfee Avenue already carries a significant amount of traffic, including occasional heavy trucks. Therefore, the predicted vibration levels reported here would not be considered an increase over existing conditions.
Conclusion: No Impact.

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

Impact Analysis: The closest airport to the project is San Gabriel Airport, approximately 3.5 miles north of the closest part of the project.
Conclusion: No Impact.

*REFERENCES:*


1 FTA Transit Noise and Vibration Impact Assessment Manual (FTA 2018). transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123.pdf
2 FHWA Roadway Construction Noise Model (RCNM) https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/
3 OSHA Noise Standards (OSHA) https://www.osha.gov/SLTC/noisehearingconservation/ Electric Power Plant Environmental Noise Guide, 2nd Edition, Edison Electric Institute, 1985 (EEI 1985)
4 David Bies and Colin Hansen, Engineering Noise Control: Theory and Practice, 3rd Edition, 2005 (B&H 2005)
5 Los Angeles County Code of Ordinances, Chapter 12.08 – Noise Control
6 City of South El Monte Code of Ordinances, Title 8 – Health and Safety, Chapter 8.20 – Noise Regulations

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| 14. POPULATION AND HOUSING | | | | |
|---|---|---|---|---|
| **Would the Project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| 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)? | ☐ | ☐ | ☐ | ☒ |
| b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | ☒ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

Executive Order 12898: This order outlines federal actions to address environmental justice in minority populations and low-income populations. Executive Order 12898 states that agencies shall identify and address disproportionately high and adverse human health or environmental effects on minority and low-income populations. A new working group was created to develop strategies for programs and policies regarding minority and low-income populations to: promote enforcement of all health and environmental statutes, improve research and data collection in relation to health and environment, identify different patterns of consumption of natural resources, and ensure greater public participation.

**ENVIRONMENTAL SETTING (BASELINE):**

The proposed WNOU Blended Water Pipeline alignment and the Blend Water Supply Pipeline are located within the Whittier Narrows flood control basin. No residential land uses occur within the Whittier Narrows Recreation Area, or in the vicinity of the treatment plant site. The proposed Plant B28 Booster Station is in an urban area that is developed with a freeway, an interstates highway, commercial/industrial land uses, and limited residential land uses.

The proposed project would not create a demand for housing or increase local population. Construction workers, equipment operators, and truck drivers would be from the local labor pool and would maintain their current residences.

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

For the purposes of this analysis, the proposed project would result in an adverse effect on population and housing if it would result in any of the following:

- Legislative act resulting in greater densities than currently established by the General Plan; or
- Extending infrastructure that may encourage growth in areas not previously planned for growth

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

No environmental studies were performed for this resource. Readily available information was reviewed for this assessment.

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

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

   Impact Analysis: No applicable.

   Conclusion: No impact.

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

   Impact Analysis: Not applicable.

Conclusion: No impact.

*REFERENCES:*

*2013. Department of Toxic Substances Control, California Environmental Quality Act, Initial Study, Groundwater Treatment Plant Modifications, Whittier Narrows Operable Unit (WNOU), San Gabriel Valley Area 1 Superfund Site.*

| 15. PUBLIC SERVICES | | | | |
|---|---|---|---|---|
| **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:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| i. Fire protection? | ☐ | ☐ | ☐ | ☒ |
| ii. Police protection? | ☐ | ☐ | ☐ | ☒ |
| iii. Schools? | ☐ | ☐ | ☐ | ☒ |
| iv. Parks? | ☐ | ☐ | ☐ | ☒ |
| v. Other public facilities? | ☐ | ☐ | ☐ | ☒ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

No regulatory laws, ordinances, regulation, standards area applicable to this resource.

**ENVIRONMENTAL SETTING (BASELINE):**

New pipelines would be installed at the proposed project sites. The WNOU Blended Water Pipeline alignment would connect the existing WNOU booster discharge header to San Gabriel's existing 30-inch water main in Durfee Avenue ROW. This blended water pipeline will allow blended water from the WNOU site to be delivered to the off-site boosters and distributed to San Gabriel's customers in the area served by San Gabriel's Plant B5.

The Blend Water Supply Pipeline would be installed from the existing WNOU site to the Peck Road and Durfee Avenue intersection. The Blend Water Supply Pipeline would be constructed within the WNOU site and within the ROW of Durfee Avenue. The new Blend Water Supply Pipeline would ultimately bring water from San Gabriel's water system, served by Plant No. 11, to the WNOU site for blending The blending pipeline will be installed so that the high quality water from San Gabriel's water system can be blended with water produced at the WNOU site to maintain Total Dissolved Solids below 500 parts per million in the treated water at the WNOU site.

A building to house the Plant B28 Booster Station would be constructed on the site. The Plant B28 Booster Station would be supported by the installation of a new 17¾ inch concrete lined and coated steel pipe and a connecting valve within the ROW of Workman Mill Road. The Plant B28 Booster Station would include a 3,000 gpm off-site booster station and related site improvements. A total of four booster pumps would be installed within the Plant B28 Booster Station, each with a design flow rate of 1,000 gpm and approximately 120-foot Total Dynamic Head. A maximum of three pumps would operate at a time, with the fourth pump provided as a backup. The proposed booster piping will be extended to discharge to the existing 16-inch diameter water main on Workman Mill Road, east of the Crossroads Parkway.

It is likely that temporary, partial road closures would be required for construction activities associated with the WNOU Blended Water Pipeline and Blend Water Supply Pipeline, affecting Durfee Avenue and Peck Road, and for the proposed new Plant B28 Booster Station, construction would affect Workman Mill Road. Vehicular and pedestrian detours would be provided to guide traffic around the construction sites and laydown areas.

The proposed project does not have any long-term or permanent impacts to public services.

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

An impact would occur if the implementation of a project resulted in the need to alter, expand, or provide more public services than currently existing.

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

No environmental studies were performed for this resource. Readily available information was reviewed for this assessment.

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

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

   i. Fire protection?

   ii. Police protection?

   iii. Schools?

   iv. Parks?

   v. Other public facilities?

   Impact Analysis: Traffic on Durfee Avenue and Workman Mill Road may be partially impeded during construction of the new pipelines. If this occurs, the construction contractor would obtain a permit from Los Angeles County which would include a traffic control plan. No other temporary impacts would be associated with the proposed project. Thus, the probability for significant impact on emergency response services is minimal.

   The proposed project would not cause any permanent adverse physical impacts to government facilities and would not cause the need for new or physically altered governmental facilities to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, parks, or other public facilities.

   Conclusion: No impact.

| 16. RECREATION | | | | |
|---|---|---|---|---|
| | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | ☐ | ☐ | ☐ | ☒ |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | ☐ | ☐ | ☐ | ☒ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

Quimby Act (AB 1191): The Quimby Act (California Government Code Section 66477) was first established by the California Legislature in 1965. It set forth provisions in the State Subdivision Map Act for the dedication of parkland and/or payment of in-lieu fees as a condition of approval of certain types of residential development projects. The Quimby Act allows local agencies, such as the City of Los Angeles, to establish ordinances that require residential subdivision developers to pay impact fees, which can be used to purchase and develop land and/or recreational facilities.

Los Angeles County General Plan: Los Angeles County has goals for acquisition and development of additional park land as follows:

- Goal P/R 3: Acquisition and development of additional parkland:
  - Policy P/R 3.1: Acquire and develop local and regional parkland to meet the following County goals: 4 acres of local parkland per 1,000 residents in the unincorporated areas and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County.
  - Policy P/R 3.2: For projects that require zone change approvals, general plan amendments, specific plans, or development agreements, work with developers to provide for local and regional parkland above and beyond their Quimby obligations.
  - Policy P/R 3.3: Provide additional parks in communities with insufficient local parkland as identified through the gap analysis.
  - Policy P/R 3.4: Expand the supply of regional parks by acquiring land that would: 1) provide a buffer from potential threats that would diminish the quality of the recreational experience; 2) protect watersheds; and 3) offer linkages that enhance wildlife movements and biodiversity.
  - Policy P/R 3.6: Pursue a variety of opportunities to secure property for parks and recreational facilities, including purchase, grant funding, private donation, easements, surplus public lands for park use, and dedication of private land as part of the development review process.

**ENVIRONMENTAL SETTING (BASELINE):**

Recreational uses in the vicinity of the proposed WNOU Blended Water Pipeline alignment and Blend Water Supply Pipeline include trails and wildlife viewing, an active recreation area in Whittier Narrows Recreation Area, and the Whittier Narrows Nature Center. The recreational uses within the vicinity are managed in accordance with the strategies identified in the Whittier Narrows Dam Master Plan.[1] The proposed WNOU Blended Water Pipeline project is within a fenced area and the Blend Water Supply Pipeline is within the exiting ROW along Durfee Avenue. These proposed project components are isolated from these recreational uses in the vicinity.

There are no recreational uses in the vicinity of the proposed Plant B28 Booster Station.

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

Based on the existing conditions discussed above, recreation-related impacts would be considered an adverse effect if the alternative would result in:

- Permanent removal of substantial recreational areas and critical recreational facilities

- Increased usage that would result in substantial physical deterioration of the recreational area or facility

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

No environmental studies were performed for this resource. Readily available information was reviewed for this assessment.

**IMPACT ANALYSES AND CONCLUSIONS:**

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?

   Impact Analysis: The proposed WNOU Blended Water Pipeline alignment would occur within the existing fenced area of the WNOU site and the Blend Water Supply Pipeline would occur underground within the existing ROW along Durfee Avenue, therefore these project components would not affect recreational uses in the area. There are no recreational areas in the vicinity of the proposed Plant B28 Booster Station. The proposed project would not cause increased use of the existing neighborhood and regional parks or other recreational facilities. Therefore, substantial physical deterioration of the nearby facilities would not occur or be accelerated.

   Conclusion: No impact.

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

   Impact Analysis: No applicable.

   Conclusion: No impact.

REFERENCES:

1 2013. Department of Toxic Substances Control, California Environmental Quality Act, Initial Study, Groundwater Treatment Plant Modifications, Whittier Narrows Operable Unit (WNOU), San Gabriel Valley Area 1 Superfund Site.

| 17. TRANSPORTATION | | | | |
|---|---|---|---|---|
| **Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? | ☐ | ☐ | ☐ | ☒ |
| b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? | ☐ | ☐ | ☐ | ☒ |
| c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | ☐ | ☐ | ☐ | ☒ |
| d) Result in inadequate emergency access? | ☐ | ☐ | ☐ | ☒ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

This section describes the federal, state, and local policies and regulations that are pertinent to transportation.

Federal

- Title 49, Code of Federal Regulations, Parts 171–177. Title 49, Parts 171-177 governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles. The administering agencies for the above regulation are the California Highway Patrol (CHP) and the United States Department of Transportation (USDOT).

State

- CEQA Guidelines, § 15064.3, subd. (b) [Criteria for Analyzing Transportation Impacts]). The Office of Planning Research (OPR) proposed, and the California Natural Resources Agency (Agency) has certified and adopted, changes to the CEQA Guidelines that identify vehicle miles traveled (VMT) as the most appropriate metric to evaluate a project's transportation impacts. With the California Natural Resources Agency's certification and adoption of the changes to the CEQA Guidelines, automobile delay, as measured by "level of service" and other similar metrics, generally no longer constitutes a significant environmental effect under CEQA. (Pub. Resources Code, § 21099, subd. (b)(3)
- California Vehicle Code (CVC), Sections 31303-31309. Requires that the transportation of hazardous materials be on the state or interstate highway that offers the shortest overall transit time possible. The administering agency for the above statutes is the CHP.
- The California Streets and Highways Code, Sections 660, 670, 672, 1450, 1460, 1470, 1480 et seq. This code defines highways and encroachments, and requires encroachment permits for projects involving excavation in State Highways and County Roadways. This law is generally enforced at the local level. The administering agencies for this regulation are Caltrans, the Los Angeles County Department of Public Works, and the City of South El Monte. The Project would need to apply for encroachment permits for any excavation in state, county and City roadways prior to construction.
- California Health and Safety Code, Section 25160 et seq. This code addresses the safe transport of hazardous wastes, requires a manifest for hazardous waste shipments, and requires a person who transports hazardous waste in a vehicle to have a valid registration issued by the DTSC in their possession while transporting hazardous waste.

Local

- City of South El Monte General Plan Circulation Element. Key roadways in the City of South El Monte serve as vital transportation corridors within the project study area and construction sites. The Circulation Element sets the direction for the development of a comprehensive, coordinated, and continuing transportation system for the City of South El Monte.

- If required, the project proponent would file a Traffic Control Plan with the County of Los Angeles and/or the City of South El Monte prior to the start of construction. The Traffic Control Plan would be designed to allow for continued function of the roadway network allowing the flow of vehicles, and other forms of traffic movement expected throughout the area, to experience minimal interruptions in travel through efficient functionality. Traffic Control Plans must be designed by a Professional Engineer, and if deemed necessary, a Traffic Engineer, and must be approved by the local jurisdiction prior to implementation during the construction phase of the proposed project.

**ENVIRONMENTAL SETTING (BASELINE):**

The traffic study area encompasses the immediate roadway circulation system serving the Blend Water Supply Pipeline site, specifically the affected roadway segment of Durfee Avenue between the WNOU site and Peck Road; construction haul routes along Rosemead Boulevard, Santa Anita Avenue; the proposed Plant B28 Booster Station access routes along Workman Mill Road, Crossroads Parkway North, Crossroad Parkway South and SR-60.

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

County of Los Angeles Traffic Impact Analysis Report Guidelines:

The City of South El Monte and unincorporated areas within the County rely on the Los Angeles County Traffic Impact Analysis Report Guidelines (January 1, 1997) in evaluating potential traffic impacts. According to County's traffic study guidelines, a traffic report must be prepared by a registered Civil or Traffic Engineer. A traffic report is generally needed if a project generates over 500 trips per day or where other possible adverse impacts as discussed in the Analysis and Impact Section (see page 4) of these Guidelines are identified.

Furthermore, the County Traffic Guidelines require a Congestion Management Program (CMP) Traffic Impact Analysis (TIA) is required for all projects required to prepare an Environmental Assessment based on local determination or projects requiring a traffic study. The geographic area examined in the TIA must include the following, at a minimum.

- All CMP arterial monitoring intersections (see Exhibit B of the Guidelines), including freeway on- or off-ramp intersections, where the proposed project will add 50 or more trips during either the a.m. or p.m. peak hours.
- Main line freeway monitoring locations (see Exhibit C of the Guidelines) where the project will add 150 or more trips, in either direction, during the a.m. or p.m. weekday peak hours.

If, based on these criteria, the TIA identifies no facilities for study, no further traffic analysis is required.

For analysis purposes, regardless of the presence of CMP arterial intersections and mainline freeway monitoring locations, the above thresholds were taken into consideration in the assessment of potential project traffic impacts.

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

The following traffic assessment scenarios were analyzed qualitatively as a part of this study:

- Existing Conditions – Utilized to establish the current level of traffic operating conditions within the study area.
- Future No Project Conditions – Represents future No Project baseline conditions prior to project construction.
- Future Plus Project Construction Conditions – Represents future No Project baseline Plus Project added traffic associated with project construction.

The traffic assessment prepared for this study was performed in context with applicable guidance from the updated Appendix G - CEQA checklist for Transportation. In addition, readily available information was reviewed for this assessment.

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?

   Impact Analysis: To evaluate potential project traffic impacts, the anticipated Project Trip Generation was developed to describe the daily and AM and PM peak hour trips generated by specific or concurrent project activities onsite and offsite. According to the Project Description, the maximum Project Trip generation would occur during project construction (versus Project operations) and was used as the conservative scenario for the traffic impact analysis.

   The traffic assessment contained herein was based on the conservative scenario and has taken into consideration the overlap of various existing onsite WNOU activities, proposed Blend Water Supply Pipeline, and the proposed Plant B28 Booster Station. It must be noted that certain non-recurring events outside of the typical construction activities are excluded from the assessment.

Table 17-1 summarizes the anticipated daily and peak project site trip generation used in the evaluation of potential project impacts in this Transportation section.

**Table 17-1 Peak Month Project Construction Trip Generation**

| Category | Actual Number of Vehicles | Daily Trips (One-Way Trips) | AM Peak Hour Trips (7:00–9:00 AM) | | PM Peak Hour Trips (4:00–6:00 PM) | | Non-Peak Hour Trips[4] | |
|---|---|---|---|---|---|---|---|---|
| | | | In | Out | In | Out | In | Out |
| Workers (Pipeline)[1] | 18 | 36 | 5 | 0 | 0 | 5 | 13 | 13 |
| Workers (Booster)[1] | 10 | 20 | 3 | 0 | 0 | 3 | 7 | 7 |
| Construction Equipment (Pipeline)[2] | 7 | 42 | 4 | 4 | 0 | 0 | 17 | 17 |
| Construction Equipment (Booster)[2] | 6 | 36 | 4 | 4 | 0 | 0 | 14 | 14 |
| Haul Truck (Pipeline)[3] | 16 | 96 | 10 | 10 | 0 | 0 | 38 | 38 |
| Haul Truck (Booster)[3] | 4 | 24 | 2 | 2 | 0 | 0 | 10 | 10 |
| Total | 61 | 254 | 28 | 20 | 0 | 8 | 99 | 99 |

Notes: Construction of the proposed project is anticipated to commence in the late summer or early fall of 2020 and would take approximately 10 to 12 months to complete. Construction of the Blend Water Supply Pipeline and WNOU Blended Water Pipeline would occur throughout the duration of construction. Construction of the new Booster Station would occur concurrently at the off-site location. Generally, in accordance with the City Noise Ordinance, construction activities would occur Monday through Friday and workers would typically be onsite for eight hours per day from 7:00 a.m. to 3:00 p.m. No work outside of these hours, or work on weekends or national holidays, is anticipated.

[1] The construction workforce was conservatively estimated to drive alone, and up to 25 percent were assumed to drive during the 7:00-9:00 a.m. (inbound) and 4:00-6:00 p.m. (outbound) peak hours while the majority were assumed to arrive before 7:00-9:00 AM peak hour and depart before 4:00-6:00 p.m. peak hours.

[2] Construction Equipment traveling to the sites were converted to Passenger Car Equivalent (PCE), assuming one Truck equals three Passenger Cars. The 13 (actual) trucks (7 for pipeline, 6 for booster station) traveling to the respective sites each day were converted to 39 PCE resulting in 78 daily (combined in/out) one-way trips. Additionally, up to ten percent of the daily construction equipment were assumed to be actively moving during the 7:00-9:00 a.m. peak hours.

[3] Haul Truck hauling to the sites were converted to Passenger Car Equivalent (PCE), assuming one Truck equals three Passenger Cars. The 20 (actual) haul trucks (16 for pipeline, 4 for booster station) hauling on the respective sites each day were converted to 60 PCE resulting in 120 daily (combined in/out) one-way trips. Additionally, up to ten percent of the daily haul truck trips were assumed to be actively moving during the 7:00-9:00 a.m. peak hours.

WNOU Blended Water Pipeline

Interconnection of the new 20-foot long WNOU Bended Water Pipeline within the travelled way along Durfee Avenue may require short-term lane closures around the interconnection point which would be eased with the implementation of the required Construction Traffic Handling Plan or Traffic Management Plan. Construction of the proposed pipeline within the existing WNOU site will be generally outside of the travelled way. Therefore, no traffic impact is anticipated. Based on the aforementioned reasons, the new 20-foot-long WNOU Blended Water Pipeline will have no anticipated conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities

Blend Water Supply Pipeline

Construction of the 7,265-linear foot-long Blend Water Supply Pipeline within the Durfee Avenue public right-of-way, between the WNOU site and Peck Road, may require short-term lane closures around the pipeline alignment which would be eased with the implementation of the required Construction Traffic Handling Plan or Traffic Management Plan.

Potential construction added traffic associated with this activity would peak during the 7:00 a.m. to 9:00 a.m. peak hour with 33 trips. These trips are well below the 50 peak hour trip threshold to warrant intersection analysis and below the 150 peak hour threshold to warrant roadway segment analysis Therefore, no traffic impact is anticipated.

Based on the aforementioned analysis and findings, the new Blend Water Supply Pipeline would have no anticipated conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities.

Plant B28 Booster Station

Construction of the new Plant B28 Booster Station on lot located in the southeast quadrant of Workman Mill Road and SR-60 would be generally outside of the travelled way. Potential construction added traffic associated with this activity would peak during the 7:00 a.m. to 9:00 a.m. peak hour with 14 trips. These trips are well below the 50 peak hour trip threshold to warrant intersection analysis and below the 150 peak hour threshold to warrant roadway segment analysis Therefore, no traffic impact is anticipated.

Based on the aforementioned analysis and findings, the new Plant B28 Booster Station would have no anticipated conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities.

Conclusion: No Impact.

b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Impact Analysis: Section 15064.3, subdivision (b) of the CEQA Guidelines describes criteria for analyzing transportation impacts. The proposed project would result in short-term presence of construction manpower and vehicles at the construction sites. Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. As set forth in the Governor's Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA developed in December 2018, "Projects that would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis, include: Rehabilitation and maintenance projects that do not add motor vehicle capacity."

Because the project construction activities are limited in nature and would occur within a short-term window during the duration of construction activities only, the project would not generate recurring and significant number of trips and associated with VMT, therefore no impact would occur, and no mitigation would be required.

Conclusion: No Impact

c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Impact Analysis: Based on the review of the study area including the construction sites and traffic haul routes, the proposed project would not introduce any form of geometric design features other than short-term lane closures implemented through a required Construction Traffic Handling Plan or Traffic Management Plan.

According to the Project Description, there are no permanent alteration of roadway alignment and no new introduction of hazards and impediments affecting roadway operations. Therefore, no impact would occur, and no mitigation would be required other than the aforementioned, Construction Traffic Handling Plan or Traffic Management Plan to be deployed as necessary during project construction activities as part of the project.

Conclusion: No Impact

d. Result in inadequate emergency access?

Impact Analysis: Based on the review of the study area including the construction sites and traffic haul routes, there are no proposed project design features that would permanently impede or block emergency access other than potential short-term lane closures during interconnect and pipelaying construction activities along Durfee Avenue.

According to the Project Description, the proposed project will not introduce any form of impediments or blockage to emergency access other than short-term lane closures implemented through a Construction Traffic Handling Plan or Traffic Management Plan. Therefore, no impact would occur, and no mitigation would be required other than the aforementioned, Construction Traffic Handling Plan or Traffic Management Plan to be deployed as necessary during project construction activities as part of the project.

Conclusion: No Impact

*REFERENCES:*

City of South El Monte Website. "Revitalizing the Durfee Avenue/Peck Road Corridor in South El Monte". http://www.ci.south-el-monte.ca.us/Portals/0/Engineering/Durfee%20Walkability%20Study/SEM_Durfee_Peck_Report-Final.pdf. Accessed 4 December 2019.

City of South El Monte Website. "Pedestrian Master Plan" http://www.ci.south-el-monte.ca.us/Portals/0/Engineering/PEDESTRIAN%20MASTER%20PLAN.pdf. Accessed 5 December 2019.

City of South El Monte Website. “Bicycle Master Plan”http://www.ci.south-el-monte.ca.us/Portals/0/Engineering/BICYCLE%20MASTER%20PLAN.pdf. Accessed 5 December 2019.

City of South El Monte Website. “Circulation Element” http://www.ci.south-el-monte.ca.us/Portals/0/General%20Plan/planning_%20generalplan_circulation%20element.pdf. Accessed 5 December 2019.

Wolfe, Donald L, “Traffic Impact Analysis Report Guidelines” https://dpw.lacounty.gov/Traffic/Traffic%20Impact%20Analysis%20Guidelines.pdf. Accessed 6 December 2019.

