# Attachment A

CalEEMod Outputs

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

# Calleguas SMP Phase 3- AQ

**Ventura County APCD Air District, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Other Asphalt Surfaces | 108.00 | 1000sqft | 2.48 | 108,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.6 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 8 | | | **Operational Year** | 2025 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 390.98 | **CH4 Intensity (lb/MWhr)** | 0.033 | **N2O Intensity (lb/MWhr)** | 0.004 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Distrubance area (27,000 linear feet by 4 foot-wide trench)

Construction Phase - Based on applicant provided information, 80 feet installation per day would occur. Based on project details, Phase 3 would have 460 LF of trenchless activity, crossing upland road bridge would take 2 weeks, and the remainder would be open-cut trench.

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Based on applicant provided information

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Off-road Equipment - Construction equipment provided by the applicant

Trips and VMT - 14 hauling trips per day according to the applicant.

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Grading -

Vehicle Trips - Based on applicant provided information. Maintenance and inspection work trips would occur annually for one day with one worker vehicle that would travel from the District's office to the pipeline and back.

Construction Off-road Equipment Mitigation - Information provided by the applicant

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 220.00 | 10.00 |
| tblConstructionPhase | NumDays | 220.00 | 33.00 |
| tblConstructionPhase | NumDays | 220.00 | 322.00 |
| tblConstructionPhase | NumDays | 6.00 | 10.00 |
| tblConstructionPhase | NumDays | 6.00 | 79.00 |
| tblConstructionPhase | NumDays | 6.00 | 322.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| 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 | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 140.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,095.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 451.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 4,505.00 |
| tblTripsAndVMT | VendorTripNumber | 18.00 | 0.00 |
| tblTripsAndVMT | VendorTripNumber | 18.00 | 0.00 |
| tblTripsAndVMT | VendorTripNumber | 18.00 | 0.00 |
| tblVehicleTrips | CW_TL | 9.50 | 0.11 |
| tblVehicleTrips | CW_TTP | 0.00 | 100.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | WD_TR | 0.00 | 0.01 |

## 2.0 Emissions Summary

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | | | | | |
| 2024 | 0.1258 | 1.1017 | 1.3712 | 3.8200e-003 | 0.0770 | 0.0388 | 0.1158 | 0.0207 | 0.0374 | 0.0581 | 0.0000 | 347.8838 | 347.8838 | 0.0503 | 0.0173 | 354.3033 |
| 2025 | 0.1086 | 0.8579 | 1.2148 | 3.1700e-003 | 0.0657 | 0.0295 | 0.0952 | 0.0176 | 0.0284 | 0.0460 | 0.0000 | 287.6403 | 287.6403 | 0.0431 | 0.0119 | 292.2578 |
| **Maximum** | **0.1258** | **1.1017** | **1.3712** | **3.8200e-003** | **0.0770** | **0.0388** | **0.1158** | **0.0207** | **0.0374** | **0.0581** | **0.0000** | **347.8838** | **347.8838** | **0.0503** | **0.0173** | **354.3033** |

### 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 | | | | | |
| 2024 | 0.1258 | 1.1017 | 1.3711 | 3.8200e-003 | 0.0770 | 0.0388 | 0.1158 | 0.0207 | 0.0374 | 0.0581 | 0.0000 | 347.8836 | 347.8836 | 0.0503 | 0.0173 | 354.3031 |
| 2025 | 0.1086 | 0.8579 | 1.2148 | 3.1700e-003 | 0.0657 | 0.0295 | 0.0952 | 0.0176 | 0.0284 | 0.0460 | 0.0000 | 287.6401 | 287.6401 | 0.0431 | 0.0119 | 292.2575 |
| **Maximum** | **0.1258** | **1.1017** | **1.3711** | **3.8200e-003** | **0.0770** | **0.0388** | **0.1158** | **0.0207** | **0.0374** | **0.0581** | **0.0000** | **347.8836** | **347.8836** | **0.0503** | **0.0173** | **354.3031** |

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## EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

| | 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** |

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---|---|---|---|---|
| **1** | **6-3-2024** | **9-2-2024** | 0.5292 | 0.5292 |
| **2** | **9-3-2024** | **12-2-2024** | 0.5668 | 0.5668 |
| **3** | **12-3-2024** | **3-2-2025** | 0.3463 | 0.3463 |
| **4** | **3-3-2025** | **6-2-2025** | 0.3418 | 0.3418 |
| **5** | **6-3-2025** | **9-2-2025** | 0.3408 | 0.3408 |
| **6** | **9-3-2025** | **9-30-2025** | 0.0519 | 0.0519 |
| | | **Highest** | 0.5668 | 0.5668 |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 8.5700e-003 | 1.0000e-005 | 9.9000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.9300e-003 | 1.9300e-003 | 1.0000e-005 | 0.0000 | 2.0600e-003 |
| 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 | 1.9000e-004 | 9.0000e-005 | 7.9000e-004 | 0.0000 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0273 | 0.0273 | 2.0000e-005 | 1.0000e-005 | 0.0299 |
| 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** | **8.7600e-003** | **1.0000e-004** | **1.7800e-003** | **0.0000** | **1.0000e-005** | **0.0000** | **1.0000e-005** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0292** | **0.0292** | **3.0000e-005** | **1.0000e-005** | **0.0320** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 8.5700e-003 | 1.0000e-005 | 9.9000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.9300e-003 | 1.9300e-003 | 1.0000e-005 | 0.0000 | 2.0600e-003 |
| 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 | 1.9000e-004 | 9.0000e-005 | 7.9000e-004 | 0.0000 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0273 | 0.0273 | 2.0000e-005 | 1.0000e-005 | 0.0299 |
| 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** | **8.7600e-003** | **1.0000e-004** | **1.7800e-003** | **0.0000** | **1.0000e-005** | **0.0000** | **1.0000e-005** | **0.0000** | **0.0000** | **0.0000** | **0.0000** | **0.0292** | **0.0292** | **3.0000e-005** | **1.0000e-005** | **0.0320** |

| | 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 | Excavation - Pipe-in-a-Bridge | Grading | 6/3/2024 | 6/14/2024 | 5 | 10 | |
| 2 | Installation - Pipe-in-a-Bridge | Building Construction | 6/3/2024 | 6/14/2024 | 5 | 10 | |
| 3 | Excavation - Trenchless | Grading | 6/17/2024 | 10/3/2024 | 5 | 79 | |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | Installation - Trenchless | Building Construction | 10/4/2024 | 11/19/2024 | 5 | 33 | |
| 5 | Installation/Backfill - Open Trench | Building Construction | 6/17/2024 | 9/9/2025 | 5 | 322 | |
| 6 | Excavation - Open Trench | Grading | 6/17/2024 | 9/9/2025 | 5 | 322 | |
| 7 | Paving - Open Trench | Paving | 9/10/2025 | 9/23/2025 | 5 | 10 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 2.48**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Excavation - Pipe-in-a-Bridge | Excavators | 1 | 4.00 | 158 | 0.38 |
| Excavation - Pipe-in-a-Bridge | Graders | 0 | 8.00 | 187 | 0.41 |
| Excavation - Pipe-in-a-Bridge | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Excavation - Pipe-in-a-Bridge | Tractors/Loaders/Backhoes | 0 | 4.00 | 97 | 0.37 |
| Excavation - Trenchless | Bore/Drill Rigs | 0 | 8.00 | 221 | 0.50 |
| Excavation - Trenchless | Concrete/Industrial Saws | 1 | 5.00 | 81 | 0.73 |
| Excavation - Trenchless | Cranes | 0 | 8.00 | 231 | 0.29 |
| Excavation - Trenchless | Dumpers/Tenders | 0 | 8.00 | 16 | 0.38 |
| Excavation - Trenchless | Excavators | 1 | 5.00 | 158 | 0.38 |
| Excavation - Trenchless | Generator Sets | 1 | 5.00 | 84 | 0.74 |
| Excavation - Trenchless | Graders | 0 | 8.00 | 187 | 0.41 |
| Excavation - Trenchless | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Excavation - Trenchless | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Excavation - Trenchless | Tractors/Loaders/Backhoes | 0 | 7.00 | 97 | 0.37 |
| Excavation - Trenchless | Welders | 0 | 8.00 | 46 | 0.45 |
| Excavation - Open Trench | Air Compressors | 1 | 5.00 | 78 | 0.48 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | | | |
|---|---|---|---|---|---|
| Excavation - Open Trench | Concrete/Industrial Saws | 1 | 5.00 | 81 | 0.73 |
| Excavation - Open Trench | Excavators | 1 | 5.00 | 158 | 0.38 |
| Excavation - Open Trench | Generator Sets | 1 | 5.00 | 84 | 0.74 |
| Excavation - Open Trench | Graders | 0 | 8.00 | 187 | 0.41 |
| Excavation - Open Trench | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Excavation - Open Trench | Plate Compactors | 0 | 8.00 | 8 | 0.43 |
| Excavation - Open Trench | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Excavation - Open Trench | Rubber Tired Loaders | 1 | 5.00 | 203 | 0.36 |
| Excavation - Open Trench | Tractors/Loaders/Backhoes | 0 | 7.00 | 97 | 0.37 |
| Installation - Pipe-in-a-Bridge | Cranes | 0 | 8.00 | 231 | 0.29 |
| Installation - Pipe-in-a-Bridge | Forklifts | 0 | 7.00 | 89 | 0.20 |
| Installation - Pipe-in-a-Bridge | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Installation - Pipe-in-a-Bridge | Tractors/Loaders/Backhoes | 1 | 4.00 | 97 | 0.37 |
| Installation - Pipe-in-a-Bridge | Welders | 0 | 8.00 | 46 | 0.45 |
| Installation - Trenchless | Bore/Drill Rigs | 1 | 5.00 | 221 | 0.50 |
| Installation - Trenchless | Cranes | 1 | 5.00 | 231 | 0.29 |
| Installation - Trenchless | Dumpers/Tenders | 1 | 5.00 | 16 | 0.38 |
| Installation - Trenchless | Forklifts | 0 | 7.00 | 89 | 0.20 |
| Installation - Trenchless | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Installation - Trenchless | Tractors/Loaders/Backhoes | 0 | 6.00 | 97 | 0.37 |
| Installation - Trenchless | Welders | 1 | 5.00 | 46 | 0.45 |
| Installation/Backfill - Open Trench | Cranes | 0 | 8.00 | 231 | 0.29 |
| Installation/Backfill - Open Trench | Forklifts | 0 | 7.00 | 89 | 0.20 |
| Installation/Backfill - Open Trench | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Installation/Backfill - Open Trench | Plate Compactors | 1 | 5.00 | 8 | 0.43 |
| Installation/Backfill - Open Trench | Tractors/Loaders/Backhoes | 1 | 5.00 | 97 | 0.37 |
| Installation/Backfill - Open Trench | Welders | 0 | 8.00 | 46 | 0.45 |
| Paving - Open Trench | Cement and Mortar Mixers | 1 | 5.00 | 9 | 0.56 |
| Paving - Open Trench | Pavers | 1 | 5.00 | 130 | 0.42 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | | | |
|---|---|---|---|---|---|
| Paving - Open Trench | Paving Equipment | 1 | 5.00 | 132 | 0.36 |
| Paving - Open Trench | Rollers | 1 | 5.00 | 80 | 0.38 |
| Paving - Open Trench | Surfacing Equipment | 1 | 5.00 | 263 | 0.30 |
| Paving - Open Trench | Tractors/Loaders/Backhoes | 0 | 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| Excavation - Pipe-in-a-Bridge | 1 | 3.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Excavation - Trenchless | 4 | 10.00 | 0.00 | 1,095.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Excavation - Open Trench | 6 | 15.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Installation - Pipe-in-a-Bridge | 1 | 45.00 | 0.00 | 140.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Installation - Trenchless | 4 | 45.00 | 0.00 | 451.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Installation/Backfill - Open Trench | 2 | 45.00 | 0.00 | 4,505.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving - Open Trench | 5 | 13.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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## 3.2 Excavation - Pipe-in-a-Bridge - 2024

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 4.5000e-004 | 3.5100e-003 | 8.1600e-003 | 1.0000e-005 | | 1.7000e-004 | 1.7000e-004 | | 1.6000e-004 | 1.6000e-004 | 0.0000 | 1.1346 | 1.1346 | 3.7000e-004 | 0.0000 | 1.1438 |
| **Total** | **4.5000e-004** | **3.5100e-003** | **8.1600e-003** | **1.0000e-005** | **0.0000** | **1.7000e-004** | **1.7000e-004** | **0.0000** | **1.6000e-004** | **1.6000e-004** | **0.0000** | **1.1346** | **1.1346** | **3.7000e-004** | **0.0000** | **1.1438** |

### 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 | 4.0000e-005 | 3.0000e-005 | 3.5000e-004 | 0.0000 | 1.2000e-004 | 0.0000 | 1.2000e-004 | 3.0000e-005 | 0.0000 | 3.0000e-005 | 0.0000 | 0.0919 | 0.0919 | 0.0000 | 0.0000 | 0.0927 |
| **Total** | **4.0000e-005** | **3.0000e-005** | **3.5000e-004** | **0.0000** | **1.2000e-004** | **0.0000** | **1.2000e-004** | **3.0000e-005** | **0.0000** | **3.0000e-005** | **0.0000** | **0.0919** | **0.0919** | **0.0000** | **0.0000** | **0.0927** |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.2 Excavation - Pipe-in-a-Bridge - 2024

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 4.5000e-004 | 3.5100e-003 | 8.1600e-003 | 1.0000e-005 | | 1.7000e-004 | 1.7000e-004 | | 1.6000e-004 | 1.6000e-004 | 0.0000 | 1.1346 | 1.1346 | 3.7000e-004 | 0.0000 | 1.1438 |
| **Total** | **4.5000e-004** | **3.5100e-003** | **8.1600e-003** | **1.0000e-005** | **0.0000** | **1.7000e-004** | **1.7000e-004** | **0.0000** | **1.6000e-004** | **1.6000e-004** | **0.0000** | **1.1346** | **1.1346** | **3.7000e-004** | **0.0000** | **1.1438** |

### 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 | 4.0000e-005 | 3.0000e-005 | 3.5000e-004 | 0.0000 | 1.2000e-004 | 0.0000 | 1.2000e-004 | 3.0000e-005 | 0.0000 | 3.0000e-005 | 0.0000 | 0.0919 | 0.0919 | 0.0000 | 0.0000 | 0.0927 |
| **Total** | **4.0000e-005** | **3.0000e-005** | **3.5000e-004** | **0.0000** | **1.2000e-004** | **0.0000** | **1.2000e-004** | **3.0000e-005** | **0.0000** | **3.0000e-005** | **0.0000** | **0.0919** | **0.0919** | **0.0000** | **0.0000** | **0.0927** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Installation - Pipe-in-a-Bridge - 2024

### 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 | 3.6000e-004 | 3.6200e-003 | 5.5900e-003 | 1.0000e-005 | | 1.7000e-004 | 1.7000e-004 | | 1.5000e-004 | 1.5000e-004 | 0.0000 | 0.6844 | 0.6844 | 2.2000e-004 | 0.0000 | 0.6899 |
| **Total** | **3.6000e-004** | **3.6200e-003** | **5.5900e-003** | **1.0000e-005** | | **1.7000e-004** | **1.7000e-004** | | **1.5000e-004** | **1.5000e-004** | **0.0000** | **0.6844** | **0.6844** | **2.2000e-004** | **0.0000** | **0.6899** |

### 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 | 1.4000e-004 | 8.6800e-003 | 2.4800e-003 | 4.0000e-005 | 1.2000e-003 | 6.0000e-005 | 1.2600e-003 | 3.3000e-004 | 6.0000e-005 | 3.9000e-004 | 0.0000 | 3.9107 | 3.9107 | 2.8000e-004 | 6.2000e-004 | 4.1034 |
| 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 | 6.0000e-004 | 4.0000e-004 | 5.2300e-003 | 1.0000e-005 | 1.8100e-003 | 1.0000e-005 | 1.8200e-003 | 4.8000e-004 | 1.0000e-005 | 4.9000e-004 | 0.0000 | 1.3784 | 1.3784 | 4.0000e-005 | 4.0000e-005 | 1.3910 |
| **Total** | **7.4000e-004** | **9.0800e-003** | **7.7100e-003** | **5.0000e-005** | **3.0100e-003** | **7.0000e-005** | **3.0800e-003** | **8.1000e-004** | **7.0000e-005** | **8.8000e-004** | **0.0000** | **5.2892** | **5.2892** | **3.2000e-004** | **6.6000e-004** | **5.4944** |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Installation - Pipe-in-a-Bridge - 2024

### 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 | 3.6000e-004 | 3.6200e-003 | 5.5900e-003 | 1.0000e-005 | | 1.7000e-004 | 1.7000e-004 | | 1.5000e-004 | 1.5000e-004 | 0.0000 | 0.6844 | 0.6844 | 2.2000e-004 | 0.0000 | 0.6899 |
| **Total** | **3.6000e-004** | **3.6200e-003** | **5.5900e-003** | **1.0000e-005** | | **1.7000e-004** | **1.7000e-004** | | **1.5000e-004** | **1.5000e-004** | **0.0000** | **0.6844** | **0.6844** | **2.2000e-004** | **0.0000** | **0.6899** |

### 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 | 1.4000e-004 | 8.6800e-003 | 2.4800e-003 | 4.0000e-005 | 1.2000e-003 | 6.0000e-005 | 1.2600e-003 | 3.3000e-004 | 6.0000e-005 | 3.9000e-004 | 0.0000 | 3.9107 | 3.9107 | 2.8000e-004 | 6.2000e-004 | 4.1034 |
| 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 | 6.0000e-004 | 4.0000e-004 | 5.2300e-003 | 1.0000e-005 | 1.8100e-003 | 1.0000e-005 | 1.8200e-003 | 4.8000e-004 | 1.0000e-005 | 4.9000e-004 | 0.0000 | 1.3784 | 1.3784 | 4.0000e-005 | 4.0000e-005 | 1.3910 |
| **Total** | **7.4000e-004** | **9.0800e-003** | **7.7100e-003** | **5.0000e-005** | **3.0100e-003** | **7.0000e-005** | **3.0800e-003** | **8.1000e-004** | **7.0000e-005** | **8.8000e-004** | **0.0000** | **5.2892** | **5.2892** | **3.2000e-004** | **6.6000e-004** | **5.4944** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Excavation - Trenchless - 2024

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0241 | 0.1899 | 0.2933 | 5.8000e-004 | | 8.3500e-003 | 8.3500e-003 | | 8.1200e-003 | 8.1200e-003 | 0.0000 | 49.9009 | 49.9009 | 8.5300e-003 | 0.0000 | 50.1141 |
| **Total** | **0.0241** | **0.1899** | **0.2933** | **5.8000e-004** | **0.0000** | **8.3500e-003** | **8.3500e-003** | **0.0000** | **8.1200e-003** | **8.1200e-003** | **0.0000** | **49.9009** | **49.9009** | **8.5300e-003** | **0.0000** | **50.1141** |

### 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 | 1.0700e-003 | 0.0679 | 0.0194 | 3.0000e-004 | 9.4100e-003 | 4.9000e-004 | 9.8900e-003 | 2.5800e-003 | 4.6000e-004 | 3.0500e-003 | 0.0000 | 30.5874 | 30.5874 | 2.1800e-003 | 4.8800e-003 | 32.0947 |
| 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 | 1.0600e-003 | 7.1000e-004 | 9.1800e-003 | 3.0000e-005 | 3.1800e-003 | 2.0000e-005 | 3.2000e-003 | 8.5000e-004 | 2.0000e-005 | 8.6000e-004 | 0.0000 | 2.4199 | 2.4199 | 7.0000e-005 | 7.0000e-005 | 2.4419 |
| **Total** | **2.1300e-003** | **0.0686** | **0.0285** | **3.3000e-004** | **0.0126** | **5.1000e-004** | **0.0131** | **3.4300e-003** | **4.8000e-004** | **3.9100e-003** | **0.0000** | **33.0073** | **33.0073** | **2.2500e-003** | **4.9500e-003** | **34.5367** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Excavation - Trenchless - 2024

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0241 | 0.1899 | 0.2933 | 5.8000e-004 | | 8.3500e-003 | 8.3500e-003 | | 8.1200e-003 | 8.1200e-003 | 0.0000 | 49.9009 | 49.9009 | 8.5300e-003 | 0.0000 | 50.1141 |
| **Total** | **0.0241** | **0.1899** | **0.2933** | **5.8000e-004** | **0.0000** | **8.3500e-003** | **8.3500e-003** | **0.0000** | **8.1200e-003** | **8.1200e-003** | **0.0000** | **49.9009** | **49.9009** | **8.5300e-003** | **0.0000** | **50.1141** |

### 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 | 1.0700e-003 | 0.0679 | 0.0194 | 3.0000e-004 | 9.4100e-003 | 4.9000e-004 | 9.8900e-003 | 2.5800e-003 | 4.6000e-004 | 3.0500e-003 | 0.0000 | 30.5874 | 30.5874 | 2.1800e-003 | 4.8800e-003 | 32.0947 |
| 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 | 1.0600e-003 | 7.1000e-004 | 9.1800e-003 | 3.0000e-005 | 3.1800e-003 | 2.0000e-005 | 3.2000e-003 | 8.5000e-004 | 2.0000e-005 | 8.6000e-004 | 0.0000 | 2.4199 | 2.4199 | 7.0000e-005 | 7.0000e-005 | 2.4419 |
| **Total** | **2.1300e-003** | **0.0686** | **0.0285** | **3.3000e-004** | **0.0126** | **5.1000e-004** | **0.0131** | **3.4300e-003** | **4.8000e-004** | **3.9100e-003** | **0.0000** | **33.0073** | **33.0073** | **2.2500e-003** | **4.9500e-003** | **34.5367** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2024

### 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 | 8.7800e-003 | 0.0748 | 0.0591 | 1.9000e-004 | | 2.8200e-003 | 2.8200e-003 | | 2.6500e-003 | 2.6500e-003 | 0.0000 | 16.3212 | 16.3212 | 4.7300e-003 | 0.0000 | 16.4394 |
| **Total** | **8.7800e-003** | **0.0748** | **0.0591** | **1.9000e-004** | | **2.8200e-003** | **2.8200e-003** | | **2.6500e-003** | **2.6500e-003** | **0.0000** | **16.3212** | **16.3212** | **4.7300e-003** | **0.0000** | **16.4394** |

### 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 | 4.4000e-004 | 0.0280 | 7.9700e-003 | 1.2000e-004 | 3.8700e-003 | 2.0000e-004 | 4.0700e-003 | 1.0600e-003 | 1.9000e-004 | 1.2500e-003 | 0.0000 | 12.5981 | 12.5981 | 9.0000e-004 | 2.0100e-003 | 13.2189 |
| 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 | 1.9800e-003 | 1.3400e-003 | 0.0173 | 5.0000e-005 | 5.9900e-003 | 3.0000e-005 | 6.0200e-003 | 1.5900e-003 | 3.0000e-005 | 1.6200e-003 | 0.0000 | 4.5489 | 4.5489 | 1.4000e-004 | 1.3000e-004 | 4.5902 |
| **Total** | **2.4200e-003** | **0.0293** | **0.0252** | **1.7000e-004** | **9.8600e-003** | **2.3000e-004** | **0.0101** | **2.6500e-003** | **2.2000e-004** | **2.8700e-003** | **0.0000** | **17.1469** | **17.1469** | **1.0400e-003** | **2.1400e-003** | **17.8092** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2024

### 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 | 8.7800e-003 | 0.0748 | 0.0591 | 1.9000e-004 | | 2.8200e-003 | 2.8200e-003 | | 2.6500e-003 | 2.6500e-003 | 0.0000 | 16.3212 | 16.3212 | 4.7300e-003 | 0.0000 | 16.4394 |
| **Total** | **8.7800e-003** | **0.0748** | **0.0591** | **1.9000e-004** | | **2.8200e-003** | **2.8200e-003** | | **2.6500e-003** | **2.6500e-003** | **0.0000** | **16.3212** | **16.3212** | **4.7300e-003** | **0.0000** | **16.4394** |

### 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 | 4.4000e-004 | 0.0280 | 7.9700e-003 | 1.2000e-004 | 3.8700e-003 | 2.0000e-004 | 4.0700e-003 | 1.0600e-003 | 1.9000e-004 | 1.2500e-003 | 0.0000 | 12.5981 | 12.5981 | 9.0000e-004 | 2.0100e-003 | 13.2189 |
| 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 | 1.9800e-003 | 1.3400e-003 | 0.0173 | 5.0000e-005 | 5.9900e-003 | 3.0000e-005 | 6.0200e-003 | 1.5900e-003 | 3.0000e-005 | 1.6200e-003 | 0.0000 | 4.5489 | 4.5489 | 1.4000e-004 | 1.3000e-004 | 4.5902 |
| **Total** | **2.4200e-003** | **0.0293** | **0.0252** | **1.7000e-004** | **9.8600e-003** | **2.3000e-004** | **0.0101** | **2.6500e-003** | **2.2000e-004** | **2.8700e-003** | **0.0000** | **17.1469** | **17.1469** | **1.0400e-003** | **2.1400e-003** | **17.8092** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Installation/Backfill - Open Trench - 2024

### 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 | 8.1700e-003 | 0.0754 | 0.1085 | 1.6000e-004 | | 3.3800e-003 | 3.3800e-003 | | 3.1500e-003 | 3.1500e-003 | 0.0000 | 13.5360 | 13.5360 | 4.0700e-003 | 0.0000 | 13.6379 |
| **Total** | **8.1700e-003** | **0.0754** | **0.1085** | **1.6000e-004** | | **3.3800e-003** | **3.3800e-003** | | **3.1500e-003** | **3.1500e-003** | **0.0000** | **13.5360** | **13.5360** | **4.0700e-003** | **0.0000** | **13.6379** |

### 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 | 1.9400e-003 | 0.1231 | 0.0351 | 5.5000e-004 | 0.0171 | 8.8000e-004 | 0.0179 | 4.6800e-003 | 8.4000e-004 | 5.5200e-003 | 0.0000 | 55.4951 | 55.4951 | 3.9500e-003 | 8.8500e-003 | 58.2300 |
| 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 | 8.5300e-003 | 5.7500e-003 | 0.0742 | 2.1000e-004 | 0.0258 | 1.4000e-004 | 0.0259 | 6.8400e-003 | 1.3000e-004 | 6.9700e-003 | 0.0000 | 19.5739 | 19.5739 | 5.8000e-004 | 5.5000e-004 | 19.7519 |
| **Total** | **0.0105** | **0.1289** | **0.1094** | **7.6000e-004** | **0.0428** | **1.0200e-003** | **0.0438** | **0.0115** | **9.7000e-004** | **0.0125** | **0.0000** | **75.0690** | **75.0690** | **4.5300e-003** | **9.4000e-003** | **77.9819** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Installation/Backfill - Open Trench - 2024

**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 | 8.1700e-003 | 0.0754 | 0.1085 | 1.6000e-004 | | 3.3800e-003 | 3.3800e-003 | | 3.1500e-003 | 3.1500e-003 | 0.0000 | 13.5360 | 13.5360 | 4.0700e-003 | 0.0000 | 13.6378 |
| **Total** | **8.1700e-003** | **0.0754** | **0.1085** | **1.6000e-004** | | **3.3800e-003** | **3.3800e-003** | | **3.1500e-003** | **3.1500e-003** | **0.0000** | **13.5360** | **13.5360** | **4.0700e-003** | **0.0000** | **13.6378** |

**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 | 1.9400e-003 | 0.1231 | 0.0351 | 5.5000e-004 | 0.0171 | 8.8000e-004 | 0.0179 | 4.6800e-003 | 8.4000e-004 | 5.5200e-003 | 0.0000 | 55.4951 | 55.4951 | 3.9500e-003 | 8.8500e-003 | 58.2300 |
| 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 | 8.5300e-003 | 5.7500e-003 | 0.0742 | 2.1000e-004 | 0.0258 | 1.4000e-004 | 0.0259 | 6.8400e-003 | 1.3000e-004 | 6.9700e-003 | 0.0000 | 19.5739 | 19.5739 | 5.8000e-004 | 5.5000e-004 | 19.7519 |
| **Total** | **0.0105** | **0.1289** | **0.1094** | **7.6000e-004** | **0.0428** | **1.0200e-003** | **0.0438** | **0.0115** | **9.7000e-004** | **0.0125** | **0.0000** | **75.0690** | **75.0690** | **4.5300e-003** | **9.4000e-003** | **77.9819** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Installation/Backfill - Open Trench - 2025

### 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 | 9.6900e-003 | 0.0892 | 0.1373 | 2.0000e-004 | | 3.5900e-003 | 3.5900e-003 | | 3.3500e-003 | 3.3500e-003 | 0.0000 | 17.1731 | 17.1731 | 5.1700e-003 | 0.0000 | 17.3023 |
| **Total** | **9.6900e-003** | **0.0892** | **0.1373** | **2.0000e-004** | | **3.5900e-003** | **3.5900e-003** | | **3.3500e-003** | **3.3500e-003** | **0.0000** | **17.1731** | **17.1731** | **5.1700e-003** | **0.0000** | **17.3023** |

### 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 | 2.4300e-003 | 0.1534 | 0.0456 | 6.8000e-004 | 0.0216 | 1.1100e-003 | 0.0228 | 5.9400e-003 | 1.0600e-003 | 7.0000e-003 | 0.0000 | 68.9464 | 68.9464 | 5.1600e-003 | 0.0110 | 72.3532 |
| 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 | 0.0101 | 6.5700e-003 | 0.0880 | 2.6000e-004 | 0.0327 | 1.6000e-004 | 0.0328 | 8.6700e-003 | 1.5000e-004 | 8.8300e-003 | 0.0000 | 24.1980 | 24.1980 | 6.7000e-004 | 6.5000e-004 | 24.4088 |
| **Total** | **0.0126** | **0.1600** | **0.1336** | **9.4000e-004** | **0.0543** | **1.2700e-003** | **0.0556** | **0.0146** | **1.2100e-003** | **0.0158** | **0.0000** | **93.1444** | **93.1444** | **5.8300e-003** | **0.0117** | **96.7620** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Installation/Backfill - Open Trench - 2025

### 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 | 9.6900e-003 | 0.0892 | 0.1373 | 2.0000e-004 | | 3.5900e-003 | 3.5900e-003 | | 3.3500e-003 | 3.3500e-003 | 0.0000 | 17.1731 | 17.1731 | 5.1700e-003 | 0.0000 | 17.3023 |
| **Total** | **9.6900e-003** | **0.0892** | **0.1373** | **2.0000e-004** | | **3.5900e-003** | **3.5900e-003** | | **3.3500e-003** | **3.3500e-003** | **0.0000** | **17.1731** | **17.1731** | **5.1700e-003** | **0.0000** | **17.3023** |

### 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 | 2.4300e-003 | 0.1534 | 0.0456 | 6.8000e-004 | 0.0216 | 1.1100e-003 | 0.0228 | 5.9400e-003 | 1.0600e-003 | 7.0000e-003 | 0.0000 | 68.9464 | 68.9464 | 5.1600e-003 | 0.0110 | 72.3532 |
| 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 | 0.0101 | 6.5700e-003 | 0.0880 | 2.6000e-004 | 0.0327 | 1.6000e-004 | 0.0328 | 8.6700e-003 | 1.5000e-004 | 8.8300e-003 | 0.0000 | 24.1980 | 24.1980 | 6.7000e-004 | 6.5000e-004 | 24.4088 |
| **Total** | **0.0126** | **0.1600** | **0.1336** | **9.4000e-004** | **0.0543** | **1.2700e-003** | **0.0556** | **0.0146** | **1.2100e-003** | **0.0158** | **0.0000** | **93.1444** | **93.1444** | **5.8300e-003** | **0.0117** | **96.7620** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.7 Excavation - Open Trench - 2024

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0653 | 0.5168 | 0.7006 | 1.4900e-003 | | 0.0221 | 0.0221 | | 0.0214 | 0.0214 | 0.0000 | 129.1778 | 129.1778 | 0.0241 | 0.0000 | 129.7794 |
| **Total** | **0.0653** | **0.5168** | **0.7006** | **1.4900e-003** | **0.0000** | **0.0221** | **0.0221** | **0.0000** | **0.0214** | **0.0214** | **0.0000** | **129.1778** | **129.1778** | **0.0241** | **0.0000** | **129.7794** |

### 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 | 2.8400e-003 | 1.9200e-003 | 0.0247 | 7.0000e-005 | 8.5900e-003 | 5.0000e-005 | 8.6300e-003 | 2.2800e-003 | 4.0000e-005 | 2.3200e-003 | 0.0000 | 6.5246 | 6.5246 | 1.9000e-004 | 1.8000e-004 | 6.5840 |
| **Total** | **2.8400e-003** | **1.9200e-003** | **0.0247** | **7.0000e-005** | **8.5900e-003** | **5.0000e-005** | **8.6300e-003** | **2.2800e-003** | **4.0000e-005** | **2.3200e-003** | **0.0000** | **6.5246** | **6.5246** | **1.9000e-004** | **1.8000e-004** | **6.5840** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.7 Excavation - Open Trench - 2024

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0653 | 0.5168 | 0.7006 | 1.4900e-003 | | 0.0221 | 0.0221 | | 0.0214 | 0.0214 | 0.0000 | 129.1777 | 129.1777 | 0.0241 | 0.0000 | 129.7793 |
| **Total** | **0.0653** | **0.5168** | **0.7006** | **1.4900e-003** | **0.0000** | **0.0221** | **0.0221** | **0.0000** | **0.0214** | **0.0214** | **0.0000** | **129.1777** | **129.1777** | **0.0241** | **0.0000** | **129.7793** |

**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 | 2.8400e-003 | 1.9200e-003 | 0.0247 | 7.0000e-005 | 8.5900e-003 | 5.0000e-005 | 8.6300e-003 | 2.2800e-003 | 4.0000e-005 | 2.3200e-003 | 0.0000 | 6.5246 | 6.5246 | 1.9000e-004 | 1.8000e-004 | 6.5840 |
| **Total** | **2.8400e-003** | **1.9200e-003** | **0.0247** | **7.0000e-005** | **8.5900e-003** | **5.0000e-005** | **8.6300e-003** | **2.2800e-003** | **4.0000e-005** | **2.3200e-003** | **0.0000** | **6.5246** | **6.5246** | **1.9000e-004** | **1.8000e-004** | **6.5840** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.7 Excavation - Open Trench - 2025

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0774 | 0.5861 | 0.8843 | 1.8900e-003 | | 0.0236 | 0.0236 | | 0.0229 | 0.0229 | 0.0000 | 163.7420 | 163.7420 | 0.0303 | 0.0000 | 164.4983 |
| **Total** | **0.0774** | **0.5861** | **0.8843** | **1.8900e-003** | **0.0000** | **0.0236** | **0.0236** | **0.0000** | **0.0229** | **0.0229** | **0.0000** | **163.7420** | **163.7420** | **0.0303** | **0.0000** | **164.4983** |

### 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 | 3.3800e-003 | 2.1900e-003 | 0.0294 | 9.0000e-005 | 0.0109 | 5.0000e-005 | 0.0109 | 2.8900e-003 | 5.0000e-005 | 2.9400e-003 | 0.0000 | 8.0660 | 8.0660 | 2.2000e-004 | 2.2000e-004 | 8.1363 |
| **Total** | **3.3800e-003** | **2.1900e-003** | **0.0294** | **9.0000e-005** | **0.0109** | **5.0000e-005** | **0.0109** | **2.8900e-003** | **5.0000e-005** | **2.9400e-003** | **0.0000** | **8.0660** | **8.0660** | **2.2000e-004** | **2.2000e-004** | **8.1363** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.7 Excavation - Open Trench - 2025

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0774 | 0.5861 | 0.8843 | 1.8900e-003 | | 0.0236 | 0.0236 | | 0.0229 | 0.0229 | 0.0000 | 163.7418 | 163.7418 | 0.0303 | 0.0000 | 164.4981 |
| **Total** | **0.0774** | **0.5861** | **0.8843** | **1.8900e-003** | **0.0000** | **0.0236** | **0.0236** | **0.0000** | **0.0229** | **0.0229** | **0.0000** | **163.7418** | **163.7418** | **0.0303** | **0.0000** | **164.4981** |

### 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 | 3.3800e-003 | 2.1900e-003 | 0.0294 | 9.0000e-005 | 0.0109 | 5.0000e-005 | 0.0109 | 2.8900e-003 | 5.0000e-005 | 2.9400e-003 | 0.0000 | 8.0660 | 8.0660 | 2.2000e-004 | 2.2000e-004 | 8.1363 |
| **Total** | **3.3800e-003** | **2.1900e-003** | **0.0294** | **9.0000e-005** | **0.0109** | **5.0000e-005** | **0.0109** | **2.8900e-003** | **5.0000e-005** | **2.9400e-003** | **0.0000** | **8.0660** | **8.0660** | **2.2000e-004** | **2.2000e-004** | **8.1363** |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.8 Paving - Open Trench - 2025

### 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 | 2.1700e-003 | 0.0203 | 0.0288 | 6.0000e-005 | | 9.2000e-004 | 9.2000e-004 | | 8.5000e-004 | 8.5000e-004 | 0.0000 | 5.1265 | 5.1265 | 1.6300e-003 | 0.0000 | 5.1672 |
| Paving | 3.2500e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **5.4200e-003** | **0.0203** | **0.0288** | **6.0000e-005** | | **9.2000e-004** | **9.2000e-004** | | **8.5000e-004** | **8.5000e-004** | **0.0000** | **5.1265** | **5.1265** | **1.6300e-003** | **0.0000** | **5.1672** |

### 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 | 1.6000e-004 | 1.1000e-004 | 1.4100e-003 | 0.0000 | 5.2000e-004 | 0.0000 | 5.3000e-004 | 1.4000e-004 | 0.0000 | 1.4000e-004 | 0.0000 | 0.3884 | 0.3884 | 1.0000e-005 | 1.0000e-005 | 0.3918 |
| **Total** | **1.6000e-004** | **1.1000e-004** | **1.4100e-003** | **0.0000** | **5.2000e-004** | **0.0000** | **5.3000e-004** | **1.4000e-004** | **0.0000** | **1.4000e-004** | **0.0000** | **0.3884** | **0.3884** | **1.0000e-005** | **1.0000e-005** | **0.3918** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.8 Paving - Open Trench - 2025

### 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 | 2.1700e-003 | 0.0203 | 0.0288 | 6.0000e-005 | | 9.2000e-004 | 9.2000e-004 | | 8.5000e-004 | 8.5000e-004 | 0.0000 | 5.1265 | 5.1265 | 1.6300e-003 | 0.0000 | 5.1671 |
| Paving | 3.2500e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **5.4200e-003** | **0.0203** | **0.0288** | **6.0000e-005** | | **9.2000e-004** | **9.2000e-004** | | **8.5000e-004** | **8.5000e-004** | **0.0000** | **5.1265** | **5.1265** | **1.6300e-003** | **0.0000** | **5.1671** |

### 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 | 1.6000e-004 | 1.1000e-004 | 1.4100e-003 | 0.0000 | 5.2000e-004 | 0.0000 | 5.3000e-004 | 1.4000e-004 | 0.0000 | 1.4000e-004 | 0.0000 | 0.3884 | 0.3884 | 1.0000e-005 | 1.0000e-005 | 0.3918 |
| **Total** | **1.6000e-004** | **1.1000e-004** | **1.4100e-003** | **0.0000** | **5.2000e-004** | **0.0000** | **5.3000e-004** | **1.4000e-004** | **0.0000** | **1.4000e-004** | **0.0000** | **0.3884** | **0.3884** | **1.0000e-005** | **1.0000e-005** | **0.3918** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

# 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 | 1.9000e-004 | 9.0000e-005 | 7.9000e-004 | 0.0000 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0273 | 0.0273 | 2.0000e-005 | 1.0000e-005 | 0.0299 |
| Unmitigated | 1.9000e-004 | 9.0000e-005 | 7.9000e-004 | 0.0000 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0273 | 0.0273 | 2.0000e-005 | 1.0000e-005 | 0.0299 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Other Asphalt Surfaces | 1.08 | 0.00 | 0.00 | 31 | 31 |
| Total | 1.08 | 0.00 | 0.00 | 31 | 31 |

## 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 |
| Other Asphalt Surfaces | 0.11 | 7.30 | 7.30 | 100.00 | 0.00 | 0.00 | 100 | 0 | 0 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other Asphalt Surfaces | 0.553410 | 0.058491 | 0.170447 | 0.127855 | 0.026791 | 0.007507 | 0.012149 | 0.006212 | 0.000674 | 0.000390 | 0.028812 | 0.000632 | 0.006629 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | | | | | |
| Other Asphalt Surfaces | 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 | | | | | |
| Other Asphalt Surfaces | 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** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Other Asphalt Surfaces | 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 | | | |
| Other Asphalt Surfaces | 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

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | 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 | 8.5700e-003 | 1.0000e-005 | 9.9000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.9300e-003 | 1.9300e-003 | 1.0000e-005 | 0.0000 | 2.0600e-003 |
| Unmitigated | 8.5700e-003 | 1.0000e-005 | 9.9000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.9300e-003 | 1.9300e-003 | 1.0000e-005 | 0.0000 | 2.0600e-003 |

## 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 | 1.5000e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 6.9800e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 9.0000e-005 | 1.0000e-005 | 9.9000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.9300e-003 | 1.9300e-003 | 1.0000e-005 | 0.0000 | 2.0600e-003 |
| **Total** | **8.5700e-003** | **1.0000e-005** | **9.9000e-004** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | **1.9300e-003** | **1.9300e-003** | **1.0000e-005** | **0.0000** | **2.0600e-003** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 1.5000e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 6.9800e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 9.0000e-005 | 1.0000e-005 | 9.9000e-004 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1.9300e-003 | 1.9300e-003 | 1.0000e-005 | 0.0000 | 2.0600e-003 |
| **Total** | **8.5700e-003** | **1.0000e-005** | **9.9000e-004** | **0.0000** | | **0.0000** | **0.0000** | | **0.0000** | **0.0000** | **0.0000** | **1.9300e-003** | **1.9300e-003** | **1.0000e-005** | **0.0000** | **2.0600e-003** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | 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 | | | |
| Other Asphalt Surfaces | 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 | | | |
| Other Asphalt Surfaces | 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 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Other Asphalt Surfaces | 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 | | | |
| Other Asphalt Surfaces | 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 |
|---|---|---|---|---|---|---|

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 10.0 Stationary Equipment

### Fire Pumps and Emergency Generators

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

### Boilers

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|---|---|---|---|---|---|

### User Defined Equipment

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

# Calleguas SMP Phase 3- AQ

**Ventura County APCD Air District, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Other Asphalt Surfaces | 108.00 | 1000sqft | 2.48 | 108,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.6 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 8 | | | **Operational Year** | 2025 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 390.98 | **CH4 Intensity (lb/MWhr)** | 0.033 | **N2O Intensity (lb/MWhr)** | 0.004 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Distrubance area (27,000 linear feet by 4 foot-wide trench)

Construction Phase - Based on applicant provided information, 80 feet installation per day would occur. Based on project details, Phase 3 would have 460 LF of trenchless activity, crossing upland road bridge would take 2 weeks, and the remainder would be open-cut trench.

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Based on applicant provided information

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Based on applicant provided information

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Trips and VMT - 14 hauling trips per day according to the applicant.

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Grading -

Vehicle Trips - Based on applicant provided information. Maintenance and inspection work trips would occur annually for one day with one worker vehicle that would travel from the District's office to the pipeline and back.

Construction Off-road Equipment Mitigation - Information provided by the applicant

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 220.00 | 10.00 |
| tblConstructionPhase | NumDays | 220.00 | 33.00 |
| tblConstructionPhase | NumDays | 220.00 | 322.00 |
| tblConstructionPhase | NumDays | 6.00 | 10.00 |
| tblConstructionPhase | NumDays | 6.00 | 79.00 |
| tblConstructionPhase | NumDays | 6.00 | 322.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| 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 | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 140.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,095.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 451.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 4,505.00 |
| tblTripsAndVMT | VendorTripNumber | 18.00 | 0.00 |
| tblTripsAndVMT | VendorTripNumber | 18.00 | 0.00 |
| tblTripsAndVMT | VendorTripNumber | 18.00 | 0.00 |
| tblVehicleTrips | CW_TL | 9.50 | 0.11 |
| tblVehicleTrips | CW_TTP | 0.00 | 100.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | WD_TR | 0.00 | 0.01 |

## 2.0 Emissions Summary

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | | | | | |
| 2024 | 1.9246 | 16.7326 | 21.4615 | 0.0577 | 1.3454 | 0.5977 | 1.9037 | 0.3611 | 0.5774 | 0.8944 | 0.0000 | 5,793.7750 | 5,793.7750 | 0.8956 | 0.2920 | 5,899.6315 |
| 2025 | 1.1574 | 9.3099 | 13.1842 | 0.0345 | 0.7372 | 0.3174 | 1.0545 | 0.1977 | 0.3058 | 0.5034 | 0.0000 | 3,453.1351 | 3,453.1351 | 0.5084 | 0.1457 | 3,509.2646 |
| **Maximum** | **1.9246** | **16.7326** | **21.4615** | **0.0577** | **1.3454** | **0.5977** | **1.9037** | **0.3611** | **0.5774** | **0.8944** | **0.0000** | **5,793.7750** | **5,793.7750** | **0.8956** | **0.2920** | **5,899.6315** |

### 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 | | | | | |
| 2024 | 1.9246 | 16.7326 | 21.4615 | 0.0577 | 1.3454 | 0.5977 | 1.9037 | 0.3611 | 0.5774 | 0.8944 | 0.0000 | 5,793.7750 | 5,793.7750 | 0.8956 | 0.2920 | 5,899.6315 |
| 2025 | 1.1574 | 9.3099 | 13.1842 | 0.0345 | 0.7372 | 0.3174 | 1.0545 | 0.1977 | 0.3058 | 0.5034 | 0.0000 | 3,453.1351 | 3,453.1351 | 0.5084 | 0.1457 | 3,509.2646 |
| **Maximum** | **1.9246** | **16.7326** | **21.4615** | **0.0577** | **1.3454** | **0.5977** | **1.9037** | **0.3611** | **0.5774** | **0.8944** | **0.0000** | **5,793.7750** | **5,793.7750** | **0.8956** | **0.2920** | **5,899.6315** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | 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 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 0.0475 | 1.0000e-004 | 0.0110 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0236 | 0.0236 | 6.0000e-005 | | 0.0252 |
| 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 | 1.4900e-003 | 7.5000e-004 | 6.7000e-003 | 0.0000 | 9.0000e-005 | 0.0000 | 1.0000e-004 | 2.0000e-005 | 0.0000 | 3.0000e-005 | | 0.2324 | 0.2324 | 1.4000e-004 | 7.0000e-005 | 0.2561 |
| **Total** | **0.0490** | **8.5000e-004** | **0.0177** | **0.0000** | **9.0000e-005** | **4.0000e-005** | **1.4000e-004** | **2.0000e-005** | **4.0000e-005** | **7.0000e-005** | | **0.2561** | **0.2561** | **2.0000e-004** | **7.0000e-005** | **0.2813** |

### 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 | 0.0475 | 1.0000e-004 | 0.0110 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0236 | 0.0236 | 6.0000e-005 | | 0.0252 |
| 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 | 1.4900e-003 | 7.5000e-004 | 6.7000e-003 | 0.0000 | 9.0000e-005 | 0.0000 | 1.0000e-004 | 2.0000e-005 | 0.0000 | 3.0000e-005 | | 0.2324 | 0.2324 | 1.4000e-004 | 7.0000e-005 | 0.2561 |
| **Total** | **0.0490** | **8.5000e-004** | **0.0177** | **0.0000** | **9.0000e-005** | **4.0000e-005** | **1.4000e-004** | **2.0000e-005** | **4.0000e-005** | **7.0000e-005** | | **0.2561** | **0.2561** | **2.0000e-004** | **7.0000e-005** | **0.2813** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | 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 | Excavation - Pipe-in-a-Bridge | Grading | 6/3/2024 | 6/14/2024 | 5 | 10 | |
| 2 | Installation - Pipe-in-a-Bridge | Building Construction | 6/3/2024 | 6/14/2024 | 5 | 10 | |
| 3 | Excavation - Trenchless | Grading | 6/17/2024 | 10/3/2024 | 5 | 79 | |
| 4 | Installation - Trenchless | Building Construction | 10/4/2024 | 11/19/2024 | 5 | 33 | |
| 5 | Installation/Backfill - Open Trench | Building Construction | 6/17/2024 | 9/9/2025 | 5 | 322 | |
| 6 | Excavation - Open Trench | Grading | 6/17/2024 | 9/9/2025 | 5 | 322 | |
| 7 | Paving - Open Trench | Paving | 9/10/2025 | 9/23/2025 | 5 | 10 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 2.48**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

### OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Excavation - Pipe-in-a-Bridge | Excavators | 1 | 4.00 | 158 | 0.38 |
| Excavation - Pipe-in-a-Bridge | Graders | 0 | 8.00 | 187 | 0.41 |
| Excavation - Pipe-in-a-Bridge | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Excavation - Pipe-in-a-Bridge | Tractors/Loaders/Backhoes | 0 | 4.00 | 97 | 0.37 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | | | |
|---|---|---|---|---|---|
| Excavation - Trenchless | Bore/Drill Rigs | 0 | 8.00 | 221 | 0.50 |
| Excavation - Trenchless | Concrete/Industrial Saws | 1 | 5.00 | 81 | 0.73 |
| Excavation - Trenchless | Cranes | 0 | 8.00 | 231 | 0.29 |
| Excavation - Trenchless | Dumpers/Tenders | 0 | 8.00 | 16 | 0.38 |
| Excavation - Trenchless | Excavators | 1 | 5.00 | 158 | 0.38 |
| Excavation - Trenchless | Generator Sets | 1 | 5.00 | 84 | 0.74 |
| Excavation - Trenchless | Graders | 0 | 8.00 | 187 | 0.41 |
| Excavation - Trenchless | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Excavation - Trenchless | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Excavation - Trenchless | Tractors/Loaders/Backhoes | 0 | 7.00 | 97 | 0.37 |
| Excavation - Trenchless | Welders | 0 | 8.00 | 46 | 0.45 |
| Excavation - Open Trench | Air Compressors | 1 | 5.00 | 78 | 0.48 |
| Excavation - Open Trench | Concrete/Industrial Saws | 1 | 5.00 | 81 | 0.73 |
| Excavation - Open Trench | Excavators | 1 | 5.00 | 158 | 0.38 |
| Excavation - Open Trench | Generator Sets | 1 | 5.00 | 84 | 0.74 |
| Excavation - Open Trench | Graders | 0 | 8.00 | 187 | 0.41 |
| Excavation - Open Trench | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Excavation - Open Trench | Plate Compactors | 0 | 8.00 | 8 | 0.43 |
| Excavation - Open Trench | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Excavation - Open Trench | Rubber Tired Loaders | 1 | 5.00 | 203 | 0.36 |
| Excavation - Open Trench | Tractors/Loaders/Backhoes | 0 | 7.00 | 97 | 0.37 |
| Installation - Pipe-in-a-Bridge | Cranes | 0 | 8.00 | 231 | 0.29 |
| Installation - Pipe-in-a-Bridge | Forklifts | 0 | 7.00 | 89 | 0.20 |
| Installation - Pipe-in-a-Bridge | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Installation - Pipe-in-a-Bridge | Tractors/Loaders/Backhoes | 1 | 4.00 | 97 | 0.37 |
| Installation - Pipe-in-a-Bridge | Welders | 0 | 8.00 | 46 | 0.45 |
| Installation - Trenchless | Bore/Drill Rigs | 1 | 5.00 | 221 | 0.50 |
| Installation - Trenchless | Cranes | 1 | 5.00 | 231 | 0.29 |
| Installation - Trenchless | Dumpers/Tenders | 1 | 5.00 | 16 | 0.38 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | | | |
|---|---|---|---|---|---|
| Installation - Trenchless | Forklifts | 0 | 7.00 | 89 | 0.20 |
| Installation - Trenchless | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Installation - Trenchless | Tractors/Loaders/Backhoes | 0 | 6.00 | 97 | 0.37 |
| Installation - Trenchless | Welders | 1 | 5.00 | 46 | 0.45 |
| Installation/Backfill - Open Trench | Cranes | 0 | 8.00 | 231 | 0.29 |
| Installation/Backfill - Open Trench | Forklifts | 0 | 7.00 | 89 | 0.20 |
| Installation/Backfill - Open Trench | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Installation/Backfill - Open Trench | Plate Compactors | 1 | 5.00 | 8 | 0.43 |
| Installation/Backfill - Open Trench | Tractors/Loaders/Backhoes | 1 | 5.00 | 97 | 0.37 |
| Installation/Backfill - Open Trench | Welders | 0 | 8.00 | 46 | 0.45 |
| Paving - Open Trench | Cement and Mortar Mixers | 1 | 5.00 | 9 | 0.56 |
| Paving - Open Trench | Pavers | 1 | 5.00 | 130 | 0.42 |
| Paving - Open Trench | Paving Equipment | 1 | 5.00 | 132 | 0.36 |
| Paving - Open Trench | Rollers | 1 | 5.00 | 80 | 0.38 |
| Paving - Open Trench | Surfacing Equipment | 1 | 5.00 | 263 | 0.30 |
| Paving - Open Trench | Tractors/Loaders/Backhoes | 0 | 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| Excavation - Pipe-in-a-Bridge | 1 | 3.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Excavation - Trenchless | 4 | 10.00 | 0.00 | 1,095.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Excavation - Open Trench | 6 | 15.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Installation - Pipe-in-a-Bridge | 1 | 45.00 | 0.00 | 140.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Installation - Trenchless | 4 | 45.00 | 0.00 | 451.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Installation/Backfill - Open Trench | 2 | 45.00 | 0.00 | 4,505.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving - Open Trench | 5 | 13.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

## 3.2 Excavation - Pipe-in-a-Bridge - 2024

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.0901 | 0.7014 | 1.6325 | 2.5800e-003 | | 0.0346 | 0.0346 | | 0.0318 | 0.0318 | | 250.1327 | 250.1327 | 0.0809 | | 252.1551 |
| **Total** | **0.0901** | **0.7014** | **1.6325** | **2.5800e-003** | **0.0000** | **0.0346** | **0.0346** | **0.0000** | **0.0318** | **0.0318** | | **250.1327** | **250.1327** | **0.0809** | | **252.1551** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.2 Excavation - Pipe-in-a-Bridge - 2024

### 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 | 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 |
| Worker | 8.7300e-003 | 5.6100e-003 | 0.0706 | 2.0000e-004 | 0.0246 | 1.3000e-004 | 0.0248 | 6.5400e-003 | 1.2000e-004 | 6.6500e-003 | | 20.1168 | 20.1168 | 6.3000e-004 | 5.8000e-004 | 20.3061 |
| **Total** | **8.7300e-003** | **5.6100e-003** | **0.0706** | **2.0000e-004** | **0.0246** | **1.3000e-004** | **0.0248** | **6.5400e-003** | **1.2000e-004** | **6.6500e-003** | | **20.1168** | **20.1168** | **6.3000e-004** | **5.8000e-004** | **20.3061** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.0901 | 0.7014 | 1.6325 | 2.5800e-003 | | 0.0346 | 0.0346 | | 0.0318 | 0.0318 | 0.0000 | 250.1327 | 250.1327 | 0.0809 | | 252.1551 |
| **Total** | **0.0901** | **0.7014** | **1.6325** | **2.5800e-003** | **0.0000** | **0.0346** | **0.0346** | **0.0000** | **0.0318** | **0.0318** | **0.0000** | **250.1327** | **250.1327** | **0.0809** | | **252.1551** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.2 Excavation - Pipe-in-a-Bridge - 2024

**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 | 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 |
| Worker | 8.7300e-003 | 5.6100e-003 | 0.0706 | 2.0000e-004 | 0.0246 | 1.3000e-004 | 0.0248 | 6.5400e-003 | 1.2000e-004 | 6.6500e-003 | | 20.1168 | 20.1168 | 6.3000e-004 | 5.8000e-004 | 20.3061 |
| **Total** | **8.7300e-003** | **5.6100e-003** | **0.0706** | **2.0000e-004** | **0.0246** | **1.3000e-004** | **0.0248** | **6.5400e-003** | **1.2000e-004** | **6.6500e-003** | | **20.1168** | **20.1168** | **6.3000e-004** | **5.8000e-004** | **20.3061** |

## 3.3 Installation - Pipe-in-a-Bridge - 2024

**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 | 0.0720 | 0.7241 | 1.1178 | 1.5600e-003 | | 0.0332 | 0.0332 | | 0.0306 | 0.0306 | | 150.8834 | 150.8834 | 0.0488 | | 152.1033 |
| **Total** | **0.0720** | **0.7241** | **1.1178** | **1.5600e-003** | | **0.0332** | **0.0332** | | **0.0306** | **0.0306** | | **150.8834** | **150.8834** | **0.0488** | | **152.1033** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Installation - Pipe-in-a-Bridge - 2024

### 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 | 0.0263 | 1.7357 | 0.4989 | 7.7500e-003 | 0.2444 | 0.0124 | 0.2569 | 0.0670 | 0.0119 | 0.0789 | | 862.6329 | 862.6329 | 0.0613 | 0.1375 | 905.1419 |
| 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 |
| Worker | 0.1309 | 0.0841 | 1.0594 | 2.9300e-003 | 0.3697 | 1.9200e-003 | 0.3716 | 0.0981 | 1.7600e-003 | 0.0998 | | 301.7517 | 301.7517 | 9.4100e-003 | 8.7400e-003 | 304.5922 |
| **Total** | **0.1572** | **1.8198** | **1.5583** | **0.0107** | **0.6141** | **0.0143** | **0.6284** | **0.1650** | **0.0137** | **0.1787** | | **1,164.3847** | **1,164.3847** | **0.0707** | **0.1463** | **1,209.7341** |