Governor’s Office of Planning Research, “Technical Advisory – On Evaluating Transportation Impacts in CEQA” http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.\ Accessed 16 December 2019.

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| **18. TRIBAL CULTURAL RESOURCES** | | | | |
|---|---|---|---|---|
| **Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3© contains provisions specific to confidentiality.** | | | | |
| **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:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or | ☐ | ☐ | ☒ | ☐ |
| b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision © of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision © of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | ☐ | ☒ | ☐ | ☐ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

Cultural resources in California are protected by a number of federal, state, and local regulations, statutes, and ordinances. Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. State and federal laws use different terms for cultural resources. California state law discusses significant cultural resources as "historical resources," whereas federal law uses the terms "historic properties" and "historic resources." In all instances where the term "resource" or "resources" is used, it is intended to convey the sense of both state and federal law.

Assembly Bill 52

On September 25, 2014, Governor Jerry Brown signed into law Assembly Bill (AB) 52. The intent of AB 52 is to "set forth a process and scope that clarifies California tribal government involvement in the CEQA process, including specific requirements and timing for lead agencies to consult with tribes on avoiding or mitigating impacts to tribal cultural resources." It applies to projects with Notice of Preparations or Notice of Negative Declaration/Mitigated Negative Declarations released on or after July 1, 2015.

AB 52 defines tribal cultural resources, amends Appendix G of CEQA Guidelines to include a separate section for tribal cultural resources, and created a formal requirement for consultation with California Native American Tribes in the CEQA process. Pursuant to Public Resources Code (PRC) Section 21080.3.2, Tribal Governments can request consultation with a lead agency and give input regarding potential impacts to tribal cultural resources before the agency decides what type of environmental review is necessary for a project. The PRC further requires avoiding damage to tribal cultural resources, if feasible. If not, lead agencies must mitigate impacts to tribal cultural resources to the extent feasible.

Section 21074 of the PRC defines "tribal cultural resources" as a resource that is either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

    a. Included or determined to be eligible for inclusion in the California Register of Historical Resources.
    b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

    b. A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
    c. A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

**ENVIRONMENTAL SETTING (BASELINE):**

The Late Prehistoric period, spanning from approximately 1500 years before present (B.P.) to the Spanish mission era, is the period associated with the florescence of contemporary Native American groups. The group occupying the southern Channel Islands and adjacent mainland areas of Los Angeles and Orange Counties came to be known as the Gabrielino, after Mission San Gabriel. They are reported to have been one of the most notable tribes in Southern California in terms of population size, regional influence, and degree of sedentism.[1] The Gabrielino are estimated to have numbered around 5,000 in the pre-contact period.[2] Maps produced by early explorers indicate the existence of at least 40 Gabrielino villages, but as many as 100 may have existed prior to contact with Europeans.[1,3,4]

Subsistence during the Late Prehistoric period consisted of hunting, fishing, and gathering. Small terrestrial game was hunted with deadfalls and rabbit drives, and by burning undergrowth, while larger game such as deer were hunted using bows and arrows. Fish were taken by hook and line, nets, traps, spears, and poison.[1,4] The primary plant resources were acorns gathered in the fall and processed with mortars and pestles, and various seeds that were harvested in late spring and summer and ground with manos and metates. The seeds included chia and other sages, various grasses, and Islay or holly-leafed cherry.[4]

Spanish explorers made brief visits to Gabrielino territory in 1542 and 1602, and on both occasions the two groups exchanged trade items.[3] Sustained contact with Europeans did not commence until the Spanish Period, which began in 1769 when Gaspar de Portola and a small Spanish contingent began their exploratory journey along the California coast from San Diego to Monterey. Gabrielino villages are reported by early explorers to have been most abundant along the dominant rivers of the Los Angeles Basin, including the Los Angeles, San Gabriel, and Santa Ana Rivers.

Mission San Gabriel Arcángel was founded September 8, 1771. The mission was initially located approximately 0.67-mile northwest of the end of the proposed pipeline alignment, near the intersection of East Lincoln Avenue and San Gabriel Boulevard. Today the site is known as Mission Vieja, or Old Mission. This location was chosen because of the near proximity of Gabrielino villages in Whittier Narrows.[3] The village named *Isantcanga* was located at or very near the old mission site.[4]

In 1776, Mission San Gabriel was moved to its present location, more than 4.5 miles northwest of the project vicinity. The establishment of the Mission was associated with a decline in the traditional Native American economic and social systems, as well as overall population due to epidemics and subsistence instabilities. This lifestyle change brought significant negative consequences for Gabrielino health and cultural integrity.[5] By the early 1800s, the majority of the surviving Gabrielino population had entered the mission system.

A detailed discussion of the prehistoric and historic overview related to the project area is located in Appendix C.

<u>Previously Recorded Cultural Resources</u>

The SCCIC records search identified 30 previously recorded cultural resources mapped within 0.5 mile of the proposed project area. Five of the resources are archaeological sites ranging from ceramic scatters to foundations, one is a railroad,

seven are transmission lines or towers, and 17 are buildings or building complexes. None of the resources enter into the proposed project area or footprint itself.

California Historical Landmarks

California Historical Landmarks are buildings, structures, sites, or places that have been determined to have statewide historical interest. A search of the California Historical Landmarks list revealed no California Historic Landmarks within 0.5 mile of the proposed project area.

Archaeological Survey

A reconnaissance-level archaeological field survey was conducted on December 6, 2019. The majority of the proposed project area is paved, built over, or otherwise obscured. No archaeological or historical resources meeting the age criterion of 45 years or more were identified at the proposed project site.

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

No additional thresholds of significance are available other than the CEQA thresholds listed in the table above.

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

A Paleontological, Historical, and Archaeological Resources Technical Memorandum (Appendix C) was prepared for the proposed project by AECOM in December 2019. The screening was conducted to identify known cultural resources in the proposed project area, provide context for the evaluation of cultural resources within this area that are 45 years or older, and inform interpretations regarding the potential to encounter previously unidentified cultural resources in the course of ground-disturbing work associated with the proposed project.

An archival search was conducted and included a records search at the SCCIC, inventories of the NRHP, the CRHR, the HRI, and California Historical Landmarks and Points of Interest were also reviewed to identify cultural resources within a 0.5-mile radius of the project area. Supplemental research in published and unpublished sources was also conducted to provide prehistoric and historic contexts for the project area.

On February 12, 2020, DTSC's Office of Environmental Equity submitted a Sacred Lands File search request, as well as a request for the list of project area Native American tribal contacts to the Native American Heritage Commission (NAHC). Subsequently, DTSC received a response from the NAHC and mailed out letters including a description of the proposed project to the list of Native American tribal contacts in early March 2020 and received one request for Tribal Consultation. Continued outreach to the remaining tribes on the NAHC list occurred throughout March-June 2020, with no additional responses received.

On May 21, 2020, a meeting to initiate government-to-government consultation was held between DTSC and the Gabrieleño Band of Mission Indians – Kizh Nation as part of the ongoing consultation process. As a result of this meeting, the Gabrieleño Band of Mission Indians – Kizh Nation provided DTSC with written correspondence outlining recommended mitigation measures, such as Native American monitoring during ground-disturbing construction activities to address their concerns regarding the proposed project. This government-to-government consultation remains ongoing and will be concluded prior to the adoption of this document. The mitigation measures have been incorporated into this analysis and are listed below.

**IMPACT ANALYSES AND CONCLUSIONS:**

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

   Impact Analysis: Construction of the proposed project would include earth-disturbing activities, such as excavation, within the public rights-of-way, as well as at the existing WNOU site and new booster station site. Operation of the proposed project would not require earth-disturbing activities. No other previously identified archaeological resources associated with Native American culture that are listed or eligible for listing in the NRHP, CRHR, or local register have been identified within a 0.5-mile radius of the project area, and no tribal cultural resources were identified in the archival research and outreach to date. Outreach to Native American tribal representatives is ongoing. Current

government-to-government consultation is occurring with one tribe and will conclude prior to the adoption of this document. Additional consultation or coordination with tribal representatives would occur based on any such requests received by DTSC. Therefore, construction impacts related to tribal cultural resources that are listed or eligible for listing in the CRHR, or in a local register of historical resources would be less than significant.

Conclusion: Less than significant impact.

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 © of Public Resource Code Section 5024.1. In applying the criteria set forth in subdivision © of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Impact Analysis: Construction of the proposed project would include earth-disturbing activities, such as excavation, within the public rights-of-way, as well as at the existing WNOU site and new booster station site. Operation of the proposed project would not require earth-disturbing activities. As previously discussed, Native American tribes and others may have resided in the vicinity of the proposed project. The NAHC Sacred Lands File search yielded a ***Positive*** result. No other previously identified archaeological resources associated with Native American culture have been identified within a 0.5-mile radius of the project area. Outreach to Native American tribal representatives is ongoing. Current government-to-government consultation is occurring with one tribe and will conclude prior to the adoption of this document. Additional consultation or coordination with tribal representatives would occur based on any such requests received by DTSC. The implementation of Mitigation Measures TCR-1 through TCR-4 listed below, would reduce potential impacts related to tribal cultural resources. As such, impacts related to tribal cultural resources that are a significant resource determined by the lead agency would be less than significant with mitigation.

Conclusion: Less than significant impact with mitigation.

Mitigation Measures:

**TCR-1:** **The following measures shall occur to mitigate for potential inadvertent discoveries:** The Project Manager shall develop a Standard Operating Procedure prior to ground-disturbing activities that will describe points of contact, a timeline and a schedule for the project. This shall include a monitoring plan to be provided to the Native American monitor and shall include provisions to halt work in the immediate area in the event of a discovery to allow for resource evaluation. The plan shall also identify the need for monitoring by both a cultural resource specialist (Archaeologist) and Native American monitor, and provide detailed guidance outlining when and for what activities monitors must be present.

**TCR-2:** **The following measures shall occur during monitoring to minimize the potential for destruction or damage to subsurface, previously undiscovered archaeological and/or tribal cultural resources and to identify any such resources at the earliest possible time during project-related earthmoving activities, the Project Manager and its Contractor(s) shall:** Invite, coordinate and compensate a Native American monitor from a culturally-affiliated Native American Tribe (as identified from the Native American Heritage Commission (NAHC) Tribal Contact List) to monitor all project-related, ground-disturbing construction activities (i.e., boring, grading, excavation, potholing, trenching, etc.) to determine the presence of any cultural resources. Native American representatives from culturally-affiliated Native American tribes act as a representative of their Tribal government and shall be consulted before any cultural studies or ground-disturbing activities begin. Native American representatives and Native American monitors have the authority to identify sites or objects of significance to Native Americans and to request that work be stopped, diverted, or slowed if such sites or objects are identified within the direct impact area. The Native American monitor shall complete daily monitoring logs that will provide descriptions of the day's activities, including construction activities, locations, soil, and any cultural materials identified. The Native American monitor shall adhere to the Project Contractor's and the Health and Safety Plan requirements to be on the project site. The on-site monitoring activities shall end when the project site grading and excavation activities are completed, or when the Tribal Monitor/consultant have indicated that the site has a low potential for impacting tribal cultural resources.

**TCR-3:** **The following measures shall be implemented to ensure the appropriate treatment of all unanticipated discoveries:** Cultural objects that are contributing elements to tribal cultural resources of significance have been identified within the project area by NAHC Sacred Land File (SLF). If such objects are unexpectedly discovered, impacts to such objects shall be mitigated by implementing culturally appropriate treatment of such objects. Culturally appropriate treatment includes (but is not limited to) minimizing handling of cultural objects and preservation in place (leaving such objects in place

within the landscape, rather than curating such objects at museums). Work will cease in the immediate vicinity of the find (based on the apparent distribution of cultural resources), whether a Native American monitor from an interested Native American Tribe is present or not. A qualified cultural resources specialist and Native American monitor from culturally-affiliated Native American Tribes shall assess the significance of the find and make recommendations for further evaluation and treatment as necessary. These recommendations shall be documented in the project record. Should adverse impacts to tribal cultural resources, unique archaeology, or other cultural resources occur, consultation with the NAHC tribe on record (as identified during government-to-government consultation) regarding mitigation contained in the Public Resources Code sections 21084.3(a) and (b) and CEQA Guidelines section 15370 shall occur.

**TCR-4:** **The following measures shall be implemented should articulated or disarticulated human remains be discovered:** If human remains are encountered, excavation shall be halted within 150 feet of the find until the County Coroner has determined the nature of the remains (work can continue in other parts of the project area). If the Coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, the Coroner shall contact the NAHC by telephone within 24 hours and PRC Section 5097.98 shall be followed. The NAHC shall identify a Most Likely Descendant (MLD). DTSC or the construction contractor shall consult with a Registered Professional Archaeologist and the designated MLD to determine the descendants' preference for treatment (5097.98 (b)(1)) and a respectful plan of treatment to be implemented for the remains and associated artifacts. If the MLD is determined by NAHC to be Gabrieleño Band of Mission Indians-Kizh Nation, the Tribe does not authorize any scientific study or the utilization of any invasive and/or destructive diagnostics on human remains. Any human remains discoveries are to be kept confidential and secure to prevent any further disturbance and there shall be no publicity regarding any cultural materials recovered.

*REFERENCES:*

1 Bean, Lowell John, and Smith, Charles R. 1978. Gabrielino. In *Handbook of North American Indians*, Vol. 9, pp. 538–562. Robert F. Heizer, editor. Smithsonian Institution, Washington, D.C.

2 Kroeber, Alfred L. 1925. Handbook of Indians of California. *Bureau of American Ethnology Bulletin 78*, Smithsonian Institution, Washington D.C.

3 McCawley, William 1996. *The First Angelinos: The Gabrielino Indians of Los Angeles.* Malki Museum Press. Banning.

4 Reid, Hugo 1939 [1852]. Letters on the Los Angeles County Indians. In *A Scotch Paisano in Old Los Angeles*, by Susanna Bryant Dakin, pp. 215–286. Berkeley, CA: University of California Press.

5 Jackson, Robert H. 1999. Agriculture, Drought & Chumash Congregation in the California Missions (1782-1834), *California Mission Studies Association*. Articles, May Newsletter.

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| 19. UTILITIES AND SERVICE SYSTEMS | | | | |
|---|---|---|---|---|
| **Would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | ☐ | ☐ | ☒ | ☐ |
| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? | ☐ | ☐ | ☐ | ☒ |
| c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | ☐ | ☐ | ☐ | ☒ |
| d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? | ☐ | ☐ | ☒ | ☐ |
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | ☐ | ☐ | ☐ | ☒ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

Federal

- Clean Water Act: The federal Clean Water Act (CWA) establishes regulatory requirements for potable water supplies including raw and treated water quality criteria. The City of Los Angeles is required to monitor water quality and conform to the regulatory requirements of the CWA.

State

- Safe Drinking Water Act: California enacted its own Safe Drinking Water Act (SDWA). Department of Health Services (DHS) has been granted primary enforcement responsibility for the SDWA. Title 22 of the California Administrative Code establishes CDHS authority and stipulates drinking water quality and monitoring standards. These standards are equal to or more stringent than the Federal standards.
- Title 22: The California Water Code requires the Department of Health Services (DHS) to establish water reclamation criteria. In 1975, the DHS prepared Title 22 to fulfill this requirement. Title 22 regulates production and use of reclaimed water in California by establishing three categories of reclaimed water: primary effluent, which typically includes grit removal and initial sedimentation or settling tanks; adequately disinfected, oxidized effluent (secondary effluent) which typically involves aeration and additional settling basins; and adequately disinfected, oxidized, coagulated, clarified, filtered effluent (tertiary effluent) which typically involves filtration and chlorination. In addition to defining reclaimed water uses, Title 22 also defines requirements for sampling and analysis of effluent and requires specific design requirements for facilities.
- Urban Water management Planning Act: The Urban Water Management Planning Act (California Water Code Division 6, Part 2.6 Sections 10610- 10656) was developed due to concerns over potential water supply shortages throughout California. It requires information on water supply reliability and water use efficiency measures. Urban water suppliers are required, as part of the Act, to develop and implement Urban Water Management Plans (UWMPs) to describe water supply, service area demand, population trends and efforts to promote efficient use and

management of water resources. An UWMP is intended to serve as a water supply and demand planning document that is updated to reflect changes in the water supplier's service area including water supply trends, and conservation and water use efficiency policies.

Local

- Los Angeles Department of Water and Power UWMP: The LADWP's UWMP is designed to meet the current requirements of the California Urban Water Management Planning Act, and it also serves as the City's master plan for water supply and resources management. The UWMP helps guide policy makers in the City and MWD, as well as providing important information to citizens of Los Angeles. While serving as a valuable resource for information, the UWMP provides the basic policy principles that will guide LADWP's decision-making process to secure a sustainable water supply for the City of Los Angeles
- County of Los Angeles UWMP: The County of Los Angeles 2015 UWMP was adopted on February 2017 and presents the county's current supply and demand situation along with an updated presentation of future supplies, demand forecasts and measures to monitor and control future demand. The 2015 UWMP, along with other water resource planning reports is used by County staff to guide the County's water use and management efforts.

**ENVIRONMENTAL SETTING (BASELINE):**

Electrical power at the WNOU Plant is provided by Southern California Edison. A central power facility for the treatment plant was installed during the original construction activities. The new pipeline will run along the north side of Durfee Avenue, adjacent to the WNOU Plant. Active and inactive oil pipelines are located in the treatment plant vicinity. The exact location and configuration of these pipelines is unknown.

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

For the purposes of this analysis, the alternative would result in a substantial impact on energy and utilities if it would:

- Result in extensive disruptions to public utility services

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

No environmental studies were performed for this resource. Readily available information was reviewed for this assessment.

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

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?

Impact Analysis: The proposed project is the modification of an existing groundwater treatment plant, the construction of approximately 7,265 liner feet of new pipeline as part of the new Blend Water Supply Pipeline, and the construction of the new Plant B28 Booster Station.

The WNOU Blended Water Pipeline would be installed from the existing WNOU booster discharge header to San Gabriel's existing 30-inch water main in Durfee Avenue ROW. This blended water pipeline will allow blended water from the WNOU site to be delivered to the off-site boosters and distributed to San Gabriel's customers in the area served by San Gabriel's Plant B5.

The new Blend Water Supply Pipeline would ultimately bring water from San Gabriel's water system, served by Plant No. 11, to the WNOU site for blending The blending pipeline will be installed so that the high quality water from San Gabriel's water system can be blended with water produced at the WNOU site to maintain Total Dissolved Solids below 500 parts per million in the treated water at the WNOU site.

The Plant B28 Booster Station would include a 3,000 gpm off-site booster station and related site improvements. A total of four booster pumps would be installed within the Plant B28 Booster Station, each with a design flow rate of 1,000 gpm and approximately 120-foot Total Dynamic Head. A maximum of three pumps would operate at a time, with the fourth pump provided as a backup. The proposed booster piping will be extended to discharge to the existing 16-inch diameter water main on Workman Mill Road, east of the Crossroads Parkway.

The proposed project is being constructed to increase the pumping rate of the existing groundwater extraction wells to contain groundwater contamination within the Main San Gabriel Groundwater Basin, prevent further migration into the adjoining Los Angeles Central Groundwater Basin, and protect nearby municipal water supply wells. The construction associated with these modifications will predominantly occur within existing paved areas and rights-of-way. Relocation of existing utilities are not required for this project. The proposed project will require the construction

of new water pipeline to distribute the increase water flow. However, the construction of new wastewater treatment and/or stormwater drainage, electric power, natural gas, or telecommunications facilities is not required as the result of this project and will not cause significant environmental effects.

Conclusion: Less than significant.

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

Impact Analysis: No new or expanded water services would be required during or following the proposed project. This proposed project will have sufficient water supplies available to serve the project from existing entitlements and resources.

Conclusion: No impact.

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?

Impact Analysis: No applicable.

Conclusion: No impact.

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?

Impact Analysis: The majority of this excavated material during construction of the WNOU Blended Water Pipeline alignment and the Blend Water Supply Pipeline would be used to backfill the trenches following pipe installation. Approximately 5,400 cubic yards of soil will be exported from the pipeline excavations and 300 from the new Plant B28 Booster Station. The proposed quantity of material to be exported from the proposed project sites minimal and would not be in excess of the capacity of local infrastructure.

Conclusion: Less than significant.

e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Impact Analysis: The proposed project will comply with federal, state, and local statutes and regulations related to solid waste, both during construction and during on-going treatment plant operations.

Conclusion: No impact.

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| **20. WILDFIRE** | | | | |
|---|---|---|---|---|
| **If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:** | **Potentially Significant Impact** | **Less Than Significant with Mitigation** | **Less Than Significant Impact** | **No Impact** |
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☒ | ☐ |
| b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? | ☐ | ☐ | ☒ | ☐ |
| c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? | ☐ | ☐ | ☐ | ☒ |
| d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? | ☐ | ☐ | ☒ | ☐ |

**REGULATORY SETTING (LAWS, ORDINANCES, REGULATIONS, STANDARDS):**

None applicable.

**ENVIRONMENTAL SETTING (BASELINE):**

The proposed project is located in areas that have not been mapped within a Fire Hazard Severity Zone.[1] Areas considered to be have a low risk of fire hazards are urban areas where fire access is available and the terrain is relatively flat or up to 20 percent slope.[2] Urban fires are typically presented by industrial areas, hazardous material users, structures with substandard electrical wiring, high voltage power lines, and high pressure gas lines. In the event of a fire at the WNOU Plant, the Los Angeles County Fire Department's Battalion 10 would provide fire and emergency safety services.

**APPLICABLE THRESHOLDS OF SIGNIFICANCE:**

Impacts are more likely to occur in areas designated as susceptible to wildfires, or for project that would substantially impair an adopted emergency response plan or emergency evacuation plan.

**ENVIRONMENTAL STUDIES PERFORMED AND METHODOLOGY:**

No environmental studies were performed for this resource. Readily available information was reviewed for this assessment.

**IMPACT ANALYSES AND CONCLUSIONS:**

Analysis as to whether or not project activities would:

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

   Impact Analysis: Construction of the proposed WNOU Blended Water Pipeline alignment project will occur along approximately 20 linear feet within the existing WNOU site and would connect to the main pipeline within the ROW of Durfee Avenue. The proposed Blend Water Supply Pipeline will occur along approximately 7,265 linear feet within the existing ROW of Durfee Avenue, between the exiting WNOU site and the intersection of Durfee Avenue and Peck Road. It is likely that temporary, partial road closures would be required for construction activities associated with the WNOU Blended Water Pipeline and Blend Water Supply Pipeline, affecting Durfee Avenue and Peck Road.

   Construction of the proposed new Plant B28 Booster Station would occur within the boundaries of the currently vacant Plant B28 Booster Station site, including the establishment of a construction laydown area. It is likely that temporary, partial road closures would be required for construction activities associated with the Plant B28 Booster Station, affecting Workman Mill Road.

During construction, vehicular and pedestrian detours would be provided to guide traffic around the construction sites and laydown areas. Street closures would occur daily (Monday through Friday), typically from 7 a.m. to 3:30 p.m. during construction hours or throughout the construction period, unless there is an emergency. Prior to initiating construction, the construction contractor would obtain a permit from the Los Angeles County Department of Public Works which would include a traffic control plan that addresses potential impacts to emergency response or evacuation.

Road closures are not anticipated during operation of the proposed project.

Conclusion: Less than significant.

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?

Impact Analysis: The proposed project sites and surrounding areas are relatively flat and are not located in areas that have been mapped as Fire Hazard Severity Zones. In the event of a nearby wildfire during construction or operations, workers could be exposed to pollutant concentrations or the uncontrolled spread of a wildfire. However, if a fire were to occur at or in the vicinity of the proposed project construction, workers would be evacuated as necessary to avoid potential exposure to wildfires and/or it's pollutants.