### 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 | 0.0720 | 0.7241 | 1.1178 | 1.5600e-003 | | 0.0332 | 0.0332 | | 0.0306 | 0.0306 | 0.0000 | 150.8834 | 150.8834 | 0.0488 | | 152.1033 |
| **Total** | **0.0720** | **0.7241** | **1.1178** | **1.5600e-003** | | **0.0332** | **0.0332** | | **0.0306** | **0.0306** | **0.0000** | **150.8834** | **150.8834** | **0.0488** | | **152.1033** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Installation - Pipe-in-a-Bridge - 2024

**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 | 0.0263 | 1.7357 | 0.4989 | 7.7500e-003 | 0.2444 | 0.0124 | 0.2569 | 0.0670 | 0.0119 | 0.0789 | | 862.6329 | 862.6329 | 0.0613 | 0.1375 | 905.1419 |
| 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 |
| Worker | 0.1309 | 0.0841 | 1.0594 | 2.9300e-003 | 0.3697 | 1.9200e-003 | 0.3716 | 0.0981 | 1.7600e-003 | 0.0998 | | 301.7517 | 301.7517 | 9.4100e-003 | 8.7400e-003 | 304.5922 |
| **Total** | **0.1572** | **1.8198** | **1.5583** | **0.0107** | **0.6141** | **0.0143** | **0.6284** | **0.1650** | **0.0137** | **0.1787** | | **1,164.3847** | **1,164.3847** | **0.0707** | **0.1463** | **1,209.7341** |

## 3.4 Excavation - Trenchless - 2024

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.6106 | 4.8080 | 7.4244 | 0.0146 | | 0.2114 | 0.2114 | | 0.2056 | 0.2056 | | 1,392.5655 | 1,392.5655 | 0.2380 | | 1,398.5156 |
| **Total** | **0.6106** | **4.8080** | **7.4244** | **0.0146** | **0.0000** | **0.2114** | **0.2114** | **0.0000** | **0.2056** | **0.2056** | | **1,392.5655** | **1,392.5655** | **0.2380** | | **1,398.5156** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Excavation - Trenchless - 2024

### 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 | 0.0260 | 1.7185 | 0.4939 | 7.6700e-003 | 0.2420 | 0.0123 | 0.2543 | 0.0663 | 0.0118 | 0.0781 | | 854.0534 | 854.0534 | 0.0607 | 0.1361 | 896.1396 |
| 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 |
| Worker | 0.0291 | 0.0187 | 0.2354 | 6.5000e-004 | 0.0822 | 4.3000e-004 | 0.0826 | 0.0218 | 3.9000e-004 | 0.0222 | | 67.0559 | 67.0559 | 2.0900e-003 | 1.9400e-003 | 67.6871 |
| **Total** | **0.0551** | **1.7372** | **0.7293** | **8.3200e-003** | **0.3242** | **0.0127** | **0.3369** | **0.0881** | **0.0122** | **0.1002** | | **921.1093** | **921.1093** | **0.0628** | **0.1381** | **963.8268** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.6106 | 4.8080 | 7.4244 | 0.0146 | | 0.2114 | 0.2114 | | 0.2056 | 0.2056 | 0.0000 | 1,392.5655 | 1,392.5655 | 0.2380 | | 1,398.5156 |
| **Total** | **0.6106** | **4.8080** | **7.4244** | **0.0146** | **0.0000** | **0.2114** | **0.2114** | **0.0000** | **0.2056** | **0.2056** | **0.0000** | **1,392.5655** | **1,392.5655** | **0.2380** | | **1,398.5156** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Excavation - Trenchless - 2024

**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 | 0.0260 | 1.7185 | 0.4939 | 7.6700e-003 | 0.2420 | 0.0123 | 0.2543 | 0.0663 | 0.0118 | 0.0781 | | 854.0534 | 854.0534 | 0.0607 | 0.1361 | 896.1396 |
| 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 |
| Worker | 0.0291 | 0.0187 | 0.2354 | 6.5000e-004 | 0.0822 | 4.3000e-004 | 0.0826 | 0.0218 | 3.9000e-004 | 0.0222 | | 67.0559 | 67.0559 | 2.0900e-003 | 1.9400e-003 | 67.6871 |
| **Total** | **0.0551** | **1.7372** | **0.7293** | **8.3200e-003** | **0.3242** | **0.0127** | **0.3369** | **0.0881** | **0.0122** | **0.1002** | | **921.1093** | **921.1093** | **0.0628** | **0.1381** | **963.8268** |

## 3.5 Installation - Trenchless - 2024

**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 | 0.5322 | 4.5316 | 3.5798 | 0.0116 | | 0.1707 | 0.1707 | | 0.1603 | 0.1603 | | 1,090.3680 | 1,090.3680 | 0.3157 | | 1,098.2608 |
| **Total** | **0.5322** | **4.5316** | **3.5798** | **0.0116** | | **0.1707** | **0.1707** | | **0.1603** | **0.1603** | | **1,090.3680** | **1,090.3680** | **0.3157** | | **1,098.2608** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2024

### 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 | 0.0257 | 1.6944 | 0.4870 | 7.5700e-003 | 0.2386 | 0.0121 | 0.2508 | 0.0654 | 0.0116 | 0.0770 | | 842.0940 | 842.0940 | 0.0598 | 0.1342 | 883.5909 |
| 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 |
| Worker | 0.1309 | 0.0841 | 1.0594 | 2.9300e-003 | 0.3697 | 1.9200e-003 | 0.3716 | 0.0981 | 1.7600e-003 | 0.0998 | | 301.7517 | 301.7517 | 9.4100e-003 | 8.7400e-003 | 304.5922 |
| **Total** | **0.1566** | **1.7785** | **1.5464** | **0.0105** | **0.6083** | **0.0141** | **0.6223** | **0.1634** | **0.0134** | **0.1768** | | **1,143.8458** | **1,143.8458** | **0.0692** | **0.1430** | **1,188.1831** |

### 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 | 0.5322 | 4.5316 | 3.5798 | 0.0116 | | 0.1707 | 0.1707 | | 0.1603 | 0.1603 | 0.0000 | 1,090.3680 | 1,090.3680 | 0.3157 | | 1,098.2608 |
| **Total** | **0.5322** | **4.5316** | **3.5798** | **0.0116** | | **0.1707** | **0.1707** | | **0.1603** | **0.1603** | **0.0000** | **1,090.3680** | **1,090.3680** | **0.3157** | | **1,098.2608** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2024

**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 | 0.0257 | 1.6944 | 0.4870 | 7.5700e-003 | 0.2386 | 0.0121 | 0.2508 | 0.0654 | 0.0116 | 0.0770 | | 842.0940 | 842.0940 | 0.0598 | 0.1342 | 883.5909 |
| 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 |
| Worker | 0.1309 | 0.0841 | 1.0594 | 2.9300e-003 | 0.3697 | 1.9200e-003 | 0.3716 | 0.0981 | 1.7600e-003 | 0.0998 | | 301.7517 | 301.7517 | 9.4100e-003 | 8.7400e-003 | 304.5922 |
| **Total** | **0.1566** | **1.7785** | **1.5464** | **0.0105** | **0.6083** | **0.0141** | **0.6223** | **0.1634** | **0.0134** | **0.1768** | | **1,143.8458** | **1,143.8458** | **0.0692** | **0.1430** | **1,188.1831** |

## 3.6 Installation/Backfill - Open Trench - 2024

**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 | 0.1150 | 1.0622 | 1.5288 | 2.2500e-003 | | 0.0477 | 0.0477 | | 0.0443 | 0.0443 | | 210.1538 | 210.1538 | 0.0632 | | 211.7347 |
| **Total** | **0.1150** | **1.0622** | **1.5288** | **2.2500e-003** | | **0.0477** | **0.0477** | | **0.0443** | **0.0443** | | **210.1538** | **210.1538** | **0.0632** | | **211.7347** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Installation/Backfill - Open Trench - 2024

### 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 | 0.0263 | 1.7346 | 0.4985 | 7.7400e-003 | 0.2443 | 0.0124 | 0.2567 | 0.0669 | 0.0119 | 0.0788 | | 862.0589 | 862.0589 | 0.0613 | 0.1374 | 904.5396 |
| 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 |
| Worker | 0.1309 | 0.0841 | 1.0594 | 2.9300e-003 | 0.3697 | 1.9200e-003 | 0.3716 | 0.0981 | 1.7600e-003 | 0.0998 | | 301.7517 | 301.7517 | 9.4100e-003 | 8.7400e-003 | 304.5922 |
| **Total** | **0.1572** | **1.8187** | **1.5579** | **0.0107** | **0.6139** | **0.0143** | **0.6283** | **0.1650** | **0.0136** | **0.1786** | | **1,163.8106** | **1,163.8106** | **0.0707** | **0.1462** | **1,209.1317** |

### 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 | 0.1150 | 1.0622 | 1.5288 | 2.2500e-003 | | 0.0477 | 0.0477 | | 0.0443 | 0.0443 | 0.0000 | 210.1538 | 210.1538 | 0.0632 | | 211.7347 |
| **Total** | **0.1150** | **1.0622** | **1.5288** | **2.2500e-003** | | **0.0477** | **0.0477** | | **0.0443** | **0.0443** | **0.0000** | **210.1538** | **210.1538** | **0.0632** | | **211.7347** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Installation/Backfill - Open Trench - 2024

**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 | 0.0263 | 1.7346 | 0.4985 | 7.7400e-003 | 0.2443 | 0.0124 | 0.2567 | 0.0669 | 0.0119 | 0.0788 | | 862.0589 | 862.0589 | 0.0613 | 0.1374 | 904.5396 |
| 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 |
| Worker | 0.1309 | 0.0841 | 1.0594 | 2.9300e-003 | 0.3697 | 1.9200e-003 | 0.3716 | 0.0981 | 1.7600e-003 | 0.0998 | | 301.7517 | 301.7517 | 9.4100e-003 | 8.7400e-003 | 304.5922 |
| **Total** | **0.1572** | **1.8187** | **1.5579** | **0.0107** | **0.6139** | **0.0143** | **0.6283** | **0.1650** | **0.0136** | **0.1786** | | **1,163.8106** | **1,163.8106** | **0.0707** | **0.1462** | **1,209.1317** |

## 3.6 Installation/Backfill - Open Trench - 2025

**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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Installation/Backfill - Open Trench - 2025

### 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 | 0.0260 | 1.7054 | 0.5104 | 7.5700e-003 | 0.2443 | 0.0124 | 0.2567 | 0.0669 | 0.0119 | 0.0788 | | 844.9193 | 844.9193 | 0.0632 | 0.1348 | 886.6662 |
| 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 |
| Worker | 0.1228 | 0.0759 | 0.9920 | 2.8200e-003 | 0.3697 | 1.8300e-003 | 0.3715 | 0.0981 | 1.6800e-003 | 0.0997 | | 294.2887 | 294.2887 | 8.5700e-003 | 8.1800e-003 | 296.9419 |
| **Total** | **0.1488** | **1.7813** | **1.5024** | **0.0104** | **0.6140** | **0.0142** | **0.6282** | **0.1650** | **0.0135** | **0.1785** | | **1,139.2080** | **1,139.2080** | **0.0717** | **0.1430** | **1,183.6081** |

### 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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | 0.0000 | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | **0.0000** | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Installation/Backfill - Open Trench - 2025

**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 | 0.0260 | 1.7054 | 0.5104 | 7.5700e-003 | 0.2443 | 0.0124 | 0.2567 | 0.0669 | 0.0119 | 0.0788 | | 844.9193 | 844.9193 | 0.0632 | 0.1348 | 886.6662 |
| 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 |
| Worker | 0.1228 | 0.0759 | 0.9920 | 2.8200e-003 | 0.3697 | 1.8300e-003 | 0.3715 | 0.0981 | 1.6800e-003 | 0.0997 | | 294.2887 | 294.2887 | 8.5700e-003 | 8.1800e-003 | 296.9419 |
| **Total** | **0.1488** | **1.7813** | **1.5024** | **0.0104** | **0.6140** | **0.0142** | **0.6282** | **0.1650** | **0.0135** | **0.1785** | | **1,139.2080** | **1,139.2080** | **0.0717** | **0.1430** | **1,183.6081** |

## 3.7 Excavation - Open Trench - 2024

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.9200 | 7.2785 | 9.8679 | 0.0210 | | 0.3109 | 0.3109 | | 0.3011 | 0.3011 | | 2,005.5518 | 2,005.5518 | 0.3736 | | 2,014.8920 |
| **Total** | **0.9200** | **7.2785** | **9.8679** | **0.0210** | **0.0000** | **0.3109** | **0.3109** | **0.0000** | **0.3011** | **0.3011** | | **2,005.5518** | **2,005.5518** | **0.3736** | | **2,014.8920** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.7 Excavation - Open Trench - 2024

### 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 | 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 |
| Worker | 0.0436 | 0.0280 | 0.3531 | 9.8000e-004 | 0.1232 | 6.4000e-004 | 0.1239 | 0.0327 | 5.9000e-004 | 0.0333 | | 100.5839 | 100.5839 | 3.1400e-003 | 2.9100e-003 | 101.5307 |
| **Total** | **0.0436** | **0.0280** | **0.3531** | **9.8000e-004** | **0.1232** | **6.4000e-004** | **0.1239** | **0.0327** | **5.9000e-004** | **0.0333** | | **100.5839** | **100.5839** | **3.1400e-003** | **2.9100e-003** | **101.5307** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.9200 | 7.2785 | 9.8679 | 0.0210 | | 0.3109 | 0.3109 | | 0.3011 | 0.3011 | 0.0000 | 2,005.5518 | 2,005.5518 | 0.3736 | | 2,014.8920 |
| **Total** | **0.9200** | **7.2785** | **9.8679** | **0.0210** | **0.0000** | **0.3109** | **0.3109** | **0.0000** | **0.3011** | **0.3011** | **0.0000** | **2,005.5518** | **2,005.5518** | **0.3736** | | **2,014.8920** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.7 Excavation - Open Trench - 2024

**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 | 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 |
| Worker | 0.0436 | 0.0280 | 0.3531 | 9.8000e-004 | 0.1232 | 6.4000e-004 | 0.1239 | 0.0327 | 5.9000e-004 | 0.0333 | | 100.5839 | 100.5839 | 3.1400e-003 | 2.9100e-003 | 101.5307 |
| **Total** | **0.0436** | **0.0280** | **0.3531** | **9.8000e-004** | **0.1232** | **6.4000e-004** | **0.1239** | **0.0327** | **5.9000e-004** | **0.0333** | | **100.5839** | **100.5839** | **3.1400e-003** | **2.9100e-003** | **101.5307** |

## 3.7 Excavation - Open Trench - 2025

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.7 Excavation - Open Trench - 2025

### 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 | 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 |
| Worker | 0.0409 | 0.0253 | 0.3307 | 9.4000e-004 | 0.1232 | 6.1000e-004 | 0.1238 | 0.0327 | 5.6000e-004 | 0.0333 | | 98.0962 | 98.0962 | 2.8600e-003 | 2.7300e-003 | 98.9806 |
| **Total** | **0.0409** | **0.0253** | **0.3307** | **9.4000e-004** | **0.1232** | **6.1000e-004** | **0.1238** | **0.0327** | **5.6000e-004** | **0.0333** | | **98.0962** | **98.0962** | **2.8600e-003** | **2.7300e-003** | **98.9806** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | 0.0000 | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | **0.0000** | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.7 Excavation - Open Trench - 2025

**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 | 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 |
| Worker | 0.0409 | 0.0253 | 0.3307 | 9.4000e-004 | 0.1232 | 6.1000e-004 | 0.1238 | 0.0327 | 5.6000e-004 | 0.0333 | | 98.0962 | 98.0962 | 2.8600e-003 | 2.7300e-003 | 98.9806 |
| **Total** | **0.0409** | **0.0253** | **0.3307** | **9.4000e-004** | **0.1232** | **6.1000e-004** | **0.1238** | **0.0327** | **5.6000e-004** | **0.0333** | | **98.0962** | **98.0962** | **2.8600e-003** | **2.7300e-003** | **98.9806** |

## 3.8 Paving - Open Trench - 2025

**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 | 0.4339 | 4.0658 | 5.7647 | 0.0118 | | 0.1841 | 0.1841 | | 0.1701 | 0.1701 | | 1,130.1965 | 1,130.1965 | 0.3586 | | 1,139.1614 |
| Paving | 0.6498 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.0837** | **4.0658** | **5.7647** | **0.0118** | | **0.1841** | **0.1841** | | **0.1701** | **0.1701** | | **1,130.1965** | **1,130.1965** | **0.3586** | | **1,139.1614** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.8 Paving - Open Trench - 2025

### 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 | 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 |
| Worker | 0.0355 | 0.0219 | 0.2866 | 8.2000e-004 | 0.1068 | 5.3000e-004 | 0.1073 | 0.0283 | 4.9000e-004 | 0.0288 | | 85.0167 | 85.0167 | 2.4700e-003 | 2.3600e-003 | 85.7832 |
| **Total** | **0.0355** | **0.0219** | **0.2866** | **8.2000e-004** | **0.1068** | **5.3000e-004** | **0.1073** | **0.0283** | **4.9000e-004** | **0.0288** | | **85.0167** | **85.0167** | **2.4700e-003** | **2.3600e-003** | **85.7832** |

### 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 | 0.4339 | 4.0658 | 5.7647 | 0.0118 | | 0.1841 | 0.1841 | | 0.1701 | 0.1701 | 0.0000 | 1,130.1965 | 1,130.1965 | 0.3586 | | 1,139.1614 |
| Paving | 0.6498 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.0837** | **4.0658** | **5.7647** | **0.0118** | | **0.1841** | **0.1841** | | **0.1701** | **0.1701** | **0.0000** | **1,130.1965** | **1,130.1965** | **0.3586** | | **1,139.1614** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.8 Paving - Open Trench - 2025

**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 | 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 |
| Worker | 0.0355 | 0.0219 | 0.2866 | 8.2000e-004 | 0.1068 | 5.3000e-004 | 0.1073 | 0.0283 | 4.9000e-004 | 0.0288 | | 85.0167 | 85.0167 | 2.4700e-003 | 2.3600e-003 | 85.7832 |
| **Total** | **0.0355** | **0.0219** | **0.2866** | **8.2000e-004** | **0.1068** | **5.3000e-004** | **0.1073** | **0.0283** | **4.9000e-004** | **0.0288** | | **85.0167** | **85.0167** | **2.4700e-003** | **2.3600e-003** | **85.7832** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

# 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 | 1.4900e-003 | 7.5000e-004 | 6.7000e-003 | 0.0000 | 9.0000e-005 | 0.0000 | 1.0000e-004 | 2.0000e-005 | 0.0000 | 3.0000e-005 | | 0.2324 | 0.2324 | 1.4000e-004 | 7.0000e-005 | 0.2561 |
| Unmitigated | 1.4900e-003 | 7.5000e-004 | 6.7000e-003 | 0.0000 | 9.0000e-005 | 0.0000 | 1.0000e-004 | 2.0000e-005 | 0.0000 | 3.0000e-005 | | 0.2324 | 0.2324 | 1.4000e-004 | 7.0000e-005 | 0.2561 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Other Asphalt Surfaces | 1.08 | 0.00 | 0.00 | 31 | 31 |
| Total | 1.08 | 0.00 | 0.00 | 31 | 31 |

## 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 |
| Other Asphalt Surfaces | 0.11 | 7.30 | 7.30 | 100.00 | 0.00 | 0.00 | 100 | 0 | 0 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other Asphalt Surfaces | 0.553410 | 0.058491 | 0.170447 | 0.127855 | 0.026791 | 0.007507 | 0.012149 | 0.006212 | 0.000674 | 0.000390 | 0.028812 | 0.000632 | 0.006629 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | | | | | |
| Other Asphalt Surfaces | 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** |

## 5.2 Energy by Land Use - NaturalGas

**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 | | | | | |
| Other Asphalt Surfaces | 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 | 0.0475 | 1.0000e-004 | 0.0110 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0236 | 0.0236 | 6.0000e-005 | | 0.0252 |
| Unmitigated | 0.0475 | 1.0000e-004 | 0.0110 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0236 | 0.0236 | 6.0000e-005 | | 0.0252 |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 8.2300e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.0383 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.0100e-003 | 1.0000e-004 | 0.0110 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0236 | 0.0236 | 6.0000e-005 | | 0.0252 |
| **Total** | **0.0475** | **1.0000e-004** | **0.0110** | **0.0000** | | **4.0000e-005** | **4.0000e-005** | | **4.0000e-005** | **4.0000e-005** | | **0.0236** | **0.0236** | **6.0000e-005** | | **0.0252** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 8.2300e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.0383 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.0100e-003 | 1.0000e-004 | 0.0110 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0236 | 0.0236 | 6.0000e-005 | | 0.0252 |
| **Total** | **0.0475** | **1.0000e-004** | **0.0110** | **0.0000** | | **4.0000e-005** | **4.0000e-005** | | **4.0000e-005** | **4.0000e-005** | | **0.0236** | **0.0236** | **6.0000e-005** | | **0.0252** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 |
|---|---|---|---|---|---|---|

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|---|---|---|---|---|---|

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

# Calleguas SMP Phase 3- AQ

**Ventura County APCD Air District, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Other Asphalt Surfaces | 108.00 | 1000sqft | 2.48 | 108,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.6 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 8 | | | **Operational Year** | 2025 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 390.98 | **CH4 Intensity (lb/MWhr)** | 0.033 | **N2O Intensity (lb/MWhr)** | 0.004 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Distrubance area (27,000 linear feet by 4 foot-wide trench)

Construction Phase - Based on applicant provided information, 80 feet installation per day would occur. Based on project details, Phase 3 would have 460 LF of trenchless activity, crossing upland road bridge would take 2 weeks, and the remainder would be open-cut trench.

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Based on applicant provided information

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Based on applicant provided information

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Trips and VMT - 14 hauling trips per day according to the applicant.

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Grading -

Vehicle Trips - Based on applicant provided information. Maintenance and inspection work trips would occur annually for one day with one worker vehicle that would travel from the District's office to the pipeline and back.

Construction Off-road Equipment Mitigation - Information provided by the applicant

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 220.00 | 10.00 |
| tblConstructionPhase | NumDays | 220.00 | 33.00 |
| tblConstructionPhase | NumDays | 220.00 | 322.00 |
| tblConstructionPhase | NumDays | 6.00 | 10.00 |
| tblConstructionPhase | NumDays | 6.00 | 79.00 |
| tblConstructionPhase | NumDays | 6.00 | 322.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| 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 | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 4.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 140.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 1,095.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 451.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 4,505.00 |
| tblTripsAndVMT | VendorTripNumber | 18.00 | 0.00 |
| tblTripsAndVMT | VendorTripNumber | 18.00 | 0.00 |
| tblTripsAndVMT | VendorTripNumber | 18.00 | 0.00 |
| tblVehicleTrips | CW_TL | 9.50 | 0.11 |
| tblVehicleTrips | CW_TTP | 0.00 | 100.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | WD_TR | 0.00 | 0.01 |

## 2.0 Emissions Summary

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | | | | | |
| 2024 | 1.9050 | 16.5721 | 21.4764 | 0.0579 | 1.3454 | 0.5976 | 1.9037 | 0.3611 | 0.5774 | 0.8944 | 0.0000 | 5,813.3598 | 5,813.3598 | 0.8940 | 0.2897 | 5,918.7063 |
| 2025 | 1.1466 | 9.2250 | 13.1976 | 0.0347 | 0.7372 | 0.3173 | 1.0545 | 0.1977 | 0.3057 | 0.5034 | 0.0000 | 3,470.0050 | 3,470.0050 | 0.5075 | 0.1445 | 3,525.7480 |
| **Maximum** | **1.9050** | **16.5721** | **21.4764** | **0.0579** | **1.3454** | **0.5976** | **1.9037** | **0.3611** | **0.5774** | **0.8944** | **0.0000** | **5,813.3598** | **5,813.3598** | **0.8940** | **0.2897** | **5,918.7063** |

### 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 | | | | | |
| 2024 | 1.9050 | 16.5721 | 21.4764 | 0.0579 | 1.3454 | 0.5976 | 1.9037 | 0.3611 | 0.5774 | 0.8944 | 0.0000 | 5,813.3598 | 5,813.3598 | 0.8940 | 0.2897 | 5,918.7063 |
| 2025 | 1.1466 | 9.2250 | 13.1976 | 0.0347 | 0.7372 | 0.3173 | 1.0545 | 0.1977 | 0.3057 | 0.5034 | 0.0000 | 3,470.0050 | 3,470.0050 | 0.5075 | 0.1445 | 3,525.7480 |
| **Maximum** | **1.9050** | **16.5721** | **21.4764** | **0.0579** | **1.3454** | **0.5976** | **1.9037** | **0.3611** | **0.5774** | **0.8944** | **0.0000** | **5,813.3598** | **5,813.3598** | **0.8940** | **0.2897** | **5,918.7063** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | 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 |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 0.0475 | 1.0000e-004 | 0.0110 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0236 | 0.0236 | 6.0000e-005 | | 0.0252 |
| 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 | 1.6400e-003 | 6.6000e-004 | 5.1200e-003 | 0.0000 | 9.0000e-005 | 0.0000 | 1.0000e-004 | 2.0000e-005 | 0.0000 | 3.0000e-005 | | 0.2319 | 0.2319 | 1.2000e-004 | 6.0000e-005 | 0.2531 |
| **Total** | **0.0491** | **7.6000e-004** | **0.0161** | **0.0000** | **9.0000e-005** | **4.0000e-005** | **1.4000e-004** | **2.0000e-005** | **4.0000e-005** | **7.0000e-005** | | **0.2556** | **0.2556** | **1.8000e-004** | **6.0000e-005** | **0.2782** |