Conclusion: Less than significant.

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?

Impact Analysis: Not applicable.

Conclusion: No impact.

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?

Impact Analysis: The proposed project sites and surrounding areas are relatively flat and are not located in areas that have been mapped as Fire Hazard Severity Zones. Therefore, downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes are unlikely.

Conclusion: Less than significant.

*REFERENCES:*

*1 2019. County of Los Angeles Fire Department. Fire Hazard Reduction Programs, Fire Hazard Severity Zones, LACounty GIS Viewer. Accessed at: https://www.fire.lacounty.gov/forestry-division/fire-hazard-reduction-programs/ on December 10, 2019.*

## 21. MANDATORY FINDINGS OF SIGNIFICANCE

**Based on evidence provided in this Initial Study, DTSC makes the following findings:**

a. The project does not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

b. The project does not have impacts that are individually limited but cumulatively considerable. ("Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

c. The project does not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

Authority: Public Resources Code 21083, 21094.5.5
Reference: Public Resources Code Sections 21094.5 and 21094.5.5

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# FIGURES


Source: Esri Maps & Data, 2019.

0 3 6 12 18 24 Miles

**Figure 1**

**Regional Location Map**

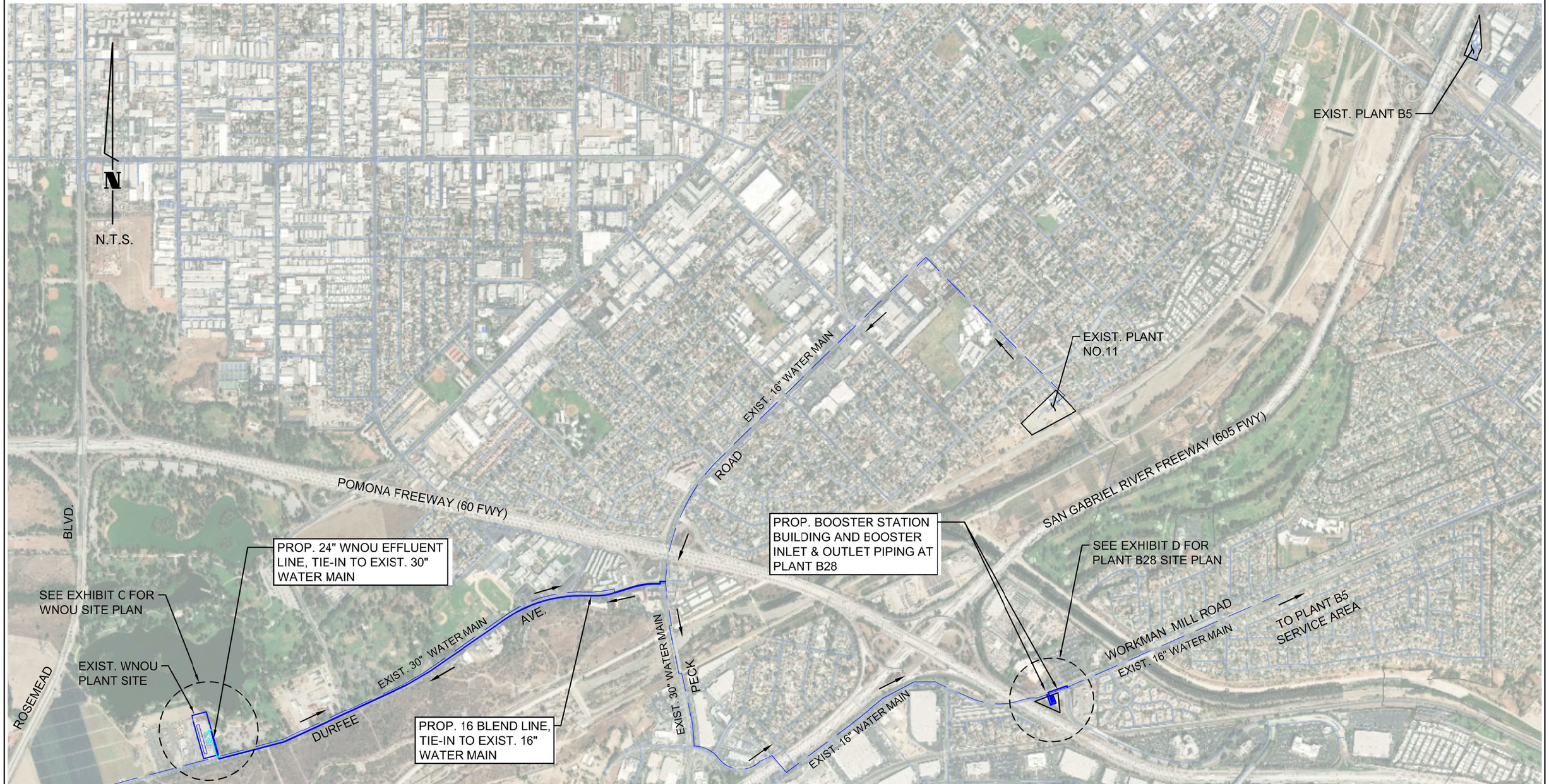
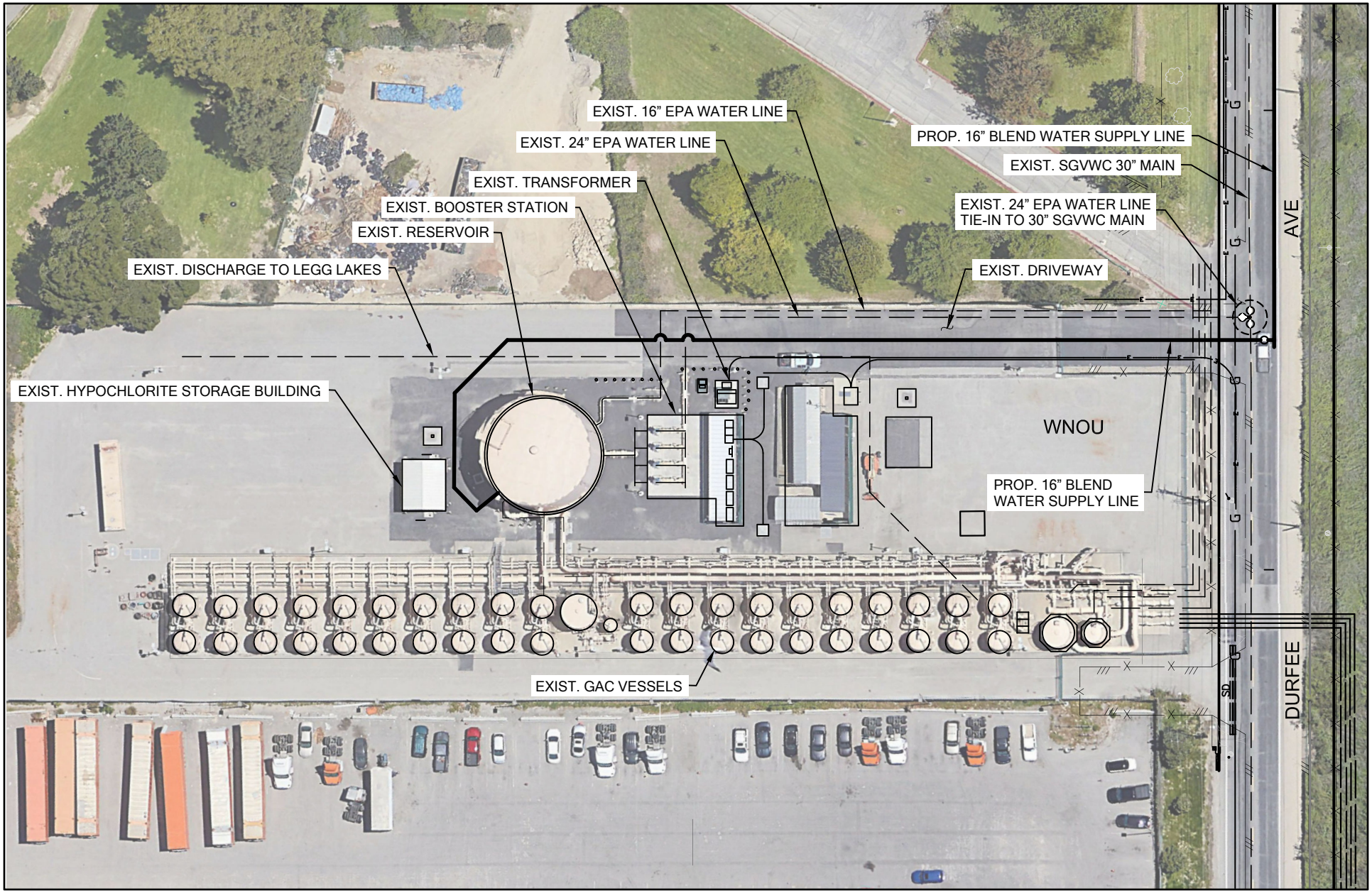


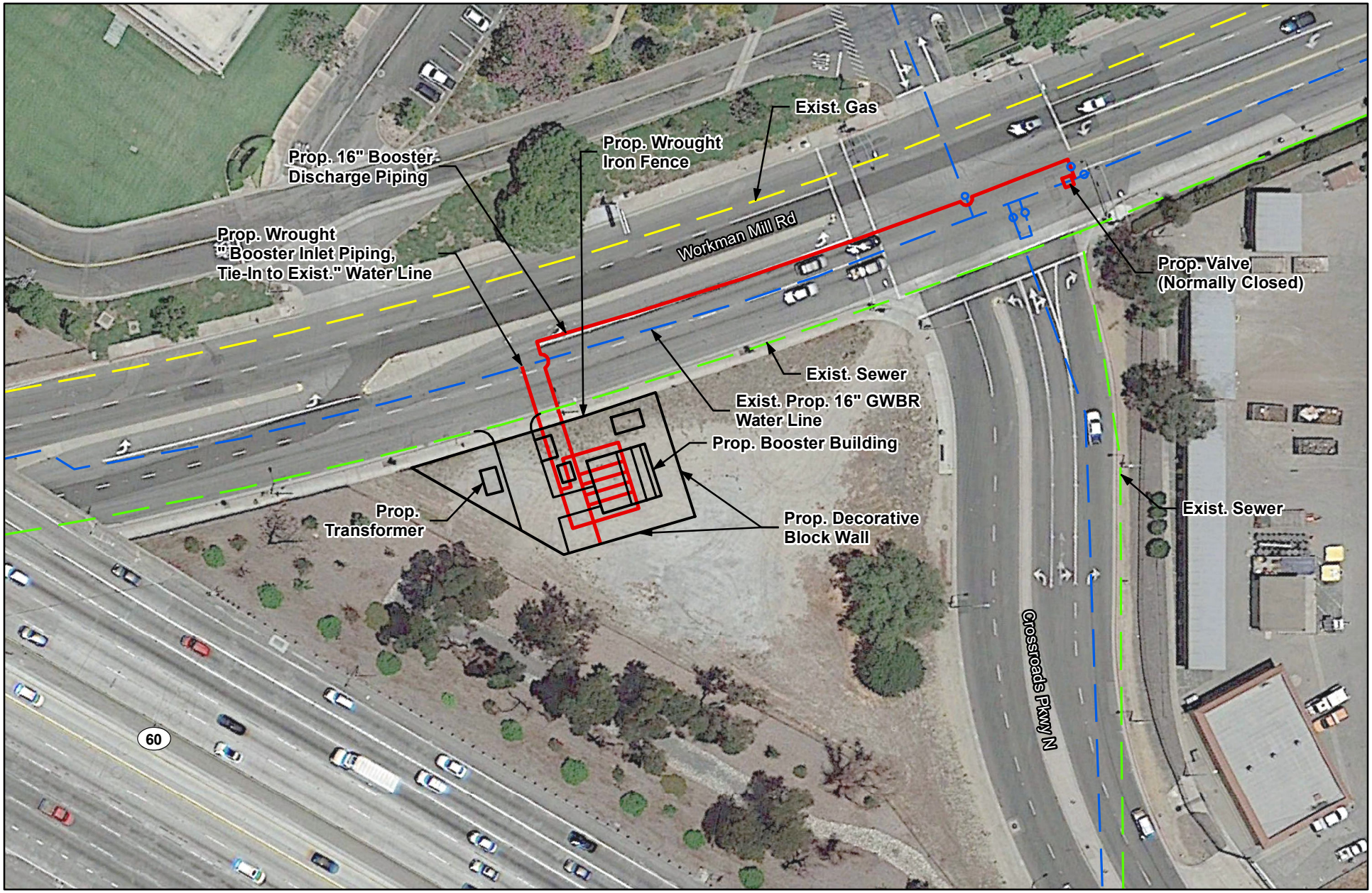

**Figure 2**
**Proposed Project Location Map**

NOT TO SCALE




NOT TO SCALE

**Figure 3**
**Existing WNOU Site and Proposed Pipeline Location Map**




Source: Esri 2020; Created by: AECOM, 2020.

0 35 70 Feet

1" = 70'

Proposed Pipeline

Exisitng Pipeline

**Figure 4**

**Proposed Booster Station**

# APPENDIX A

# Air Quality Modeling

# WNOU Blend Project

**Los Angeles-South Coast County, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| User Defined Industrial | 1.00 | User Defined Unit | 0.87 | 0.00 | 0 |
| User Defined Industrial | 1.00 | User Defined Unit | 0.02 | 938.56 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 33 |
| **Climate Zone** | 9 | | | **Operational Year** | 2021 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 513 | **CH4 Intensity (lb/MWhr)** | 0 | **N2O Intensity (lb/MWhr)** | 0 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - SCE carbon intensity from 2018 Sustainability Report: 513 lb CO2e/MWh

Land Use - Industrial land use acreages and square footages to reflect lengths of pipelines, approximate trench width, and booster pump station building square footage.

Construction Phase - Assumes a maximum 12 month construction schedule, with building construction, coatings, and paving, conservatively assumed to overlap during grading activities.

Off-road Equipment - Default equipment.

Off-road Equipment - Project specific equipment: concrete truck modeled as off-highway truck, assuming operating approximately 2 hrs onsite and included as vendor trip.

Off-road Equipment - Project specific equipment: dump truck modeled as off-highway truck, assuming operating approximately 2 hrs onsite and included as hauling trip.

Off-road Equipment - Project specific equipment: dump truck modeled as off-highway truck, assuming operating approximately 2 hrs onsite and included as hauling trip.

Off-road Equipment - Default equipment.

Trips and VMT - Assumes 18 peak workers during pipeline, 10 peak workers during booster pump station construction. Vendor trips include daily work trucks and peak concrete trucks. Dump trucks assume 16 CY capacity trucks.

Grading - Assumes 5,400 CY and 300 CY for material import/export for pipeline and booster station, respectively.

Energy Use -

Construction Off-road Equipment Mitigation - Construction best management practices assumes watering twice per day, travel on unpaved roads limited to 15 mph.

Operational Off-Road Equipment - Assumes 4- 40 hp pumps are used 4 hrs/day, 365 days per year, based on similar projects.

Stationary Sources - Emergency Generators and Fire Pumps - Assumes use of a back up generator, 50 hours per year for maintenance/testing and maximum of one hour per day.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 5.00 | 43.00 |
| tblConstructionPhase | NumDays | 100.00 | 43.00 |
| tblConstructionPhase | NumDays | 2.00 | 66.00 |
| tblConstructionPhase | NumDays | 2.00 | 197.00 |
| tblConstructionPhase | NumDays | 5.00 | 43.00 |
| tblGrading | MaterialExported | 0.00 | 5,400.00 |
| tblGrading | MaterialExported | 0.00 | 300.00 |

WNOU Blend Project - Los Angeles-South Coast County, Winter

| | | | |
|---|---|---|---|
| tblGrading | MaterialImported | 0.00 | 5,400.00 |
| tblGrading | MaterialImported | 0.00 | 300.00 |
| tblLandUse | LandUseSquareFeet | 0.00 | 938.56 |
| tblLandUse | LotAcreage | 0.00 | 0.87 |
| tblLandUse | LotAcreage | 0.00 | 0.02 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 4.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 1.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 1.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 365.00 |
| tblOperationalOffRoadEquipment | OperFuelType | Diesel | Electrical |
| tblOperationalOffRoadEquipment | OperHorsePower | 84.00 | 40.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 4.00 |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 4.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0 |
| tblProjectCharacteristics | CO2IntensityFactor | 702.44 | 513 |

| | | | |
|---|---|---|---|
| tblProjectCharacteristics | N2OIntensityFactor | 0.006 | 0 |
| tblStationaryGeneratorsPumpsUse | HoursPerYear | 0.00 | 50.00 |
| tblStationaryGeneratorsPumpsUse | NumberOfEquipment | 0.00 | 1.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 10.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 12.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 6.00 |
| tblTripsAndVMT | WorkerTripNumber | 8.00 | 36.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 20.00 |
| tblTripsAndVMT | WorkerTripNumber | 18.00 | 0.00 |

## 2.0 Emissions Summary

## 2.1 Overall Construction (Maximum Daily Emission)

### Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2020 | 1.0599 | 12.9426 | 11.3664 | 0.0319 | 0.8426 | 0.4950 | 1.1939 | 0.2260 | 0.4557 | 0.5501 | 0.0000 | 3,309.7326 | 3,309.7326 | 0.5553 | 0.0000 | 3,321.0327 |
| 2021 | 2.8606 | 26.3665 | 25.4039 | 0.0502 | 0.3542 | 1.2107 | 1.5649 | 0.0964 | 1.1250 | 1.2214 | 0.0000 | 4,854.9710 | 4,854.9710 | 1.2696 | 0.0000 | 4,886.7113 |
| **Maximum** | **2.8606** | **26.3665** | **25.4039** | **0.0502** | **0.8426** | **1.2107** | **1.5649** | **0.2260** | **1.1250** | **1.2214** | **0.0000** | **4,854.9710** | **4,854.9710** | **1.2696** | **0.0000** | **4,886.7113** |

### Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | lb/day | | | | | | | | | | lb/day | | | | | |
| 2020 | 1.0599 | 12.9426 | 11.3664 | 0.0319 | 0.8324 | 0.4950 | 1.1837 | 0.2244 | 0.4557 | 0.5486 | 0.0000 | 3,309.7326 | 3,309.7326 | 0.5553 | 0.0000 | 3,321.0327 |
| 2021 | 2.8606 | 26.3665 | 25.4039 | 0.0502 | 0.3540 | 1.2107 | 1.5647 | 0.0964 | 1.1250 | 1.2213 | 0.0000 | 4,854.9710 | 4,854.9710 | 1.2696 | 0.0000 | 4,886.7112 |
| **Maximum** | **2.8606** | **26.3665** | **25.4039** | **0.0502** | **0.8324** | **1.2107** | **1.5647** | **0.2244** | **1.1250** | **1.2213** | **0.0000** | **4,854.9710** | **4,854.9710** | **1.2696** | **0.0000** | **4,886.7112** |

| | **ROG** | **NOx** | **CO** | **SO2** | **Fugitive PM10** | **Exhaust PM10** | **PM10 Total** | **Fugitive PM2.5** | **Exhaust PM2.5** | **PM2.5 Total** | **Bio- CO2** | **NBio-CO2** | **Total CO2** | **CH4** | **N20** | **CO2e** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **0.87** | **0.00** | **0.38** | **0.49** | **0.00** | **0.09** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 0.0210 | 0.0000 | 2.0000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 4.4000e-004 | 4.4000e-004 | 0.0000 | | 4.7000e-004 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Offroad | 0.7006 | 4.1409 | 4.2798 | 7.3100e-003 | | 0.1827 | 0.1827 | | 0.1827 | 0.1827 | | 593.3663 | 593.3663 | 0.0627 | | 594.9324 |
| Stationary | 0.2625 | 0.7339 | 0.9528 | 1.2600e-003 | | 0.0386 | 0.0386 | | 0.0386 | 0.0386 | | 134.3223 | 134.3223 | 0.0188 | | 134.7931 |
| **Total** | **0.9841** | **4.8748** | **5.2328** | **8.5700e-003** | **0.0000** | **0.2213** | **0.2213** | **0.0000** | **0.2213** | **0.2213** | | **727.6890** | **727.6890** | **0.0815** | **0.0000** | **729.7260** |

## 2.2 Overall Operational

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 0.0210 | 0.0000 | 2.0000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 4.4000e-004 | 4.4000e-004 | 0.0000 | | 4.7000e-004 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Offroad | 0.7006 | 4.1409 | 4.2798 | 7.3100e-003 | | 0.1827 | 0.1827 | | 0.1827 | 0.1827 | | 593.3663 | 593.3663 | 0.0627 | | 594.9324 |
| Stationary | 0.2625 | 0.7339 | 0.9528 | 1.2600e-003 | | 0.0386 | 0.0386 | | 0.0386 | 0.0386 | | 134.3223 | 134.3223 | 0.0188 | | 134.7931 |
| **Total** | **0.9841** | **4.8748** | **5.2328** | **8.5700e-003** | **0.0000** | **0.2213** | **0.2213** | **0.0000** | **0.2213** | **0.2213** | | **727.6890** | **727.6890** | **0.0815** | **0.0000** | **729.7260** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 3.0 Construction Detail

**Construction Phase**

WNOU Blend Project - Los Angeles-South Coast County, Winter

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Grading - Pipeline | Grading | 4/13/2020 | 7/13/2020 | 5 | 66 | |
| 2 | Grading - Booster Station | Grading | 7/14/2020 | 4/14/2021 | 5 | 197 | |
| 3 | Building Construction - Booster Station | Building Construction | 2/14/2021 | 4/14/2021 | 5 | 43 | |
| 4 | Paving | Paving | 2/14/2021 | 4/14/2021 | 5 | 43 | |
| 5 | Architectural Coating | Architectural Coating | 2/14/2021 | 4/14/2021 | 5 | 43 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,408; Non-Residential Outdoor: 469; Striped Parking Area: 0 (Architectural Coating – sqft)**

**<u>OffRoad Equipment</u>**

WNOU Blend Project - Los Angeles-South Coast County, Winter

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Grading - Pipeline | Concrete/Industrial Saws | 0 | 0.00 | 81 | 0.73 |
| Grading - Pipeline | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Grading - Pipeline | Rubber Tired Dozers | 0 | 0.00 | 247 | 0.40 |
| Grading - Pipeline | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Building Construction - Booster Station | Aerial Lifts | 1 | 8.00 | 63 | 0.31 |
| Building Construction - Booster Station | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Construction - Booster Station | Forklifts | 1 | 8.00 | 89 | 0.20 |
| Building Construction - Booster Station | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Building Construction - Booster Station | Tractors/Loaders/Backhoes | 0 | 0.00 | 97 | 0.37 |
| Paving | Cement and Mortar Mixers | 4 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 7.00 | 130 | 0.42 |
| Paving | Rollers | 1 | 7.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |
| Grading - Booster Station | Concrete/Industrial Saws | 0 | 0.00 | 81 | 0.73 |
| Grading - Booster Station | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading - Booster Station | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Grading - Booster Station | Rubber Tired Dozers | 0 | 0.00 | 247 | 0.40 |
| Grading - Booster Station | Skid Steer Loaders | 1 | 8.00 | 65 | 0.37 |
| Grading - Booster Station | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Grading - Pipeline | 3 | 36.00 | 10.00 | 1,350.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction - Booster Station | 4 | 0.00 | 6.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 7 | 0.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 0.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading - Booster Station | 5 | 20.00 | 12.00 | 75.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