### 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 | 0.0475 | 1.0000e-004 | 0.0110 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0236 | 0.0236 | 6.0000e-005 | | 0.0252 |
| 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 | 1.6400e-003 | 6.6000e-004 | 5.1200e-003 | 0.0000 | 9.0000e-005 | 0.0000 | 1.0000e-004 | 2.0000e-005 | 0.0000 | 3.0000e-005 | | 0.2319 | 0.2319 | 1.2000e-004 | 6.0000e-005 | 0.2531 |
| **Total** | **0.0491** | **7.6000e-004** | **0.0161** | **0.0000** | **9.0000e-005** | **4.0000e-005** | **1.4000e-004** | **2.0000e-005** | **4.0000e-005** | **7.0000e-005** | | **0.2556** | **0.2556** | **1.8000e-004** | **6.0000e-005** | **0.2782** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | 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 | Excavation - Pipe-in-a-Bridge | Grading | 6/3/2024 | 6/14/2024 | 5 | 10 | |
| 2 | Installation - Pipe-in-a-Bridge | Building Construction | 6/3/2024 | 6/14/2024 | 5 | 10 | |
| 3 | Excavation - Trenchless | Grading | 6/17/2024 | 10/3/2024 | 5 | 79 | |
| 4 | Installation - Trenchless | Building Construction | 10/4/2024 | 11/19/2024 | 5 | 33 | |
| 5 | Installation/Backfill - Open Trench | Building Construction | 6/17/2024 | 9/9/2025 | 5 | 322 | |
| 6 | Excavation - Open Trench | Grading | 6/17/2024 | 9/9/2025 | 5 | 322 | |
| 7 | Paving - Open Trench | Paving | 9/10/2025 | 9/23/2025 | 5 | 10 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 2.48**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Excavation - Pipe-in-a-Bridge | Excavators | 1 | 4.00 | 158 | 0.38 |
| Excavation - Pipe-in-a-Bridge | Graders | 0 | 8.00 | 187 | 0.41 |
| Excavation - Pipe-in-a-Bridge | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Excavation - Pipe-in-a-Bridge | Tractors/Loaders/Backhoes | 0 | 4.00 | 97 | 0.37 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | | | |
|---|---|---|---|---|---|
| Excavation - Trenchless | Bore/Drill Rigs | 0 | 8.00 | 221 | 0.50 |
| Excavation - Trenchless | Concrete/Industrial Saws | 1 | 5.00 | 81 | 0.73 |
| Excavation - Trenchless | Cranes | 0 | 8.00 | 231 | 0.29 |
| Excavation - Trenchless | Dumpers/Tenders | 0 | 8.00 | 16 | 0.38 |
| Excavation - Trenchless | Excavators | 1 | 5.00 | 158 | 0.38 |
| Excavation - Trenchless | Generator Sets | 1 | 5.00 | 84 | 0.74 |
| Excavation - Trenchless | Graders | 0 | 8.00 | 187 | 0.41 |
| Excavation - Trenchless | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Excavation - Trenchless | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Excavation - Trenchless | Tractors/Loaders/Backhoes | 0 | 7.00 | 97 | 0.37 |
| Excavation - Trenchless | Welders | 0 | 8.00 | 46 | 0.45 |
| Excavation - Open Trench | Air Compressors | 1 | 5.00 | 78 | 0.48 |
| Excavation - Open Trench | Concrete/Industrial Saws | 1 | 5.00 | 81 | 0.73 |
| Excavation - Open Trench | Excavators | 1 | 5.00 | 158 | 0.38 |
| Excavation - Open Trench | Generator Sets | 1 | 5.00 | 84 | 0.74 |
| Excavation - Open Trench | Graders | 0 | 8.00 | 187 | 0.41 |
| Excavation - Open Trench | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Excavation - Open Trench | Plate Compactors | 0 | 8.00 | 8 | 0.43 |
| Excavation - Open Trench | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Excavation - Open Trench | Rubber Tired Loaders | 1 | 5.00 | 203 | 0.36 |
| Excavation - Open Trench | Tractors/Loaders/Backhoes | 0 | 7.00 | 97 | 0.37 |
| Installation - Pipe-in-a-Bridge | Cranes | 0 | 8.00 | 231 | 0.29 |
| Installation - Pipe-in-a-Bridge | Forklifts | 0 | 7.00 | 89 | 0.20 |
| Installation - Pipe-in-a-Bridge | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Installation - Pipe-in-a-Bridge | Tractors/Loaders/Backhoes | 1 | 4.00 | 97 | 0.37 |
| Installation - Pipe-in-a-Bridge | Welders | 0 | 8.00 | 46 | 0.45 |
| Installation - Trenchless | Bore/Drill Rigs | 1 | 5.00 | 221 | 0.50 |
| Installation - Trenchless | Cranes | 1 | 5.00 | 231 | 0.29 |
| Installation - Trenchless | Dumpers/Tenders | 1 | 5.00 | 16 | 0.38 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | | | |
|---|---|---|---|---|---|
| Installation - Trenchless | Forklifts | 0 | 7.00 | 89 | 0.20 |
| Installation - Trenchless | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Installation - Trenchless | Tractors/Loaders/Backhoes | 0 | 6.00 | 97 | 0.37 |
| Installation - Trenchless | Welders | 1 | 5.00 | 46 | 0.45 |
| Installation/Backfill - Open Trench | Cranes | 0 | 8.00 | 231 | 0.29 |
| Installation/Backfill - Open Trench | Forklifts | 0 | 7.00 | 89 | 0.20 |
| Installation/Backfill - Open Trench | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Installation/Backfill - Open Trench | Plate Compactors | 1 | 5.00 | 8 | 0.43 |
| Installation/Backfill - Open Trench | Tractors/Loaders/Backhoes | 1 | 5.00 | 97 | 0.37 |
| Installation/Backfill - Open Trench | Welders | 0 | 8.00 | 46 | 0.45 |
| Paving - Open Trench | Cement and Mortar Mixers | 1 | 5.00 | 9 | 0.56 |
| Paving - Open Trench | Pavers | 1 | 5.00 | 130 | 0.42 |
| Paving - Open Trench | Paving Equipment | 1 | 5.00 | 132 | 0.36 |
| Paving - Open Trench | Rollers | 1 | 5.00 | 80 | 0.38 |
| Paving - Open Trench | Surfacing Equipment | 1 | 5.00 | 263 | 0.30 |
| Paving - Open Trench | Tractors/Loaders/Backhoes | 0 | 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| Excavation - Pipe-in-a-Bridge | 1 | 3.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Excavation - Trenchless | 4 | 10.00 | 0.00 | 1,095.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Excavation - Open Trench | 6 | 15.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Installation - Pipe-in-a-Bridge | 1 | 45.00 | 0.00 | 140.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Installation - Trenchless | 4 | 45.00 | 0.00 | 451.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Installation/Backfill - Open Trench | 2 | 45.00 | 0.00 | 4,505.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving - Open Trench | 5 | 13.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

## 3.2 Excavation - Pipe-in-a-Bridge - 2024

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.0901 | 0.7014 | 1.6325 | 2.5800e-003 | | 0.0346 | 0.0346 | | 0.0318 | 0.0318 | | 250.1327 | 250.1327 | 0.0809 | | 252.1551 |
| **Total** | **0.0901** | **0.7014** | **1.6325** | **2.5800e-003** | **0.0000** | **0.0346** | **0.0346** | **0.0000** | **0.0318** | **0.0318** | | **250.1327** | **250.1327** | **0.0809** | | **252.1551** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.2 Excavation - Pipe-in-a-Bridge - 2024

### 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 | 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 |
| Worker | 8.0700e-003 | 4.7900e-003 | 0.0718 | 2.0000e-004 | 0.0246 | 1.3000e-004 | 0.0248 | 6.5400e-003 | 1.2000e-004 | 6.6500e-003 | | 21.0250 | 21.0250 | 5.8000e-004 | 5.2000e-004 | 21.1957 |
| **Total** | **8.0700e-003** | **4.7900e-003** | **0.0718** | **2.0000e-004** | **0.0246** | **1.3000e-004** | **0.0248** | **6.5400e-003** | **1.2000e-004** | **6.6500e-003** | | **21.0250** | **21.0250** | **5.8000e-004** | **5.2000e-004** | **21.1957** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.0901 | 0.7014 | 1.6325 | 2.5800e-003 | | 0.0346 | 0.0346 | | 0.0318 | 0.0318 | 0.0000 | 250.1327 | 250.1327 | 0.0809 | | 252.1551 |
| **Total** | **0.0901** | **0.7014** | **1.6325** | **2.5800e-003** | **0.0000** | **0.0346** | **0.0346** | **0.0000** | **0.0318** | **0.0318** | **0.0000** | **250.1327** | **250.1327** | **0.0809** | | **252.1551** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.2 Excavation - Pipe-in-a-Bridge - 2024

**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 | 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 |
| Worker | 8.0700e-003 | 4.7900e-003 | 0.0718 | 2.0000e-004 | 0.0246 | 1.3000e-004 | 0.0248 | 6.5400e-003 | 1.2000e-004 | 6.6500e-003 | | 21.0250 | 21.0250 | 5.8000e-004 | 5.2000e-004 | 21.1957 |
| **Total** | **8.0700e-003** | **4.7900e-003** | **0.0718** | **2.0000e-004** | **0.0246** | **1.3000e-004** | **0.0248** | **6.5400e-003** | **1.2000e-004** | **6.6500e-003** | | **21.0250** | **21.0250** | **5.8000e-004** | **5.2000e-004** | **21.1957** |

## 3.3 Installation - Pipe-in-a-Bridge - 2024

**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 | 0.0720 | 0.7241 | 1.1178 | 1.5600e-003 | | 0.0332 | 0.0332 | | 0.0306 | 0.0306 | | 150.8834 | 150.8834 | 0.0488 | | 152.1033 |
| **Total** | **0.0720** | **0.7241** | **1.1178** | **1.5600e-003** | | **0.0332** | **0.0332** | | **0.0306** | **0.0306** | | **150.8834** | **150.8834** | **0.0488** | | **152.1033** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Installation - Pipe-in-a-Bridge - 2024

### 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 | 0.0281 | 1.6647 | 0.4925 | 7.7400e-003 | 0.2444 | 0.0124 | 0.2568 | 0.0670 | 0.0119 | 0.0788 | | 861.8252 | 861.8252 | 0.0614 | 0.1374 | 904.2973 |
| 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 |
| Worker | 0.1210 | 0.0718 | 1.0771 | 3.0600e-003 | 0.3697 | 1.9200e-003 | 0.3716 | 0.0981 | 1.7600e-003 | 0.0998 | | 315.3750 | 315.3750 | 8.6300e-003 | 7.8700e-003 | 317.9347 |
| **Total** | **0.1491** | **1.7365** | **1.5696** | **0.0108** | **0.6141** | **0.0143** | **0.6284** | **0.1650** | **0.0136** | **0.1786** | | **1,177.2002** | **1,177.2002** | **0.0700** | **0.1452** | **1,222.2321** |

### 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 | 0.0720 | 0.7241 | 1.1178 | 1.5600e-003 | | 0.0332 | 0.0332 | | 0.0306 | 0.0306 | 0.0000 | 150.8834 | 150.8834 | 0.0488 | | 152.1033 |
| **Total** | **0.0720** | **0.7241** | **1.1178** | **1.5600e-003** | | **0.0332** | **0.0332** | | **0.0306** | **0.0306** | **0.0000** | **150.8834** | **150.8834** | **0.0488** | | **152.1033** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Installation - Pipe-in-a-Bridge - 2024

**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 | 0.0281 | 1.6647 | 0.4925 | 7.7400e-003 | 0.2444 | 0.0124 | 0.2568 | 0.0670 | 0.0119 | 0.0788 | | 861.8252 | 861.8252 | 0.0614 | 0.1374 | 904.2973 |
| 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 |
| Worker | 0.1210 | 0.0718 | 1.0771 | 3.0600e-003 | 0.3697 | 1.9200e-003 | 0.3716 | 0.0981 | 1.7600e-003 | 0.0998 | | 315.3750 | 315.3750 | 8.6300e-003 | 7.8700e-003 | 317.9347 |
| **Total** | **0.1491** | **1.7365** | **1.5696** | **0.0108** | **0.6141** | **0.0143** | **0.6284** | **0.1650** | **0.0136** | **0.1786** | | **1,177.2002** | **1,177.2002** | **0.0700** | **0.1452** | **1,222.2321** |

## 3.4 Excavation - Trenchless - 2024

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.6106 | 4.8080 | 7.4244 | 0.0146 | | 0.2114 | 0.2114 | | 0.2056 | 0.2056 | | 1,392.5655 | 1,392.5655 | 0.2380 | | 1,398.5156 |
| **Total** | **0.6106** | **4.8080** | **7.4244** | **0.0146** | **0.0000** | **0.2114** | **0.2114** | **0.0000** | **0.2056** | **0.2056** | | **1,392.5655** | **1,392.5655** | **0.2380** | | **1,398.5156** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Excavation - Trenchless - 2024

### 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 | 0.0278 | 1.6481 | 0.4876 | 7.6700e-003 | 0.2420 | 0.0123 | 0.2543 | 0.0663 | 0.0117 | 0.0780 | | 853.2537 | 853.2537 | 0.0608 | 0.1360 | 895.3034 |
| 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 |
| Worker | 0.0269 | 0.0160 | 0.2394 | 6.8000e-004 | 0.0822 | 4.3000e-004 | 0.0826 | 0.0218 | 3.9000e-004 | 0.0222 | | 70.0833 | 70.0833 | 1.9200e-003 | 1.7500e-003 | 70.6522 |
| **Total** | **0.0547** | **1.6641** | **0.7270** | **8.3500e-003** | **0.3242** | **0.0127** | **0.3368** | **0.0881** | **0.0121** | **0.1002** | | **923.3370** | **923.3370** | **0.0627** | **0.1378** | **965.9556** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.6106 | 4.8080 | 7.4244 | 0.0146 | | 0.2114 | 0.2114 | | 0.2056 | 0.2056 | 0.0000 | 1,392.5655 | 1,392.5655 | 0.2380 | | 1,398.5156 |
| **Total** | **0.6106** | **4.8080** | **7.4244** | **0.0146** | **0.0000** | **0.2114** | **0.2114** | **0.0000** | **0.2056** | **0.2056** | **0.0000** | **1,392.5655** | **1,392.5655** | **0.2380** | | **1,398.5156** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Excavation - Trenchless - 2024

**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 | 0.0278 | 1.6481 | 0.4876 | 7.6700e-003 | 0.2420 | 0.0123 | 0.2543 | 0.0663 | 0.0117 | 0.0780 | | 853.2537 | 853.2537 | 0.0608 | 0.1360 | 895.3034 |
| 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 |
| Worker | 0.0269 | 0.0160 | 0.2394 | 6.8000e-004 | 0.0822 | 4.3000e-004 | 0.0826 | 0.0218 | 3.9000e-004 | 0.0222 | | 70.0833 | 70.0833 | 1.9200e-003 | 1.7500e-003 | 70.6522 |
| **Total** | **0.0547** | **1.6641** | **0.7270** | **8.3500e-003** | **0.3242** | **0.0127** | **0.3368** | **0.0881** | **0.0121** | **0.1002** | | **923.3370** | **923.3370** | **0.0627** | **0.1378** | **965.9556** |

## 3.5 Installation - Trenchless - 2024

**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 | 0.5322 | 4.5316 | 3.5798 | 0.0116 | | 0.1707 | 0.1707 | | 0.1603 | 0.1603 | | 1,090.3680 | 1,090.3680 | 0.3157 | | 1,098.2608 |
| **Total** | **0.5322** | **4.5316** | **3.5798** | **0.0116** | | **0.1707** | **0.1707** | | **0.1603** | **0.1603** | | **1,090.3680** | **1,090.3680** | **0.3157** | | **1,098.2608** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2024

### 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 | 0.0274 | 1.6250 | 0.4808 | 7.5600e-003 | 0.2386 | 0.0121 | 0.2507 | 0.0654 | 0.0116 | 0.0769 | | 841.3056 | 841.3056 | 0.0599 | 0.1341 | 882.7664 |
| 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 |
| Worker | 0.1210 | 0.0718 | 1.0771 | 3.0600e-003 | 0.3697 | 1.9200e-003 | 0.3716 | 0.0981 | 1.7600e-003 | 0.0998 | | 315.3750 | 315.3750 | 8.6300e-003 | 7.8700e-003 | 317.9347 |
| **Total** | **0.1484** | **1.6969** | **1.5579** | **0.0106** | **0.6083** | **0.0140** | **0.6223** | **0.1634** | **0.0133** | **0.1768** | | **1,156.6805** | **1,156.6805** | **0.0686** | **0.1420** | **1,200.7012** |

### 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 | 0.5322 | 4.5316 | 3.5798 | 0.0116 | | 0.1707 | 0.1707 | | 0.1603 | 0.1603 | 0.0000 | 1,090.3680 | 1,090.3680 | 0.3157 | | 1,098.2608 |
| **Total** | **0.5322** | **4.5316** | **3.5798** | **0.0116** | | **0.1707** | **0.1707** | | **0.1603** | **0.1603** | **0.0000** | **1,090.3680** | **1,090.3680** | **0.3157** | | **1,098.2608** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2024

**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 | 0.0274 | 1.6250 | 0.4808 | 7.5600e-003 | 0.2386 | 0.0121 | 0.2507 | 0.0654 | 0.0116 | 0.0769 | | 841.3056 | 841.3056 | 0.0599 | 0.1341 | 882.7664 |
| 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 |
| Worker | 0.1210 | 0.0718 | 1.0771 | 3.0600e-003 | 0.3697 | 1.9200e-003 | 0.3716 | 0.0981 | 1.7600e-003 | 0.0998 | | 315.3750 | 315.3750 | 8.6300e-003 | 7.8700e-003 | 317.9347 |
| **Total** | **0.1484** | **1.6969** | **1.5579** | **0.0106** | **0.6083** | **0.0140** | **0.6223** | **0.1634** | **0.0133** | **0.1768** | | **1,156.6805** | **1,156.6805** | **0.0686** | **0.1420** | **1,200.7012** |

## 3.6 Installation/Backfill - Open Trench - 2024

**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 | 0.1150 | 1.0622 | 1.5288 | 2.2500e-003 | | 0.0477 | 0.0477 | | 0.0443 | 0.0443 | | 210.1538 | 210.1538 | 0.0632 | | 211.7347 |
| **Total** | **0.1150** | **1.0622** | **1.5288** | **2.2500e-003** | | **0.0477** | **0.0477** | | **0.0443** | **0.0443** | | **210.1538** | **210.1538** | **0.0632** | | **211.7347** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Installation/Backfill - Open Trench - 2024

### 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 | 0.0281 | 1.6636 | 0.4922 | 7.7400e-003 | 0.2443 | 0.0124 | 0.2567 | 0.0669 | 0.0119 | 0.0788 | | 861.2517 | 861.2517 | 0.0614 | 0.1373 | 903.6955 |
| 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 |
| Worker | 0.1210 | 0.0718 | 1.0771 | 3.0600e-003 | 0.3697 | 1.9200e-003 | 0.3716 | 0.0981 | 1.7600e-003 | 0.0998 | | 315.3750 | 315.3750 | 8.6300e-003 | 7.8700e-003 | 317.9347 |
| **Total** | **0.1491** | **1.7354** | **1.5693** | **0.0108** | **0.6139** | **0.0143** | **0.6282** | **0.1650** | **0.0136** | **0.1786** | | **1,176.6266** | **1,176.6266** | **0.0700** | **0.1452** | **1,221.6303** |

### 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 | 0.1150 | 1.0622 | 1.5288 | 2.2500e-003 | | 0.0477 | 0.0477 | | 0.0443 | 0.0443 | 0.0000 | 210.1538 | 210.1538 | 0.0632 | | 211.7347 |
| **Total** | **0.1150** | **1.0622** | **1.5288** | **2.2500e-003** | | **0.0477** | **0.0477** | | **0.0443** | **0.0443** | **0.0000** | **210.1538** | **210.1538** | **0.0632** | | **211.7347** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Installation/Backfill - Open Trench - 2024

**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 | 0.0281 | 1.6636 | 0.4922 | 7.7400e-003 | 0.2443 | 0.0124 | 0.2567 | 0.0669 | 0.0119 | 0.0788 | | 861.2517 | 861.2517 | 0.0614 | 0.1373 | 903.6955 |
| 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 |
| Worker | 0.1210 | 0.0718 | 1.0771 | 3.0600e-003 | 0.3697 | 1.9200e-003 | 0.3716 | 0.0981 | 1.7600e-003 | 0.0998 | | 315.3750 | 315.3750 | 8.6300e-003 | 7.8700e-003 | 317.9347 |
| **Total** | **0.1491** | **1.7354** | **1.5693** | **0.0108** | **0.6139** | **0.0143** | **0.6282** | **0.1650** | **0.0136** | **0.1786** | | **1,176.6266** | **1,176.6266** | **0.0700** | **0.1452** | **1,221.6303** |

## 3.6 Installation/Backfill - Open Trench - 2025

**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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Installation/Backfill - Open Trench - 2025

### 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 | 0.0278 | 1.6353 | 0.5042 | 7.5600e-003 | 0.2443 | 0.0124 | 0.2567 | 0.0669 | 0.0118 | 0.0788 | | 844.1088 | 844.1088 | 0.0633 | 0.1347 | 885.8186 |
| 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 |
| Worker | 0.1133 | 0.0648 | 1.0068 | 2.9500e-003 | 0.3697 | 1.8300e-003 | 0.3715 | 0.0981 | 1.6800e-003 | 0.0997 | | 307.5490 | 307.5490 | 7.8400e-003 | 7.3700e-003 | 309.9402 |
| **Total** | **0.1411** | **1.7001** | **1.5109** | **0.0105** | **0.6140** | **0.0142** | **0.6282** | **0.1650** | **0.0135** | **0.1785** | | **1,151.6578** | **1,151.6578** | **0.0711** | **0.1420** | **1,195.7588** |

### 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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | 0.0000 | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | **0.0000** | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Installation/Backfill - Open Trench - 2025

**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 | 0.0278 | 1.6353 | 0.5042 | 7.5600e-003 | 0.2443 | 0.0124 | 0.2567 | 0.0669 | 0.0118 | 0.0788 | | 844.1088 | 844.1088 | 0.0633 | 0.1347 | 885.8186 |
| 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 |
| Worker | 0.1133 | 0.0648 | 1.0068 | 2.9500e-003 | 0.3697 | 1.8300e-003 | 0.3715 | 0.0981 | 1.6800e-003 | 0.0997 | | 307.5490 | 307.5490 | 7.8400e-003 | 7.3700e-003 | 309.9402 |
| **Total** | **0.1411** | **1.7001** | **1.5109** | **0.0105** | **0.6140** | **0.0142** | **0.6282** | **0.1650** | **0.0135** | **0.1785** | | **1,151.6578** | **1,151.6578** | **0.0711** | **0.1420** | **1,195.7588** |

## 3.7 Excavation - Open Trench - 2024

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.9200 | 7.2785 | 9.8679 | 0.0210 | | 0.3109 | 0.3109 | | 0.3011 | 0.3011 | | 2,005.5518 | 2,005.5518 | 0.3736 | | 2,014.8920 |
| **Total** | **0.9200** | **7.2785** | **9.8679** | **0.0210** | **0.0000** | **0.3109** | **0.3109** | **0.0000** | **0.3011** | **0.3011** | | **2,005.5518** | **2,005.5518** | **0.3736** | | **2,014.8920** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.7 Excavation - Open Trench - 2024

### 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 | 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 |
| Worker | 0.0403 | 0.0239 | 0.3590 | 1.0200e-003 | 0.1232 | 6.4000e-004 | 0.1239 | 0.0327 | 5.9000e-004 | 0.0333 | | 105.1250 | 105.1250 | 2.8800e-003 | 2.6200e-003 | 105.9782 |
| **Total** | **0.0403** | **0.0239** | **0.3590** | **1.0200e-003** | **0.1232** | **6.4000e-004** | **0.1239** | **0.0327** | **5.9000e-004** | **0.0333** | | **105.1250** | **105.1250** | **2.8800e-003** | **2.6200e-003** | **105.9782** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.9200 | 7.2785 | 9.8679 | 0.0210 | | 0.3109 | 0.3109 | | 0.3011 | 0.3011 | 0.0000 | 2,005.5518 | 2,005.5518 | 0.3736 | | 2,014.8920 |
| **Total** | **0.9200** | **7.2785** | **9.8679** | **0.0210** | **0.0000** | **0.3109** | **0.3109** | **0.0000** | **0.3011** | **0.3011** | **0.0000** | **2,005.5518** | **2,005.5518** | **0.3736** | | **2,014.8920** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.7 Excavation - Open Trench - 2024

**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 | 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 |
| Worker | 0.0403 | 0.0239 | 0.3590 | 1.0200e-003 | 0.1232 | 6.4000e-004 | 0.1239 | 0.0327 | 5.9000e-004 | 0.0333 | | 105.1250 | 105.1250 | 2.8800e-003 | 2.6200e-003 | 105.9782 |
| **Total** | **0.0403** | **0.0239** | **0.3590** | **1.0200e-003** | **0.1232** | **6.4000e-004** | **0.1239** | **0.0327** | **5.9000e-004** | **0.0333** | | **105.1250** | **105.1250** | **2.8800e-003** | **2.6200e-003** | **105.9782** |

## 3.7 Excavation - Open Trench - 2025

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.7 Excavation - Open Trench - 2025

### 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 | 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 |
| Worker | 0.0378 | 0.0216 | 0.3356 | 9.8000e-004 | 0.1232 | 6.1000e-004 | 0.1238 | 0.0327 | 5.6000e-004 | 0.0333 | | 102.5163 | 102.5163 | 2.6100e-003 | 2.4600e-003 | 103.3134 |
| **Total** | **0.0378** | **0.0216** | **0.3356** | **9.8000e-004** | **0.1232** | **6.1000e-004** | **0.1238** | **0.0327** | **5.6000e-004** | **0.0333** | | **102.5163** | **102.5163** | **2.6100e-003** | **2.4600e-003** | **103.3134** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | 0.0000 | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | **0.0000** | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.7 Excavation - Open Trench - 2025

**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 | 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 |
| Worker | 0.0378 | 0.0216 | 0.3356 | 9.8000e-004 | 0.1232 | 6.1000e-004 | 0.1238 | 0.0327 | 5.6000e-004 | 0.0333 | | 102.5163 | 102.5163 | 2.6100e-003 | 2.4600e-003 | 103.3134 |
| **Total** | **0.0378** | **0.0216** | **0.3356** | **9.8000e-004** | **0.1232** | **6.1000e-004** | **0.1238** | **0.0327** | **5.6000e-004** | **0.0333** | | **102.5163** | **102.5163** | **2.6100e-003** | **2.4600e-003** | **103.3134** |

## 3.8 Paving - Open Trench - 2025

**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 | 0.4339 | 4.0658 | 5.7647 | 0.0118 | | 0.1841 | 0.1841 | | 0.1701 | 0.1701 | | 1,130.1965 | 1,130.1965 | 0.3586 | | 1,139.1614 |
| Paving | 0.6498 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.0837** | **4.0658** | **5.7647** | **0.0118** | | **0.1841** | **0.1841** | | **0.1701** | **0.1701** | | **1,130.1965** | **1,130.1965** | **0.3586** | | **1,139.1614** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.8 Paving - Open Trench - 2025

### 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 | 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 |
| Worker | 0.0327 | 0.0187 | 0.2908 | 8.5000e-004 | 0.1068 | 5.3000e-004 | 0.1073 | 0.0283 | 4.9000e-004 | 0.0288 | | 88.8475 | 88.8475 | 2.2600e-003 | 2.1300e-003 | 89.5383 |
| **Total** | **0.0327** | **0.0187** | **0.2908** | **8.5000e-004** | **0.1068** | **5.3000e-004** | **0.1073** | **0.0283** | **4.9000e-004** | **0.0288** | | **88.8475** | **88.8475** | **2.2600e-003** | **2.1300e-003** | **89.5383** |

### 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 | 0.4339 | 4.0658 | 5.7647 | 0.0118 | | 0.1841 | 0.1841 | | 0.1701 | 0.1701 | 0.0000 | 1,130.1965 | 1,130.1965 | 0.3586 | | 1,139.1614 |
| Paving | 0.6498 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.0837** | **4.0658** | **5.7647** | **0.0118** | | **0.1841** | **0.1841** | | **0.1701** | **0.1701** | **0.0000** | **1,130.1965** | **1,130.1965** | **0.3586** | | **1,139.1614** |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.8 Paving - Open Trench - 2025

**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 | 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 |
| Worker | 0.0327 | 0.0187 | 0.2908 | 8.5000e-004 | 0.1068 | 5.3000e-004 | 0.1073 | 0.0283 | 4.9000e-004 | 0.0288 | | 88.8475 | 88.8475 | 2.2600e-003 | 2.1300e-003 | 89.5383 |
| **Total** | **0.0327** | **0.0187** | **0.2908** | **8.5000e-004** | **0.1068** | **5.3000e-004** | **0.1073** | **0.0283** | **4.9000e-004** | **0.0288** | | **88.8475** | **88.8475** | **2.2600e-003** | **2.1300e-003** | **89.5383** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

# 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 | 1.6400e-003 | 6.6000e-004 | 5.1200e-003 | 0.0000 | 9.0000e-005 | 0.0000 | 1.0000e-004 | 2.0000e-005 | 0.0000 | 3.0000e-005 | | 0.2319 | 0.2319 | 1.2000e-004 | 6.0000e-005 | 0.2531 |
| Unmitigated | 1.6400e-003 | 6.6000e-004 | 5.1200e-003 | 0.0000 | 9.0000e-005 | 0.0000 | 1.0000e-004 | 2.0000e-005 | 0.0000 | 3.0000e-005 | | 0.2319 | 0.2319 | 1.2000e-004 | 6.0000e-005 | 0.2531 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Other Asphalt Surfaces | 1.08 | 0.00 | 0.00 | 31 | 31 |
| Total | 1.08 | 0.00 | 0.00 | 31 | 31 |

## 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 |
| Other Asphalt Surfaces | 0.11 | 7.30 | 7.30 | 100.00 | 0.00 | 0.00 | 100 | 0 | 0 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other Asphalt Surfaces | 0.553410 | 0.058491 | 0.170447 | 0.127855 | 0.026791 | 0.007507 | 0.012149 | 0.006212 | 0.000674 | 0.000390 | 0.028812 | 0.000632 | 0.006629 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | | | | | |
| Other Asphalt Surfaces | 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** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 5.2 Energy by Land Use - NaturalGas

**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 | | | | | |
| Other Asphalt Surfaces | 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 | 0.0475 | 1.0000e-004 | 0.0110 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0236 | 0.0236 | 6.0000e-005 | | 0.0252 |
| Unmitigated | 0.0475 | 1.0000e-004 | 0.0110 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0236 | 0.0236 | 6.0000e-005 | | 0.0252 |

Calleguas SMP Phase 3- AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 8.2300e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.0383 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.0100e-003 | 1.0000e-004 | 0.0110 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0236 | 0.0236 | 6.0000e-005 | | 0.0252 |
| **Total** | **0.0475** | **1.0000e-004** | **0.0110** | **0.0000** | | **4.0000e-005** | **4.0000e-005** | | **4.0000e-005** | **4.0000e-005** | | **0.0236** | **0.0236** | **6.0000e-005** | | **0.0252** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 8.2300e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.0383 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.0100e-003 | 1.0000e-004 | 0.0110 | 0.0000 | | 4.0000e-005 | 4.0000e-005 | | 4.0000e-005 | 4.0000e-005 | | 0.0236 | 0.0236 | 6.0000e-005 | | 0.0252 |
| **Total** | **0.0475** | **1.0000e-004** | **0.0110** | **0.0000** | | **4.0000e-005** | **4.0000e-005** | | **4.0000e-005** | **4.0000e-005** | | **0.0236** | **0.0236** | **6.0000e-005** | | **0.0252** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 |
|---|---|---|---|---|---|---|

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|---|---|---|---|---|---|

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

# Calleguas SMP Phase 4 - AQ

**Ventura County APCD Air District, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Other Asphalt Surfaces | 196.00 | 1000sqft | 4.50 | 196,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.6 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 8 | | | **Operational Year** | 2028 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 390.98 | **CH4 Intensity (lb/MWhr)** | 0.033 | **N2O Intensity (lb/MWhr)** | 0.004 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Distrubance area (49,000 linear feet by 4 foot-wide trench)

Construction Phase - Based on applicant information, such as 80 feet installation for open trench per day, 400 LF of trenchless activity, and paving would occur after excavation and installation operation. 4 feet trenchless activity per day.