## 3.2 Grading - Pipeline - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0185 | 0.0000 | 0.0185 | 2.8000e-003 | 0.0000 | 2.8000e-003 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.5848 | 5.7910 | 5.5119 | 9.5100e-003 | | 0.3238 | 0.3238 | | 0.2979 | 0.2979 | | 921.1925 | 921.1925 | 0.2979 | | 928.6408 |
| **Total** | **0.5848** | **5.7910** | **5.5119** | **9.5100e-003** | **0.0185** | **0.3238** | **0.3423** | **2.8000e-003** | **0.2979** | **0.3007** | | **921.1925** | **921.1925** | **0.2979** | | **928.6408** |

## 3.2 Grading - Pipeline - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1830 | 5.9576 | 1.3851 | 0.0159 | 0.3576 | 0.0191 | 0.3767 | 0.0980 | 0.0182 | 0.1163 | | 1,720.4197 | 1,720.4197 | 0.1235 | | 1,723.5069 |
| Vendor | 0.0372 | 1.0635 | 0.3074 | 2.5200e-003 | 0.0640 | 5.0900e-003 | 0.0691 | 0.0184 | 4.8700e-003 | 0.0233 | | 269.4491 | 269.4491 | 0.0180 | | 269.8995 |
| Worker | 0.1840 | 0.1305 | 1.4436 | 4.0000e-003 | 0.4024 | 3.3600e-003 | 0.4058 | 0.1067 | 3.1000e-003 | 0.1098 | | 398.6713 | 398.6713 | 0.0126 | | 398.9855 |
| **Total** | **0.4042** | **7.1516** | **3.1361** | **0.0224** | **0.8241** | **0.0275** | **0.8516** | **0.2232** | **0.0262** | **0.2494** | | **2,388.5401** | **2,388.5401** | **0.1541** | | **2,392.3919** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 8.3300e-003 | 0.0000 | 8.3300e-003 | 1.2600e-003 | 0.0000 | 1.2600e-003 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.5848 | 5.7910 | 5.5119 | 9.5100e-003 | | 0.3238 | 0.3238 | | 0.2979 | 0.2979 | 0.0000 | 921.1925 | 921.1925 | 0.2979 | | 928.6408 |
| **Total** | **0.5848** | **5.7910** | **5.5119** | **9.5100e-003** | **8.3300e-003** | **0.3238** | **0.3322** | **1.2600e-003** | **0.2979** | **0.2992** | **0.0000** | **921.1925** | **921.1925** | **0.2979** | | **928.6408** |

## 3.2 Grading - Pipeline - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1830 | 5.9576 | 1.3851 | 0.0159 | 0.3576 | 0.0191 | 0.3767 | 0.0980 | 0.0182 | 0.1163 | | 1,720.4197 | 1,720.4197 | 0.1235 | | 1,723.5069 |
| Vendor | 0.0372 | 1.0635 | 0.3074 | 2.5200e-003 | 0.0640 | 5.0900e-003 | 0.0691 | 0.0184 | 4.8700e-003 | 0.0233 | | 269.4491 | 269.4491 | 0.0180 | | 269.8995 |
| Worker | 0.1840 | 0.1305 | 1.4436 | 4.0000e-003 | 0.4024 | 3.3600e-003 | 0.4058 | 0.1067 | 3.1000e-003 | 0.1098 | | 398.6713 | 398.6713 | 0.0126 | | 398.9855 |
| **Total** | **0.4042** | **7.1516** | **3.1361** | **0.0224** | **0.8241** | **0.0275** | **0.8516** | **0.2232** | **0.0262** | **0.2494** | | **2,388.5401** | **2,388.5401** | **0.1541** | | **2,392.3919** |

## 3.3 Grading - Booster Station - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 3.4000e-004 | 0.0000 | 3.4000e-004 | 5.0000e-005 | 0.0000 | 5.0000e-005 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.9097 | 9.2660 | 10.1698 | 0.0168 | | 0.4867 | 0.4867 | | 0.4478 | 0.4478 | | 1,621.4797 | 1,621.4797 | 0.5244 | | 1,634.5902 |
| **Total** | **0.9097** | **9.2660** | **10.1698** | **0.0168** | **3.4000e-004** | **0.4867** | **0.4870** | **5.0000e-005** | **0.4478** | **0.4478** | | **1,621.4797** | **1,621.4797** | **0.5244** | | **1,634.5902** |

## 3.3 Grading - Booster Station - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 3.4100e-003 | 0.1109 | 0.0258 | 3.0000e-004 | 9.6800e-003 | 3.5000e-004 | 0.0100 | 2.5700e-003 | 3.4000e-004 | 2.9100e-003 | | 32.0214 | 32.0214 | 2.3000e-003 | | 32.0788 |
| Vendor | 0.0446 | 1.2762 | 0.3689 | 3.0300e-003 | 0.0768 | 6.1000e-003 | 0.0829 | 0.0221 | 5.8400e-003 | 0.0280 | | 323.3389 | 323.3389 | 0.0216 | | 323.8794 |
| Worker | 0.1022 | 0.0725 | 0.8020 | 2.2200e-003 | 0.2236 | 1.8700e-003 | 0.2254 | 0.0593 | 1.7200e-003 | 0.0610 | | 221.4841 | 221.4841 | 6.9800e-003 | | 221.6586 |
| **Total** | **0.1502** | **1.4596** | **1.1967** | **5.5500e-003** | **0.3101** | **8.3200e-003** | **0.3184** | **0.0840** | **7.9000e-003** | **0.0919** | | **576.8443** | **576.8443** | **0.0309** | | **577.6168** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.5000e-004 | 0.0000 | 1.5000e-004 | 2.0000e-005 | 0.0000 | 2.0000e-005 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.9097 | 9.2660 | 10.1698 | 0.0168 | | 0.4867 | 0.4867 | | 0.4478 | 0.4478 | 0.0000 | 1,621.4797 | 1,621.4797 | 0.5244 | | 1,634.5902 |
| **Total** | **0.9097** | **9.2660** | **10.1698** | **0.0168** | **1.5000e-004** | **0.4867** | **0.4868** | **2.0000e-005** | **0.4478** | **0.4478** | **0.0000** | **1,621.4797** | **1,621.4797** | **0.5244** | | **1,634.5902** |

## 3.3 Grading - Booster Station - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 3.4100e-003 | 0.1109 | 0.0258 | 3.0000e-004 | 9.6800e-003 | 3.5000e-004 | 0.0100 | 2.5700e-003 | 3.4000e-004 | 2.9100e-003 | | 32.0214 | 32.0214 | 2.3000e-003 | | 32.0788 |
| Vendor | 0.0446 | 1.2762 | 0.3689 | 3.0300e-003 | 0.0768 | 6.1000e-003 | 0.0829 | 0.0221 | 5.8400e-003 | 0.0280 | | 323.3389 | 323.3389 | 0.0216 | | 323.8794 |
| Worker | 0.1022 | 0.0725 | 0.8020 | 2.2200e-003 | 0.2236 | 1.8700e-003 | 0.2254 | 0.0593 | 1.7200e-003 | 0.0610 | | 221.4841 | 221.4841 | 6.9800e-003 | | 221.6586 |
| **Total** | **0.1502** | **1.4596** | **1.1967** | **5.5500e-003** | **0.3101** | **8.3200e-003** | **0.3184** | **0.0840** | **7.9000e-003** | **0.0919** | | **576.8443** | **576.8443** | **0.0309** | | **577.6168** |

## 3.3 Grading - Booster Station - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 3.4000e-004 | 0.0000 | 3.4000e-004 | 5.0000e-005 | 0.0000 | 5.0000e-005 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8307 | 8.2644 | 10.0833 | 0.0168 | | 0.4171 | 0.4171 | | 0.3837 | 0.3837 | | 1,621.8212 | 1,621.8212 | 0.5245 | | 1,634.9345 |
| **Total** | **0.8307** | **8.2644** | **10.0833** | **0.0168** | **3.4000e-004** | **0.4171** | **0.4174** | **5.0000e-005** | **0.3837** | **0.3838** | | **1,621.8212** | **1,621.8212** | **0.5245** | | **1,634.9345** |

## 3.3 Grading - Booster Station - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 3.2500e-003 | 0.1034 | 0.0254 | 2.9000e-004 | 0.0150 | 3.2000e-004 | 0.0153 | 3.8800e-003 | 3.0000e-004 | 4.1800e-003 | | 31.6669 | 31.6669 | 2.2600e-003 | | 31.7235 |
| Vendor | 0.0383 | 1.1627 | 0.3369 | 3.0000e-003 | 0.0768 | 2.4600e-003 | 0.0793 | 0.0221 | 2.3500e-003 | 0.0245 | | 320.8146 | 320.8146 | 0.0207 | | 321.3324 |
| Worker | 0.0954 | 0.0652 | 0.7365 | 2.1500e-003 | 0.2236 | 1.8100e-003 | 0.2254 | 0.0593 | 1.6600e-003 | 0.0610 | | 214.4502 | 214.4502 | 6.3100e-003 | | 214.6080 |
| **Total** | **0.1369** | **1.3313** | **1.0988** | **5.4400e-003** | **0.3154** | **4.5900e-003** | **0.3200** | **0.0853** | **4.3100e-003** | **0.0896** | | **566.9317** | **566.9317** | **0.0293** | | **567.6639** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 1.5000e-004 | 0.0000 | 1.5000e-004 | 2.0000e-005 | 0.0000 | 2.0000e-005 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8307 | 8.2644 | 10.0833 | 0.0168 | | 0.4171 | 0.4171 | | 0.3837 | 0.3837 | 0.0000 | 1,621.8212 | 1,621.8212 | 0.5245 | | 1,634.9345 |
| **Total** | **0.8307** | **8.2644** | **10.0833** | **0.0168** | **1.5000e-004** | **0.4171** | **0.4172** | **2.0000e-005** | **0.3837** | **0.3837** | **0.0000** | **1,621.8212** | **1,621.8212** | **0.5245** | | **1,634.9345** |

## 3.3 Grading - Booster Station - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 3.2500e-003 | 0.1034 | 0.0254 | 2.9000e-004 | 0.0150 | 3.2000e-004 | 0.0153 | 3.8800e-003 | 3.0000e-004 | 4.1800e-003 | | 31.6669 | 31.6669 | 2.2600e-003 | | 31.7235 |
| Vendor | 0.0383 | 1.1627 | 0.3369 | 3.0000e-003 | 0.0768 | 2.4600e-003 | 0.0793 | 0.0221 | 2.3500e-003 | 0.0245 | | 320.8146 | 320.8146 | 0.0207 | | 321.3324 |
| Worker | 0.0954 | 0.0652 | 0.7365 | 2.1500e-003 | 0.2236 | 1.8100e-003 | 0.2254 | 0.0593 | 1.6600e-003 | 0.0610 | | 214.4502 | 214.4502 | 6.3100e-003 | | 214.6080 |
| **Total** | **0.1369** | **1.3313** | **1.0988** | **5.4400e-003** | **0.3154** | **4.5900e-003** | **0.3200** | **0.0853** | **4.3100e-003** | **0.0896** | | **566.9317** | **566.9317** | **0.0293** | | **567.6639** |

## 3.4 Building Construction - Booster Station - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.7312 | 7.9449 | 5.1458 | 0.0123 | | 0.3403 | 0.3403 | | 0.3131 | 0.3131 | | 1,189.0202 | 1,189.0202 | 0.3846 | | 1,198.6340 |
| **Total** | **0.7312** | **7.9449** | **5.1458** | **0.0123** | | **0.3403** | **0.3403** | | **0.3131** | **0.3131** | | **1,189.0202** | **1,189.0202** | **0.3846** | | **1,198.6340** |

## 3.4 Building Construction - Booster Station - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0192 | 0.5813 | 0.1685 | 1.5000e-003 | 0.0384 | 1.2300e-003 | 0.0396 | 0.0111 | 1.1800e-003 | 0.0122 | | 160.4073 | 160.4073 | 0.0104 | | 160.6662 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **0.0192** | **0.5813** | **0.1685** | **1.5000e-003** | **0.0384** | **1.2300e-003** | **0.0396** | **0.0111** | **1.1800e-003** | **0.0122** | | **160.4073** | **160.4073** | **0.0104** | | **160.6662** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.7312 | 7.9449 | 5.1458 | 0.0123 | | 0.3403 | 0.3403 | | 0.3131 | 0.3131 | 0.0000 | 1,189.0202 | 1,189.0202 | 0.3846 | | 1,198.6340 |
| **Total** | **0.7312** | **7.9449** | **5.1458** | **0.0123** | | **0.3403** | **0.3403** | | **0.3131** | **0.3131** | **0.0000** | **1,189.0202** | **1,189.0202** | **0.3846** | | **1,198.6340** |

## 3.4 Building Construction - Booster Station - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0192 | 0.5813 | 0.1685 | 1.5000e-003 | 0.0384 | 1.2300e-003 | 0.0396 | 0.0111 | 1.1800e-003 | 0.0122 | | 160.4073 | 160.4073 | 0.0104 | | 160.6662 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **0.0192** | **0.5813** | **0.1685** | **1.5000e-003** | **0.0384** | **1.2300e-003** | **0.0396** | **0.0111** | **1.1800e-003** | **0.0122** | | **160.4073** | **160.4073** | **0.0104** | | **160.6662** |

## 3.5 Paving - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.7214 | 6.7178 | 7.0899 | 0.0113 | | 0.3534 | 0.3534 | | 0.3286 | 0.3286 | | 1,035.3425 | 1,035.3425 | 0.3016 | | 1,042.8818 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **0.7214** | **6.7178** | **7.0899** | **0.0113** | | **0.3534** | **0.3534** | | **0.3286** | **0.3286** | | **1,035.3425** | **1,035.3425** | **0.3016** | | **1,042.8818** |

## 3.5 Paving - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | | **0.0000** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 0.7214 | 6.7178 | 7.0899 | 0.0113 | | 0.3534 | 0.3534 | | 0.3286 | 0.3286 | 0.0000 | 1,035.3425 | 1,035.3425 | 0.3016 | | 1,042.8818 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **0.7214** | **6.7178** | **7.0899** | **0.0113** | | **0.3534** | **0.3534** | | **0.3286** | **0.3286** | **0.0000** | **1,035.3425** | **1,035.3425** | **0.3016** | | **1,042.8818** |

## 3.5 Paving - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | | **0.0000** |

## 3.6 Architectural Coating - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 0.2023 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2189 | 1.5268 | 1.8176 | 2.9700e-003 | | 0.0941 | 0.0941 | | 0.0941 | 0.0941 | | 281.4481 | 281.4481 | 0.0193 | | 281.9309 |
| **Total** | **0.4212** | **1.5268** | **1.8176** | **2.9700e-003** | | **0.0941** | **0.0941** | | **0.0941** | **0.0941** | | **281.4481** | **281.4481** | **0.0193** | | **281.9309** |

## 3.6 Architectural Coating - 2021

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | | **0.0000** |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 0.2023 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2189 | 1.5268 | 1.8176 | 2.9700e-003 | | 0.0941 | 0.0941 | | 0.0941 | 0.0941 | 0.0000 | 281.4481 | 281.4481 | 0.0193 | | 281.9309 |
| **Total** | **0.4212** | **1.5268** | **1.8176** | **2.9700e-003** | | **0.0941** | **0.0941** | | **0.0941** | **0.0941** | **0.0000** | **281.4481** | **281.4481** | **0.0193** | | **281.9309** |

## 3.6 Architectural Coating - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | | **0.0000** |

# 4.0 Operational Detail - Mobile

## 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| User Defined Industrial | 0.00 | 0.00 | 0.00 | | |
| User Defined Industrial | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| User Defined Industrial | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| User Defined Industrial | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | 0.547192 | 0.045177 | 0.202743 | 0.121510 | 0.016147 | 0.006143 | 0.019743 | 0.029945 | 0.002479 | 0.002270 | 0.005078 | 0.000682 | 0.000891 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| NaturalGas Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

## 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| User Defined Industrial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | lb/day | | | | | | | | | | lb/day | | | | | |
| User Defined Industrial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.0210 | 0.0000 | 2.0000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 4.4000e-004 | 4.4000e-004 | 0.0000 | | 4.7000e-004 |
| Unmitigated | 0.0210 | 0.0000 | 2.0000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 4.4000e-004 | 4.4000e-004 | 0.0000 | | 4.7000e-004 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 2.3800e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.0186 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 2.0000e-005 | 0.0000 | 2.0000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 4.4000e-004 | 4.4000e-004 | 0.0000 | | 4.7000e-004 |
| **Total** | **0.0210** | **0.0000** | **2.0000e-004** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | | **4.4000e-004** | **4.4000e-004** | **0.0000** | | **4.7000e-004** |

### 6.2 Area by SubCategory

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 2.3800e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.0186 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 2.0000e-005 | 0.0000 | 2.0000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 4.4000e-004 | 4.4000e-004 | 0.0000 | | 4.7000e-004 |
| **Total** | **0.0210** | **0.0000** | **2.0000e-004** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | | **4.4000e-004** | **4.4000e-004** | **0.0000** | | **4.7000e-004** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|
| Pumps | 4 | 4.00 | 365 | 40 | 0.74 | Electrical |

**UnMitigated/Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | lb/day | | | | | | | | | | lb/day | | | | | |
| Pumps | 0.7006 | 4.1409 | 4.2798 | 7.3100e-003 | | 0.1827 | 0.1827 | | 0.1827 | 0.1827 | | 593.3663 | 593.3663 | 0.0627 | | 594.9324 |
| **Total** | **0.7006** | **4.1409** | **4.2798** | **7.3100e-003** | | **0.1827** | **0.1827** | | **0.1827** | **0.1827** | | **593.3663** | **593.3663** | **0.0627** | | **594.9324** |

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|
| Emergency Generator | 1 | 1 | 50 | 160 | 0.73 | Diesel |

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|---|---|---|---|---|---|

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 10.1 Stationary Sources

**Unmitigated/Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | lb/day | | | | | | | | | | lb/day | | | | | |
| Emergency Generator - Diesel (100 - 175 HP) | 0.2625 | 0.7339 | 0.9528 | 1.2600e-003 | | 0.0386 | 0.0386 | | 0.0386 | 0.0386 | | 134.3223 | 134.3223 | 0.0188 | | 134.7931 |
| **Total** | **0.2625** | **0.7339** | **0.9528** | **1.2600e-003** | | **0.0386** | **0.0386** | | **0.0386** | **0.0386** | | **134.3223** | **134.3223** | **0.0188** | | **134.7931** |

## 11.0 Vegetation

# WNOU Blend Project

**Los Angeles-South Coast County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| User Defined Industrial | 1.00 | User Defined Unit | 0.87 | 0.00 | 0 |
| User Defined Industrial | 1.00 | User Defined Unit | 0.02 | 938.56 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 33 |
| **Climate Zone** | 9 | | | **Operational Year** | 2021 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 513 | **CH4 Intensity (lb/MWhr)** | 0 | **N2O Intensity (lb/MWhr)** | 0 |

### 1.3 User Entered Comments & Non-Default Data

WNOU Blend Project - Los Angeles-South Coast County, Annual

Project Characteristics - SCE carbon intensity from 2018 Sustainability Report: 513 lb CO2e/MWh

Land Use - Industrial land use acreages and square footages to reflect lengths of pipelines, approximate trench width, and booster pump station building square footage.

Construction Phase - Assumes a maximum 12 month construction schedule, with building construction, coatings, and paving, conservatively assumed to overlap during grading activities.

Off-road Equipment - Default equipment.

Off-road Equipment - Project specific equipment: concrete truck modeled as off-highway truck, assuming operating approximately 2 hrs onsite and included as vendor trip.

Off-road Equipment - Project specific equipment: dump truck modeled as off-highway truck, assuming operating approximately 2 hrs onsite and included as hauling trip.

Off-road Equipment - Project specific equipment: dump truck modeled as off-highway truck, assuming operating approximately 2 hrs onsite and included as hauling trip.

Off-road Equipment - Default equipment.

Trips and VMT - Assumes 18 peak workers during pipeline, 10 peak workers during booster pump station construction. Vendor trips include daily work trucks and peak concrete trucks. Dump trucks assume 16 CY capacity trucks.

Grading - Assumes 5,400 CY and 300 CY for material import/export for pipeline and booster station, respectively.

Energy Use -

Construction Off-road Equipment Mitigation - Construction best management practices assumes watering twice per day, travel on unpaved roads limited to 15 mph.

Operational Off-Road Equipment - Assumes 4- 40 hp pumps are used 4 hrs/day, 365 days per year, based on similar projects.