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Trips and VMT - 14 hauling trips per day according to the applicant.

Grading -

Vehicle Trips - Based on applicant provided information, maintenance and inspection trips would occur once per year, one worker trips for one day, and would travel from the district's office to the end of the pipeline and back.

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Construction Off-road Equipment Mitigation - Information provided by the applicant

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 8.00 | 68.00 |
| tblConstructionPhase | NumDays | 8.00 | 608.00 |
| tblConstructionPhase | NumDays | 230.00 | 608.00 |
| tblConstructionPhase | NumDays | 230.00 | 28.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 5.00 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 392.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 8,505.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 952.00 |
| tblTripsAndVMT | VendorTripNumber | 32.00 | 0.00 |
| tblTripsAndVMT | VendorTripNumber | 32.00 | 0.00 |
| tblVehicleTrips | CW_TL | 9.50 | 0.06 |
| tblVehicleTrips | CW_TTP | 0.00 | 100.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | WD_TR | 0.00 | 0.01 |

## 2.0 Emissions Summary

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | | | | | |
| 2025 | 0.0659 | 0.5192 | 0.7717 | 1.9800e-003 | 0.0443 | 0.0179 | 0.0622 | 0.0119 | 0.0173 | 0.0292 | 0.0000 | 179.8501 | 179.8501 | 0.0254 | 7.1200e-003 | 182.6067 |
| 2026 | 0.1692 | 1.3220 | 1.8890 | 5.2000e-003 | 0.1490 | 0.0440 | 0.1930 | 0.0399 | 0.0423 | 0.0822 | 0.0000 | 475.2136 | 475.2136 | 0.0665 | 0.0213 | 483.2370 |
| 2027 | 0.1578 | 1.2101 | 1.7952 | 4.7200e-003 | 0.1334 | 0.0415 | 0.1750 | 0.0357 | 0.0400 | 0.0757 | 0.0000 | 430.2168 | 430.2168 | 0.0610 | 0.0171 | 436.8395 |
| 2028 | 0.0190 | 0.1060 | 0.1566 | 3.8000e-004 | 8.6100e-003 | 4.0400e-003 | 0.0127 | 2.3000e-003 | 3.8300e-003 | 6.1300e-003 | 0.0000 | 34.4013 | 34.4013 | 6.4500e-003 | 9.8000e-004 | 34.8533 |
| **Maximum** | **0.1692** | **1.3220** | **1.8890** | **5.2000e-003** | **0.1490** | **0.0440** | **0.1930** | **0.0399** | **0.0423** | **0.0822** | **0.0000** | **475.2136** | **475.2136** | **0.0665** | **0.0213** | **483.2370** |

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 2.1 Overall Construction

**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 | | | | | |
| 2025 | 0.0659 | 0.5192 | 0.7717 | 1.9800e-003 | 0.0443 | 0.0179 | 0.0622 | 0.0119 | 0.0173 | 0.0292 | 0.0000 | 179.8499 | 179.8499 | 0.0254 | 7.1200e-003 | 182.6066 |
| 2026 | 0.1692 | 1.3220 | 1.8890 | 5.2000e-003 | 0.1490 | 0.0440 | 0.1930 | 0.0399 | 0.0423 | 0.0822 | 0.0000 | 475.2133 | 475.2133 | 0.0665 | 0.0213 | 483.2366 |
| 2027 | 0.1578 | 1.2101 | 1.7952 | 4.7200e-003 | 0.1334 | 0.0415 | 0.1750 | 0.0357 | 0.0400 | 0.0757 | 0.0000 | 430.2165 | 430.2165 | 0.0610 | 0.0171 | 436.8392 |
| 2028 | 0.0190 | 0.1060 | 0.1566 | 3.8000e-004 | 8.6100e-003 | 4.0400e-003 | 0.0127 | 2.3000e-003 | 3.8300e-003 | 6.1300e-003 | 0.0000 | 34.4013 | 34.4013 | 6.4500e-003 | 9.8000e-004 | 34.8532 |
| **Maximum** | **0.1692** | **1.3220** | **1.8890** | **5.2000e-003** | **0.1490** | **0.0440** | **0.1930** | **0.0399** | **0.0423** | **0.0822** | **0.0000** | **475.2133** | **475.2133** | **0.0665** | **0.0213** | **483.2366** |

| | 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** |

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---|---|---|---|---|
| **1** | **9-23-2025** | **12-22-2025** | 0.5254 | 0.5254 |
| **2** | **12-23-2025** | **3-22-2026** | 0.4738 | 0.4738 |
| **3** | **3-23-2026** | **6-22-2026** | 0.3440 | 0.3440 |
| **4** | **6-23-2026** | **9-22-2026** | 0.3437 | 0.3437 |
| **5** | **9-23-2026** | **12-22-2026** | 0.3432 | 0.3432 |
| **6** | **12-23-2026** | **3-22-2027** | 0.3379 | 0.3379 |
| **7** | **3-23-2027** | **6-22-2027** | 0.3421 | 0.3421 |
| **8** | **6-23-2027** | **9-22-2027** | 0.3418 | 0.3418 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | | |
|---|---|---|---|---|
| **9** | **9-23-2027** | **12-22-2027** | 0.3412 | 0.3412 |
| **10** | **12-23-2027** | **3-22-2028** | 0.1568 | 0.1568 |
| | | **Highest** | 0.5254 | 0.5254 |

## 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 | 0.0156 | 2.0000e-005 | 1.8000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | 0.0000 | 3.7300e-003 |
| 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 | 3.0000e-004 | 1.4000e-004 | 1.2700e-003 | 0.0000 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0388 | 0.0388 | 2.0000e-005 | 1.0000e-005 | 0.0430 |
| 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** | **0.0159** | **1.6000e-004** | **3.0700e-003** | **0.0000** | **1.0000e-005** | **1.0000e-005** | **2.0000e-005** | **0.0000** | **1.0000e-005** | **1.0000e-005** | **0.0000** | **0.0423** | **0.0423** | **3.0000e-005** | **1.0000e-005** | **0.0467** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 0.0156 | 2.0000e-005 | 1.8000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | 0.0000 | 3.7300e-003 |
| 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 | 3.0000e-004 | 1.4000e-004 | 1.2700e-003 | 0.0000 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0388 | 0.0388 | 2.0000e-005 | 1.0000e-005 | 0.0430 |
| 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** | **0.0159** | **1.6000e-004** | **3.0700e-003** | **0.0000** | **1.0000e-005** | **1.0000e-005** | **2.0000e-005** | **0.0000** | **1.0000e-005** | **1.0000e-005** | **0.0000** | **0.0423** | **0.0423** | **3.0000e-005** | **1.0000e-005** | **0.0467** |

| | 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 | Excavation - Trenchless | Grading | 9/24/2025 | 12/26/2025 | 5 | 68 | |
| 2 | Excavation - Open Trench | Grading | 9/24/2025 | 1/21/2028 | 5 | 608 | |
| 3 | Installation/Backfill - Open Trench | Building Construction | 9/24/2025 | 1/21/2028 | 5 | 608 | |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | Installation - Trenchless | Building Construction | 12/29/2025 | 2/4/2026 | 5 | 28 | |
| 5 | Paving - Open Trench | Paving | 1/24/2028 | 2/16/2028 | 5 | 18 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 4.5**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Excavation - Trenchless | Concrete/Industrial Saws | 1 | 5.00 | 81 | 0.73 |
| Excavation - Trenchless | Excavators | 0 | 8.00 | 158 | 0.38 |
| Excavation - Trenchless | Excavators | 1 | 5.00 | 158 | 0.38 |
| Excavation - Trenchless | Generator Sets | 1 | 5.00 | 84 | 0.74 |
| Excavation - Trenchless | Graders | 0 | 8.00 | 187 | 0.41 |
| Excavation - Trenchless | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Excavation - Trenchless | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Excavation - Trenchless | Tractors/Loaders/Backhoes | 0 | 8.00 | 97 | 0.37 |
| Excavation - Open Trench | Air Compressors | 1 | 5.00 | 78 | 0.48 |
| Excavation - Open Trench | Concrete/Industrial Saws | 1 | 5.00 | 81 | 0.73 |
| Excavation - Open Trench | Excavators | 1 | 5.00 | 158 | 0.38 |
| Excavation - Open Trench | Generator Sets | 1 | 5.00 | 84 | 0.74 |
| Excavation - Open Trench | Graders | 0 | 8.00 | 187 | 0.41 |
| Excavation - Open Trench | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Excavation - Open Trench | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Excavation - Open Trench | Rubber Tired Loaders | 1 | 5.00 | 203 | 0.36 |
| Excavation - Open Trench | Tractors/Loaders/Backhoes | 0 | 8.00 | 97 | 0.37 |
| Installation/Backfill - Open Trench | Cranes | 0 | 7.00 | 231 | 0.29 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | | | |
|---|---|---|---|---|---|
| Installation/Backfill - Open Trench | Forklifts | 0 | 8.00 | 89 | 0.20 |
| Installation/Backfill - Open Trench | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Installation/Backfill - Open Trench | Plate Compactors | 1 | 5.00 | 8 | 0.43 |
| Installation/Backfill - Open Trench | Tractors/Loaders/Backhoes | 1 | 5.00 | 97 | 0.37 |
| Installation/Backfill - Open Trench | Welders | 0 | 8.00 | 46 | 0.45 |
| Installation - Trenchless | Bore/Drill Rigs | 1 | 5.00 | 221 | 0.50 |
| Installation - Trenchless | Cranes | 1 | 5.00 | 231 | 0.29 |
| Installation - Trenchless | Dumpers/Tenders | 1 | 5.00 | 16 | 0.38 |
| Installation - Trenchless | Forklifts | 0 | 8.00 | 89 | 0.20 |
| Installation - Trenchless | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Installation - Trenchless | Tractors/Loaders/Backhoes | 0 | 7.00 | 97 | 0.37 |
| Installation - Trenchless | Welders | 1 | 5.00 | 46 | 0.45 |
| Paving - Open Trench | Cement and Mortar Mixers | 1 | 5.00 | 9 | 0.56 |
| Paving - Open Trench | Pavers | 1 | 5.00 | 130 | 0.42 |
| Paving - Open Trench | Paving Equipment | 1 | 5.00 | 132 | 0.36 |
| Paving - Open Trench | Rollers | 1 | 5.00 | 80 | 0.38 |
| Paving - Open Trench | Surfacing Equipment | 1 | 5.00 | 263 | 0.30 |
| Paving - Open Trench | Tractors/Loaders/Backhoes | 0 | 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| Excavation - Trenchless | 4 | 10.00 | 0.00 | 392.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Excavation - Open Trench | 6 | 15.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Installation/Backfill - Open Trench | 2 | 82.00 | 0.00 | 8,505.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Installation - Trenchless | 4 | 82.00 | 0.00 | 952.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving - Open Trench | 5 | 13.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

## 3.2 Excavation - Trenchless - 2025

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0195 | 0.1495 | 0.2516 | 5.0000e-004 | | 6.1400e-003 | 6.1400e-003 | | 5.9700e-003 | 5.9700e-003 | 0.0000 | 42.9489 | 42.9489 | 7.2600e-003 | 0.0000 | 43.1303 |
| **Total** | **0.0195** | **0.1495** | **0.2516** | **5.0000e-004** | **0.0000** | **6.1400e-003** | **6.1400e-003** | **0.0000** | **5.9700e-003** | **5.9700e-003** | **0.0000** | **42.9489** | **42.9489** | **7.2600e-003** | **0.0000** | **43.1303** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.2 Excavation - Trenchless - 2025

### 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 | 3.8000e-004 | 0.0239 | 7.1000e-003 | 1.1000e-004 | 3.3700e-003 | 1.7000e-004 | 3.5400e-003 | 9.2000e-004 | 1.7000e-004 | 1.0900e-003 | 0.0000 | 10.7321 | 10.7321 | 8.0000e-004 | 1.7100e-003 | 11.2624 |
| 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 | 8.5000e-004 | 5.5000e-004 | 7.3900e-003 | 2.0000e-005 | 2.7400e-003 | 1.0000e-005 | 2.7600e-003 | 7.3000e-004 | 1.0000e-005 | 7.4000e-004 | 0.0000 | 2.0314 | 2.0314 | 6.0000e-005 | 5.0000e-005 | 2.0491 |
| **Total** | **1.2300e-003** | **0.0244** | **0.0145** | **1.3000e-004** | **6.1100e-003** | **1.8000e-004** | **6.3000e-003** | **1.6500e-003** | **1.8000e-004** | **1.8300e-003** | **0.0000** | **12.7636** | **12.7636** | **8.6000e-004** | **1.7600e-003** | **13.3116** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0195 | 0.1495 | 0.2516 | 5.0000e-004 | | 6.1400e-003 | 6.1400e-003 | | 5.9700e-003 | 5.9700e-003 | 0.0000 | 42.9488 | 42.9488 | 7.2600e-003 | 0.0000 | 43.1303 |
| **Total** | **0.0195** | **0.1495** | **0.2516** | **5.0000e-004** | **0.0000** | **6.1400e-003** | **6.1400e-003** | **0.0000** | **5.9700e-003** | **5.9700e-003** | **0.0000** | **42.9488** | **42.9488** | **7.2600e-003** | **0.0000** | **43.1303** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.2 Excavation - Trenchless - 2025

**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 | 3.8000e-004 | 0.0239 | 7.1000e-003 | 1.1000e-004 | 3.3700e-003 | 1.7000e-004 | 3.5400e-003 | 9.2000e-004 | 1.7000e-004 | 1.0900e-003 | 0.0000 | 10.7321 | 10.7321 | 8.0000e-004 | 1.7100e-003 | 11.2624 |
| 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 | 8.5000e-004 | 5.5000e-004 | 7.3900e-003 | 2.0000e-005 | 2.7400e-003 | 1.0000e-005 | 2.7600e-003 | 7.3000e-004 | 1.0000e-005 | 7.4000e-004 | 0.0000 | 2.0314 | 2.0314 | 6.0000e-005 | 5.0000e-005 | 2.0491 |
| **Total** | **1.2300e-003** | **0.0244** | **0.0145** | **1.3000e-004** | **6.1100e-003** | **1.8000e-004** | **6.3000e-003** | **1.6500e-003** | **1.8000e-004** | **1.8300e-003** | **0.0000** | **12.7636** | **12.7636** | **8.6000e-004** | **1.7600e-003** | **13.3116** |

## 3.3 Excavation - Open Trench - 2025

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0305 | 0.2312 | 0.3488 | 7.4000e-004 | | 9.3200e-003 | 9.3200e-003 | | 9.0300e-003 | 9.0300e-003 | 0.0000 | 64.5871 | 64.5871 | 0.0119 | 0.0000 | 64.8854 |
| **Total** | **0.0305** | **0.2312** | **0.3488** | **7.4000e-004** | **0.0000** | **9.3200e-003** | **9.3200e-003** | **0.0000** | **9.0300e-003** | **9.0300e-003** | **0.0000** | **64.5871** | **64.5871** | **0.0119** | **0.0000** | **64.8854** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2025

### 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 | 1.3300e-003 | 8.6000e-004 | 0.0116 | 3.0000e-005 | 4.2900e-003 | 2.0000e-005 | 4.3200e-003 | 1.1400e-003 | 2.0000e-005 | 1.1600e-003 | 0.0000 | 3.1816 | 3.1816 | 9.0000e-005 | 9.0000e-005 | 3.2093 |
| **Total** | **1.3300e-003** | **8.6000e-004** | **0.0116** | **3.0000e-005** | **4.2900e-003** | **2.0000e-005** | **4.3200e-003** | **1.1400e-003** | **2.0000e-005** | **1.1600e-003** | **0.0000** | **3.1816** | **3.1816** | **9.0000e-005** | **9.0000e-005** | **3.2093** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0305 | 0.2312 | 0.3488 | 7.4000e-004 | | 9.3200e-003 | 9.3200e-003 | | 9.0300e-003 | 9.0300e-003 | 0.0000 | 64.5871 | 64.5871 | 0.0119 | 0.0000 | 64.8854 |
| **Total** | **0.0305** | **0.2312** | **0.3488** | **7.4000e-004** | **0.0000** | **9.3200e-003** | **9.3200e-003** | **0.0000** | **9.0300e-003** | **9.0300e-003** | **0.0000** | **64.5871** | **64.5871** | **0.0119** | **0.0000** | **64.8854** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2025

**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 | 1.3300e-003 | 8.6000e-004 | 0.0116 | 3.0000e-005 | 4.2900e-003 | 2.0000e-005 | 4.3200e-003 | 1.1400e-003 | 2.0000e-005 | 1.1600e-003 | 0.0000 | 3.1816 | 3.1816 | 9.0000e-005 | 9.0000e-005 | 3.2093 |
| **Total** | **1.3300e-003** | **8.6000e-004** | **0.0116** | **3.0000e-005** | **4.2900e-003** | **2.0000e-005** | **4.3200e-003** | **1.1400e-003** | **2.0000e-005** | **1.1600e-003** | **0.0000** | **3.1816** | **3.1816** | **9.0000e-005** | **9.0000e-005** | **3.2093** |

## 3.3 Excavation - Open Trench - 2026

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.1122 | 0.8498 | 1.2823 | 2.7300e-003 | | 0.0343 | 0.0343 | | 0.0332 | 0.0332 | 0.0000 | 237.4259 | 237.4259 | 0.0439 | 0.0000 | 238.5225 |
| **Total** | **0.1122** | **0.8498** | **1.2823** | **2.7300e-003** | **0.0000** | **0.0343** | **0.0343** | **0.0000** | **0.0332** | **0.0332** | **0.0000** | **237.4259** | **237.4259** | **0.0439** | **0.0000** | **238.5225** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2026

### 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 | 4.6100e-003 | 2.8900e-003 | 0.0401 | 1.2000e-004 | 0.0158 | 8.0000e-005 | 0.0159 | 4.1900e-003 | 7.0000e-005 | 4.2600e-003 | 0.0000 | 11.4195 | 11.4195 | 3.0000e-004 | 3.0000e-004 | 11.5154 |
| **Total** | **4.6100e-003** | **2.8900e-003** | **0.0401** | **1.2000e-004** | **0.0158** | **8.0000e-005** | **0.0159** | **4.1900e-003** | **7.0000e-005** | **4.2600e-003** | **0.0000** | **11.4195** | **11.4195** | **3.0000e-004** | **3.0000e-004** | **11.5154** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.1122 | 0.8498 | 1.2823 | 2.7300e-003 | | 0.0343 | 0.0343 | | 0.0332 | 0.0332 | 0.0000 | 237.4256 | 237.4256 | 0.0439 | 0.0000 | 238.5222 |
| **Total** | **0.1122** | **0.8498** | **1.2823** | **2.7300e-003** | **0.0000** | **0.0343** | **0.0343** | **0.0000** | **0.0332** | **0.0332** | **0.0000** | **237.4256** | **237.4256** | **0.0439** | **0.0000** | **238.5222** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2026

**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 | 4.6100e-003 | 2.8900e-003 | 0.0401 | 1.2000e-004 | 0.0158 | 8.0000e-005 | 0.0159 | 4.1900e-003 | 7.0000e-005 | 4.2600e-003 | 0.0000 | 11.4195 | 11.4195 | 3.0000e-004 | 3.0000e-004 | 11.5154 |
| **Total** | **4.6100e-003** | **2.8900e-003** | **0.0401** | **1.2000e-004** | **0.0158** | **8.0000e-005** | **0.0159** | **4.1900e-003** | **7.0000e-005** | **4.2600e-003** | **0.0000** | **11.4195** | **11.4195** | **3.0000e-004** | **3.0000e-004** | **11.5154** |

## 3.3 Excavation - Open Trench - 2027

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.1122 | 0.8498 | 1.2823 | 2.7300e-003 | | 0.0343 | 0.0343 | | 0.0332 | 0.0332 | 0.0000 | 237.4259 | 237.4259 | 0.0439 | 0.0000 | 238.5225 |
| **Total** | **0.1122** | **0.8498** | **1.2823** | **2.7300e-003** | **0.0000** | **0.0343** | **0.0343** | **0.0000** | **0.0332** | **0.0332** | **0.0000** | **237.4259** | **237.4259** | **0.0439** | **0.0000** | **238.5225** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2027

### 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 | 4.3300e-003 | 2.6400e-003 | 0.0379 | 1.2000e-004 | 0.0158 | 7.0000e-005 | 0.0159 | 4.1900e-003 | 7.0000e-005 | 4.2600e-003 | 0.0000 | 11.1699 | 11.1699 | 2.7000e-004 | 2.8000e-004 | 11.2606 |
| **Total** | **4.3300e-003** | **2.6400e-003** | **0.0379** | **1.2000e-004** | **0.0158** | **7.0000e-005** | **0.0159** | **4.1900e-003** | **7.0000e-005** | **4.2600e-003** | **0.0000** | **11.1699** | **11.1699** | **2.7000e-004** | **2.8000e-004** | **11.2606** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.1122 | 0.8498 | 1.2823 | 2.7300e-003 | | 0.0343 | 0.0343 | | 0.0332 | 0.0332 | 0.0000 | 237.4256 | 237.4256 | 0.0439 | 0.0000 | 238.5222 |
| **Total** | **0.1122** | **0.8498** | **1.2823** | **2.7300e-003** | **0.0000** | **0.0343** | **0.0343** | **0.0000** | **0.0332** | **0.0332** | **0.0000** | **237.4256** | **237.4256** | **0.0439** | **0.0000** | **238.5222** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2027

**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 | 4.3300e-003 | 2.6400e-003 | 0.0379 | 1.2000e-004 | 0.0158 | 7.0000e-005 | 0.0159 | 4.1900e-003 | 7.0000e-005 | 4.2600e-003 | 0.0000 | 11.1699 | 11.1699 | 2.7000e-004 | 2.8000e-004 | 11.2606 |
| **Total** | **4.3300e-003** | **2.6400e-003** | **0.0379** | **1.2000e-004** | **0.0158** | **7.0000e-005** | **0.0159** | **4.1900e-003** | **7.0000e-005** | **4.2600e-003** | **0.0000** | **11.1699** | **11.1699** | **2.7000e-004** | **2.8000e-004** | **11.2606** |

## 3.3 Excavation - Open Trench - 2028

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 6.4500e-003 | 0.0488 | 0.0737 | 1.6000e-004 | | 1.9700e-003 | 1.9700e-003 | | 1.9100e-003 | 1.9100e-003 | 0.0000 | 13.6452 | 13.6452 | 2.5200e-003 | 0.0000 | 13.7082 |
| **Total** | **6.4500e-003** | **0.0488** | **0.0737** | **1.6000e-004** | **0.0000** | **1.9700e-003** | **1.9700e-003** | **0.0000** | **1.9100e-003** | **1.9100e-003** | **0.0000** | **13.6452** | **13.6452** | **2.5200e-003** | **0.0000** | **13.7082** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2028

### 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 | 2.3000e-004 | 1.4000e-004 | 2.0700e-003 | 1.0000e-005 | 9.1000e-004 | 0.0000 | 9.1000e-004 | 2.4000e-004 | 0.0000 | 2.4000e-004 | 0.0000 | 0.6293 | 0.6293 | 1.0000e-005 | 2.0000e-005 | 0.6342 |
| **Total** | **2.3000e-004** | **1.4000e-004** | **2.0700e-003** | **1.0000e-005** | **9.1000e-004** | **0.0000** | **9.1000e-004** | **2.4000e-004** | **0.0000** | **2.4000e-004** | **0.0000** | **0.6293** | **0.6293** | **1.0000e-005** | **2.0000e-005** | **0.6342** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 6.4500e-003 | 0.0488 | 0.0737 | 1.6000e-004 | | 1.9700e-003 | 1.9700e-003 | | 1.9100e-003 | 1.9100e-003 | 0.0000 | 13.6452 | 13.6452 | 2.5200e-003 | 0.0000 | 13.7082 |
| **Total** | **6.4500e-003** | **0.0488** | **0.0737** | **1.6000e-004** | **0.0000** | **1.9700e-003** | **1.9700e-003** | **0.0000** | **1.9100e-003** | **1.9100e-003** | **0.0000** | **13.6452** | **13.6452** | **2.5200e-003** | **0.0000** | **13.7082** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2028

**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 | 2.3000e-004 | 1.4000e-004 | 2.0700e-003 | 1.0000e-005 | 9.1000e-004 | 0.0000 | 9.1000e-004 | 2.4000e-004 | 0.0000 | 2.4000e-004 | 0.0000 | 0.6293 | 0.6293 | 1.0000e-005 | 2.0000e-005 | 0.6342 |
| **Total** | **2.3000e-004** | **1.4000e-004** | **2.0700e-003** | **1.0000e-005** | **9.1000e-004** | **0.0000** | **9.1000e-004** | **2.4000e-004** | **0.0000** | **2.4000e-004** | **0.0000** | **0.6293** | **0.6293** | **1.0000e-005** | **2.0000e-005** | **0.6342** |

## 3.4 Installation/Backfill - Open Trench - 2025

**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 | 3.8200e-003 | 0.0352 | 0.0541 | 8.0000e-005 | | 1.4200e-003 | 1.4200e-003 | | 1.3200e-003 | 1.3200e-003 | 0.0000 | 6.7738 | 6.7738 | 2.0400e-003 | 0.0000 | 6.8248 |
| **Total** | **3.8200e-003** | **0.0352** | **0.0541** | **8.0000e-005** | | **1.4200e-003** | **1.4200e-003** | | **1.3200e-003** | **1.3200e-003** | **0.0000** | **6.7738** | **6.7738** | **2.0400e-003** | **0.0000** | **6.8248** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2025

### 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 | 9.6000e-004 | 0.0605 | 0.0180 | 2.7000e-004 | 8.5300e-003 | 4.4000e-004 | 8.9700e-003 | 2.3400e-003 | 4.2000e-004 | 2.7600e-003 | 0.0000 | 27.1913 | 27.1913 | 2.0400e-003 | 4.3400e-003 | 28.5348 |
| 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 | 7.2900e-003 | 4.7300e-003 | 0.0633 | 1.8000e-004 | 0.0235 | 1.2000e-004 | 0.0236 | 6.2300e-003 | 1.1000e-004 | 6.3400e-003 | 0.0000 | 17.3927 | 17.3927 | 4.8000e-004 | 4.7000e-004 | 17.5442 |
| **Total** | **8.2500e-003** | **0.0652** | **0.0813** | **4.5000e-004** | **0.0320** | **5.6000e-004** | **0.0326** | **8.5700e-003** | **5.3000e-004** | **9.1000e-003** | **0.0000** | **44.5839** | **44.5839** | **2.5200e-003** | **4.8100e-003** | **46.0791** |

### 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 | 3.8200e-003 | 0.0352 | 0.0541 | 8.0000e-005 | | 1.4200e-003 | 1.4200e-003 | | 1.3200e-003 | 1.3200e-003 | 0.0000 | 6.7738 | 6.7738 | 2.0400e-003 | 0.0000 | 6.8248 |
| **Total** | **3.8200e-003** | **0.0352** | **0.0541** | **8.0000e-005** | | **1.4200e-003** | **1.4200e-003** | | **1.3200e-003** | **1.3200e-003** | **0.0000** | **6.7738** | **6.7738** | **2.0400e-003** | **0.0000** | **6.8248** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2025

**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 | 9.6000e-004 | 0.0605 | 0.0180 | 2.7000e-004 | 8.5300e-003 | 4.4000e-004 | 8.9700e-003 | 2.3400e-003 | 4.2000e-004 | 2.7600e-003 | 0.0000 | 27.1913 | 27.1913 | 2.0400e-003 | 4.3400e-003 | 28.5348 |
| 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 | 7.2900e-003 | 4.7300e-003 | 0.0633 | 1.8000e-004 | 0.0235 | 1.2000e-004 | 0.0236 | 6.2300e-003 | 1.1000e-004 | 6.3400e-003 | 0.0000 | 17.3927 | 17.3927 | 4.8000e-004 | 4.7000e-004 | 17.5442 |
| **Total** | **8.2500e-003** | **0.0652** | **0.0813** | **4.5000e-004** | **0.0320** | **5.6000e-004** | **0.0326** | **8.5700e-003** | **5.3000e-004** | **9.1000e-003** | **0.0000** | **44.5839** | **44.5839** | **2.5200e-003** | **4.8100e-003** | **46.0791** |

## 3.4 Installation/Backfill - Open Trench - 2026

**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 | 0.0141 | 0.1294 | 0.1990 | 2.9000e-004 | | 5.2100e-003 | 5.2100e-003 | | 4.8600e-003 | 4.8600e-003 | 0.0000 | 24.9010 | 24.9010 | 7.4900e-003 | 0.0000 | 25.0883 |
| **Total** | **0.0141** | **0.1294** | **0.1990** | **2.9000e-004** | | **5.2100e-003** | **5.2100e-003** | | **4.8600e-003** | **4.8600e-003** | **0.0000** | **24.9010** | **24.9010** | **7.4900e-003** | **0.0000** | **25.0883** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2026