Stationary Sources - Emergency Generators and Fire Pumps - Assumes use of a back up generator, 50 hours per year for maintenance/testing and maximum of one hour per day.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 5.00 | 43.00 |
| tblConstructionPhase | NumDays | 100.00 | 43.00 |
| tblConstructionPhase | NumDays | 2.00 | 66.00 |
| tblConstructionPhase | NumDays | 2.00 | 197.00 |
| tblConstructionPhase | NumDays | 5.00 | 43.00 |
| tblGrading | MaterialExported | 0.00 | 5,400.00 |
| tblGrading | MaterialExported | 0.00 | 300.00 |

| | | | |
|---|---|---|---|
| tblGrading | MaterialImported | 0.00 | 5,400.00 |
| tblGrading | MaterialImported | 0.00 | 300.00 |
| tblLandUse | LandUseSquareFeet | 0.00 | 938.56 |
| tblLandUse | LotAcreage | 0.00 | 0.87 |
| tblLandUse | LotAcreage | 0.00 | 0.02 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 4.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 1.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 1.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 365.00 |
| tblOperationalOffRoadEquipment | OperFuelType | Diesel | Electrical |
| tblOperationalOffRoadEquipment | OperHorsePower | 84.00 | 40.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 4.00 |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 4.00 |
| tblProjectCharacteristics | CH4IntensityFactor | 0.029 | 0 |
| tblProjectCharacteristics | CO2IntensityFactor | 702.44 | 513 |

| | | | |
|---|---|---|---|
| tblProjectCharacteristics | N2OIntensityFactor | 0.006 | 0 |
| tblStationaryGeneratorsPumpsUse | HoursPerYear | 0.00 | 50.00 |
| tblStationaryGeneratorsPumpsUse | NumberOfEquipment | 0.00 | 1.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 10.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 12.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 6.00 |
| tblTripsAndVMT | WorkerTripNumber | 8.00 | 36.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 20.00 |
| tblTripsAndVMT | WorkerTripNumber | 18.00 | 0.00 |

## 2.0 Emissions Summary

## 2.1 Overall Construction

### Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2020 | 0.0964 | 1.0931 | 0.9839 | 2.4400e-003 | 0.0461 | 0.0420 | 0.0881 | 0.0124 | 0.0387 | 0.0511 | 0.0000 | 223.1039 | 223.1039 | 0.0444 | 0.0000 | 224.2136 |
| 2021 | 0.0761 | 0.7168 | 0.7195 | 1.4300e-003 | 0.0123 | 0.0326 | 0.0449 | 3.3400e-003 | 0.0302 | 0.0335 | 0.0000 | 125.8283 | 125.8283 | 0.0325 | 0.0000 | 126.6414 |
| **Maximum** | **0.0964** | **1.0931** | **0.9839** | **2.4400e-003** | **0.0461** | **0.0420** | **0.0881** | **0.0124** | **0.0387** | **0.0511** | **0.0000** | **223.1039** | **223.1039** | **0.0444** | **0.0000** | **224.2136** |

### Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2020 | 0.0964 | 1.0931 | 0.9839 | 2.4400e-003 | 0.0457 | 0.0420 | 0.0877 | 0.0124 | 0.0387 | 0.0511 | 0.0000 | 223.1037 | 223.1037 | 0.0444 | 0.0000 | 224.2135 |
| 2021 | 0.0761 | 0.7168 | 0.7195 | 1.4300e-003 | 0.0123 | 0.0326 | 0.0448 | 3.3400e-003 | 0.0302 | 0.0335 | 0.0000 | 125.8282 | 125.8282 | 0.0325 | 0.0000 | 126.6413 |
| **Maximum** | **0.0964** | **1.0931** | **0.9839** | **2.4400e-003** | **0.0457** | **0.0420** | **0.0877** | **0.0124** | **0.0387** | **0.0511** | **0.0000** | **223.1037** | **223.1037** | **0.0444** | **0.0000** | **224.2135** |

| | **ROG** | **NOx** | **CO** | **SO2** | **Fugitive PM10** | **Exhaust PM10** | **PM10 Total** | **Fugitive PM2.5** | **Exhaust PM2.5** | **PM2.5 Total** | **Bio- CO2** | **NBio-CO2** | **Total CO2** | **CH4** | **N20** | **CO2e** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **0.63** | **0.00** | **0.28** | **0.38** | **0.00** | **0.07** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---|---|---|---|---|
| **1** | **4-13-2020** | **7-12-2020** | 0.4491 | 0.4491 |
| **2** | **7-13-2020** | **10-12-2020** | 0.3874 | 0.3874 |
| **3** | **10-13-2020** | **1-12-2021** | 0.3820 | 0.3820 |
| **4** | **1-13-2021** | **4-12-2021** | 0.7261 | 0.7261 |
| **5** | **4-13-2021** | **7-12-2021** | 0.0209 | 0.0209 |
| | | **Highest** | 0.7261 | 0.7261 |

## 2.2 Overall Operational

**Unmitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 3.8300e-003 | 0.0000 | 3.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 5.0000e-005 | 5.0000e-005 | 0.0000 | 0.0000 | 5.0000e-005 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Offroad | 0.1279 | 0.7557 | 0.7811 | 1.3300e-003 | | 0.0334 | 0.0334 | | 0.0334 | 0.0334 | 0.0000 | 98.2384 | 98.2384 | 0.0104 | 0.0000 | 98.4977 |
| Stationary | 6.5600e-003 | 0.0184 | 0.0238 | 3.0000e-005 | | 9.7000e-004 | 9.7000e-004 | | 9.7000e-004 | 9.7000e-004 | 0.0000 | 3.0464 | 3.0464 | 4.3000e-004 | 0.0000 | 3.0571 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.1383** | **0.7741** | **0.8049** | **1.3600e-003** | **0.0000** | **0.0343** | **0.0343** | **0.0000** | **0.0343** | **0.0343** | **0.0000** | **101.2849** | **101.2849** | **0.0108** | **0.0000** | **101.5548** |

## 2.2 Overall Operational

**Mitigated Operational**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 3.8300e-003 | 0.0000 | 3.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 5.0000e-005 | 5.0000e-005 | 0.0000 | 0.0000 | 5.0000e-005 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Offroad | 0.1279 | 0.7557 | 0.7811 | 1.3300e-003 | | 0.0334 | 0.0334 | | 0.0334 | 0.0334 | 0.0000 | 98.2384 | 98.2384 | 0.0104 | 0.0000 | 98.4977 |
| Stationary | 6.5600e-003 | 0.0184 | 0.0238 | 3.0000e-005 | | 9.7000e-004 | 9.7000e-004 | | 9.7000e-004 | 9.7000e-004 | 0.0000 | 3.0464 | 3.0464 | 4.3000e-004 | 0.0000 | 3.0571 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.1383** | **0.7741** | **0.8049** | **1.3600e-003** | **0.0000** | **0.0343** | **0.0343** | **0.0000** | **0.0343** | **0.0343** | **0.0000** | **101.2849** | **101.2849** | **0.0108** | **0.0000** | **101.5548** |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N20 | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Percent Reduction** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 3.0 Construction Detail

**Construction Phase**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Grading - Pipeline | Grading | 4/13/2020 | 7/13/2020 | 5 | 66 | |
| 2 | Grading - Booster Station | Grading | 7/14/2020 | 4/14/2021 | 5 | 197 | |
| 3 | Building Construction - Booster Station | Building Construction | 2/14/2021 | 4/14/2021 | 5 | 43 | |
| 4 | Paving | Paving | 2/14/2021 | 4/14/2021 | 5 | 43 | |
| 5 | Architectural Coating | Architectural Coating | 2/14/2021 | 4/14/2021 | 5 | 43 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,408; Non-Residential Outdoor: 469; Striped Parking Area: 0 (Architectural Coating – sqft)**

**<u>OffRoad Equipment</u>**

WNOU Blend Project - Los Angeles-South Coast County, Annual

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Grading - Pipeline | Concrete/Industrial Saws | 0 | 0.00 | 81 | 0.73 |
| Grading - Pipeline | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Grading - Pipeline | Rubber Tired Dozers | 0 | 0.00 | 247 | 0.40 |
| Grading - Pipeline | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Building Construction - Booster Station | Aerial Lifts | 1 | 8.00 | 63 | 0.31 |
| Building Construction - Booster Station | Cranes | 1 | 8.00 | 231 | 0.29 |
| Building Construction - Booster Station | Forklifts | 1 | 8.00 | 89 | 0.20 |
| Building Construction - Booster Station | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Building Construction - Booster Station | Tractors/Loaders/Backhoes | 0 | 0.00 | 97 | 0.37 |
| Paving | Cement and Mortar Mixers | 4 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 7.00 | 130 | 0.42 |
| Paving | Rollers | 1 | 7.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |
| Grading - Booster Station | Concrete/Industrial Saws | 0 | 0.00 | 81 | 0.73 |
| Grading - Booster Station | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading - Booster Station | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Grading - Booster Station | Rubber Tired Dozers | 0 | 0.00 | 247 | 0.40 |
| Grading - Booster Station | Skid Steer Loaders | 1 | 8.00 | 65 | 0.37 |
| Grading - Booster Station | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Grading - Pipeline | 3 | 36.00 | 10.00 | 1,350.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction - Booster Station | 4 | 0.00 | 6.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 7 | 0.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 0.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading - Booster Station | 5 | 20.00 | 12.00 | 75.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

## 3.2 Grading - Pipeline - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 6.1000e-004 | 0.0000 | 6.1000e-004 | 9.0000e-005 | 0.0000 | 9.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0193 | 0.1911 | 0.1819 | 3.1000e-004 | | 0.0107 | 0.0107 | | 9.8300e-003 | 9.8300e-003 | 0.0000 | 27.5778 | 27.5778 | 8.9200e-003 | 0.0000 | 27.8008 |
| **Total** | **0.0193** | **0.1911** | **0.1819** | **3.1000e-004** | **6.1000e-004** | **0.0107** | **0.0113** | **9.0000e-005** | **9.8300e-003** | **9.9200e-003** | **0.0000** | **27.5778** | **27.5778** | **8.9200e-003** | **0.0000** | **27.8008** |

## 3.2 Grading - Pipeline - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 5.9600e-003 | 0.2005 | 0.0442 | 5.3000e-004 | 0.0116 | 6.2000e-004 | 0.0122 | 3.1900e-003 | 6.0000e-004 | 3.7800e-003 | 0.0000 | 52.0278 | 52.0278 | 3.6200e-003 | 0.0000 | 52.1184 |
| Vendor | 1.2000e-003 | 0.0358 | 9.6800e-003 | 8.0000e-005 | 2.0800e-003 | 1.7000e-004 | 2.2400e-003 | 6.0000e-004 | 1.6000e-004 | 7.6000e-004 | 0.0000 | 8.1981 | 8.1981 | 5.2000e-004 | 0.0000 | 8.2111 |
| Worker | 5.4800e-003 | 4.4200e-003 | 0.0489 | 1.3000e-004 | 0.0130 | 1.1000e-004 | 0.0131 | 3.4600e-003 | 1.0000e-004 | 3.5600e-003 | 0.0000 | 12.1336 | 12.1336 | 3.8000e-004 | 0.0000 | 12.1432 |
| **Total** | **0.0126** | **0.2406** | **0.1028** | **7.4000e-004** | **0.0267** | **9.0000e-004** | **0.0276** | **7.2500e-003** | **8.6000e-004** | **8.1000e-003** | **0.0000** | **72.3595** | **72.3595** | **4.5200e-003** | **0.0000** | **72.4727** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 2.7000e-004 | 0.0000 | 2.7000e-004 | 4.0000e-005 | 0.0000 | 4.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0193 | 0.1911 | 0.1819 | 3.1000e-004 | | 0.0107 | 0.0107 | | 9.8300e-003 | 9.8300e-003 | 0.0000 | 27.5778 | 27.5778 | 8.9200e-003 | 0.0000 | 27.8008 |
| **Total** | **0.0193** | **0.1911** | **0.1819** | **3.1000e-004** | **2.7000e-004** | **0.0107** | **0.0110** | **4.0000e-005** | **9.8300e-003** | **9.8700e-003** | **0.0000** | **27.5778** | **27.5778** | **8.9200e-003** | **0.0000** | **27.8008** |

## 3.2 Grading - Pipeline - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 5.9600e-003 | 0.2005 | 0.0442 | 5.3000e-004 | 0.0116 | 6.2000e-004 | 0.0122 | 3.1900e-003 | 6.0000e-004 | 3.7800e-003 | 0.0000 | 52.0278 | 52.0278 | 3.6200e-003 | 0.0000 | 52.1184 |
| Vendor | 1.2000e-003 | 0.0358 | 9.6800e-003 | 8.0000e-005 | 2.0800e-003 | 1.7000e-004 | 2.2400e-003 | 6.0000e-004 | 1.6000e-004 | 7.6000e-004 | 0.0000 | 8.1981 | 8.1981 | 5.2000e-004 | 0.0000 | 8.2111 |
| Worker | 5.4800e-003 | 4.4200e-003 | 0.0489 | 1.3000e-004 | 0.0130 | 1.1000e-004 | 0.0131 | 3.4600e-003 | 1.0000e-004 | 3.5600e-003 | 0.0000 | 12.1336 | 12.1336 | 3.8000e-004 | 0.0000 | 12.1432 |
| **Total** | **0.0126** | **0.2406** | **0.1028** | **7.4000e-004** | **0.0267** | **9.0000e-004** | **0.0276** | **7.2500e-003** | **8.6000e-004** | **8.1000e-003** | **0.0000** | **72.3595** | **72.3595** | **4.5200e-003** | **0.0000** | **72.4727** |

## 3.3 Grading - Booster Station - 2020

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 3.0000e-005 | 0.0000 | 3.0000e-005 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0559 | 0.5699 | 0.6254 | 1.0300e-003 | | 0.0299 | 0.0299 | | 0.0275 | 0.0275 | 0.0000 | 90.4654 | 90.4654 | 0.0293 | 0.0000 | 91.1968 |
| **Total** | **0.0559** | **0.5699** | **0.6254** | **1.0300e-003** | **3.0000e-005** | **0.0299** | **0.0300** | **1.0000e-005** | **0.0275** | **0.0276** | **0.0000** | **90.4654** | **90.4654** | **0.0293** | **0.0000** | **91.1968** |

## 3.3 Grading - Booster Station - 2020

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 2.1000e-004 | 6.9500e-003 | 1.5300e-003 | 2.0000e-005 | 5.8000e-004 | 2.0000e-005 | 6.1000e-004 | 1.6000e-004 | 2.0000e-005 | 1.8000e-004 | 0.0000 | 1.8047 | 1.8047 | 1.3000e-004 | 0.0000 | 1.8078 |
| Vendor | 2.6800e-003 | 0.0800 | 0.0217 | 1.9000e-004 | 4.6500e-003 | 3.7000e-004 | 5.0200e-003 | 1.3400e-003 | 3.6000e-004 | 1.7000e-003 | 0.0000 | 18.3339 | 18.3339 | 1.1700e-003 | 0.0000 | 18.3630 |
| Worker | 5.6800e-003 | 4.5800e-003 | 0.0506 | 1.4000e-004 | 0.0135 | 1.1000e-004 | 0.0136 | 3.5800e-003 | 1.1000e-004 | 3.6900e-003 | 0.0000 | 12.5626 | 12.5626 | 4.0000e-004 | 0.0000 | 12.5725 |
| **Total** | **8.5700e-003** | **0.0915** | **0.0738** | **3.5000e-004** | **0.0187** | **5.0000e-004** | **0.0192** | **5.0800e-003** | **4.9000e-004** | **5.5700e-003** | **0.0000** | **32.7012** | **32.7012** | **1.7000e-003** | **0.0000** | **32.7433** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 2.0000e-005 | 0.0000 | 2.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0559 | 0.5699 | 0.6254 | 1.0300e-003 | | 0.0299 | 0.0299 | | 0.0275 | 0.0275 | 0.0000 | 90.4653 | 90.4653 | 0.0293 | 0.0000 | 91.1967 |
| **Total** | **0.0559** | **0.5699** | **0.6254** | **1.0300e-003** | **2.0000e-005** | **0.0299** | **0.0300** | **0.0000** | **0.0275** | **0.0275** | **0.0000** | **90.4653** | **90.4653** | **0.0293** | **0.0000** | **91.1967** |

## 3.3 Grading - Booster Station - 2020

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 2.1000e-004 | 6.9500e-003 | 1.5300e-003 | 2.0000e-005 | 5.8000e-004 | 2.0000e-005 | 6.1000e-004 | 1.6000e-004 | 2.0000e-005 | 1.8000e-004 | 0.0000 | 1.8047 | 1.8047 | 1.3000e-004 | 0.0000 | 1.8078 |
| Vendor | 2.6800e-003 | 0.0800 | 0.0217 | 1.9000e-004 | 4.6500e-003 | 3.7000e-004 | 5.0200e-003 | 1.3400e-003 | 3.6000e-004 | 1.7000e-003 | 0.0000 | 18.3339 | 18.3339 | 1.1700e-003 | 0.0000 | 18.3630 |
| Worker | 5.6800e-003 | 4.5800e-003 | 0.0506 | 1.4000e-004 | 0.0135 | 1.1000e-004 | 0.0136 | 3.5800e-003 | 1.1000e-004 | 3.6900e-003 | 0.0000 | 12.5626 | 12.5626 | 4.0000e-004 | 0.0000 | 12.5725 |
| **Total** | **8.5700e-003** | **0.0915** | **0.0738** | **3.5000e-004** | **0.0187** | **5.0000e-004** | **0.0192** | **5.0800e-003** | **4.9000e-004** | **5.5700e-003** | **0.0000** | **32.7012** | **32.7012** | **1.7000e-003** | **0.0000** | **32.7433** |

## 3.3 Grading - Booster Station - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 3.0000e-005 | 0.0000 | 3.0000e-005 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0307 | 0.3058 | 0.3731 | 6.2000e-004 | | 0.0154 | 0.0154 | | 0.0142 | 0.0142 | 0.0000 | 54.4378 | 54.4378 | 0.0176 | 0.0000 | 54.8779 |
| **Total** | **0.0307** | **0.3058** | **0.3731** | **6.2000e-004** | **3.0000e-005** | **0.0154** | **0.0155** | **1.0000e-005** | **0.0142** | **0.0142** | **0.0000** | **54.4378** | **54.4378** | **0.0176** | **0.0000** | **54.8779** |

## 3.3 Grading - Booster Station - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 1.2000e-004 | 3.9000e-003 | 9.1000e-004 | 1.0000e-005 | 5.4000e-004 | 1.0000e-005 | 5.6000e-004 | 1.4000e-004 | 1.0000e-005 | 1.5000e-004 | 0.0000 | 1.0738 | 1.0738 | 7.0000e-005 | 0.0000 | 1.0757 |
| Vendor | 1.3800e-003 | 0.0438 | 0.0119 | 1.1000e-004 | 2.8000e-003 | 9.0000e-005 | 2.8900e-003 | 8.1000e-004 | 9.0000e-005 | 8.9000e-004 | 0.0000 | 10.9445 | 10.9445 | 6.7000e-004 | 0.0000 | 10.9612 |
| Worker | 3.1800e-003 | 2.4800e-003 | 0.0280 | 8.0000e-005 | 8.1100e-003 | 7.0000e-005 | 8.1800e-003 | 2.1500e-003 | 6.0000e-005 | 2.2200e-003 | 0.0000 | 7.3180 | 7.3180 | 2.2000e-004 | 0.0000 | 7.3234 |
| **Total** | **4.6800e-003** | **0.0502** | **0.0408** | **2.0000e-004** | **0.0115** | **1.7000e-004** | **0.0116** | **3.1000e-003** | **1.6000e-004** | **3.2600e-003** | **0.0000** | **19.3362** | **19.3362** | **9.6000e-004** | **0.0000** | **19.3603** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 2.0000e-005 | 0.0000 | 2.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0307 | 0.3058 | 0.3731 | 6.2000e-004 | | 0.0154 | 0.0154 | | 0.0142 | 0.0142 | 0.0000 | 54.4377 | 54.4377 | 0.0176 | 0.0000 | 54.8779 |
| **Total** | **0.0307** | **0.3058** | **0.3731** | **6.2000e-004** | **2.0000e-005** | **0.0154** | **0.0155** | **0.0000** | **0.0142** | **0.0142** | **0.0000** | **54.4377** | **54.4377** | **0.0176** | **0.0000** | **54.8779** |

## 3.3 Grading - Booster Station - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 1.2000e-004 | 3.9000e-003 | 9.1000e-004 | 1.0000e-005 | 5.4000e-004 | 1.0000e-005 | 5.6000e-004 | 1.4000e-004 | 1.0000e-005 | 1.5000e-004 | 0.0000 | 1.0738 | 1.0738 | 7.0000e-005 | 0.0000 | 1.0757 |
| Vendor | 1.3800e-003 | 0.0438 | 0.0119 | 1.1000e-004 | 2.8000e-003 | 9.0000e-005 | 2.8900e-003 | 8.1000e-004 | 9.0000e-005 | 8.9000e-004 | 0.0000 | 10.9445 | 10.9445 | 6.7000e-004 | 0.0000 | 10.9612 |
| Worker | 3.1800e-003 | 2.4800e-003 | 0.0280 | 8.0000e-005 | 8.1100e-003 | 7.0000e-005 | 8.1800e-003 | 2.1500e-003 | 6.0000e-005 | 2.2200e-003 | 0.0000 | 7.3180 | 7.3180 | 2.2000e-004 | 0.0000 | 7.3234 |
| **Total** | **4.6800e-003** | **0.0502** | **0.0408** | **2.0000e-004** | **0.0115** | **1.7000e-004** | **0.0116** | **3.1000e-003** | **1.6000e-004** | **3.2600e-003** | **0.0000** | **19.3362** | **19.3362** | **9.6000e-004** | **0.0000** | **19.3603** |

## 3.4 Building Construction - Booster Station - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0157 | 0.1708 | 0.1106 | 2.6000e-004 | | 7.3200e-003 | 7.3200e-003 | | 6.7300e-003 | 6.7300e-003 | 0.0000 | 23.1912 | 23.1912 | 7.5000e-003 | 0.0000 | 23.3787 |
| **Total** | **0.0157** | **0.1708** | **0.1106** | **2.6000e-004** | | **7.3200e-003** | **7.3200e-003** | | **6.7300e-003** | **6.7300e-003** | **0.0000** | **23.1912** | **23.1912** | **7.5000e-003** | **0.0000** | **23.3787** |

## 3.4 Building Construction - Booster Station - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 4.0000e-004 | 0.0127 | 3.4500e-003 | 3.0000e-005 | 8.1000e-004 | 3.0000e-005 | 8.4000e-004 | 2.3000e-004 | 2.0000e-005 | 2.6000e-004 | 0.0000 | 3.1798 | 3.1798 | 2.0000e-004 | 0.0000 | 3.1847 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **4.0000e-004** | **0.0127** | **3.4500e-003** | **3.0000e-005** | **8.1000e-004** | **3.0000e-005** | **8.4000e-004** | **2.3000e-004** | **2.0000e-005** | **2.6000e-004** | **0.0000** | **3.1798** | **3.1798** | **2.0000e-004** | **0.0000** | **3.1847** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0157 | 0.1708 | 0.1106 | 2.6000e-004 | | 7.3200e-003 | 7.3200e-003 | | 6.7300e-003 | 6.7300e-003 | 0.0000 | 23.1912 | 23.1912 | 7.5000e-003 | 0.0000 | 23.3787 |
| **Total** | **0.0157** | **0.1708** | **0.1106** | **2.6000e-004** | | **7.3200e-003** | **7.3200e-003** | | **6.7300e-003** | **6.7300e-003** | **0.0000** | **23.1912** | **23.1912** | **7.5000e-003** | **0.0000** | **23.3787** |

## 3.4 Building Construction - Booster Station - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 4.0000e-004 | 0.0127 | 3.4500e-003 | 3.0000e-005 | 8.1000e-004 | 3.0000e-005 | 8.4000e-004 | 2.3000e-004 | 2.0000e-005 | 2.6000e-004 | 0.0000 | 3.1798 | 3.1798 | 2.0000e-004 | 0.0000 | 3.1847 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **4.0000e-004** | **0.0127** | **3.4500e-003** | **3.0000e-005** | **8.1000e-004** | **3.0000e-005** | **8.4000e-004** | **2.3000e-004** | **2.0000e-005** | **2.6000e-004** | **0.0000** | **3.1798** | **3.1798** | **2.0000e-004** | **0.0000** | **3.1847** |

## 3.5 Paving - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0155 | 0.1444 | 0.1524 | 2.4000e-004 | | 7.6000e-003 | 7.6000e-003 | | 7.0600e-003 | 7.0600e-003 | 0.0000 | 20.1938 | 20.1938 | 5.8800e-003 | 0.0000 | 20.3409 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0155** | **0.1444** | **0.1524** | **2.4000e-004** | | **7.6000e-003** | **7.6000e-003** | | **7.0600e-003** | **7.0600e-003** | **0.0000** | **20.1938** | **20.1938** | **5.8800e-003** | **0.0000** | **20.3409** |

## 3.5 Paving - 2021

### Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

### Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0155 | 0.1444 | 0.1524 | 2.4000e-004 | | 7.6000e-003 | 7.6000e-003 | | 7.0600e-003 | 7.0600e-003 | 0.0000 | 20.1938 | 20.1938 | 5.8800e-003 | 0.0000 | 20.3408 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0155** | **0.1444** | **0.1524** | **2.4000e-004** | | **7.6000e-003** | **7.6000e-003** | | **7.0600e-003** | **7.0600e-003** | **0.0000** | **20.1938** | **20.1938** | **5.8800e-003** | **0.0000** | **20.3408** |

## 3.5 Paving - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 3.6 Architectural Coating - 2021

**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 4.3500e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 4.7100e-003 | 0.0328 | 0.0391 | 6.0000e-005 | | 2.0200e-003 | 2.0200e-003 | | 2.0200e-003 | 2.0200e-003 | 0.0000 | 5.4895 | 5.4895 | 3.8000e-004 | 0.0000 | 5.4989 |
| **Total** | **9.0600e-003** | **0.0328** | **0.0391** | **6.0000e-005** | | **2.0200e-003** | **2.0200e-003** | | **2.0200e-003** | **2.0200e-003** | **0.0000** | **5.4895** | **5.4895** | **3.8000e-004** | **0.0000** | **5.4989** |

## 3.6 Architectural Coating - 2021

**Unmitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 4.3500e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 4.7100e-003 | 0.0328 | 0.0391 | 6.0000e-005 | | 2.0200e-003 | 2.0200e-003 | | 2.0200e-003 | 2.0200e-003 | 0.0000 | 5.4895 | 5.4895 | 3.8000e-004 | 0.0000 | 5.4989 |
| **Total** | **9.0600e-003** | **0.0328** | **0.0391** | **6.0000e-005** | | **2.0200e-003** | **2.0200e-003** | | **2.0200e-003** | **2.0200e-003** | **0.0000** | **5.4895** | **5.4895** | **3.8000e-004** | **0.0000** | **5.4989** |