### 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 | 3.4900e-003 | 0.2183 | 0.0676 | 9.6000e-004 | 0.0314 | 1.6000e-003 | 0.0330 | 8.6100e-003 | 1.5300e-003 | 0.0101 | 0.0000 | 97.9039 | 97.9039 | 7.7100e-003 | 0.0156 | 102.7546 |
| 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 | 0.0252 | 0.0158 | 0.2190 | 6.6000e-004 | 0.0863 | 4.1000e-004 | 0.0867 | 0.0229 | 3.8000e-004 | 0.0233 | 0.0000 | 62.4265 | 62.4265 | 1.6300e-003 | 1.6200e-003 | 62.9506 |
| **Total** | **0.0287** | **0.2341** | **0.2866** | **1.6200e-003** | **0.1177** | **2.0100e-003** | **0.1197** | **0.0315** | **1.9100e-003** | **0.0334** | **0.0000** | **160.3304** | **160.3304** | **9.3400e-003** | **0.0173** | **165.7053** |

### 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 | 0.0141 | 0.1294 | 0.1990 | 2.9000e-004 | | 5.2100e-003 | 5.2100e-003 | | 4.8600e-003 | 4.8600e-003 | 0.0000 | 24.9010 | 24.9010 | 7.4900e-003 | 0.0000 | 25.0883 |
| **Total** | **0.0141** | **0.1294** | **0.1990** | **2.9000e-004** | | **5.2100e-003** | **5.2100e-003** | | **4.8600e-003** | **4.8600e-003** | **0.0000** | **24.9010** | **24.9010** | **7.4900e-003** | **0.0000** | **25.0883** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2026

**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 | 3.4900e-003 | 0.2183 | 0.0676 | 9.6000e-004 | 0.0314 | 1.6000e-003 | 0.0330 | 8.6100e-003 | 1.5300e-003 | 0.0101 | 0.0000 | 97.9039 | 97.9039 | 7.7100e-003 | 0.0156 | 102.7546 |
| 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 | 0.0252 | 0.0158 | 0.2190 | 6.6000e-004 | 0.0863 | 4.1000e-004 | 0.0867 | 0.0229 | 3.8000e-004 | 0.0233 | 0.0000 | 62.4265 | 62.4265 | 1.6300e-003 | 1.6200e-003 | 62.9506 |
| **Total** | **0.0287** | **0.2341** | **0.2866** | **1.6200e-003** | **0.1177** | **2.0100e-003** | **0.1197** | **0.0315** | **1.9100e-003** | **0.0334** | **0.0000** | **160.3304** | **160.3304** | **9.3400e-003** | **0.0173** | **165.7053** |

## 3.4 Installation/Backfill - Open Trench - 2027

**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 | 0.0141 | 0.1294 | 0.1990 | 2.9000e-004 | | 5.2100e-003 | 5.2100e-003 | | 4.8600e-003 | 4.8600e-003 | 0.0000 | 24.9010 | 24.9010 | 7.4900e-003 | 0.0000 | 25.0883 |
| **Total** | **0.0141** | **0.1294** | **0.1990** | **2.9000e-004** | | **5.2100e-003** | **5.2100e-003** | | **4.8600e-003** | **4.8600e-003** | **0.0000** | **24.9010** | **24.9010** | **7.4900e-003** | **0.0000** | **25.0883** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2027

### 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 | 3.4500e-003 | 0.2139 | 0.0687 | 9.4000e-004 | 0.0314 | 1.5900e-003 | 0.0330 | 8.6100e-003 | 1.5200e-003 | 0.0101 | 0.0000 | 95.6582 | 95.6582 | 7.9000e-003 | 0.0153 | 100.4103 |
| 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 | 0.0237 | 0.0145 | 0.2072 | 6.4000e-004 | 0.0863 | 3.9000e-004 | 0.0867 | 0.0229 | 3.6000e-004 | 0.0233 | 0.0000 | 61.0618 | 61.0618 | 1.4900e-003 | 1.5400e-003 | 61.5578 |
| **Total** | **0.0271** | **0.2283** | **0.2760** | **1.5800e-003** | **0.1177** | **1.9800e-003** | **0.1196** | **0.0315** | **1.8800e-003** | **0.0334** | **0.0000** | **156.7200** | **156.7200** | **9.3900e-003** | **0.0168** | **161.9681** |

### 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 | 0.0141 | 0.1294 | 0.1990 | 2.9000e-004 | | 5.2100e-003 | 5.2100e-003 | | 4.8600e-003 | 4.8600e-003 | 0.0000 | 24.9010 | 24.9010 | 7.4900e-003 | 0.0000 | 25.0883 |
| **Total** | **0.0141** | **0.1294** | **0.1990** | **2.9000e-004** | | **5.2100e-003** | **5.2100e-003** | | **4.8600e-003** | **4.8600e-003** | **0.0000** | **24.9010** | **24.9010** | **7.4900e-003** | **0.0000** | **25.0883** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2027

**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 | 3.4500e-003 | 0.2139 | 0.0687 | 9.4000e-004 | 0.0314 | 1.5900e-003 | 0.0330 | 8.6100e-003 | 1.5200e-003 | 0.0101 | 0.0000 | 95.6582 | 95.6582 | 7.9000e-003 | 0.0153 | 100.4103 |
| 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 | 0.0237 | 0.0145 | 0.2072 | 6.4000e-004 | 0.0863 | 3.9000e-004 | 0.0867 | 0.0229 | 3.6000e-004 | 0.0233 | 0.0000 | 61.0618 | 61.0618 | 1.4900e-003 | 1.5400e-003 | 61.5578 |
| **Total** | **0.0271** | **0.2283** | **0.2760** | **1.5800e-003** | **0.1177** | **1.9800e-003** | **0.1196** | **0.0315** | **1.8800e-003** | **0.0334** | **0.0000** | **156.7200** | **156.7200** | **9.3900e-003** | **0.0168** | **161.9681** |

## 3.4 Installation/Backfill - Open Trench - 2028

**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 | 8.1000e-004 | 7.4400e-003 | 0.0114 | 2.0000e-005 | | 3.0000e-004 | 3.0000e-004 | | 2.8000e-004 | 2.8000e-004 | 0.0000 | 1.4311 | 1.4311 | 4.3000e-004 | 0.0000 | 1.4419 |
| **Total** | **8.1000e-004** | **7.4400e-003** | **0.0114** | **2.0000e-005** | | **3.0000e-004** | **3.0000e-004** | | **2.8000e-004** | **2.8000e-004** | **0.0000** | **1.4311** | **1.4311** | **4.3000e-004** | **0.0000** | **1.4419** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2028

### 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 | 2.0000e-004 | 0.0121 | 4.0200e-003 | 5.0000e-005 | 1.8000e-003 | 9.0000e-005 | 1.8900e-003 | 4.9000e-004 | 9.0000e-005 | 5.8000e-004 | 0.0000 | 5.3736 | 5.3736 | 4.7000e-004 | 8.6000e-004 | 5.6413 |
| 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 | 1.2800e-003 | 7.7000e-004 | 0.0113 | 4.0000e-005 | 4.9600e-003 | 2.0000e-005 | 4.9800e-003 | 1.3200e-003 | 2.0000e-005 | 1.3400e-003 | 0.0000 | 3.4401 | 3.4401 | 8.0000e-005 | 8.0000e-005 | 3.4672 |
| **Total** | **1.4800e-003** | **0.0129** | **0.0154** | **9.0000e-005** | **6.7600e-003** | **1.1000e-004** | **6.8700e-003** | **1.8100e-003** | **1.1000e-004** | **1.9200e-003** | **0.0000** | **8.8137** | **8.8137** | **5.5000e-004** | **9.4000e-004** | **9.1085** |

### 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 | 8.1000e-004 | 7.4400e-003 | 0.0114 | 2.0000e-005 | | 3.0000e-004 | 3.0000e-004 | | 2.8000e-004 | 2.8000e-004 | 0.0000 | 1.4311 | 1.4311 | 4.3000e-004 | 0.0000 | 1.4419 |
| **Total** | **8.1000e-004** | **7.4400e-003** | **0.0114** | **2.0000e-005** | | **3.0000e-004** | **3.0000e-004** | | **2.8000e-004** | **2.8000e-004** | **0.0000** | **1.4311** | **1.4311** | **4.3000e-004** | **0.0000** | **1.4419** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2028

**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 | 2.0000e-004 | 0.0121 | 4.0200e-003 | 5.0000e-005 | 1.8000e-003 | 9.0000e-005 | 1.8900e-003 | 4.9000e-004 | 9.0000e-005 | 5.8000e-004 | 0.0000 | 5.3736 | 5.3736 | 4.7000e-004 | 8.6000e-004 | 5.6413 |
| 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 | 1.2800e-003 | 7.7000e-004 | 0.0113 | 4.0000e-005 | 4.9600e-003 | 2.0000e-005 | 4.9800e-003 | 1.3200e-003 | 2.0000e-005 | 1.3400e-003 | 0.0000 | 3.4401 | 3.4401 | 8.0000e-005 | 8.0000e-005 | 3.4672 |
| **Total** | **1.4800e-003** | **0.0129** | **0.0154** | **9.0000e-005** | **6.7600e-003** | **1.1000e-004** | **6.8700e-003** | **1.8100e-003** | **1.1000e-004** | **1.9200e-003** | **0.0000** | **8.8137** | **8.8137** | **5.5000e-004** | **9.4000e-004** | **9.1085** |

## 3.5 Installation - Trenchless - 2025

**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 | 7.6000e-004 | 6.4100e-003 | 5.3200e-003 | 2.0000e-005 | | 2.4000e-004 | 2.4000e-004 | | 2.2000e-004 | 2.2000e-004 | 0.0000 | 1.4837 | 1.4837 | 4.3000e-004 | 0.0000 | 1.4944 |
| **Total** | **7.6000e-004** | **6.4100e-003** | **5.3200e-003** | **2.0000e-005** | | **2.4000e-004** | **2.4000e-004** | | **2.2000e-004** | **2.2000e-004** | **0.0000** | **1.4837** | **1.4837** | **4.3000e-004** | **0.0000** | **1.4944** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2025

### 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 | 1.0000e-004 | 6.2100e-003 | 1.8500e-003 | 3.0000e-005 | 8.8000e-004 | 5.0000e-005 | 9.2000e-004 | 2.4000e-004 | 4.0000e-005 | 2.8000e-004 | 0.0000 | 2.7926 | 2.7926 | 2.1000e-004 | 4.5000e-004 | 2.9305 |
| 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 | 3.1000e-004 | 2.0000e-004 | 2.6700e-003 | 1.0000e-005 | 9.9000e-004 | 0.0000 | 1.0000e-003 | 2.6000e-004 | 0.0000 | 2.7000e-004 | 0.0000 | 0.7349 | 0.7349 | 2.0000e-005 | 2.0000e-005 | 0.7413 |
| **Total** | **4.1000e-004** | **6.4100e-003** | **4.5200e-003** | **4.0000e-005** | **1.8700e-003** | **5.0000e-005** | **1.9200e-003** | **5.0000e-004** | **4.0000e-005** | **5.5000e-004** | **0.0000** | **3.5275** | **3.5275** | **2.3000e-004** | **4.7000e-004** | **3.6718** |

### 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 | 7.6000e-004 | 6.4100e-003 | 5.3200e-003 | 2.0000e-005 | | 2.4000e-004 | 2.4000e-004 | | 2.2000e-004 | 2.2000e-004 | 0.0000 | 1.4837 | 1.4837 | 4.3000e-004 | 0.0000 | 1.4944 |
| **Total** | **7.6000e-004** | **6.4100e-003** | **5.3200e-003** | **2.0000e-005** | | **2.4000e-004** | **2.4000e-004** | | **2.2000e-004** | **2.2000e-004** | **0.0000** | **1.4837** | **1.4837** | **4.3000e-004** | **0.0000** | **1.4944** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2025

**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 | 1.0000e-004 | 6.2100e-003 | 1.8500e-003 | 3.0000e-005 | 8.8000e-004 | 5.0000e-005 | 9.2000e-004 | 2.4000e-004 | 4.0000e-005 | 2.8000e-004 | 0.0000 | 2.7926 | 2.7926 | 2.1000e-004 | 4.5000e-004 | 2.9305 |
| 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 | 3.1000e-004 | 2.0000e-004 | 2.6700e-003 | 1.0000e-005 | 9.9000e-004 | 0.0000 | 1.0000e-003 | 2.6000e-004 | 0.0000 | 2.7000e-004 | 0.0000 | 0.7349 | 0.7349 | 2.0000e-005 | 2.0000e-005 | 0.7413 |
| **Total** | **4.1000e-004** | **6.4100e-003** | **4.5200e-003** | **4.0000e-005** | **1.8700e-003** | **5.0000e-005** | **1.9200e-003** | **5.0000e-004** | **4.0000e-005** | **5.5000e-004** | **0.0000** | **3.5275** | **3.5275** | **2.3000e-004** | **4.7000e-004** | **3.6718** |

## 3.5 Installation - Trenchless - 2026

**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 | 6.3700e-003 | 0.0534 | 0.0443 | 1.4000e-004 | | 1.9800e-003 | 1.9800e-003 | | 1.8600e-003 | 1.8600e-003 | 0.0000 | 12.3639 | 12.3639 | 3.5700e-003 | 0.0000 | 12.4531 |
| **Total** | **6.3700e-003** | **0.0534** | **0.0443** | **1.4000e-004** | | **1.9800e-003** | **1.9800e-003** | | **1.8600e-003** | **1.8600e-003** | **0.0000** | **12.3639** | **12.3639** | **3.5700e-003** | **0.0000** | **12.4531** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2026

### 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 | 8.1000e-004 | 0.0508 | 0.0157 | 2.2000e-004 | 7.3000e-003 | 3.7000e-004 | 7.6800e-003 | 2.0000e-003 | 3.6000e-004 | 2.3600e-003 | 0.0000 | 22.7933 | 22.7933 | 1.7900e-003 | 3.6400e-003 | 23.9226 |
| 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 | 2.4100e-003 | 1.5100e-003 | 0.0210 | 6.0000e-005 | 8.2600e-003 | 4.0000e-005 | 8.3000e-003 | 2.2000e-003 | 4.0000e-005 | 2.2300e-003 | 0.0000 | 5.9796 | 5.9796 | 1.6000e-004 | 1.6000e-004 | 6.0298 |
| **Total** | **3.2200e-003** | **0.0523** | **0.0367** | **2.8000e-004** | **0.0156** | **4.1000e-004** | **0.0160** | **4.2000e-003** | **4.0000e-004** | **4.5900e-003** | **0.0000** | **28.7729** | **28.7729** | **1.9500e-003** | **3.8000e-003** | **29.9524** |

### 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 | 6.3700e-003 | 0.0534 | 0.0443 | 1.4000e-004 | | 1.9800e-003 | 1.9800e-003 | | 1.8600e-003 | 1.8600e-003 | 0.0000 | 12.3639 | 12.3639 | 3.5700e-003 | 0.0000 | 12.4531 |
| **Total** | **6.3700e-003** | **0.0534** | **0.0443** | **1.4000e-004** | | **1.9800e-003** | **1.9800e-003** | | **1.8600e-003** | **1.8600e-003** | **0.0000** | **12.3639** | **12.3639** | **3.5700e-003** | **0.0000** | **12.4531** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2026

**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 | 8.1000e-004 | 0.0508 | 0.0157 | 2.2000e-004 | 7.3000e-003 | 3.7000e-004 | 7.6800e-003 | 2.0000e-003 | 3.6000e-004 | 2.3600e-003 | 0.0000 | 22.7933 | 22.7933 | 1.7900e-003 | 3.6400e-003 | 23.9226 |
| 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 | 2.4100e-003 | 1.5100e-003 | 0.0210 | 6.0000e-005 | 8.2600e-003 | 4.0000e-005 | 8.3000e-003 | 2.2000e-003 | 4.0000e-005 | 2.2300e-003 | 0.0000 | 5.9796 | 5.9796 | 1.6000e-004 | 1.6000e-004 | 6.0298 |
| **Total** | **3.2200e-003** | **0.0523** | **0.0367** | **2.8000e-004** | **0.0156** | **4.1000e-004** | **0.0160** | **4.2000e-003** | **4.0000e-004** | **4.5900e-003** | **0.0000** | **28.7729** | **28.7729** | **1.9500e-003** | **3.8000e-003** | **29.9524** |

## 3.6 Paving - Open Trench - 2028

**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 | 3.9100e-003 | 0.0366 | 0.0519 | 1.1000e-004 | | 1.6600e-003 | 1.6600e-003 | | 1.5300e-003 | 1.5300e-003 | 0.0000 | 9.2277 | 9.2277 | 2.9300e-003 | 0.0000 | 9.3009 |
| Paving | 5.9000e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **9.8100e-003** | **0.0366** | **0.0519** | **1.1000e-004** | | **1.6600e-003** | **1.6600e-003** | | **1.5300e-003** | **1.5300e-003** | **0.0000** | **9.2277** | **9.2277** | **2.9300e-003** | **0.0000** | **9.3009** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Paving - Open Trench - 2028

### 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 | 2.4000e-004 | 1.5000e-004 | 2.1600e-003 | 1.0000e-005 | 9.4000e-004 | 0.0000 | 9.5000e-004 | 2.5000e-004 | 0.0000 | 2.5000e-004 | 0.0000 | 0.6545 | 0.6545 | 2.0000e-005 | 2.0000e-005 | 0.6596 |
| **Total** | **2.4000e-004** | **1.5000e-004** | **2.1600e-003** | **1.0000e-005** | **9.4000e-004** | **0.0000** | **9.5000e-004** | **2.5000e-004** | **0.0000** | **2.5000e-004** | **0.0000** | **0.6545** | **0.6545** | **2.0000e-005** | **2.0000e-005** | **0.6596** |

### 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 | 3.9100e-003 | 0.0366 | 0.0519 | 1.1000e-004 | | 1.6600e-003 | 1.6600e-003 | | 1.5300e-003 | 1.5300e-003 | 0.0000 | 9.2277 | 9.2277 | 2.9300e-003 | 0.0000 | 9.3009 |
| Paving | 5.9000e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **9.8100e-003** | **0.0366** | **0.0519** | **1.1000e-004** | | **1.6600e-003** | **1.6600e-003** | | **1.5300e-003** | **1.5300e-003** | **0.0000** | **9.2277** | **9.2277** | **2.9300e-003** | **0.0000** | **9.3009** |

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Paving - Open Trench - 2028

**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 | 2.4000e-004 | 1.5000e-004 | 2.1600e-003 | 1.0000e-005 | 9.4000e-004 | 0.0000 | 9.5000e-004 | 2.5000e-004 | 0.0000 | 2.5000e-004 | 0.0000 | 0.6545 | 0.6545 | 2.0000e-005 | 2.0000e-005 | 0.6596 |
| **Total** | **2.4000e-004** | **1.5000e-004** | **2.1600e-003** | **1.0000e-005** | **9.4000e-004** | **0.0000** | **9.5000e-004** | **2.5000e-004** | **0.0000** | **2.5000e-004** | **0.0000** | **0.6545** | **0.6545** | **2.0000e-005** | **2.0000e-005** | **0.6596** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

# 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 | 3.0000e-004 | 1.4000e-004 | 1.2700e-003 | 0.0000 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0388 | 0.0388 | 2.0000e-005 | 1.0000e-005 | 0.0430 |
| Unmitigated | 3.0000e-004 | 1.4000e-004 | 1.2700e-003 | 0.0000 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0388 | 0.0388 | 2.0000e-005 | 1.0000e-005 | 0.0430 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Other Asphalt Surfaces | 1.96 | 0.00 | 0.00 | 31 | 31 |
| Total | 1.96 | 0.00 | 0.00 | 31 | 31 |

## 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 |
| Other Asphalt Surfaces | 0.06 | 7.30 | 7.30 | 100.00 | 0.00 | 0.00 | 100 | 0 | 0 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other Asphalt Surfaces | 0.564931 | 0.058891 | 0.167885 | 0.120679 | 0.025398 | 0.007381 | 0.013024 | 0.006272 | 0.000657 | 0.000386 | 0.028170 | 0.000621 | 0.005705 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | | | | | |
| Other Asphalt Surfaces | 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 | | | | | |
| Other Asphalt Surfaces | 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** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 5.3 Energy by Land Use - Electricity

**Unmitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| Other Asphalt Surfaces | 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 | | | |
| Other Asphalt Surfaces | 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

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | 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 | 0.0156 | 2.0000e-005 | 1.8000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | 0.0000 | 3.7300e-003 |
| Unmitigated | 0.0156 | 2.0000e-005 | 1.8000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | 0.0000 | 3.7300e-003 |

## 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 | 2.7300e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.0127 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 1.7000e-004 | 2.0000e-005 | 1.8000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | 0.0000 | 3.7300e-003 |
| **Total** | **0.0156** | **2.0000e-005** | **1.8000e-003** | **0.0000** | | **1.0000e-005** | **1.0000e-005** | | **1.0000e-005** | **1.0000e-005** | **0.0000** | **3.5000e-003** | **3.5000e-003** | **1.0000e-005** | **0.0000** | **3.7300e-003** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 2.7300e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.0127 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 1.7000e-004 | 2.0000e-005 | 1.8000e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 3.5000e-003 | 3.5000e-003 | 1.0000e-005 | 0.0000 | 3.7300e-003 |
| **Total** | **0.0156** | **2.0000e-005** | **1.8000e-003** | **0.0000** | | **1.0000e-005** | **1.0000e-005** | | **1.0000e-005** | **1.0000e-005** | **0.0000** | **3.5000e-003** | **3.5000e-003** | **1.0000e-005** | **0.0000** | **3.7300e-003** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | 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 | | | |
| Other Asphalt Surfaces | 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 | | | |
| Other Asphalt Surfaces | 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 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| Other Asphalt Surfaces | 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 | | | |
| Other Asphalt Surfaces | 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 |
|---|---|---|---|---|---|---|

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|---|---|---|---|---|---|

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

# Calleguas SMP Phase 4 - AQ

**Ventura County APCD Air District, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Other Asphalt Surfaces | 196.00 | 1000sqft | 4.50 | 196,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.6 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 8 | | | **Operational Year** | 2028 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 390.98 | **CH4 Intensity (lb/MWhr)** | 0.033 | **N2O Intensity (lb/MWhr)** | 0.004 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Distrubance area (49,000 linear feet by 4 foot-wide trench)

Construction Phase - Based on applicant information, such as 80 feet installation for open trench per day, 400 LF of trenchless activity, and paving would occur after excavation and installation operation. 4 feet trenchless activity per day.

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Trips and VMT - 14 hauling trips per day according to the applicant.

Grading -

Vehicle Trips - Based on applicant provided information, maintenance and inspection trips would occur once per year, one worker trips for one day, and would travel from the district's office to the end of the pipeline and back.

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Construction Off-road Equipment Mitigation - Information provided by the applicant

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 8.00 | 68.00 |
| tblConstructionPhase | NumDays | 8.00 | 608.00 |
| tblConstructionPhase | NumDays | 230.00 | 608.00 |
| tblConstructionPhase | NumDays | 230.00 | 28.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 5.00 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 392.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 8,505.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 952.00 |
| tblTripsAndVMT | VendorTripNumber | 32.00 | 0.00 |
| tblTripsAndVMT | VendorTripNumber | 32.00 | 0.00 |
| tblVehicleTrips | CW_TL | 9.50 | 0.06 |
| tblVehicleTrips | CW_TTP | 0.00 | 100.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | WD_TR | 0.00 | 0.01 |

## 2.0 Emissions Summary

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | | | | | |
| 2025 | 2.0234 | 17.6452 | 21.8555 | 0.0725 | 2.3084 | 0.5110 | 2.8194 | 0.6196 | 0.4880 | 1.1075 | 0.0000 | 7,424.8213 | 7,424.8213 | 0.9968 | 0.4912 | 7,596.1135 |
| 2026 | 1.9953 | 17.5185 | 20.4329 | 0.0715 | 2.3085 | 0.5103 | 2.8188 | 0.6196 | 0.4873 | 1.1069 | 0.0000 | 7,336.3866 | 7,336.3866 | 1.0005 | 0.4804 | 7,504.5561 |
| 2027 | 1.2108 | 9.1918 | 13.8052 | 0.0364 | 1.0412 | 0.3182 | 1.3594 | 0.2783 | 0.3065 | 0.5848 | 0.0000 | 3,656.5793 | 3,656.5793 | 0.5147 | 0.1433 | 3,712.1381 |
| 2028 | 1.1978 | 9.1553 | 13.7217 | 0.0360 | 1.0412 | 0.3179 | 1.3590 | 0.2783 | 0.3062 | 0.5845 | 0.0000 | 3,625.8570 | 3,625.8570 | 0.5152 | 0.1398 | 3,680.3967 |
| **Maximum** | **2.0234** | **17.6452** | **21.8555** | **0.0725** | **2.3085** | **0.5110** | **2.8194** | **0.6196** | **0.4880** | **1.1075** | **0.0000** | **7,424.8213** | **7,424.8213** | **1.0005** | **0.4912** | **7,596.1135** |

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 2.1 Overall Construction (Maximum Daily Emission)

**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 | | | | | |
| 2025 | 2.0234 | 17.6452 | 21.8555 | 0.0725 | 2.3084 | 0.5110 | 2.8194 | 0.6196 | 0.4880 | 1.1075 | 0.0000 | 7,424.8213 | 7,424.8213 | 0.9968 | 0.4912 | 7,596.1135 |
| 2026 | 1.9953 | 17.5185 | 20.4329 | 0.0715 | 2.3085 | 0.5103 | 2.8188 | 0.6196 | 0.4873 | 1.1069 | 0.0000 | 7,336.3866 | 7,336.3866 | 1.0005 | 0.4804 | 7,504.5561 |
| 2027 | 1.2108 | 9.1918 | 13.8052 | 0.0364 | 1.0412 | 0.3182 | 1.3594 | 0.2783 | 0.3065 | 0.5848 | 0.0000 | 3,656.5793 | 3,656.5793 | 0.5147 | 0.1433 | 3,712.1381 |
| 2028 | 1.1978 | 9.1553 | 13.7217 | 0.0360 | 1.0412 | 0.3179 | 1.3590 | 0.2783 | 0.3062 | 0.5845 | 0.0000 | 3,625.8570 | 3,625.8570 | 0.5152 | 0.1398 | 3,680.3967 |
| **Maximum** | **2.0234** | **17.6452** | **21.8555** | **0.0725** | **2.3085** | **0.5110** | **2.8194** | **0.6196** | **0.4880** | **1.1075** | **0.0000** | **7,424.8213** | **7,424.8213** | **1.0005** | **0.4912** | **7,596.1135** |

| | 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** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 0.0862 | 1.8000e-004 | 0.0200 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0429 | 0.0429 | 1.1000e-004 | | 0.0457 |
| 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 | 2.5500e-003 | 1.0400e-003 | 8.2000e-003 | 0.0000 | 9.0000e-005 | 1.0000e-005 | 1.0000e-004 | 2.0000e-005 | 1.0000e-005 | 3.0000e-005 | | 0.3287 | 0.3287 | 1.8000e-004 | 1.0000e-004 | 0.3618 |
| **Total** | **0.0887** | **1.2200e-003** | **0.0282** | **0.0000** | **9.0000e-005** | **8.0000e-005** | **1.7000e-004** | **2.0000e-005** | **8.0000e-005** | **1.0000e-004** | | **0.3716** | **0.3716** | **2.9000e-004** | **1.0000e-004** | **0.4074** |

### 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 | 0.0862 | 1.8000e-004 | 0.0200 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0429 | 0.0429 | 1.1000e-004 | | 0.0457 |
| 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 | 2.5500e-003 | 1.0400e-003 | 8.2000e-003 | 0.0000 | 9.0000e-005 | 1.0000e-005 | 1.0000e-004 | 2.0000e-005 | 1.0000e-005 | 3.0000e-005 | | 0.3287 | 0.3287 | 1.8000e-004 | 1.0000e-004 | 0.3618 |
| **Total** | **0.0887** | **1.2200e-003** | **0.0282** | **0.0000** | **9.0000e-005** | **8.0000e-005** | **1.7000e-004** | **2.0000e-005** | **8.0000e-005** | **1.0000e-004** | | **0.3716** | **0.3716** | **2.9000e-004** | **1.0000e-004** | **0.4074** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | 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 | Excavation - Trenchless | Grading | 9/24/2025 | 12/26/2025 | 5 | 68 | |
| 2 | Excavation - Open Trench | Grading | 9/24/2025 | 1/21/2028 | 5 | 608 | |
| 3 | Installation/Backfill - Open Trench | Building Construction | 9/24/2025 | 1/21/2028 | 5 | 608 | |
| 4 | Installation - Trenchless | Building Construction | 12/29/2025 | 2/4/2026 | 5 | 28 | |
| 5 | Paving - Open Trench | Paving | 1/24/2028 | 2/16/2028 | 5 | 18 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 4.5**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Excavation - Trenchless | Concrete/Industrial Saws | 1 | 5.00 | 81 | 0.73 |
| Excavation - Trenchless | Excavators | 0 | 8.00 | 158 | 0.38 |
| Excavation - Trenchless | Excavators | 1 | 5.00 | 158 | 0.38 |
| Excavation - Trenchless | Generator Sets | 1 | 5.00 | 84 | 0.74 |
| Excavation - Trenchless | Graders | 0 | 8.00 | 187 | 0.41 |
| Excavation - Trenchless | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | | | |
|---|---|---|---|---|---|
| Excavation - Trenchless | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Excavation - Trenchless | Tractors/Loaders/Backhoes | 0 | 8.00 | 97 | 0.37 |
| Excavation - Open Trench | Air Compressors | 1 | 5.00 | 78 | 0.48 |
| Excavation - Open Trench | Concrete/Industrial Saws | 1 | 5.00 | 81 | 0.73 |
| Excavation - Open Trench | Excavators | 1 | 5.00 | 158 | 0.38 |
| Excavation - Open Trench | Generator Sets | 1 | 5.00 | 84 | 0.74 |
| Excavation - Open Trench | Graders | 0 | 8.00 | 187 | 0.41 |
| Excavation - Open Trench | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Excavation - Open Trench | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Excavation - Open Trench | Rubber Tired Loaders | 1 | 5.00 | 203 | 0.36 |
| Excavation - Open Trench | Tractors/Loaders/Backhoes | 0 | 8.00 | 97 | 0.37 |
| Installation/Backfill - Open Trench | Cranes | 0 | 7.00 | 231 | 0.29 |
| Installation/Backfill - Open Trench | Forklifts | 0 | 8.00 | 89 | 0.20 |
| Installation/Backfill - Open Trench | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Installation/Backfill - Open Trench | Plate Compactors | 1 | 5.00 | 8 | 0.43 |
| Installation/Backfill - Open Trench | Tractors/Loaders/Backhoes | 1 | 5.00 | 97 | 0.37 |
| Installation/Backfill - Open Trench | Welders | 0 | 8.00 | 46 | 0.45 |
| Installation - Trenchless | Bore/Drill Rigs | 1 | 5.00 | 221 | 0.50 |
| Installation - Trenchless | Cranes | 1 | 5.00 | 231 | 0.29 |
| Installation - Trenchless | Dumpers/Tenders | 1 | 5.00 | 16 | 0.38 |
| Installation - Trenchless | Forklifts | 0 | 8.00 | 89 | 0.20 |
| Installation - Trenchless | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Installation - Trenchless | Tractors/Loaders/Backhoes | 0 | 7.00 | 97 | 0.37 |
| Installation - Trenchless | Welders | 1 | 5.00 | 46 | 0.45 |
| Paving - Open Trench | Cement and Mortar Mixers | 1 | 5.00 | 9 | 0.56 |
| Paving - Open Trench | Pavers | 1 | 5.00 | 130 | 0.42 |
| Paving - Open Trench | Paving Equipment | 1 | 5.00 | 132 | 0.36 |
| Paving - Open Trench | Rollers | 1 | 5.00 | 80 | 0.38 |
| Paving - Open Trench | Surfacing Equipment | 1 | 5.00 | 263 | 0.30 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | | | |
|---|---|---|---|---|---|
| Paving - Open Trench | Tractors/Loaders/Backhoes | 0 | 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| Excavation - Trenchless | 4 | 10.00 | 0.00 | 392.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Excavation - Open Trench | 6 | 15.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Installation/Backfill - Open Trench | 2 | 82.00 | 0.00 | 8,505.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Installation - Trenchless | 4 | 82.00 | 0.00 | 952.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving - Open Trench | 5 | 13.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

## 3.2 Excavation - Trenchless - 2025

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.5748 | 4.3955 | 7.3987 | 0.0146 | | 0.1807 | 0.1807 | | 0.1756 | 0.1756 | | 1,392.4427 | 1,392.4427 | 0.2353 | | 1,398.3249 |
| **Total** | **0.5748** | **4.3955** | **7.3987** | **0.0146** | **0.0000** | **0.1807** | **0.1807** | **0.0000** | **0.1756** | **0.1756** | | **1,392.4427** | **1,392.4427** | **0.2353** | | **1,398.3249** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.2 Excavation - Trenchless - 2025

### 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 | 0.0115 | 0.6738 | 0.2077 | 3.1200e-003 | 0.1007 | 5.0900e-003 | 0.1058 | 0.0276 | 4.8700e-003 | 0.0325 | | 347.8057 | 347.8057 | 0.0261 | 0.0555 | 364.9917 |
| 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 |
| Worker | 0.0252 | 0.0144 | 0.2237 | 6.6000e-004 | 0.0822 | 4.1000e-004 | 0.0826 | 0.0218 | 3.7000e-004 | 0.0222 | | 68.3442 | 68.3442 | 1.7400e-003 | 1.6400e-003 | 68.8756 |
| **Total** | **0.0366** | **0.6882** | **0.4315** | **3.7800e-003** | **0.1828** | **5.5000e-003** | **0.1883** | **0.0494** | **5.2400e-003** | **0.0546** | | **416.1499** | **416.1499** | **0.0278** | **0.0571** | **433.8673** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.5748 | 4.3955 | 7.3987 | 0.0146 | | 0.1807 | 0.1807 | | 0.1756 | 0.1756 | 0.0000 | 1,392.4427 | 1,392.4427 | 0.2353 | | 1,398.3249 |
| **Total** | **0.5748** | **4.3955** | **7.3987** | **0.0146** | **0.0000** | **0.1807** | **0.1807** | **0.0000** | **0.1756** | **0.1756** | **0.0000** | **1,392.4427** | **1,392.4427** | **0.2353** | | **1,398.3249** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.2 Excavation - Trenchless - 2025

**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 | 0.0115 | 0.6738 | 0.2077 | 3.1200e-003 | 0.1007 | 5.0900e-003 | 0.1058 | 0.0276 | 4.8700e-003 | 0.0325 | | 347.8057 | 347.8057 | 0.0261 | 0.0555 | 364.9917 |
| 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 |
| Worker | 0.0252 | 0.0144 | 0.2237 | 6.6000e-004 | 0.0822 | 4.1000e-004 | 0.0826 | 0.0218 | 3.7000e-004 | 0.0222 | | 68.3442 | 68.3442 | 1.7400e-003 | 1.6400e-003 | 68.8756 |
| **Total** | **0.0366** | **0.6882** | **0.4315** | **3.7800e-003** | **0.1828** | **5.5000e-003** | **0.1883** | **0.0494** | **5.2400e-003** | **0.0546** | | **416.1499** | **416.1499** | **0.0278** | **0.0571** | **433.8673** |

## 3.3 Excavation - Open Trench - 2025

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2025

### 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 | 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 |
| Worker | 0.0378 | 0.0216 | 0.3356 | 9.8000e-004 | 0.1232 | 6.1000e-004 | 0.1238 | 0.0327 | 5.6000e-004 | 0.0333 | | 102.5163 | 102.5163 | 2.6100e-003 | 2.4600e-003 | 103.3134 |
| **Total** | **0.0378** | **0.0216** | **0.3356** | **9.8000e-004** | **0.1232** | **6.1000e-004** | **0.1238** | **0.0327** | **5.6000e-004** | **0.0333** | | **102.5163** | **102.5163** | **2.6100e-003** | **2.4600e-003** | **103.3134** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | 0.0000 | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | **0.0000** | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2025

**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 | 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 |
| Worker | 0.0378 | 0.0216 | 0.3356 | 9.8000e-004 | 0.1232 | 6.1000e-004 | 0.1238 | 0.0327 | 5.6000e-004 | 0.0333 | | 102.5163 | 102.5163 | 2.6100e-003 | 2.4600e-003 | 103.3134 |
| **Total** | **0.0378** | **0.0216** | **0.3356** | **9.8000e-004** | **0.1232** | **6.1000e-004** | **0.1238** | **0.0327** | **5.6000e-004** | **0.0333** | | **102.5163** | **102.5163** | **2.6100e-003** | **2.4600e-003** | **103.3134** |

## 3.3 Excavation - Open Trench - 2026

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2026

### 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 | 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 |
| Worker | 0.0355 | 0.0197 | 0.3157 | 9.5000e-004 | 0.1232 | 5.8000e-004 | 0.1238 | 0.0327 | 5.3000e-004 | 0.0332 | | 100.0902 | 100.0902 | 2.3800e-003 | 2.3200e-003 | 100.8402 |
| **Total** | **0.0355** | **0.0197** | **0.3157** | **9.5000e-004** | **0.1232** | **5.8000e-004** | **0.1238** | **0.0327** | **5.3000e-004** | **0.0332** | | **100.0902** | **100.0902** | **2.3800e-003** | **2.3200e-003** | **100.8402** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | 0.0000 | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | **0.0000** | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2026

**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 | 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 |
| Worker | 0.0355 | 0.0197 | 0.3157 | 9.5000e-004 | 0.1232 | 5.8000e-004 | 0.1238 | 0.0327 | 5.3000e-004 | 0.0332 | | 100.0902 | 100.0902 | 2.3800e-003 | 2.3200e-003 | 100.8402 |
| **Total** | **0.0355** | **0.0197** | **0.3157** | **9.5000e-004** | **0.1232** | **5.8000e-004** | **0.1238** | **0.0327** | **5.3000e-004** | **0.0332** | | **100.0902** | **100.0902** | **2.3800e-003** | **2.3200e-003** | **100.8402** |

## 3.3 Excavation - Open Trench - 2027

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2027

### 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 | 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 |
| Worker | 0.0334 | 0.0180 | 0.2985 | 9.2000e-004 | 0.1232 | 5.4000e-004 | 0.1238 | 0.0327 | 5.0000e-004 | 0.0332 | | 97.8991 | 97.8991 | 2.1800e-003 | 2.2000e-003 | 98.6088 |
| **Total** | **0.0334** | **0.0180** | **0.2985** | **9.2000e-004** | **0.1232** | **5.4000e-004** | **0.1238** | **0.0327** | **5.0000e-004** | **0.0332** | | **97.8991** | **97.8991** | **2.1800e-003** | **2.2000e-003** | **98.6088** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | 0.0000 | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | **0.0000** | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2027

**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 | 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 |
| Worker | 0.0334 | 0.0180 | 0.2985 | 9.2000e-004 | 0.1232 | 5.4000e-004 | 0.1238 | 0.0327 | 5.0000e-004 | 0.0332 | | 97.8991 | 97.8991 | 2.1800e-003 | 2.2000e-003 | 98.6088 |
| **Total** | **0.0334** | **0.0180** | **0.2985** | **9.2000e-004** | **0.1232** | **5.4000e-004** | **0.1238** | **0.0327** | **5.0000e-004** | **0.0332** | | **97.8991** | **97.8991** | **2.1800e-003** | **2.2000e-003** | **98.6088** |

## 3.3 Excavation - Open Trench - 2028

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2028

### 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 | 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 |
| Worker | 0.0314 | 0.0166 | 0.2840 | 9.0000e-004 | 0.1232 | 5.1000e-004 | 0.1237 | 0.0327 | 4.7000e-004 | 0.0332 | | 95.9662 | 95.9662 | 2.0100e-003 | 2.1000e-003 | 96.6418 |
| **Total** | **0.0314** | **0.0166** | **0.2840** | **9.0000e-004** | **0.1232** | **5.1000e-004** | **0.1237** | **0.0327** | **4.7000e-004** | **0.0332** | | **95.9662** | **95.9662** | **2.0100e-003** | **2.1000e-003** | **96.6418** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | 0.0000 | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | **0.0000** | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2028

**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 | 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 |
| Worker | 0.0314 | 0.0166 | 0.2840 | 9.0000e-004 | 0.1232 | 5.1000e-004 | 0.1237 | 0.0327 | 4.7000e-004 | 0.0332 | | 95.9662 | 95.9662 | 2.0100e-003 | 2.1000e-003 | 96.6418 |
| **Total** | **0.0314** | **0.0166** | **0.2840** | **9.0000e-004** | **0.1232** | **5.1000e-004** | **0.1237** | **0.0327** | **4.7000e-004** | **0.0332** | | **95.9662** | **95.9662** | **2.0100e-003** | **2.1000e-003** | **96.6418** |

## 3.4 Installation/Backfill - Open Trench - 2025

**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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2025

### 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 | 0.0278 | 1.6350 | 0.5041 | 7.5600e-003 | 0.2443 | 0.0124 | 0.2566 | 0.0669 | 0.0118 | 0.0787 | | 843.9763 | 843.9763 | 0.0633 | 0.1346 | 885.6796 |
| 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 |
| Worker | 0.2065 | 0.1181 | 1.8345 | 5.3800e-003 | 0.6736 | 3.3300e-003 | 0.6769 | 0.1787 | 3.0700e-003 | 0.1817 | | 560.4226 | 560.4226 | 0.0143 | 0.0134 | 564.7799 |
| **Total** | **0.2343** | **1.7532** | **2.3386** | **0.0129** | **0.9179** | **0.0157** | **0.9336** | **0.2456** | **0.0149** | **0.2605** | | **1,404.3988** | **1,404.3988** | **0.0776** | **0.1481** | **1,450.4595** |

### 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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | 0.0000 | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | **0.0000** | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2025

**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 | 0.0278 | 1.6350 | 0.5041 | 7.5600e-003 | 0.2443 | 0.0124 | 0.2566 | 0.0669 | 0.0118 | 0.0787 | | 843.9763 | 843.9763 | 0.0633 | 0.1346 | 885.6796 |
| 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 |
| Worker | 0.2065 | 0.1181 | 1.8345 | 5.3800e-003 | 0.6736 | 3.3300e-003 | 0.6769 | 0.1787 | 3.0700e-003 | 0.1817 | | 560.4226 | 560.4226 | 0.0143 | 0.0134 | 564.7799 |
| **Total** | **0.2343** | **1.7532** | **2.3386** | **0.0129** | **0.9179** | **0.0157** | **0.9336** | **0.2456** | **0.0149** | **0.2605** | | **1,404.3988** | **1,404.3988** | **0.0776** | **0.1481** | **1,450.4595** |

## 3.4 Installation/Backfill - Open Trench - 2026

**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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2026

### 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 | 0.0275 | 1.6049 | 0.5153 | 7.3800e-003 | 0.2443 | 0.0123 | 0.2566 | 0.0669 | 0.0117 | 0.0787 | | 826.6372 | 826.6372 | 0.0651 | 0.1320 | 867.5940 |
| 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 |
| Worker | 0.1941 | 0.1075 | 1.7256 | 5.2100e-003 | 0.6736 | 3.1700e-003 | 0.6768 | 0.1787 | 2.9100e-003 | 0.1816 | | 547.1598 | 547.1598 | 0.0130 | 0.0127 | 551.2596 |
| **Total** | **0.2216** | **1.7124** | **2.2410** | **0.0126** | **0.9179** | **0.0154** | **0.9333** | **0.2456** | **0.0146** | **0.2603** | | **1,373.7969** | **1,373.7969** | **0.0782** | **0.1446** | **1,418.8537** |

### 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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | 0.0000 | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | **0.0000** | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2026

**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 | 0.0275 | 1.6049 | 0.5153 | 7.3800e-003 | 0.2443 | 0.0123 | 0.2566 | 0.0669 | 0.0117 | 0.0787 | | 826.6372 | 826.6372 | 0.0651 | 0.1320 | 867.5940 |
| 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 |
| Worker | 0.1941 | 0.1075 | 1.7256 | 5.2100e-003 | 0.6736 | 3.1700e-003 | 0.6768 | 0.1787 | 2.9100e-003 | 0.1816 | | 547.1598 | 547.1598 | 0.0130 | 0.0127 | 551.2596 |
| **Total** | **0.2216** | **1.7124** | **2.2410** | **0.0126** | **0.9179** | **0.0154** | **0.9333** | **0.2456** | **0.0146** | **0.2603** | | **1,373.7969** | **1,373.7969** | **0.0782** | **0.1446** | **1,418.8537** |

## 3.4 Installation/Backfill - Open Trench - 2027

**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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2027

### 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 | 0.0272 | 1.5721 | 0.5240 | 7.1900e-003 | 0.2443 | 0.0121 | 0.2565 | 0.0669 | 0.0116 | 0.0786 | | 807.6679 | 807.6679 | 0.0668 | 0.1290 | 847.7920 |
| 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 |
| Worker | 0.1825 | 0.0984 | 1.6316 | 5.0600e-003 | 0.6736 | 2.9800e-003 | 0.6766 | 0.1787 | 2.7400e-003 | 0.1814 | | 535.1815 | 535.1815 | 0.0119 | 0.0120 | 539.0615 |
| **Total** | **0.2097** | **1.6705** | **2.1556** | **0.0123** | **0.9179** | **0.0151** | **0.9331** | **0.2456** | **0.0144** | **0.2600** | | **1,342.8494** | **1,342.8494** | **0.0787** | **0.1411** | **1,386.8535** |

### 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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | 0.0000 | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | **0.0000** | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2027

**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 | 0.0272 | 1.5721 | 0.5240 | 7.1900e-003 | 0.2443 | 0.0121 | 0.2565 | 0.0669 | 0.0116 | 0.0786 | | 807.6679 | 807.6679 | 0.0668 | 0.1290 | 847.7920 |
| 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 |
| Worker | 0.1825 | 0.0984 | 1.6316 | 5.0600e-003 | 0.6736 | 2.9800e-003 | 0.6766 | 0.1787 | 2.7400e-003 | 0.1814 | | 535.1815 | 535.1815 | 0.0119 | 0.0120 | 539.0615 |
| **Total** | **0.2097** | **1.6705** | **2.1556** | **0.0123** | **0.9179** | **0.0151** | **0.9331** | **0.2456** | **0.0144** | **0.2600** | | **1,342.8494** | **1,342.8494** | **0.0787** | **0.1411** | **1,386.8535** |

## 3.4 Installation/Backfill - Open Trench - 2028

**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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2028

### 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 | 0.0270 | 1.5448 | 0.5342 | 7.0100e-003 | 0.2443 | 0.0120 | 0.2564 | 0.0669 | 0.0115 | 0.0785 | | 789.4449 | 789.4449 | 0.0684 | 0.1262 | 828.7705 |
| 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 |
| Worker | 0.1717 | 0.0907 | 1.5524 | 4.9200e-003 | 0.6736 | 2.7800e-003 | 0.6764 | 0.1787 | 2.5600e-003 | 0.1812 | | 524.6151 | 524.6151 | 0.0110 | 0.0115 | 528.3085 |
| **Total** | **0.1987** | **1.6354** | **2.0866** | **0.0119** | **0.9180** | **0.0148** | **0.9328** | **0.2456** | **0.0141** | **0.2597** | | **1,314.0599** | **1,314.0599** | **0.0794** | **0.1377** | **1,357.0791** |

### 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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | 0.0000 | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | **0.0000** | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2028

**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 | 0.0270 | 1.5448 | 0.5342 | 7.0100e-003 | 0.2443 | 0.0120 | 0.2564 | 0.0669 | 0.0115 | 0.0785 | | 789.4449 | 789.4449 | 0.0684 | 0.1262 | 828.7705 |
| 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 |
| Worker | 0.1717 | 0.0907 | 1.5524 | 4.9200e-003 | 0.6736 | 2.7800e-003 | 0.6764 | 0.1787 | 2.5600e-003 | 0.1812 | | 524.6151 | 524.6151 | 0.0110 | 0.0115 | 528.3085 |
| **Total** | **0.1987** | **1.6354** | **2.0866** | **0.0119** | **0.9180** | **0.0148** | **0.9328** | **0.2456** | **0.0141** | **0.2597** | | **1,314.0599** | **1,314.0599** | **0.0794** | **0.1377** | **1,357.0791** |

## 3.5 Installation - Trenchless - 2025

**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 | 0.5096 | 4.2750 | 3.5470 | 0.0116 | | 0.1588 | 0.1588 | | 0.1490 | 0.1490 | | 1,090.3090 | 1,090.3090 | 0.3148 | | 1,098.1786 |
| **Total** | **0.5096** | **4.2750** | **3.5470** | **0.0116** | | **0.1588** | **0.1588** | | **0.1490** | **0.1490** | | **1,090.3090** | **1,090.3090** | **0.3148** | | **1,098.1786** |

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2025

### 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 | 0.0675 | 3.9740 | 1.2253 | 0.0184 | 0.5937 | 0.0300 | 0.6237 | 0.1627 | 0.0287 | 0.1914 | | 2,051.3437 | 2,051.3437 | 0.1538 | 0.3272 | 2,152.7064 |
| 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 |
| Worker | 0.2065 | 0.1181 | 1.8345 | 5.3800e-003 | 0.6736 | 3.3300e-003 | 0.6769 | 0.1787 | 3.0700e-003 | 0.1817 | | 560.4226 | 560.4226 | 0.0143 | 0.0134 | 564.7799 |
| **Total** | **0.2741** | **4.0922** | **3.0598** | **0.0238** | **1.2673** | **0.0334** | **1.3007** | **0.3413** | **0.0318** | **0.3731** | | **2,611.7662** | **2,611.7662** | **0.1681** | **0.3407** | **2,717.4863** |

### 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 | 0.5096 | 4.2750 | 3.5470 | 0.0116 | | 0.1588 | 0.1588 | | 0.1490 | 0.1490 | 0.0000 | 1,090.3090 | 1,090.3090 | 0.3148 | | 1,098.1786 |
| **Total** | **0.5096** | **4.2750** | **3.5470** | **0.0116** | | **0.1588** | **0.1588** | | **0.1490** | **0.1490** | **0.0000** | **1,090.3090** | **1,090.3090** | **0.3148** | | **1,098.1786** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2025

**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 | 0.0675 | 3.9740 | 1.2253 | 0.0184 | 0.5937 | 0.0300 | 0.6237 | 0.1627 | 0.0287 | 0.1914 | | 2,051.3437 | 2,051.3437 | 0.1538 | 0.3272 | 2,152.7064 |
| 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 |
| Worker | 0.2065 | 0.1181 | 1.8345 | 5.3800e-003 | 0.6736 | 3.3300e-003 | 0.6769 | 0.1787 | 3.0700e-003 | 0.1817 | | 560.4226 | 560.4226 | 0.0143 | 0.0134 | 564.7799 |
| **Total** | **0.2741** | **4.0922** | **3.0598** | **0.0238** | **1.2673** | **0.0334** | **1.3007** | **0.3413** | **0.0318** | **0.3731** | | **2,611.7662** | **2,611.7662** | **0.1681** | **0.3407** | **2,717.4863** |

## 3.5 Installation - Trenchless - 2026

**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 | 0.5096 | 4.2750 | 3.5470 | 0.0116 | | 0.1588 | 0.1588 | | 0.1490 | 0.1490 | | 1,090.3090 | 1,090.3090 | 0.3148 | | 1,098.1786 |
| **Total** | **0.5096** | **4.2750** | **3.5470** | **0.0116** | | **0.1588** | **0.1588** | | **0.1490** | **0.1490** | | **1,090.3090** | **1,090.3090** | **0.3148** | | **1,098.1786** |

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2026

### 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 | 0.0668 | 3.9007 | 1.2526 | 0.0179 | 0.5938 | 0.0298 | 0.6236 | 0.1627 | 0.0285 | 0.1912 | | 2,009.1998 | 2,009.1998 | 0.1583 | 0.3208 | 2,108.7482 |
| 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 |
| Worker | 0.1941 | 0.1075 | 1.7256 | 5.2100e-003 | 0.6736 | 3.1700e-003 | 0.6768 | 0.1787 | 2.9100e-003 | 0.1816 | | 547.1598 | 547.1598 | 0.0130 | 0.0127 | 551.2596 |
| **Total** | **0.2609** | **4.0082** | **2.9782** | **0.0232** | **1.2674** | **0.0330** | **1.3004** | **0.3413** | **0.0314** | **0.3728** | | **2,556.3595** | **2,556.3595** | **0.1713** | **0.3334** | **2,660.0079** |

### 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 | 0.5096 | 4.2750 | 3.5470 | 0.0116 | | 0.1588 | 0.1588 | | 0.1490 | 0.1490 | 0.0000 | 1,090.3090 | 1,090.3090 | 0.3148 | | 1,098.1786 |
| **Total** | **0.5096** | **4.2750** | **3.5470** | **0.0116** | | **0.1588** | **0.1588** | | **0.1490** | **0.1490** | **0.0000** | **1,090.3090** | **1,090.3090** | **0.3148** | | **1,098.1786** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2026

**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 | 0.0668 | 3.9007 | 1.2526 | 0.0179 | 0.5938 | 0.0298 | 0.6236 | 0.1627 | 0.0285 | 0.1912 | | 2,009.1998 | 2,009.1998 | 0.1583 | 0.3208 | 2,108.7482 |
| 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 |
| Worker | 0.1941 | 0.1075 | 1.7256 | 5.2100e-003 | 0.6736 | 3.1700e-003 | 0.6768 | 0.1787 | 2.9100e-003 | 0.1816 | | 547.1598 | 547.1598 | 0.0130 | 0.0127 | 551.2596 |
| **Total** | **0.2609** | **4.0082** | **2.9782** | **0.0232** | **1.2674** | **0.0330** | **1.3004** | **0.3413** | **0.0314** | **0.3728** | | **2,556.3595** | **2,556.3595** | **0.1713** | **0.3334** | **2,660.0079** |

## 3.6 Paving - Open Trench - 2028

**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 | 0.4339 | 4.0658 | 5.7647 | 0.0118 | | 0.1841 | 0.1841 | | 0.1701 | 0.1701 | | 1,130.1965 | 1,130.1965 | 0.3586 | | 1,139.1614 |
| Paving | 0.6550 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.0889** | **4.0658** | **5.7647** | **0.0118** | | **0.1841** | **0.1841** | | **0.1701** | **0.1701** | | **1,130.1965** | **1,130.1965** | **0.3586** | | **1,139.1614** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Paving - Open Trench - 2028

### 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 | 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 |
| Worker | 0.0272 | 0.0144 | 0.2461 | 7.8000e-004 | 0.1068 | 4.4000e-004 | 0.1072 | 0.0283 | 4.1000e-004 | 0.0287 | | 83.1707 | 83.1707 | 1.7400e-003 | 1.8200e-003 | 83.7562 |
| **Total** | **0.0272** | **0.0144** | **0.2461** | **7.8000e-004** | **0.1068** | **4.4000e-004** | **0.1072** | **0.0283** | **4.1000e-004** | **0.0287** | | **83.1707** | **83.1707** | **1.7400e-003** | **1.8200e-003** | **83.7562** |

### 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 | 0.4339 | 4.0658 | 5.7647 | 0.0118 | | 0.1841 | 0.1841 | | 0.1701 | 0.1701 | 0.0000 | 1,130.1965 | 1,130.1965 | 0.3586 | | 1,139.1614 |
| Paving | 0.6550 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.0889** | **4.0658** | **5.7647** | **0.0118** | | **0.1841** | **0.1841** | | **0.1701** | **0.1701** | **0.0000** | **1,130.1965** | **1,130.1965** | **0.3586** | | **1,139.1614** |

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Paving - Open Trench - 2028

**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 | 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 |
| Worker | 0.0272 | 0.0144 | 0.2461 | 7.8000e-004 | 0.1068 | 4.4000e-004 | 0.1072 | 0.0283 | 4.1000e-004 | 0.0287 | | 83.1707 | 83.1707 | 1.7400e-003 | 1.8200e-003 | 83.7562 |
| **Total** | **0.0272** | **0.0144** | **0.2461** | **7.8000e-004** | **0.1068** | **4.4000e-004** | **0.1072** | **0.0283** | **4.1000e-004** | **0.0287** | | **83.1707** | **83.1707** | **1.7400e-003** | **1.8200e-003** | **83.7562** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

# 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 | 2.5500e-003 | 1.0400e-003 | 8.2000e-003 | 0.0000 | 9.0000e-005 | 1.0000e-005 | 1.0000e-004 | 2.0000e-005 | 1.0000e-005 | 3.0000e-005 | | 0.3287 | 0.3287 | 1.8000e-004 | 1.0000e-004 | 0.3618 |
| Unmitigated | 2.5500e-003 | 1.0400e-003 | 8.2000e-003 | 0.0000 | 9.0000e-005 | 1.0000e-005 | 1.0000e-004 | 2.0000e-005 | 1.0000e-005 | 3.0000e-005 | | 0.3287 | 0.3287 | 1.8000e-004 | 1.0000e-004 | 0.3618 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Other Asphalt Surfaces | 1.96 | 0.00 | 0.00 | 31 | 31 |
| Total | 1.96 | 0.00 | 0.00 | 31 | 31 |

## 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 |
| Other Asphalt Surfaces | 0.06 | 7.30 | 7.30 | 100.00 | 0.00 | 0.00 | 100 | 0 | 0 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other Asphalt Surfaces | 0.564931 | 0.058891 | 0.167885 | 0.120679 | 0.025398 | 0.007381 | 0.013024 | 0.006272 | 0.000657 | 0.000386 | 0.028170 | 0.000621 | 0.005705 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | | | | | |
| Other Asphalt Surfaces | 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** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 5.2 Energy by Land Use - NaturalGas

**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 | | | | | |
| Other Asphalt Surfaces | 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 | 0.0862 | 1.8000e-004 | 0.0200 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0429 | 0.0429 | 1.1000e-004 | | 0.0457 |
| Unmitigated | 0.0862 | 1.8000e-004 | 0.0200 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0429 | 0.0429 | 1.1000e-004 | | 0.0457 |

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 0.0149 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.0694 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.8400e-003 | 1.8000e-004 | 0.0200 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0429 | 0.0429 | 1.1000e-004 | | 0.0457 |
| **Total** | **0.0862** | **1.8000e-004** | **0.0200** | **0.0000** | | **7.0000e-005** | **7.0000e-005** | | **7.0000e-005** | **7.0000e-005** | | **0.0429** | **0.0429** | **1.1000e-004** | | **0.0457** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 0.0149 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.0694 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.8400e-003 | 1.8000e-004 | 0.0200 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0429 | 0.0429 | 1.1000e-004 | | 0.0457 |
| **Total** | **0.0862** | **1.8000e-004** | **0.0200** | **0.0000** | | **7.0000e-005** | **7.0000e-005** | | **7.0000e-005** | **7.0000e-005** | | **0.0429** | **0.0429** | **1.1000e-004** | | **0.0457** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 |
|---|---|---|---|---|---|---|

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|---|---|---|---|---|---|

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

# Calleguas SMP Phase 4 - AQ

**Ventura County APCD Air District, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| Other Asphalt Surfaces | 196.00 | 1000sqft | 4.50 | 196,000.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.6 | **Precipitation Freq (Days)** | 31 |
| **Climate Zone** | 8 | | | **Operational Year** | 2028 |
| **Utility Company** | Southern California Edison | | | | |
| **CO2 Intensity (lb/MWhr)** | 390.98 | **CH4 Intensity (lb/MWhr)** | 0.033 | **N2O Intensity (lb/MWhr)** | 0.004 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Total Distrubance area (49,000 linear feet by 4 foot-wide trench)

Construction Phase - Based on applicant information, such as 80 feet installation for open trench per day, 400 LF of trenchless activity, and paving would occur after excavation and installation operation. 4 feet trenchless activity per day.