## 3.6 Architectural Coating - 2021

**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

# 4.0 Operational Detail - Mobile

## 4.1 Mitigation Measures Mobile

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| User Defined Industrial | 0.00 | 0.00 | 0.00 | | |
| User Defined Industrial | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

## 4.3 Trip Type Information

| | Miles | | | Trip % | | | Trip Purpose % | | |
|---|---|---|---|---|---|---|---|---|---|
| Land Use | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| User Defined Industrial | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |
| User Defined Industrial | 16.60 | 8.40 | 6.90 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| User Defined Industrial | 0.547192 | 0.045177 | 0.202743 | 0.121510 | 0.016147 | 0.006143 | 0.019743 | 0.029945 | 0.002479 | 0.002270 | 0.005078 | 0.000682 | 0.000891 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures Energy

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Electricity Mitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| NaturalGas Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

## 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| User Defined Industrial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated**

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| User Defined Industrial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| User Defined Industrial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| User Defined Industrial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 3.8300e-003 | 0.0000 | 3.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 5.0000e-005 | 5.0000e-005 | 0.0000 | 0.0000 | 5.0000e-005 |
| Unmitigated | 3.8300e-003 | 0.0000 | 3.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 5.0000e-005 | 5.0000e-005 | 0.0000 | 0.0000 | 5.0000e-005 |

## 6.2 Area by SubCategory

**Unmitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 4.3000e-004 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 3.3900e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.0000 | 0.0000 | 3.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 5.0000e-005 | 5.0000e-005 | 0.0000 | 0.0000 | 5.0000e-005 |
| **Total** | **3.8200e-003** | **0.0000** | **3.0000e-005** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | **5.0000e-005** | **5.0000e-005** | **0.0000** | **0.0000** | **5.0000e-005** |

## 6.2 Area by SubCategory

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 4.3000e-004 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 3.3900e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 0.0000 | 0.0000 | 3.0000e-005 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 5.0000e-005 | 5.0000e-005 | 0.0000 | 0.0000 | 5.0000e-005 |
| **Total** | **3.8200e-003** | **0.0000** | **3.0000e-005** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | **5.0000e-005** | **5.0000e-005** | **0.0000** | **0.0000** | **5.0000e-005** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

## 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| User Defined Industrial | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

### 7.2 Water by Land Use

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| User Defined Industrial | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Unmitigated | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

## 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| User Defined Industrial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| User Defined Industrial | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|
| Pumps | 4 | 4.00 | 365 | 40 | 0.74 | Electrical |

**UnMitigated/Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Pumps | 0.1279 | 0.7557 | 0.7811 | 1.3300e-003 | | 0.0334 | 0.0334 | | 0.0334 | 0.0334 | 0.0000 | 98.2384 | 98.2384 | 0.0104 | 0.0000 | 98.4977 |
| **Total** | **0.1279** | **0.7557** | **0.7811** | **1.3300e-003** | | **0.0334** | **0.0334** | | **0.0334** | **0.0334** | **0.0000** | **98.2384** | **98.2384** | **0.0104** | **0.0000** | **98.4977** |

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|
| Emergency Generator | 1 | 1 | 50 | 160 | 0.73 | Diesel |

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|---|---|---|---|---|---|

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 10.1 Stationary Sources

**Unmitigated/Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Emergency Generator - Diesel (100 - 175 HP) | 6.5600e-003 | 0.0184 | 0.0238 | 3.0000e-005 | | 9.7000e-004 | 9.7000e-004 | | 9.7000e-004 | 9.7000e-004 | 0.0000 | 3.0464 | 3.0464 | 4.3000e-004 | 0.0000 | 3.0571 |
| **Total** | **6.5600e-003** | **0.0184** | **0.0238** | **3.0000e-005** | | **9.7000e-004** | **9.7000e-004** | | **9.7000e-004** | **9.7000e-004** | **0.0000** | **3.0464** | **3.0464** | **4.3000e-004** | **0.0000** | **3.0571** |

## 11.0 Vegetation

# APPENDIX B

# Biological Resources Database Review

# Selected Elements by Scientific Name

## California Department of Fish and Wildlife

## California Natural Diversity Database

**Query Criteria:** Quad IS (El Monte (3411811) OR Mt. Wilson (3411821) OR Azusa (3411728) OR Baldwin Park (3411718) OR La Habra (3311788) OR Whittier (3311881) OR South Gate (3311882) OR Los Angeles (3411812) OR Pasadena (3411822))

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Accipiter cooperii***<br>Cooper's hawk | ABNKC12040 | None | None | G5 | S4 | WL |
| ***Aimophila ruficeps canescens***<br>southern California rufous-crowned sparrow | ABPBX91091 | None | None | G5T3 | S3 | WL |
| ***Ammodramus savannarum***<br>grasshopper sparrow | ABPBXA0020 | None | None | G5 | S3 | SSC |
| ***Anaxyrus californicus***<br>arroyo toad | AAABB01230 | Endangered | None | G2G3 | S2S3 | SSC |
| ***Anniella stebbinsi***<br>southern California legless lizard | ARACC01060 | None | None | G3 | S3 | SSC |
| ***Antrozous pallidus***<br>pallid bat | AMACC10010 | None | None | G5 | S3 | SSC |
| ***Arctostaphylos glandulosa ssp. gabrielensis***<br>San Gabriel manzanita | PDERI042P0 | None | None | G5T3 | S3 | 1B.2 |
| ***Arizona elegans occidentalis***<br>California glossy snake | ARADB01017 | None | None | G5T2 | S2 | SSC |
| ***Aspidoscelis tigris stejnegeri***<br>coastal whiptail | ARACJ02143 | None | None | G5T5 | S3 | SSC |
| ***Astragalus brauntonii***<br>Braunton's milk-vetch | PDFAB0F1G0 | Endangered | None | G2 | S2 | 1B.1 |
| ***Athene cunicularia***<br>burrowing owl | ABNSB10010 | None | None | G4 | S3 | SSC |
| ***Atriplex parishii***<br>Parish's brittlescale | PDCHE041D0 | None | None | G1G2 | S1 | 1B.1 |
| ***Atriplex serenana var. davidsonii***<br>Davidson's saltscale | PDCHE041T1 | None | None | G5T1 | S1 | 1B.2 |
| ***Berberis nevinii***<br>Nevin's barberry | PDBER060A0 | Endangered | Endangered | G1 | S1 | 1B.1 |
| ***Bombus crotchii***<br>Crotch bumble bee | IIHYM24480 | None | Candidate Endangered | G3G4 | S1S2 | |
| ***Buteo swainsoni***<br>Swainson's hawk | ABNKC19070 | None | Threatened | G5 | S3 | |
| ***California Walnut Woodland***<br>California Walnut Woodland | CTT71210CA | None | None | G2 | S2.1 | |
| ***Calochortus clavatus var. gracilis***<br>slender mariposa-lily | PMLIL0D096 | None | None | G4T2T3 | S2S3 | 1B.2 |
| ***Calochortus plummerae***<br>Plummer's mariposa-lily | PMLIL0D150 | None | None | G4 | S4 | 4.2 |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Calochortus weedii var. intermedius***<br>intermediate mariposa-lily | PMLIL0D1J1 | None | None | G3G4T2 | S2 | 1B.2 |
| ***Calystegia felix***<br>lucky morning-glory | PDCON040P0 | None | None | G1Q | S1 | 1B.1 |
| ***Campylorhynchus brunneicapillus sandiegensis***<br>coastal cactus wren | ABPBG02095 | None | None | G5T3Q | S3 | SSC |
| ***Canyon Live Oak Ravine Forest***<br>Canyon Live Oak Ravine Forest | CTT61350CA | None | None | G3 | S3.3 | |
| ***Catostomus santaanae***<br>Santa Ana sucker | AFCJC02190 | Threatened | None | G1 | S1 | |
| ***Centromadia parryi ssp. australis***<br>southern tarplant | PDAST4R0P4 | None | None | G3T2 | S2 | 1B.1 |
| ***Centromadia pungens ssp. laevis***<br>smooth tarplant | PDAST4R0R4 | None | None | G3G4T2 | S2 | 1B.1 |
| ***Chorizanthe parryi var. parryi***<br>Parry's spineflower | PDPGN040J2 | None | None | G3T2 | S2 | 1B.1 |
| ***Cladium californicum***<br>California saw-grass | PMCYP04010 | None | None | G4 | S2 | 2B.2 |
| ***Coccyzus americanus occidentalis***<br>western yellow-billed cuckoo | ABNRB02022 | Threatened | Endangered | G5T2T3 | S1 | |
| ***Corynorhinus townsendii***<br>Townsend's big-eared bat | AMACC08010 | None | None | G3G4 | S2 | SSC |
| ***Cuscuta obtusiflora var. glandulosa***<br>Peruvian dodder | PDCUS01111 | None | None | G5T4? | SH | 2B.2 |
| ***Cypseloides niger***<br>black swift | ABNUA01010 | None | None | G4 | S2 | SSC |
| ***Dodecahema leptoceras***<br>slender-horned spineflower | PDPGN0V010 | Endangered | Endangered | G1 | S1 | 1B.1 |
| ***Dudleya cymosa ssp. crebrifolia***<br>San Gabriel River dudleya | PDCRA040A8 | None | None | G5T2 | S2 | 1B.2 |
| ***Dudleya densiflora***<br>San Gabriel Mountains dudleya | PDCRA040B0 | None | None | G2 | S2 | 1B.1 |
| ***Dudleya multicaulis***<br>many-stemmed dudleya | PDCRA040H0 | None | None | G2 | S2 | 1B.2 |
| ***Empidonax traillii extimus***<br>southwestern willow flycatcher | ABPAE33043 | Endangered | Endangered | G5T2 | S1 | |
| ***Emys marmorata***<br>western pond turtle | ARAAD02030 | None | None | G3G4 | S3 | SSC |
| ***Eumops perotis californicus***<br>western mastiff bat | AMACD02011 | None | None | G5T4 | S3S4 | SSC |
| ***Falco peregrinus anatum***<br>American peregrine falcon | ABNKD06071 | Delisted | Delisted | G4T4 | S3S4 | FP |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Galium grande***<br>San Gabriel bedstraw | PDRUB0N0V0 | None | None | G1 | S1 | 1B.2 |
| ***Gila orcuttii***<br>arroyo chub | AFCJB13120 | None | None | G2 | S2 | SSC |
| ***Helianthus nuttallii ssp. parishii***<br>Los Angeles sunflower | PDAST4N102 | None | None | G5TH | SH | 1A |
| ***Horkelia cuneata var. puberula***<br>mesa horkelia | PDROS0W045 | None | None | G4T1 | S1 | 1B.1 |
| ***Icteria virens***<br>yellow-breasted chat | ABPBX24010 | None | None | G5 | S3 | SSC |
| ***Imperata brevifolia***<br>California satintail | PMPOA3D020 | None | None | G4 | S3 | 2B.1 |
| ***Lasionycteris noctivagans***<br>silver-haired bat | AMACC02010 | None | None | G5 | S3S4 | |
| ***Lasiurus blossevillii***<br>western red bat | AMACC05060 | None | None | G5 | S3 | SSC |
| ***Lasiurus cinereus***<br>hoary bat | AMACC05030 | None | None | G5 | S4 | |
| ***Lasiurus xanthinus***<br>western yellow bat | AMACC05070 | None | None | G5 | S3 | SSC |
| ***Lasthenia glabrata ssp. coulteri***<br>Coulter's goldfields | PDAST5L0A1 | None | None | G4T2 | S2 | 1B.1 |
| ***Lepidium virginicum var. robinsonii***<br>Robinson's pepper-grass | PDBRA1M114 | None | None | G5T3 | S3 | 4.3 |
| ***Lepus californicus bennettii***<br>San Diego black-tailed jackrabbit | AMAEB03051 | None | None | G5T3T4 | S3S4 | SSC |
| ***Linanthus concinnus***<br>San Gabriel linanthus | PDPLM090D0 | None | None | G2 | S2 | 1B.2 |
| ***Muhlenbergia californica***<br>California muhly | PMPOA480A0 | None | None | G4 | S4 | 4.3 |
| ***Navarretia prostrata***<br>prostrate vernal pool navarretia | PDPLM0C0Q0 | None | None | G2 | S2 | 1B.2 |
| ***Nyctinomops femorosaccus***<br>pocketed free-tailed bat | AMACD04010 | None | None | G4 | S3 | SSC |
| ***Nyctinomops macrotis***<br>big free-tailed bat | AMACD04020 | None | None | G5 | S3 | SSC |
| ***Onychomys torridus ramona***<br>southern grasshopper mouse | AMAFF06022 | None | None | G5T3 | S3 | SSC |
| ***Open Engelmann Oak Woodland***<br>Open Engelmann Oak Woodland | CTT71181CA | None | None | G2 | S2.2 | |
| ***Orcuttia californica***<br>California Orcutt grass | PMPOA4G010 | Endangered | Endangered | G1 | S1 | 1B.1 |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Orobanche valida ssp. valida***<br>Rock Creek broomrape | PDORO040G2 | None | None | G4T2 | S2 | 1B.2 |
| ***Ovis canadensis nelsoni***<br>desert bighorn sheep | AMALE04013 | None | None | G4T4 | S3 | FP |
| ***Phacelia stellaris***<br>Brand's star phacelia | PDHYD0C510 | None | None | G1 | S1 | 1B.1 |
| ***Phrynosoma blainvillii***<br>coast horned lizard | ARACF12100 | None | None | G3G4 | S3S4 | SSC |
| ***Polioptila californica californica***<br>coastal California gnatcatcher | ABPBJ08081 | Threatened | None | G4G5T2Q | S2 | SSC |
| ***Pseudognaphalium leucocephalum***<br>white rabbit-tobacco | PDAST440C0 | None | None | G4 | S2 | 2B.2 |
| ***Rana boylii***<br>foothill yellow-legged frog | AAABH01050 | None | Endangered | G3 | S3 | SSC |
| ***Rana muscosa***<br>southern mountain yellow-legged frog | AAABH01330 | Endangered | Endangered | G1 | S1 | WL |
| ***Rhinichthys osculus ssp. 3***<br>Santa Ana speckled dace | AFCJB3705K | None | None | G5T1 | S1 | SSC |
| ***Ribes divaricatum var. parishii***<br>Parish's gooseberry | PDGRO020F3 | None | None | G5TX | SX | 1A |
| ***Riparia riparia***<br>bank swallow | ABPAU08010 | None | Threatened | G5 | S2 | |
| ***Riversidian Alluvial Fan Sage Scrub***<br>Riversidian Alluvial Fan Sage Scrub | CTT32720CA | None | None | G1 | S1.1 | |
| ***Scutellaria bolanderi ssp. austromontana***<br>southern mountains skullcap | PDLAM1U0A1 | None | None | G4T3 | S3 | 1B.2 |
| ***Sidalcea neomexicana***<br>salt spring checkerbloom | PDMAL110J0 | None | None | G4 | S2 | 2B.2 |
| ***Southern California Arroyo Chub/Santa Ana Sucker Stream***<br>Southern California Arroyo Chub/Santa Ana Sucker Stream | CARE2330CA | None | None | GNR | SNR | |
| ***Southern Coast Live Oak Riparian Forest***<br>Southern Coast Live Oak Riparian Forest | CTT61310CA | None | None | G4 | S4 | |
| ***Southern Sycamore Alder Riparian Woodland***<br>Southern Sycamore Alder Riparian Woodland | CTT62400CA | None | None | G4 | S4 | |
| ***Spea hammondii***<br>western spadefoot | AAABF02020 | None | None | G3 | S3 | SSC |
| ***Symphyotrichum defoliatum***<br>San Bernardino aster | PDASTE80C0 | None | None | G2 | S2 | 1B.2 |
| ***Symphyotrichum greatae***<br>Greata's aster | PDASTE80U0 | None | None | G2 | S2 | 1B.3 |
| ***Taricha torosa***<br>Coast Range newt | AAAAF02032 | None | None | G4 | S4 | SSC |

| Species | Element Code | Federal Status | State Status | Global Rank | State Rank | Rare Plant Rank/CDFW SSC or FP |
|---|---|---|---|---|---|---|
| ***Taxidea taxus*** | AMAJF04010 | None | None | G5 | S3 | SSC |
| American badger | | | | | | |
| ***Thamnophis hammondii*** | ARADB36160 | None | None | G4 | S3S4 | SSC |
| two-striped gartersnake | | | | | | |
| ***Thelypteris puberula var. sonorensis*** | PPTHE05192 | None | None | G5T3 | S2 | 2B.2 |
| Sonoran maiden fern | | | | | | |
| ***Vireo bellii pusillus*** | ABPBW01114 | Endangered | Endangered | G5T2 | S2 | |
| least Bell's vireo | | | | | | |
| ***Walnut Forest*** | CTT81600CA | None | None | G1 | S1.1 | |
| Walnut Forest | | | | | | |

**Record Count: 87**

**California Native Plant Society**
**Inventory of Rare and Endangered Plants**

**9-Quad Search:** El Monte, Mt. Wilson, Azusa, Baldwin Park, La Habra, Whittier, South Gate, Los Angeles, and Pasadena

| Scientific Name | Common Name | Rare Plant Rank | State Listing (CESA) | Federal Listing (FESA) |
|---|---|---|---|---|
| *Acanthoscyphus parishii var. parishii* | Parish's oxytheca | 4.2 | None | None |
| *Arctostaphylos glandulosa ssp. gabrielensis* | San Gabriel manzanita | 1B.2 | None | None |
| *Asplenium vespertinum* | western spleenwort | 4.2 | None | None |
| *Astragalus brauntonii* | Braunton's milk-vetch | 1B.1 | None | Endangered |
| *Atriplex serenana var. davidsonii* | Davidson's saltscale | 1B.2 | None | None |
| *Berberis nevinii* | Nevin's barberry | 1B.1 | Candidate | Endangered |
| *Calochortus catalinae* | Catalina mariposa lily | 4.2 | None | None |
| *Calochortus clavatus var. gracilis* | slender mariposa lily | 1B.2 | None | None |
| *Calochortus plummerae* | Plummer's mariposa lily | 4.2 | None | None |
| *Calochortus weedii var. intermedius* | intermediate mariposa lily | 1B.2 | None | None |
| *Calystegia felix* | lucky morning-glory | 1B.1 | None | None |
| *Centromadia parryi ssp. australis* | southern tarplant | 1B.1 | None | None |
| *Centromadia pungens ssp. laevis* | smooth tarplant | 1B.1 | None | None |
| *Chorizanthe parryi var. fernandina* | San Fernando Valley spineflower | 1B.1 | Candidate | Candidate |
| *Chorizanthe parryi var. parryi* | Parry's spineflower | 1B.1 | None | None |
| *Cladium californicum* | California sawgrass | 2B.2 | None | None |
| *Clinopodium mimuloides* | monkey-flower savory | 4.2 | None | None |
| *Convolvulus simulans* | small-flowered morning-glory | 4.2 | None | None |
| *Cuscuta obtusiflora var. glandulosa* | Peruvian dodder | 2B.2 | None | None |
| *Diplacus johnstonii* | Johnston's monkeyflower | 4.3 | None | None |
| *Dodecahema leptoceras* | slender-horned spineflower | 1B.1 | Candidate | Endangered |
| *Dudleya cymosa ssp. crebrifolia* | San Gabriel River dudleya | 1B.2 | None | None |
| *Dudleya densiflora* | San Gabriel Mountains dudleya | 1B.1 | None | None |
| *Dudleya multicaulis* | many-stemmed dudleya | 1B.2 | None | None |
| *Galium angustifolium ssp. gabrielense* | San Antonio Canyon bedstraw | 4.3 | None | None |
| *Galium grande* | San Gabriel bedstraw | 1B.2 | None | None |
| *Galium johnstonii* | Johnston's bedstraw | 4.3 | None | None |
| *Helianthus nuttallii ssp. parishii* | Los Angeles sunflower | 1A | None | None |
| *Heuchera caespitosa* | urn-flowered alumroot | 4.3 | None | None |
| *Hordeum intercedens* | vernal barley | 3.2 | None | None |
| *Horkelia cuneata var. puberula* | mesa horkelia | 1B.1 | None | None |
| *Imperata brevifolia* | California satintail | 2B.1 | None | None |
| *Juglans californica* | Southern California black walnut | 4.2 | None | None |
| *Lasthenia glabrata ssp. coulteri* | Coulter's goldfields | 1B.1 | None | None |
| *Lepechinia fragrans* | fragrant pitcher sage | 4.2 | None | None |
| *Lepidium virginicum var. robinsonii* | Robinson's pepper-grass | 4.3 | None | None |
| *Lilium humboldtii ssp. ocellatum* | ocellated Humboldt lily | 4.2 | None | None |
| *Linanthus concinnus* | San Gabriel linanthus | 1B.2 | None | None |
| *Linanthus orcuttii* | Orcutt's linanthus | 1B.3 | None | None |
| *Muhlenbergia californica* | California muhly | 4.3 | None | None |
| *Navarretia prostrata* | prostrate vernal pool navarretia | 1B.1 | None | None |
| *Orcuttia californica* | California Orcutt grass | 1B.1 | Candidate | Endangered |
| *Orobanche valida ssp. valida* | Rock Creek broomrape | 1B.2 | None | None |

| Scientific Name | Common Name | Rare Plant Rank | State Listing (CESA) | Federal Listing (FESA) |
|---|---|---|---|---|
| *Phacelia hubbyi* | Hubby's phacelia | 4.2 | None | None |
| *Phacelia ramosissima var. austrolitoralis* | south coast branching phacelia | 3.2 | None | None |
| *Phacelia stellaris* | Brand's star phacelia | 1B.1 | None | None |
| *Pseudognaphalium leucocephalum* | white rabbit-tobacco | 2B.2 | None | None |
| *Quercus durata var. gabrielensis* | San Gabriel oak | 4.2 | None | None |
| *Quercus engelmannii* | Engelmann oak | 4.2 | None | None |
| *Ribes divaricatum var. parishii* | Parish's gooseberry | 1A | None | None |
| *Romneya coulteri* | Coulter's matilija poppy | 4.2 | None | None |
| *Rupertia rigida* | Parish's rupertia | 4.3 | None | None |
| *Scutellaria bolanderi ssp. austromontana* | southern mountains skullcap | 1B.2 | None | None |
| *Senecio astephanus* | San Gabriel ragwort | 4.3 | None | None |
| *Sidalcea neomexicana* | salt spring checkerbloom | 2B.2 | None | None |
| *Symphyotrichum defoliatum* | San Bernardino aster | 1B.2 | None | None |
| *Symphyotrichum greatae* | Greata's aster | 1B.3 | None | None |
| *Thelypteris puberula var. sonorensis* | Sonoran maiden fern | 2B.2 | None | None |

CNPS, Rare Plant Program, 2020. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org [accessed 6 July 2020].

**IPaC** **U.S. Fish & Wildlife Service**

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.



## Location

Los Angeles County, California


## Local office

Carlsbad Fish And Wildlife Office

(760) 431-9440
(760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

http://www.fws.gov/carlsbad/

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Birds

| NAME | STATUS |
|---|---|

| | |
|---|---|
| Coastal California Gnatcatcher *Polioptila californica californica*<br>There is **final** critical habitat for this species. Your location is outside the critical habitat.<br>https://ecos.fws.gov/ecp/species/8178 | Threatened |
| Least Bell's Vireo *Vireo bellii pusillus*<br>There is **final** critical habitat for this species. Your location is outside the critical habitat.<br>https://ecos.fws.gov/ecp/species/5945 | Endangered |

## Flowering Plants

| NAME | STATUS |
|---|---|
| Nevin's Barberry *Berberis nevinii*<br>There is **final** critical habitat for this species. Your location is outside the critical habitat.<br>https://ecos.fws.gov/ecp/species/8025 | Endangered |

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.



# Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php

- Nationwide conservation measures for birds
  http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.



| NAME | BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.) |
|---|---|
| Allen's Hummingbird *Selasphorus sasin*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9637 | Breeds Feb 1 to Jul 15 |
| Bald Eagle *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Jan 1 to Aug 31 |

Burrowing Owl Athene cunicularia — Breeds Mar 15 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9737

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Costa's Hummingbird Calypte costae — Breeds Jan 15 to Jun 10
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9470

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

| | |
|---|---|
| Oak Titmouse Baeolophus inornatus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9656 | Breeds Mar 15 to Jul 15 |
| Rufous Hummingbird selasphorus rufus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/8002 | Breeds elsewhere |
| Song Sparrow Melospiza melodia<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA | Breeds Feb 20 to Sep 5 |
| Spotted Towhee Pipilo maculatus clementae<br>This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA<br>https://ecos.fws.gov/ecp/species/4243 | Breeds Apr 15 to Jul 20 |
| Tricolored Blackbird Agelaius tricolor<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/3910 | Breeds Mar 15 to Aug 10 |
| Whimbrel Numenius phaeopus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9483 | Breeds elsewhere |
| Wrentit Chamaea fasciata<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Mar 15 to Aug 10 |



# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season** ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

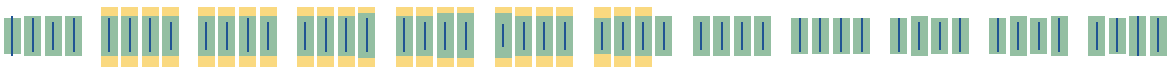
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

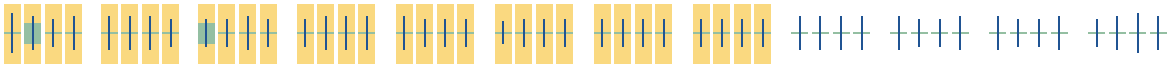
**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



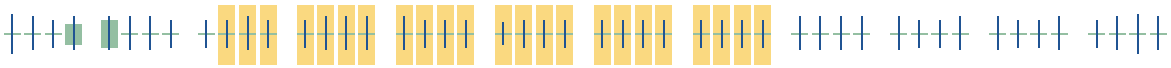
probability of presence breeding season survey effort no data

| SPECIES | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Allen's Hummingbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.) |  | | | | | | | | | | | |

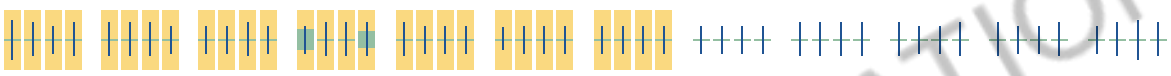
Bald Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



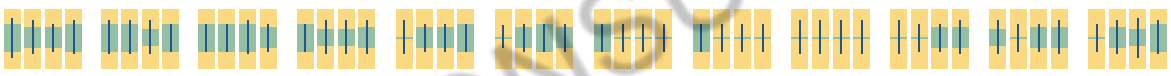
Burrowing Owl
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



California Thrasher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Clark's Grebe
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Costa's Hummingbird
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Golden Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Long-billed Curlew
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



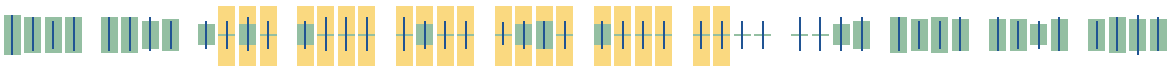
SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

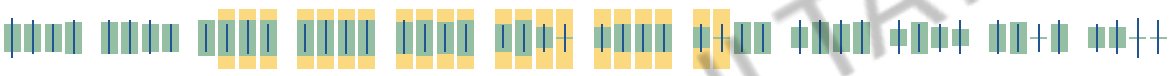
Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Tricolored Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Whimbrel
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wrentit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)





**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

**What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

**Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

**What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

**Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

# Facilities

## National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

## Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

# Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

**Data limitations**

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

# APPENDIX C

# Paleontological, Historical and Archaeological Resources Technical Memorandum

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# Memorandum

| | | |
|---|---|---|
| To | John Childs, California Department of Toxic Substances Control<br>Candace Hill, California Department of Toxic Substances Control | Pages 17 |
| Subject | Whittier Narrows Operable Unit Blend Project: Paleontological, Historical, and Archaeological Resources Memorandum | |
| From | Marc A. Beherec, Ph.D., RPA, AECOM;<br>Frank Humphries, M.S., RPA, AECOM | |
| Date | January 22, 2020 | |

## Introduction

This technical memorandum describes the potential impact to paleontological, historical, archaeological resources associated with the Whittier Narrows Operable Unit (WNOU) Blend Project (proposed project). The California Department of Toxic Substances Control (DTSC) proposes to implement the Whittier Narrows Operable Unit (WNOU) Blend Project (proposed project), which involves the construction of a new 7,265-foot-long blend water supply pipeline, a new 20-foot-long blended water pipeline connection to the existing 30-inch San Gabriel Valley Water Company (San Gabriel) pipeline on Durfee Avenue, and a new off-site booster station (Plant B28 Booster Station). The implementation of the proposed project would provide additional water for blending with groundwater produced from the existing WNOU extraction wells, as well as boosting capacity to deliver this blended water to San Gabriel for distribution to its customers.

The purpose of the proposed project is to increase the pumping rate of the existing groundwater extraction wells to contain groundwater contamination within the Main San Gabriel Basin. The project would increase the capture of the contaminants and prevent further migration into the adjoining Los Angeles Central Groundwater Basin (Central Basin) and help protect nearby municipal water supply wells.
As discussed in this memorandum, the proposed project will have no significant effects related to cultural resources, including paleontological, historical, or archaeological resources.

## Proposed Project

The proposed project would be located in the City of South El Monte and the Unincorporated Areas of Whittier Narrows and Avocado Heights, in the County of Los Angeles. All figures referenced in this discussion are attached to this document. Figure 1 shows the regional location of the proposed project and Figure 2 shows the location of the existing WNOU site and the proposed Blend Water Supply Pipeline, WNOU Blended Water Pipeline and the Plant B28 Booster Station.

The WNOU site is located at 331 North Durfee Avenue, approximately 3,000 feet east of Rosemead Boulevard, in the City of South El Monte. The WNOU site occupies an area of approximately 2.5 acres

and is owned by the U.S. Army Corps of Engineers (USACE) (Assessor Parcel Identification 8119-004-901). The WNOU site is generally bound by Schneider International Intermodal Yard to the west, Legg Lake and the grounds and hardstand parking of Whittier Narrows Recreation Area to the north and east, and the Durfee Avenue public right-of-way (ROW) to the south. Legg Lake is a fishing and recreational lake located within the 1,492-acre Whitter Narrows Recreation Area.1 Whittier Narrows Natural Area is located on the southern side of Durfee Avenue, approximately 50 feet from the WNOU site. Immediately adjacent to the Schneider International Intermodal Yard is an area of land approximately 3.2 acres in size that is used for agricultural purposes (strawberry farm), located approximately 850 feet west of the WNOU site. The WNOU site is fully fenced off from the public and can be accessed by workers via paved driveways and locked gates both on the east and west sides of the site.

The proposed Blend Water Supply Pipeline alignment comprises approximately 7,265 liner feet of 16-inch diameter welded steel pipe, fittings, and appurtenances. The Blend Water Supply Pipeline would be installed within the existing public ROW along Durfee Avenue for a distance of approximately 7,265 liner feet, from the intersection of Durfee Avenue and Peck Road to the existing WNOU site. Access to the proposed Blend Water Supply Pipeline site would be provided via the existing local roadway network.

The proposed WNOU Blended Water Pipeline comprises approximately 20 linear feet of 24-inch diameter welded steel pipe connection to the 30-inch San Gabriel distribution pipeline on Durfee Avenue. Figure 3 shows the location of the proposed WNOU Blended Water Pipeline and WNOU site improvements. Access to the proposed WNOU Blended Water Pipeline alignment site would be provided via the existing local roadway network.

The proposed Plant B28 Booster Station includes a 3,000 gallon-per-minute (GPM) off-site booster station and related site improvements. The Plant B28 Booster Station would be located at Workman Mill Road, immediately north of Highway 60 and east of Crossroads Parkway North. The proposed Plant B28 Booster Station would be located approximately one mile southeast of the terminus of the proposed Blend Water Supply Pipeline alignment at the intersection of Durfee Avenue and Peck Road. As part of the Plant B28 Booster Station installation, booster piping would be extended to discharge to the existing 16-inch diameter water main on Workman Mill Road, east of the Crossroads Parkway. Access to the proposed Plant B28 Booster site would be provided via the existing local roadway network. Figure 4 shows the location of the proposed Booster Station and related improvements.

Travelling in an easterly direction from the WNOU site, Durfee Avenue comprises one lane travelling in either direction (total of two lanes) and is not supported by any paved pedestrian sidewalks. There is a gravel shoulder on the south side of the street, and grassy areas including some mature trees border the street directly on the north side. Approximately 3,000 feet east of the WNOU site, near its intersection with Santa Anita Avenue, Durfee Avenue widens to accommodate two eastbound travel lanes, with only one westbound travel lane (total of three lanes). Approximately 1,300 feet east of Santa Anita Avenue, Durfee Avenue widens to accommodate two travel lanes in each direction (total of four lanes), with paved pedestrian sidewalks, designated bicycle lanes and street parking available up to the intersection of Durfee Avenue and Peck Road.

## Cultural Setting

As a framework for discussing the types of cultural resources that might be encountered in the vicinity of the proposed project, the following section summarizes our current understanding of major

prehistoric and historic developments in and around the Los Angeles Basin and the greater Southern California area.

*Prehistoric Overview*

The earliest occupation of Southern California may be associated with the peoples who first colonized North America in the terminal Pleistocene and earliest Holocene (Arnold et al. 2004). A key indicator of these early cultures is fluted points, which have been reported at a number of locations in Southern California (Rondeau 2008). Closest to the project area, the Farpoint Site (CA-LAN-451) in Malibu, Los Angeles County, has yielded a fluted point, and its excavator argues the site should be associated with the Clovis culture (Stickel 2008). Clovis is the earliest universally recognized material culture in North America, and dates to approximately 11,500 radiocarbon years before present (B.P.).

However, scholarly consensus holds that the earliest unambiguous evidence of human occupation in the Los Angeles area dates to at least 9000 B.P. and is associated with a period known as the Millingstone Cultural Horizon (Wallace 1955; Warren 1968). Millingstone populations established permanent settlements that were located primarily on the coast and in the vicinity of estuaries, lagoons, lakes, streams, and marshes where a variety of resources, including seeds, fish, shellfish, small mammals, and birds, were exploited. Early Millingstone occupations are typically identified by the presence of handstones (manos) and millingstones (metates), while those Millingstone occupations dating later than 5000 B.P. contain a mortar and pestle complex as well, signifying the exploitation of acorns in the region.

Although many aspects of Millingstone culture persisted, by 3500 B.P., a number of socioeconomic changes occurred (Erlandson 1994; Wallace 1955; Warren 1968). These changes are associated with the period known as the Intermediate Horizon (Wallace 1955). Increasing population size necessitated the intensification of existing terrestrial and marine resources (Erlandson 1994). This was accomplished in part through use of new technological innovations such as the circular shell fishhook on the coast and, in inland areas, use of the mortar and pestle to process an important new vegetal food staple (acorns); and the dart and atlatl, which resulted in a more diverse hunting capability. Evidence for shifts in settlement patterns has been noted as well at a variety of locations at this time and is seen by many researchers as reflecting increasingly territorial and sedentary populations. The Intermediate Horizon marks a period in which specialization in labor emerged, trading networks became an increasingly important means by which both utilitarian and nonutilitarian materials were acquired, and travel routes were extended.

The Late Prehistoric period, spanning from approximately 1500 years B.P. to the Spanish mission era, is the period associated with the florescence of contemporary Native American groups. The group occupying the southern Channel Islands and adjacent mainland areas of Los Angeles and Orange Counties came to be known as the Gabrielino, after Mission San Gabriel. They are reported to have been one of the most notable tribes in Southern California in terms of population size, regional influence, and degree of sedentism (Bean and Smith 1978). The Gabrielino are estimated to have numbered around 5,000 in the pre-contact period (Kroeber 1925). Maps produced by early explorers indicate the existence of at least 40 Gabrielino villages, but as many as 100 may have existed prior to contact with Europeans (Bean and Smith 1978; McCawley 1996; Reid 1939 [1852]).

Subsistence during the Late Prehistoric period consisted of hunting, fishing, and gathering. Small terrestrial game was hunted with deadfalls and rabbit drives, and by burning undergrowth, while larger game such as deer were hunted using bows and arrows. Fish were taken by hook and line, nets, traps, spears, and poison (Bean and Smith 1978; Reid 1939 [1852]). The primary plant resources were acorns gathered in the fall and processed with mortars and pestles, and various seeds that were harvested in

late spring and summer and ground with manos and metates. The seeds included chia and other sages, various grasses, and Islay or holly-leafed cherry (Reid 1939 [1852]).

*Historic Overview*

Spanish explorers made brief visits to Gabrielino territory in 1542 and 1602, and on both occasions the two groups exchanged trade items (McCawley 1996). Sustained contact with Europeans did not commence until the Spanish Period, which began in 1769 when Gaspar de Portola and a small Spanish contingent began their exploratory journey along the California coast from San Diego to Monterey. Gabrielino villages are reported by early explorers to have been most abundant along the dominant rivers of the Los Angeles Basin, including the Los Angeles, San Gabriel, and Santa Ana Rivers.

Mission San Gabriel Arcángel was founded September 8, 1771. The mission was initially located approximately 0.67 mile northwest of the end of the proposed pipeline alignment, near the intersection of East Lincoln Avenue and San Gabriel Boulevard. Today the site is known as Mission Vieja, or Old Mission. This location was chosen because of the near proximity of Gabrielino villages in Whittier Narrows (McCawley 1996). The village named *Isantcanga* was located at or very near the old mission site (Reid 1939 [1852]).

In 1776, Mission San Gabriel was moved to its present location, more than 4.5 miles northwest of the project vicinity. The establishment of the Mission was associated with a decline in the traditional Native American economic and social systems, as well as overall population due to epidemics and subsistence instabilities. This lifestyle change brought significant negative consequences for Gabrielino health and cultural integrity (Jackson 1999). By the early 1800s, the majority of the surviving Gabrielino population had entered the mission system.

Alongside mission development was the foundation of *El Pueblo de la Reyna de Los Angeles,* a secular community established by colonists in 1781. This community was formed by 11 families that included 44 individuals as part of a colorization effort that eventually became the City of Los Angeles (Poole and Ball 2002). *El Pueblo de la Reyna de Los Angeles* increased in size and influence after the Mexican empire gained independence and formed what would become the state of Alta California in 1821.

The authority of the California missions gradually declined, culminating with their secularization in 1834. Although the Mexican government directed that each mission's lands, livestock, and equipment be divided among its converts, the majority of these holdings quickly fell into non-Indigenous hands. Mission buildings were abandoned and quickly fell into decay. If mission life was difficult for Native Americans, secularization was no better. After two generations of dependence on the missions, they were suddenly disenfranchised. After secularization, "nearly all of the Gabrielinos went north while those of San Diego, San Luis, and San Juan overran this county, filling the Angeles and surrounding ranchos with more servants than were required" (Reid 1977 [1851]:104).

The first party of U.S. immigrants arrived in Los Angeles in 1841, although surreptitious commerce had previously been conducted between Mexican California and residents of the United States and its territories. As the possibility of a takeover of California by the United States loomed large, the Mexican government increased the number of land grants in an effort to keep the land in the hands of upper-class *Californios* like the Dominguez, Lugo, and Sepulveda families (Wilkman and Wilkman 2006:14–17). Governor Pio Pico and his predecessors made more than 600 rancho grants between 1833 and 1846, putting most of the state's lands into private ownership for the first time (Gumprecht 1999).

The project area was controlled by Mission San Gabriel up until the secularization of the missions. In 1841, a group of settlers came to California by way of New Mexico under the leadership of John A. Rowland and William Workman. Rowland and Workman petitioned Governor Juan Bautista Alvarado to grant them Ranch La Puente, which had been one of Mission San Gabriel's important ranchos. In

1845, after Rowland and Workman assisted Pio Pico in defeating Governor Manuel Micheltorena at the Battle of Cahuenga Pass, Pico seized the governorship from Micheltorena, and Pico granted them the land. The Booster Station parcel is located on the former Rancho La Puente (Spitzzeri 2007). Similarly, in 1845, Pio Pico granted the land that includes the Durfee Avenue alignment to the merchant Henry Dalton as part of the Rancho San Francisquito (Robinson 1948). Native Americans continued to reside on and work the ranchos, forming the majority of their labor force in the middle nineteenth century (Phillips 2010).

The United States took control of California after the Mexican–American War of 1846, and seized Monterey, San Francisco, San Diego, and Los Angeles (then the state capital) with little resistance. Local unrest soon bubbled to the surface, however, and Los Angeles slipped from U.S. control in 1847. Hostilities officially ended with the signing of the Treaty of Guadalupe Hidalgo in 1848, in which the United States agreed to pay Mexico $15 million for the conquered territory, which included California, Nevada, and Utah, and parts of Colorado, Arizona, New Mexico, and Wyoming. The conquered territory represented nearly half of Mexico's pre-1846 holdings. California joined the United States in 1850 as the 31st state (Wilkman and Wilkman 2006:15).

The discovery of gold in northern California led to an enormous influx of American citizens in the 1850s and 1860s, and these settlers rapidly displaced the old rancho families. The Southern Pacific Railroad extended its line from San Francisco to Los Angeles in 1876, passing through the San Fernando Valley thanks to a new tunnel through Newhall Pass. Newcomers continued to pour into Los Angeles and the population nearly doubled between 1870 and 1880. The completion of the second transcontinental rail line, the Santa Fe, took place in 1886 causing a fare war, which drove fares to an unprecedented low. More settlers continued to head west and the demand for real estate skyrocketed. The city's population rose from 11,000 in 1880 to 50,000 by 1890 (Meyer 1981:45).

The beginning of the twentieth century saw the florescence of a uniquely suburban metropolis, where a vast network of residential communities overshadowed city centers, where the single-family home was valued over the high-rise, and where private space took precedence over public space (Hawthorne 2006). This landscape demanded an innovative transportation solution, and Los Angeles embraced automobiles and freeways like no other city had. The first homemade car puttered down city streets in 1897. Inexpensive automobiles gained popularity in the 1920s, soon creating tremendous congestion in the centers of cities and necessitating alternate transportation routes (Wilkman and Wilkman 2006). Dozens of freeways were constructed in the post-World War II years, radically altering the character of Los Angeles by simultaneously dividing local neighborhoods and connecting outlying communities.

## Archival Research

As part of this cultural resources assessment, an archival research program was conducted. The purpose of this research is to identify known cultural resources in the project area, provide context for the evaluation of cultural resources within this area that are 45 years or older, and inform interpretations regarding the potential to encounter previously unidentified cultural resources in the course of ground-disturbing work associated with the proposed project.

Archival research included a records search at the South Central Coastal Information Center (SCCIC), a review of local cultural resource registers, and review of local and regional historic maps. Supplemental research in published and unpublished sources was also conducted to provide prehistoric and historic contexts for the project area.

Archival research of the project site was conducted by AECOM archaeologist Marc A. Beherec, Ph.D., RPA, at the SCCIC housed at California State University, Fullerton on November 25, 2019. The research focused on the identification of previously recorded cultural resources within a 0.5-mile radius of the proposed project footprints. The archival research included review of previously recorded

archaeological site records and reports, historic site and property inventories, and historic maps. Inventories of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California State Historic Resources Inventory (HRI), and California Historical Landmarks and Points of Interest were also reviewed to identify cultural resources within a 0.5-mile radius of the project area.

*Previous Cultural Resources Investigations Reports*

The records search revealed that 56 cultural resources investigations were previously conducted within a 0.5-mile radius of the project sites (Table 1). Eleven of these studies overlap the project footprints. These studies include cultural resources surveys, site evaluations, monitoring plans, and monitoring reports. As a result of previous studies, approximately 100 percent of the project areas have been previously surveyed. The last study that partially overlapped the project area was conducted in 2007.

**Table 1. Previous Investigations Conducted within 0.5 Mile of the Project Area**

| Report # (LA-) | Author | Description | Date |
|---|---|---|---|
| 00182 | Clewlow, William C. Jr. | Evaluation of the Archaeological Resources and Potential Impact of Proposed Development of the Los Angeles County Equestrian Center at Whittier Narrows Recreation Area; an Environmental Impact Report | 1976 |
| 00358* | Stickel, Gary E. | An Archaeological and Paleontological Resource Survey of the Los Angeles River, Rio Hondo River and the Whittier Narrows Flood Control Basin, Los Angeles, California | 1976 |
| 00427 | Bove, Frederick J. | An Archaeological and Historical Assessment of Areas within the Puente Hills Landfill Expansion, Los Angeles County, California. | 1978 |
| 00828 | Love, Bruce | Archaeological Resource Survey of Part of Whittier Narrows, California | 1980 |
| 01221 | Schwartz, Steven J. | Test Excavations at CA-LAN-858 Whittier Narrows Flood Control Basin, Los Angeles County, California | 1982 |
| 01648* | Roberts, Louis and James Brock | Cultural Resources Archival Study: Whittier Narrows Archaeological District | 1987 |
| 02586 | McKenna, Jeanette A. | Phase I Cultural Resources Investigations of the Proposed Crossroads Business Park, City of Industry, Los Angeles County, California | 1992 |
| 02649 | Anonymous | Historic Properties Overview for Routine Properties Overview for Routine Operation Maintenance, Los Angeles County Drainage Area (LACDA) | 1989 |
| 02665 | Cottrell, Marie G., James N. Hill, Stephen Van Wormer, and John Cooper | Cultural Resource Overview and Survey for the Los Angeles County Drainage Area Review Study | 1985 |
| 02667 | Lindsey, David and Martin Schiesl | Whittier Narrows Flood Control Basin Historic Resources Survey | 1976 |
| 02882 | McKenna, Jeanette A. | Cultural Resources Investigations, Site Inventory, and Evaluations, the Cajon Pipeline Project Corridor, Los Angeles and San Bernardino Counties, California | 1993 |
| 02970 | Chamberlaine, Pat and Jean Rivers-Council | Cajon Pipeline Project Draft Environmental Impact Statement/Environmental Impact Report | 1992 |
| 03295 | Scientific Resource Surveys, Inc. | A Cultural and Paleontological Investigation of the Proposed San Jose Creek Water Reclamation Plant Phase III Project Site, Los Angeles County | 1988 |
| 03508 | Van Wormer, Stephen R. | Historical Resource Overview and Survey for the Los Angeles County Drainage Area Review Study | 1985 |

| Report # (LA-) | Author | Description | Date |
|---|---|---|---|
| 04117 | Brechbiel, Brant A. | Cultural Resources Records Search and Literature Review Report for a Pacific Bell Mobile Services Telecommunications Facility: La 009-11 near Industry, Los Angeles County, California | 1998 |
| 04527* | Anonymous | Archaeological Survey of Crossroads Parkway Interchange with the Pomona Freeway | 1977 |
| 04528* | Anonymous | Historic Property Survey Crossroads Parkway Interchange Route 60 City of Industry, County of Los Angeles | 1979 |
| 04659* | Maxwell, Pamela | Records and Literature Survey for the Whittier Narrows Water Control Manual Project, Los Angeles County, California | 1993 |
| 04835 | Ashkar, Shahira | Cultural Resources Inventory Report for Williams Communications, Inc. Proposed Fiber Optic Cable System Installation Project, Los Angeles to Riverside, Los Angeles and Riverside Counties | 1999 |
| 04880 | Smith, Philomene and Adam Sriro | Pavement Rehabilitation Along Route 605 within the Cities of Long Beach, Lakewood, Cerritos, Downey, Pico Rivera, Santa Fe Springs, Whittier, City of Industry, Baldwin Park and Irwindale. | 2000 |
| 04883* | Storey, Noelle | Negative Archaeological Survey Report – Highway Project Description | 2000 |
| 05455* | Maxwell, Pamela | Cultural Resource Evaluation for Whittier Narrows Project Master Plan and Environmental Assessment, Los Angeles County, California | 1994 |
| 05456* | McLean, Roderic | Archival Study and Archaeological Survey for the Whittier Narrows Water Reclamation Project (Golf Course Storage Lakes), Los Angeles County, California | 1994 |
| 05475 | Miller, Jason A. | Cultural Resources Reconnaissance for the Whittier Narrows OU Remedy and Early Action Project, Whittier, Los Angeles County, California | 2000 |
| 05476 | Romani, Gwendolyn R. | Archaeological Survey Report: Los Angeles-san Diego Fiber Optic Project: Mesa Substation to Chino Hills State Park Segment | 2000 |
| 06299 | McKenna, Jeanette A. | Cultural Resource Assessment/Evaluation for Nextel Communications Site CA-8028b, South El Monte, Los Angeles County, California | 2002 |
| 06305 | Duke, Curt | Cultural Resource Assessment Cingular Wireless Facility No. Vy 132-01 Los Angeles County, California | 2001 |
| 06319 | Duke, Curt | Cultural Resource Assessment Cingular Wireless Facility No. Vy 132-03 Los Angeles County, California | 2002 |
| 07176* | Messick, Peter | Selected Archaeological Investigations for the San Gabriel River Project Master Plan | 2003 |
| 07305 | Wetherbee, Matthew and Josh Smallwood | Identification and Evaluation of Historic Properties Upper San Gabriel Valley Municipal Water District Direct Reuse Project, Phase IIa | 2004 |
| 07314 | Bonner, Wayne H. | Records Search Results for Cingular Wireless Site Vy-132-04 (the La Puente Landfill Site), Located on Crossroads Parkway N., La Puente, Los Angeles County, California | 2002 |
| 08210 | Bonner, Wayne H. | Cultural Resources Records Search Results and Site Visit for Sprint Nextel Candidate Ca5535b (Fry's), 1001 North Durfee Avenue, South El Monte, Los Angeles County, California | 2005 |
| 08214 | McKenna, Jeanette A. | A Phase I Cultural Resources Investigation for the Proposed Puente Hills Intermodal Facility in the City of Industry, Los Angeles County, California | 2006 |
| 08218* | Hogan, Michael | Whittier Narrows Historic Properties Management Plan | 1997 |
| 08231 | Bonner, Diane F. | Cultural Resources Records Search Results for Global Signal Candidate 3019265 (6002-26) (Avocado Heights), 2050 Workman Mill Road, Whittier, Los Angeles County, California | 2006 |
| 08248 | Fulton, Terri and Deborah McLean | Cultural Resource Assessment for the Puente Hills Landfill Native Habitat Preservation Authority, Los Angeles County, California | 2006 |

| Report # (LA-) | Author | Description | Date |
|---|---|---|---|
| 08249 | Peterson, Patricia A. | Cultural Resources Records Search and Survey Report for the Reclaimed Water Backbone Transmission Project, Los Angeles County, California | 2002 |
| 09282* | Strauss, Monica, Angel Tomes, and John Dietler | Cultural Resources Assessment for the Proposed San Gabriel River Discovery Center at Whittier Narrows Los Angeles County, California | 2007 |
| 09676 | Turner, Robin, Adrianna Jackson, and Shannon Loftus | Cultural Resource Monitoring and Mitigation Report Upper San Gabriel Valley Municipal Water District, San Gabriel Valley Water Recycling Project, Phase IIA. Whittier Narrows Recreation Area, Los Angeles County, California. | 2007 |
| 10363 | Tang, Bai and Michael Hogan | Identification and Evaluation of Historic Properties – Whittier Narrows Dam Deviations Study | 2009 |
| 11282 | Bischoff, Wayne | Historic Property Treatment Plan for Site CA-LAN-3814 Segment 7 Southern California Edison (SCE) Tehachapi Renewable Transmission Project (TRTP) | 2010 |
| 11579 | Bonner, Wayne | Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate IE24381-A (California CC2), 1509 South Workman Mill Road, City of Industry, Los Angeles County, California | 2011 |
| 11707 | Dibble, Stephen | Horseman's Park Development Proposal, Archeological Survey | 2011 |
| 11839 | Jordan, Stacey, Koji Tsunoda, and Stacie Wilson | Archaeological Survey Report for Southern California Edison Company Weed Abatement Project, Whittier Narrows Dam Recreation Area, Los Angeles County, CA | 2009 |
| 11843 | Schneider, Tsim, Elena Reese, Patricia Welsh, John Holson, and Wendy Tinsley Becker | Data Recovery Excavations at Archaeological Site CA-LAN-3814H, for the Southern California Edison Company Tehachapi Renewable Transmission Project, Segment 7, Los Angeles County, California | 2012 |
| 11988 | Schneider, Tsim | TRTP Cultural Resources Survey Report with Negative Findings, Segment 8 West (Phase 4) Supplemental Survey #6 | 2010 |
| 11989 | Panich, Lee and John Holson | Supplemental Archaeological Survey Report, 66KV Transmission Lines Access Roads, Tehachapi Renewable Transmission Project Segments 7 and 8, Los Angeles and San Bernardino Counties, California | 2010 |
| 11990 | Wetherbee, Matthew, Thomas Jackson, and Wendy Tinsley-Becker | Supplemental Cultural Resources Survey Report for the Southern California Edison Tehachapi Renewable Transmission Project Segment 7 Rio Hondo-Amamdor-Jose-Mesa 66kv Line Relocation, Los Angeles County, California | 2010 |
| 11991 | Schneider, Tsim and John Holson | Supplemental Archaeological Survey Report #2, Tehachapi Renewable Transmission Project Segment 7, Los Angeles County, California | 2010 |
| 12552 | Holm, Lisa and John Holson | Supplemental Archaeological Survey Report, Tehachapi Renewable Transmission Project Segment 8 East (Phases 2 and 3) and West (Phase 4), Los Angeles and San Bernardino Counties, California | 2011 |
| 12630 | Brown, Joan C. and Carol J. Stadum | Puente Hills Landfill Expansion, Los Angeles County, Expansion | 1997 |
| 12835 | Greenberg, Marc | Cultural Resources Survey for Tehachapi Renewable Transmission Project Request for Final Engineering Concurrence: Segments 7 and 8 Phase IV, Army Corps of Engineers Give Back Areas, Los Angeles County, California | 2013 |
| 12840 | Greenberg, Marc | Segment 11C Supplemental Survey for TEWS for Construct 03 Access Road, Tehachapi Renewable Transmission Project, Los Angeles County, California | 2014 |

| Report # (LA-) | Author | Description | Date |
|---|---|---|---|
| 12928 | Holm, Lisa and John Holson | Supplemental Archaeological Survey Report, Tehachapi Renewable Transmission Project Segment 8 East (Phases 2 and 3) and West (Phase 4), Los Angeles and San Bernardino Counties, California | 2011 |
| 13008 | David Brunzell | Cultural Resources Assessment, Whittier Narrows Temporary Deviation Project, City of Montebello and Unincorporated Los Angeles County, California | 2014 |
| 13155 | Bonner, Wayne H. | Cultural Resources Assessment of the Puente Hills Landfill, Whittier, Los Angeles County, California, Draft EIR | 2000 |

*Signifies overlap the project footprint

*Previously Recorded Cultural Resources*

The SCCIC records search identified 30 previously recorded cultural resources mapped within 0.5 mile of the project area (Table 2). Five of the resources are archaeological sites ranging from ceramic scatters to foundations, one is a railroad, seven are transmission lines or towers, and 17 are buildings or building complexes. None of the resources enter into the project area or footprint itself.

**Table 2. Previously Recorded Cultural Resource Sites within 0.5 Mile of the Project Area**

| Primary Number (P-19-) | Historic Name/Description | Time Period | Eligibility Evaluation |
|---|---|---|---|
| 000858 | Prehistoric/historic ceramic scatter and metal fragments | Prehistoric/Historic | Not evaluated |
| 002583 | La Merced Adobe foundations and refuse deposit | Historic (ca. 1870s) | Not evaluated |
| 003814 | Refuse deposit | Historic (ca. 1915) | Not evaluated |
| 004828 | KRLA radio antenna foundation | Historic (ca. 1959) | Not evaluated |
| 186112 | Union Pacific Railroad (historic Southern Pacific Railroad) | Historic (1874–present) | Appears eligible for listing in NRHP through survey evaluation |
| 186889 | Concrete and brick foundations and concrete swimming pool within Whittier Narrows Dam National Recreation Area | Historic | Not evaluated |
| 188114 | Whittier Narrows Nature Center Park Police Office | Historic (1955–1956) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 188115 | Whittier Narrows Nature Center Main Building | Historic (ca. 1950s) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 188116 | Whittier Narrows Nature Center Restroom | Historic (1956) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 188117 | Whittier Narrows Nature Center maintenance garage and storage shed | Historic | Found ineligible for listing in NRHP, CRHR, or local listing through survey |

| Primary Number (P-19-) | Historic Name/Description | Time Period | Eligibility Evaluation |
|---|---|---|---|
| 188118 | Whittier Narrows Nature Center picnic shelter | Historic (1957) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 188983 | Boulder Dam-Los Angeles 287.5 kV Transmission Line | Historic (1936) | Appears eligible for listing in NRHP through survey evaluation |
| 190176 | Southern California Edison transmission towers | Historic | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 190334 | United States Army Corps of Engineers Base Yard Facility | Historic (1937–1948) | Appears eligible for listing in NRHP through survey evaluation |
| 190504 | Southern California Edison Rio Hondo-Amador-Jose-Mesa-Narrows 66kV Transmission Line | Historic | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 190505 | Southern California Edison Mesa-Walnut 220 kV Transmission Line | Historic (1956) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 190507 | Southern California Edison Siphon Road Towers | Historic | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 190508 | Southern California Edison Walnut-Hillgen-Industry-Mesa-Reno 66 kV Transmission Line | Historic (1954) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 191150 | 11034 Fawcett Avenue single-family residence | Historic (1961) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 191151 | 1046 Lexham Avenue single-family residence | Historic (1948) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 191153 | 1054 Lexham Avenue single-family residence | Historic (1941) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 191154 | 1055 Lexham Avenue single-family residence | Historic (1946) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 191155 | 1058 Lexham Avenue single-family residence | Historic (1957) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 191156 | 1042 Lexington-Gallatin Road single-family residence | Historic (1956) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 191157 | 825 Lexington-Gallatin Road single-family residence | Historic (1950) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 191158 | 1032 Lexington-Gallatin Road single-family residence | Historic (1952) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |

| Primary Number (P-19-) | Historic Name/Description | Time Period | Eligibility Evaluation |
|---|---|---|---|
| 192581 | Antelope-Mesa 220 kV Transmission Line | Historic (1949–1953) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 192818 | 12417 Pellissier Road, two single-family residences | Historic (1957) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |
| 192822 | California Country Club | Historic (1957) | Found ineligible for listing in NRHP or CRHR, through survey |
| 192828 | Sanitation Districts of Los Angeles County office complex | Historic (ca.1965) | Found ineligible for listing in NRHP, CRHR, or local listing through survey |

CRHR = California Register of Historical Resources; NRHP = National Register of Historic Places

*California State Historic Resources Inventory*

Study of the California Office of Historic Preservation's HRI focused on properties within 0.5 mile of the project area that faced streets bordering the project area, including Workman Mill Road, Durfee Avenue, and Peck Road. The HRI listings of both South El Monte and Whittier were consulted. No properties are listed in the HRI on these three streets within 0.5 mile of the project area.

*California Historical Landmarks*

California Historical Landmarks are buildings, structures, sites, or places that have been determined to have statewide historical interest. A search of the California Historical Landmarks list revealed no California Historic Landmarks within 0.5 mile of the project area.

*Historic Maps*

Historic map research was conducted to understand past land use and disturbance and to identify possible locations of archaeological sensitivity within the project area. General Land Office (GLO) and U.S. Geological Survey (USGS) maps were consulted.

The earliest map of the project area held at the SCCIC consists of a GLO map of Township 5 South, Range 11 West. The map depicts the area as reflected by surveys conducted between 1852 and 1867. The majority of the project area appears as part of "Potrero de Felipe Lugo," that is, grazing lands granted to Felipe Lugo. No roads or other improvements are shown within the project area.

USGS topographic maps of the area generally show the project area itself much as it appears today, as the surrounding area is increasingly developed. The 1894 Los Angeles, 1896 Pasadena, and 1900 Pasadena and Los Angeles 1:62500 maps, and the 1923, 1926, 1948, 1953 El Monte 1:24000 maps show Durfee Avenue following approximately its modern alignment. Workman Mill Road also follows modern alignment, but the Pomona Freeway is not yet constructed. There is no development on the Booster Station parcel. More and more roads and structures appear as the maps become more recent, but the project area itself does not change.

The 1966 El Monte 1:24000 USGS map is the first to show the Pomona Freeway in current paths. Workman Mill Road follows its present alignment. Booster Station is undeveloped. Durfee Avenue passes through Whittier Narrows Flood Control Basin as it does today, and the artificial Legg Lake appears for the first time.

*Paleontological Research*

The proposed pipeline within Durfee Avenue passes within an area mapped as including surficial deposits of younger Quaternary alluvium (Dibblee and Ehrenspeck 1999). Younger Quaternary alluvium consists of gravel, sand, and silt deposited by rivers and streams within valleys and floodplains. Deposited within the Holocene, younger alluvium is typically too young to contain significant fossils. However, Older Quaternary alluvium is typically found at varying depths beneath younger Quaternary alluvium.

The proposed Booster Station is mapped as located within surficial deposits of Older Quaternary alluvium (Dibblee and Ehrenspeck 1999). Older Quaternary alluvium consists of stream deposits laid down in the late Pleistocene (ending approximately 11,700 years ago). These deposits are known for their terrestrial vertebrate fossils, including fossils of extinct megafauna such as mammoth, mastodon, giant sloth, bison, and horse (McLeod 2013).

## Archaeological Survey

A reconnaissance-level archaeological field survey was conducted on December 6, 2019, by AECOM archaeologist Frank Humphries, M.S., RPA. Mr. Humphries meets the Secretary of the Interior's Professional Qualification Standards in Archaeology. The purpose of the survey was to identify and record cultural resources that are at least 45 years old and evaluate any discovered resources for historical significance based on criteria for listing in the CRHR, as well as to identify the potential for buried resources within the project area.

Because the majority of the project area is paved, built over, or otherwise obscured, survey methodology varied according to the degree of ground visibility.

The parcel upon which the proposed Booster Station would be located, including the proposed inlet and outlet location, was discovered to have zero ground surface visibility during the survey. The entire project area in this location is obscured by landscaping, including wood chips and cobbles, that cover the ground surface (Figure 1). The only visible soil was immediately surrounding a few planted trees, but no artifacts were visible in these small exposures, and it is unclear whether the soil in these locations is naturally occurring or consists of imported fill. The inlet and outlet pass from the parcel beneath the paved surface of Workman Mill Road and continues east approximately 200 feet, where the new piping will connect to existing piping at Crossroad Parkway North.

**Figure 1. Overview of Proposed Plant B28 Booster Station Area, View North.**

The project area within Durfee Avenue was even more obscured. The proposed blend line will be placed entirely within the limits of the paved street (Figure 2), terminating at an existing facility (Figure 3). The proposed project area was subjected to a windshield survey. No unobscured ground surfaces were identified within the project area.

**Figure 2. Project Area, West End of Durfee Avenue Segment, View East.**

**Figure 3. Project Area, Durfee Avenue Segment Termination at Existing Plant, View North.**

In the course of the field survey, no archaeological or historical resources meeting the age criterion of 45 years or more were identified.

## Recommendations and Conclusions

The following section presents recommendations for further action regarding paleontological, historical, and archaeological resources within the project area. These recommendations are based on information collected from archival research, which examined records kept at the SCCIC, local cultural resource listings, historic maps, contemporary archaeological literature, local prehistoric land use patterns and resource availability, geological publications, and the results of the field survey. All of these investigations and resource documentation serve to inform the recommendations provided for cultural resources in the project area.

Based on the investigations and resource documentation listed above, no historical built resources have been identified within the project site and footprint. The proposed project would have no significant effects related to known historical built resources.

In addition, the sensitivity of the proposed project to encounter archaeological resources appears low. Excavations for the proposed project are limited to 5 feet within the existing roadway, and 10 feet at the Booster Station location. Most excavations for the proposed project will take place within Durfee Avenue, which has been a major thoroughfare since at least the early twentieth century.

The sensitivity of the proposed project to encounter significant fossil remains also appears low. The paleontological desktop study indicates that surface deposits within the project area consist primarily of younger Quaternary alluvium, which is anticipated to overlie older Quaternary alluvium at varying depths. The exception is at the proposed Booster Station location, where older Quaternary alluvium is mapped at the present ground surface, although no alluvial deposits were visible at the time of the survey.

Although older Quaternary alluvium has at times yielded significant fossil remains, excavations for the proposed project are not anticipated to extend below 5 feet in depth in Durfee Avenue, and therefore are unlikely to encounter older Quaternary alluvium. Fossils encountered at the shallow depths required for

project excavations would be subject to erosion and weathering. Moreover, previous road grading associated with Durfee Avenue, Workman Mill Road, and the Pomona Freeway, as well as utilities excavations in the existing active roadway of Durfee Avenue, are likely to have impacted sedimentary deposits within the three-dimensional project area. The shallow excavations required for the project are unlikely to encounter significant preserved fossil deposits.

Based on the results of the archival research and survey, there is low potential that paleontological or archaeological resources will be encountered during ground-disturbing activities for the proposed project. If archaeological or paleontological resources are encountered during ground-disturbing activities, work will temporarily be halted in the vicinity of the find and the DTSC will contact a qualified archaeologist or paleontologist to evaluate and determine appropriate treatment for the resource in accordance with California Public Resource Code (PRC) Section 21083.2(i).

If any Native American cultural material is encountered within the project site, consultation with interested Native American parties will be conducted to apprise them of any such findings and solicit any comments they may have regarding appropriate treatment and disposition of the resources.

If human remains are discovered, work in the immediate vicinity of the discovery will be suspended and the Los Angeles County Coroner will be contacted. If the remains are deemed Native American in origin, the Coroner will contact the Native American Heritage Commission and identify a Most Likely Descendant pursuant to PRC Section 5097.98 and California Code of Regulations Section 15064.5. Work may be resumed at the landowner's discretion but will only commence after consultation and treatment have been concluded. Work may continue on other parts of the project site while consultation and treatment are conducted. The proposed project would have no significant effects related to human remains.

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Attachment – Project Area Map

## References


Arnold, Jeanne E., Michael Walsh, and Sandra E. Hollimon
2004 The Archaeology of California. *Journal of Archaeological Research* 12(1): 1–73.

Bean, Lowell John, and Smith, Charles R.
1978 Gabrielino. In *Handbook of North American Indians*, Vol. 9, pp. 538–562. Robert F. Heizer, editor. Smithsonian Institution, Washington, D.C.

Dibblee, T. W., and H. E. Ehrenspeck
1999 Geologic map of the El Monte and Baldwin Park quadrangles, Los Angeles County, California. 1:24000 scale map. Camarillo, CA: Dibblee Geological Foundation.

Erlandson, Jon M.
1994 *Early Hunter-Gatherers of the California Coast*. Plenum Press, New York.

Gumprecht, Blake
1999 *The Los Angeles River: Its Life, Death and Possible Rebirth.* John Hopkins University Press, Baltimore, MD.

Hawthorne, Christopher
2006 Hooray for Sprawlywood. *Los Angeles Times.* 3 December:S6. Los Angeles.

Jackson, Robert H.
1999 Agriculture, Drought & Chumash Congregation in the California Missions (1782-1834), *California Mission Studies Association*. Articles, May Newsletter.

Kroeber, Alfred L.
1925 Handbook of Indians of California. *Bureau of American Ethnology Bulletin 78*, Smithsonian Institution, Washington D.C.

McCawley, William
1996 *The First Angelinos: The Gabrielino Indians of Los Angeles.* Malki Museum Press. Banning.

McLeod, Samuel A.
2013 Paleontological Resources Records Check for the WRD GRIP Project, Los Angeles County, Project area: Natural History Museum of Los Angeles County.

Meyer, L.
1981 *Los Angeles, 1781–1981*. A special bicentennial issue of California history, Spring 1981. California Historical Society, Los Angeles.

Phillips, George Harwood
2010 *Vineyards and Vaqueros: Indian Labor and the Economic Expansion of Southern California, 1771-1877.* Norman, OK: Arthur H. Clark Co.

Poole, Jean Bruce, and Tevvy Ball
2002 *The Historic Heart of Los Angeles.* Getty Publications, Los Angeles, CA. ISBN 0-89236-662-1.

Reid, Hugo
1939 [1852] Letters on the Los Angeles County Indians. In *A Scotch Paisano in Old Los Angeles*, by Susanna Bryant Dakin, pp. 215–286. Berkeley, CA: University of California Press.

1977 [1851] The Decay of the Mission. In *Los Angeles, Biography of a City*, edited by John Caughey and LaRee Caughey, pp. 102–104. Berkeley, CA: University of California Press.

Robinson, W.W.
1948 *Land in California.* Berkeley: University of California Press.

Rondeau, Michael F.
2008 Fluted Points of the Far West. *Proceedings of the Society for California Archaeology* 21:265–-274.

Spitzzeri, Paul R.
2007 *The Workman & Temple Families of Southern California, 1830-1930.* Dallas: Seligson Publishing, Inc.

Stickel, E. Gary
2008 *The Farpoint Site (CA-LAN-451): A Unique Clovis Culture Site of the First Americans on the Malibu Coast*. Online at http://farpointsite.blogspot.com/2008/02/farpoint-site-ca-lan-451-unique-clovis.html. Accessed December 27, 2013.

Wallace, William J.
1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11(3): 214–230.

Warren, Claude N.
1968 Cultural Traditions and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States*, edited by Cynthia Irwin-Williams. Eastern New Mexico University Contributions in Anthropology 1(3): 1–14.

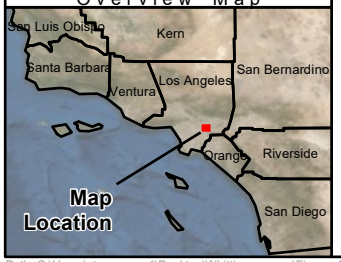
Wilkman, Nancy, and Jon Wilkman
2006 *Picturing Los Angeles.* Gibbs Smith Publishers, Salt Lake City.

**Attachment**
**Project Area Maps**

Proposed Booster Station

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Overview Map




**Legend:**

- Proposed 16" Blend Line
- Proposed Booster Station

0 0.125 0.25 Miles

0 0.125 0.25 Kilometers

**Scale:** 1:14,400
1 in = 1,200 ft

Date: 12/15/2019
Projection: NAD 83 UTM Zone 11N

N

Whitter Narrows
WNOUProp1G

**Project Area**

Project: 60609755

AECOM

**Figure 1**

Path: C:\Users\stevensona1\Desktop\Whittier narrows\Figure_1_WhitterNarrows_ProjectArea.mxd