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Off-road Equipment - Construction equipment provided by the applicant

Trips and VMT - 14 hauling trips per day according to the applicant.

Grading -

Vehicle Trips - Based on applicant provided information, maintenance and inspection trips would occur once per year, one worker trips for one day, and would travel from the district's office to the end of the pipeline and back.

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

Construction Off-road Equipment Mitigation - Information provided by the applicant

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 8.00 | 68.00 |
| tblConstructionPhase | NumDays | 8.00 | 608.00 |
| tblConstructionPhase | NumDays | 230.00 | 608.00 |
| tblConstructionPhase | NumDays | 230.00 | 28.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 3.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 5.00 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | |
|---|---|---|---|
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 5.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 5.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 392.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 8,505.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 952.00 |
| tblTripsAndVMT | VendorTripNumber | 32.00 | 0.00 |
| tblTripsAndVMT | VendorTripNumber | 32.00 | 0.00 |
| tblVehicleTrips | CW_TL | 9.50 | 0.06 |
| tblVehicleTrips | CW_TTP | 0.00 | 100.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | WD_TR | 0.00 | 0.01 |

## 2.0 Emissions Summary

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | | | | | |
| 2025 | 2.0550 | 17.9297 | 21.8291 | 0.0720 | 2.3084 | 0.5111 | 2.8195 | 0.6196 | 0.4880 | 1.1076 | 0.0000 | 7,374.8550 | 7,374.8550 | 0.9993 | 0.4949 | 7,547.3165 |
| 2026 | 2.0254 | 17.7957 | 20.4039 | 0.0710 | 2.3085 | 0.5104 | 2.8189 | 0.6196 | 0.4874 | 1.1070 | 0.0000 | 7,287.7381 | 7,287.7381 | 1.0028 | 0.4839 | 7,457.0150 |
| 2027 | 1.2279 | 9.2797 | 13.7880 | 0.0361 | 1.0412 | 0.3182 | 1.3594 | 0.2783 | 0.3065 | 0.5848 | 0.0000 | 3,630.1523 | 3,630.1523 | 0.5160 | 0.1450 | 3,686.2505 |
| 2028 | 1.2141 | 9.2407 | 13.7076 | 0.0358 | 1.0412 | 0.3179 | 1.3591 | 0.2783 | 0.3062 | 0.5845 | 0.0000 | 3,599.9762 | 3,599.9762 | 0.5164 | 0.1414 | 3,655.0309 |
| **Maximum** | **2.0550** | **17.9297** | **21.8291** | **0.0720** | **2.3085** | **0.5111** | **2.8195** | **0.6196** | **0.4880** | **1.1076** | **0.0000** | **7,374.8550** | **7,374.8550** | **1.0028** | **0.4949** | **7,547.3165** |

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 2.1 Overall Construction (Maximum Daily Emission)

**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 | | | | | |
| 2025 | 2.0550 | 17.9297 | 21.8291 | 0.0720 | 2.3084 | 0.5111 | 2.8195 | 0.6196 | 0.4880 | 1.1076 | 0.0000 | 7,374.8550 | 7,374.8550 | 0.9993 | 0.4949 | 7,547.3165 |
| 2026 | 2.0254 | 17.7957 | 20.4039 | 0.0710 | 2.3085 | 0.5104 | 2.8189 | 0.6196 | 0.4874 | 1.1070 | 0.0000 | 7,287.7381 | 7,287.7381 | 1.0028 | 0.4839 | 7,457.0150 |
| 2027 | 1.2279 | 9.2797 | 13.7880 | 0.0361 | 1.0412 | 0.3182 | 1.3594 | 0.2783 | 0.3065 | 0.5848 | 0.0000 | 3,630.1523 | 3,630.1523 | 0.5160 | 0.1450 | 3,686.2505 |
| 2028 | 1.2141 | 9.2407 | 13.7076 | 0.0358 | 1.0412 | 0.3179 | 1.3591 | 0.2783 | 0.3062 | 0.5845 | 0.0000 | 3,599.9762 | 3,599.9762 | 0.5164 | 0.1414 | 3,655.0309 |
| **Maximum** | **2.0550** | **17.9297** | **21.8291** | **0.0720** | **2.3085** | **0.5111** | **2.8195** | **0.6196** | **0.4880** | **1.1076** | **0.0000** | **7,374.8550** | **7,374.8550** | **1.0028** | **0.4949** | **7,547.3165** |

| | 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** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 0.0862 | 1.8000e-004 | 0.0200 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0429 | 0.0429 | 1.1000e-004 | | 0.0457 |
| 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 | 2.2800e-003 | 1.1700e-003 | 0.0108 | 0.0000 | 9.0000e-005 | 1.0000e-005 | 1.0000e-004 | 2.0000e-005 | 1.0000e-005 | 3.0000e-005 | | 0.3316 | 0.3316 | 2.1000e-004 | 1.1000e-004 | 0.3687 |
| **Total** | **0.0885** | **1.3500e-003** | **0.0307** | **0.0000** | **9.0000e-005** | **8.0000e-005** | **1.7000e-004** | **2.0000e-005** | **8.0000e-005** | **1.0000e-004** | | **0.3745** | **0.3745** | **3.2000e-004** | **1.1000e-004** | **0.4144** |

### 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 | 0.0862 | 1.8000e-004 | 0.0200 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0429 | 0.0429 | 1.1000e-004 | | 0.0457 |
| 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 | 2.2800e-003 | 1.1700e-003 | 0.0108 | 0.0000 | 9.0000e-005 | 1.0000e-005 | 1.0000e-004 | 2.0000e-005 | 1.0000e-005 | 3.0000e-005 | | 0.3316 | 0.3316 | 2.1000e-004 | 1.1000e-004 | 0.3687 |
| **Total** | **0.0885** | **1.3500e-003** | **0.0307** | **0.0000** | **9.0000e-005** | **8.0000e-005** | **1.7000e-004** | **2.0000e-005** | **8.0000e-005** | **1.0000e-004** | | **0.3745** | **0.3745** | **3.2000e-004** | **1.1000e-004** | **0.4144** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | 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 | Excavation - Trenchless | Grading | 9/24/2025 | 12/26/2025 | 5 | 68 | |
| 2 | Excavation - Open Trench | Grading | 9/24/2025 | 1/21/2028 | 5 | 608 | |
| 3 | Installation/Backfill - Open Trench | Building Construction | 9/24/2025 | 1/21/2028 | 5 | 608 | |
| 4 | Installation - Trenchless | Building Construction | 12/29/2025 | 2/4/2026 | 5 | 28 | |
| 5 | Paving - Open Trench | Paving | 1/24/2028 | 2/16/2028 | 5 | 18 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 4.5**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Excavation - Trenchless | Concrete/Industrial Saws | 1 | 5.00 | 81 | 0.73 |
| Excavation - Trenchless | Excavators | 0 | 8.00 | 158 | 0.38 |
| Excavation - Trenchless | Excavators | 1 | 5.00 | 158 | 0.38 |
| Excavation - Trenchless | Generator Sets | 1 | 5.00 | 84 | 0.74 |
| Excavation - Trenchless | Graders | 0 | 8.00 | 187 | 0.41 |
| Excavation - Trenchless | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | | | |
|---|---|---|---|---|---|
| Excavation - Trenchless | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Excavation - Trenchless | Tractors/Loaders/Backhoes | 0 | 8.00 | 97 | 0.37 |
| Excavation - Open Trench | Air Compressors | 1 | 5.00 | 78 | 0.48 |
| Excavation - Open Trench | Concrete/Industrial Saws | 1 | 5.00 | 81 | 0.73 |
| Excavation - Open Trench | Excavators | 1 | 5.00 | 158 | 0.38 |
| Excavation - Open Trench | Generator Sets | 1 | 5.00 | 84 | 0.74 |
| Excavation - Open Trench | Graders | 0 | 8.00 | 187 | 0.41 |
| Excavation - Open Trench | Off-Highway Trucks | 1 | 2.00 | 402 | 0.38 |
| Excavation - Open Trench | Rubber Tired Dozers | 0 | 8.00 | 247 | 0.40 |
| Excavation - Open Trench | Rubber Tired Loaders | 1 | 5.00 | 203 | 0.36 |
| Excavation - Open Trench | Tractors/Loaders/Backhoes | 0 | 8.00 | 97 | 0.37 |
| Installation/Backfill - Open Trench | Cranes | 0 | 7.00 | 231 | 0.29 |
| Installation/Backfill - Open Trench | Forklifts | 0 | 8.00 | 89 | 0.20 |
| Installation/Backfill - Open Trench | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Installation/Backfill - Open Trench | Plate Compactors | 1 | 5.00 | 8 | 0.43 |
| Installation/Backfill - Open Trench | Tractors/Loaders/Backhoes | 1 | 5.00 | 97 | 0.37 |
| Installation/Backfill - Open Trench | Welders | 0 | 8.00 | 46 | 0.45 |
| Installation - Trenchless | Bore/Drill Rigs | 1 | 5.00 | 221 | 0.50 |
| Installation - Trenchless | Cranes | 1 | 5.00 | 231 | 0.29 |
| Installation - Trenchless | Dumpers/Tenders | 1 | 5.00 | 16 | 0.38 |
| Installation - Trenchless | Forklifts | 0 | 8.00 | 89 | 0.20 |
| Installation - Trenchless | Generator Sets | 0 | 8.00 | 84 | 0.74 |
| Installation - Trenchless | Tractors/Loaders/Backhoes | 0 | 7.00 | 97 | 0.37 |
| Installation - Trenchless | Welders | 1 | 5.00 | 46 | 0.45 |
| Paving - Open Trench | Cement and Mortar Mixers | 1 | 5.00 | 9 | 0.56 |
| Paving - Open Trench | Pavers | 1 | 5.00 | 130 | 0.42 |
| Paving - Open Trench | Paving Equipment | 1 | 5.00 | 132 | 0.36 |
| Paving - Open Trench | Rollers | 1 | 5.00 | 80 | 0.38 |
| Paving - Open Trench | Surfacing Equipment | 1 | 5.00 | 263 | 0.30 |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

| | | | | | |
|---|---|---|---|---|---|
| Paving - Open Trench | Tractors/Loaders/Backhoes | 0 | 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| Excavation - Trenchless | 4 | 10.00 | 0.00 | 392.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Excavation - Open Trench | 6 | 15.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Installation/Backfill - Open Trench | 2 | 82.00 | 0.00 | 8,505.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Installation - Trenchless | 4 | 82.00 | 0.00 | 952.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving - Open Trench | 5 | 13.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

## 3.2 Excavation - Trenchless - 2025

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.5748 | 4.3955 | 7.3987 | 0.0146 | | 0.1807 | 0.1807 | | 0.1756 | 0.1756 | | 1,392.4427 | 1,392.4427 | 0.2353 | | 1,398.3249 |
| **Total** | **0.5748** | **4.3955** | **7.3987** | **0.0146** | **0.0000** | **0.1807** | **0.1807** | **0.0000** | **0.1756** | **0.1756** | | **1,392.4427** | **1,392.4427** | **0.2353** | | **1,398.3249** |

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.2 Excavation - Trenchless - 2025

### 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 | 0.0107 | 0.7027 | 0.2103 | 3.1200e-003 | 0.1007 | 5.1000e-003 | 0.1058 | 0.0276 | 4.8800e-003 | 0.0325 | | 348.1396 | 348.1396 | 0.0260 | 0.0555 | 365.3410 |
| 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 |
| Worker | 0.0273 | 0.0169 | 0.2204 | 6.3000e-004 | 0.0822 | 4.1000e-004 | 0.0826 | 0.0218 | 3.7000e-004 | 0.0222 | | 65.3975 | 65.3975 | 1.9000e-003 | 1.8200e-003 | 65.9871 |
| **Total** | **0.0380** | **0.7196** | **0.4308** | **3.7500e-003** | **0.1828** | **5.5100e-003** | **0.1883** | **0.0494** | **5.2500e-003** | **0.0546** | | **413.5371** | **413.5371** | **0.0279** | **0.0574** | **431.3281** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.5748 | 4.3955 | 7.3987 | 0.0146 | | 0.1807 | 0.1807 | | 0.1756 | 0.1756 | 0.0000 | 1,392.4427 | 1,392.4427 | 0.2353 | | 1,398.3249 |
| **Total** | **0.5748** | **4.3955** | **7.3987** | **0.0146** | **0.0000** | **0.1807** | **0.1807** | **0.0000** | **0.1756** | **0.1756** | **0.0000** | **1,392.4427** | **1,392.4427** | **0.2353** | | **1,398.3249** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.2 Excavation - Trenchless - 2025

**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 | 0.0107 | 0.7027 | 0.2103 | 3.1200e-003 | 0.1007 | 5.1000e-003 | 0.1058 | 0.0276 | 4.8800e-003 | 0.0325 | | 348.1396 | 348.1396 | 0.0260 | 0.0555 | 365.3410 |
| 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 |
| Worker | 0.0273 | 0.0169 | 0.2204 | 6.3000e-004 | 0.0822 | 4.1000e-004 | 0.0826 | 0.0218 | 3.7000e-004 | 0.0222 | | 65.3975 | 65.3975 | 1.9000e-003 | 1.8200e-003 | 65.9871 |
| **Total** | **0.0380** | **0.7196** | **0.4308** | **3.7500e-003** | **0.1828** | **5.5100e-003** | **0.1883** | **0.0494** | **5.2500e-003** | **0.0546** | | **413.5371** | **413.5371** | **0.0279** | **0.0574** | **431.3281** |

## 3.3 Excavation - Open Trench - 2025

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2025

### 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 | 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 |
| Worker | 0.0409 | 0.0253 | 0.3307 | 9.4000e-004 | 0.1232 | 6.1000e-004 | 0.1238 | 0.0327 | 5.6000e-004 | 0.0333 | | 98.0962 | 98.0962 | 2.8600e-003 | 2.7300e-003 | 98.9806 |
| **Total** | **0.0409** | **0.0253** | **0.3307** | **9.4000e-004** | **0.1232** | **6.1000e-004** | **0.1238** | **0.0327** | **5.6000e-004** | **0.0333** | | **98.0962** | **98.0962** | **2.8600e-003** | **2.7300e-003** | **98.9806** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | 0.0000 | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | **0.0000** | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2025

**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 | 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 |
| Worker | 0.0409 | 0.0253 | 0.3307 | 9.4000e-004 | 0.1232 | 6.1000e-004 | 0.1238 | 0.0327 | 5.6000e-004 | 0.0333 | | 98.0962 | 98.0962 | 2.8600e-003 | 2.7300e-003 | 98.9806 |
| **Total** | **0.0409** | **0.0253** | **0.3307** | **9.4000e-004** | **0.1232** | **6.1000e-004** | **0.1238** | **0.0327** | **5.6000e-004** | **0.0333** | | **98.0962** | **98.0962** | **2.8600e-003** | **2.7300e-003** | **98.9806** |

## 3.3 Excavation - Open Trench - 2026

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2026

### 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 | 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 |
| Worker | 0.0386 | 0.0230 | 0.3115 | 9.1000e-004 | 0.1232 | 5.8000e-004 | 0.1238 | 0.0327 | 5.3000e-004 | 0.0332 | | 95.7804 | 95.7804 | 2.6100e-003 | 2.5700e-003 | 96.6125 |
| **Total** | **0.0386** | **0.0230** | **0.3115** | **9.1000e-004** | **0.1232** | **5.8000e-004** | **0.1238** | **0.0327** | **5.3000e-004** | **0.0332** | | **95.7804** | **95.7804** | **2.6100e-003** | **2.5700e-003** | **96.6125** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | 0.0000 | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | **0.0000** | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2026

**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 | 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 |
| Worker | 0.0386 | 0.0230 | 0.3115 | 9.1000e-004 | 0.1232 | 5.8000e-004 | 0.1238 | 0.0327 | 5.3000e-004 | 0.0332 | | 95.7804 | 95.7804 | 2.6100e-003 | 2.5700e-003 | 96.6125 |
| **Total** | **0.0386** | **0.0230** | **0.3115** | **9.1000e-004** | **0.1232** | **5.8000e-004** | **0.1238** | **0.0327** | **5.3000e-004** | **0.0332** | | **95.7804** | **95.7804** | **2.6100e-003** | **2.5700e-003** | **96.6125** |

## 3.3 Excavation - Open Trench - 2027

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2027

### 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 | 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 |
| Worker | 0.0363 | 0.0211 | 0.2949 | 8.9000e-004 | 0.1232 | 5.4000e-004 | 0.1238 | 0.0327 | 5.0000e-004 | 0.0332 | | 93.6870 | 93.6870 | 2.4000e-003 | 2.4400e-003 | 94.4744 |
| **Total** | **0.0363** | **0.0211** | **0.2949** | **8.9000e-004** | **0.1232** | **5.4000e-004** | **0.1238** | **0.0327** | **5.0000e-004** | **0.0332** | | **93.6870** | **93.6870** | **2.4000e-003** | **2.4400e-003** | **94.4744** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | 0.0000 | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | **0.0000** | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2027

**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 | 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 |
| Worker | 0.0363 | 0.0211 | 0.2949 | 8.9000e-004 | 0.1232 | 5.4000e-004 | 0.1238 | 0.0327 | 5.0000e-004 | 0.0332 | | 93.6870 | 93.6870 | 2.4000e-003 | 2.4400e-003 | 94.4744 |
| **Total** | **0.0363** | **0.0211** | **0.2949** | **8.9000e-004** | **0.1232** | **5.4000e-004** | **0.1238** | **0.0327** | **5.0000e-004** | **0.0332** | | **93.6870** | **93.6870** | **2.4000e-003** | **2.4400e-003** | **94.4744** |

## 3.3 Excavation - Open Trench - 2028

**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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2028

### 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 | 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 |
| Worker | 0.0342 | 0.0194 | 0.2809 | 8.6000e-004 | 0.1232 | 5.1000e-004 | 0.1237 | 0.0327 | 4.7000e-004 | 0.0332 | | 91.8390 | 91.8390 | 2.2100e-003 | 2.3300e-003 | 92.5886 |
| **Total** | **0.0342** | **0.0194** | **0.2809** | **8.6000e-004** | **0.1232** | **5.1000e-004** | **0.1237** | **0.0327** | **4.7000e-004** | **0.0332** | | **91.8390** | **91.8390** | **2.2100e-003** | **2.3300e-003** | **92.5886** |

### 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 | | | | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.8601 | 6.5118 | 9.8260 | 0.0210 | | 0.2626 | 0.2626 | | 0.2544 | 0.2544 | 0.0000 | 2,005.4964 | 2,005.4964 | 0.3705 | | 2,014.7589 |
| **Total** | **0.8601** | **6.5118** | **9.8260** | **0.0210** | **0.0000** | **0.2626** | **0.2626** | **0.0000** | **0.2544** | **0.2544** | **0.0000** | **2,005.4964** | **2,005.4964** | **0.3705** | | **2,014.7589** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.3 Excavation - Open Trench - 2028

**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 | 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 |
| Worker | 0.0342 | 0.0194 | 0.2809 | 8.6000e-004 | 0.1232 | 5.1000e-004 | 0.1237 | 0.0327 | 4.7000e-004 | 0.0332 | | 91.8390 | 91.8390 | 2.2100e-003 | 2.3300e-003 | 92.5886 |
| **Total** | **0.0342** | **0.0194** | **0.2809** | **8.6000e-004** | **0.1232** | **5.1000e-004** | **0.1237** | **0.0327** | **4.7000e-004** | **0.0332** | | **91.8390** | **91.8390** | **2.2100e-003** | **2.3300e-003** | **92.5886** |

## 3.4 Installation/Backfill - Open Trench - 2025

**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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2025

### 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 | 0.0260 | 1.7052 | 0.5103 | 7.5700e-003 | 0.2443 | 0.0124 | 0.2567 | 0.0669 | 0.0119 | 0.0788 | | 844.7867 | 844.7867 | 0.0632 | 0.1348 | 886.5270 |
| 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 |
| Worker | 0.2238 | 0.1383 | 1.8076 | 5.1500e-003 | 0.6736 | 3.3300e-003 | 0.6769 | 0.1787 | 3.0700e-003 | 0.1817 | | 536.2594 | 536.2594 | 0.0156 | 0.0149 | 541.0942 |
| **Total** | **0.2498** | **1.8434** | **2.3179** | **0.0127** | **0.9179** | **0.0157** | **0.9336** | **0.2456** | **0.0149** | **0.2605** | | **1,381.0461** | **1,381.0461** | **0.0788** | **0.1497** | **1,427.6212** |

### 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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | 0.0000 | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | **0.0000** | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2025

**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 | 0.0260 | 1.7052 | 0.5103 | 7.5700e-003 | 0.2443 | 0.0124 | 0.2567 | 0.0669 | 0.0119 | 0.0788 | | 844.7867 | 844.7867 | 0.0632 | 0.1348 | 886.5270 |
| 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 |
| Worker | 0.2238 | 0.1383 | 1.8076 | 5.1500e-003 | 0.6736 | 3.3300e-003 | 0.6769 | 0.1787 | 3.0700e-003 | 0.1817 | | 536.2594 | 536.2594 | 0.0156 | 0.0149 | 541.0942 |
| **Total** | **0.2498** | **1.8434** | **2.3179** | **0.0127** | **0.9179** | **0.0157** | **0.9336** | **0.2456** | **0.0149** | **0.2605** | | **1,381.0461** | **1,381.0461** | **0.0788** | **0.1497** | **1,427.6212** |

## 3.4 Installation/Backfill - Open Trench - 2026

**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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2026

### 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 | 0.0257 | 1.6740 | 0.5215 | 7.3900e-003 | 0.2443 | 0.0123 | 0.2566 | 0.0669 | 0.0118 | 0.0787 | | 827.4482 | 827.4482 | 0.0650 | 0.1321 | 868.4421 |
| 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 |
| Worker | 0.2107 | 0.1258 | 1.7027 | 4.9800e-003 | 0.6736 | 3.1700e-003 | 0.6768 | 0.1787 | 2.9100e-003 | 0.1816 | | 523.5994 | 523.5994 | 0.0143 | 0.0141 | 528.1482 |
| **Total** | **0.2364** | **1.7998** | **2.2242** | **0.0124** | **0.9179** | **0.0155** | **0.9334** | **0.2456** | **0.0147** | **0.2603** | | **1,351.0475** | **1,351.0475** | **0.0793** | **0.1462** | **1,396.5903** |

### 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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | 0.0000 | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | **0.0000** | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2026

**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 | 0.0257 | 1.6740 | 0.5215 | 7.3900e-003 | 0.2443 | 0.0123 | 0.2566 | 0.0669 | 0.0118 | 0.0787 | | 827.4482 | 827.4482 | 0.0650 | 0.1321 | 868.4421 |
| 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 |
| Worker | 0.2107 | 0.1258 | 1.7027 | 4.9800e-003 | 0.6736 | 3.1700e-003 | 0.6768 | 0.1787 | 2.9100e-003 | 0.1816 | | 523.5994 | 523.5994 | 0.0143 | 0.0141 | 528.1482 |
| **Total** | **0.2364** | **1.7998** | **2.2242** | **0.0124** | **0.9179** | **0.0155** | **0.9334** | **0.2456** | **0.0147** | **0.2603** | | **1,351.0475** | **1,351.0475** | **0.0793** | **0.1462** | **1,396.5903** |

## 3.4 Installation/Backfill - Open Trench - 2027

**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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2027

### 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 | 0.0254 | 1.6402 | 0.5302 | 7.2000e-003 | 0.2443 | 0.0122 | 0.2565 | 0.0669 | 0.0117 | 0.0786 | | 808.4789 | 808.4789 | 0.0667 | 0.1292 | 848.6402 |
| 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 |
| Worker | 0.1985 | 0.1152 | 1.6119 | 4.8400e-003 | 0.6736 | 2.9800e-003 | 0.6766 | 0.1787 | 2.7400e-003 | 0.1814 | | 512.1554 | 512.1554 | 0.0131 | 0.0134 | 516.4601 |
| **Total** | **0.2239** | **1.7553** | **2.1420** | **0.0120** | **0.9179** | **0.0152** | **0.9331** | **0.2456** | **0.0144** | **0.2600** | | **1,320.6344** | **1,320.6344** | **0.0798** | **0.1425** | **1,365.1003** |

### 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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | 0.0000 | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | **0.0000** | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2027

**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 | 0.0254 | 1.6402 | 0.5302 | 7.2000e-003 | 0.2443 | 0.0122 | 0.2565 | 0.0669 | 0.0117 | 0.0786 | | 808.4789 | 808.4789 | 0.0667 | 0.1292 | 848.6402 |
| 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 |
| Worker | 0.1985 | 0.1152 | 1.6119 | 4.8400e-003 | 0.6736 | 2.9800e-003 | 0.6766 | 0.1787 | 2.7400e-003 | 0.1814 | | 512.1554 | 512.1554 | 0.0131 | 0.0134 | 516.4601 |
| **Total** | **0.2239** | **1.7553** | **2.1420** | **0.0120** | **0.9179** | **0.0152** | **0.9331** | **0.2456** | **0.0144** | **0.2600** | | **1,320.6344** | **1,320.6344** | **0.0798** | **0.1425** | **1,365.1003** |

## 3.4 Installation/Backfill - Open Trench - 2028

**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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2028

### 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 | 0.0252 | 1.6119 | 0.5402 | 7.0200e-003 | 0.2443 | 0.0121 | 0.2564 | 0.0669 | 0.0115 | 0.0785 | | 790.2530 | 790.2530 | 0.0683 | 0.1264 | 829.6158 |
| 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 |
| Worker | 0.1870 | 0.1061 | 1.5354 | 4.7100e-003 | 0.6736 | 2.7800e-003 | 0.6764 | 0.1787 | 2.5600e-003 | 0.1812 | | 502.0532 | 502.0532 | 0.0121 | 0.0127 | 506.1507 |
| **Total** | **0.2122** | **1.7180** | **2.0756** | **0.0117** | **0.9180** | **0.0148** | **0.9328** | **0.2456** | **0.0141** | **0.2597** | | **1,292.3062** | **1,292.3062** | **0.0804** | **0.1391** | **1,335.7665** |

### 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 | 0.1076 | 0.9915 | 1.5251 | 2.2500e-003 | | 0.0399 | 0.0399 | | 0.0372 | 0.0372 | 0.0000 | 210.3345 | 210.3345 | 0.0633 | | 211.9169 |
| **Total** | **0.1076** | **0.9915** | **1.5251** | **2.2500e-003** | | **0.0399** | **0.0399** | | **0.0372** | **0.0372** | **0.0000** | **210.3345** | **210.3345** | **0.0633** | | **211.9169** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.4 Installation/Backfill - Open Trench - 2028

**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 | 0.0252 | 1.6119 | 0.5402 | 7.0200e-003 | 0.2443 | 0.0121 | 0.2564 | 0.0669 | 0.0115 | 0.0785 | | 790.2530 | 790.2530 | 0.0683 | 0.1264 | 829.6158 |
| 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 |
| Worker | 0.1870 | 0.1061 | 1.5354 | 4.7100e-003 | 0.6736 | 2.7800e-003 | 0.6764 | 0.1787 | 2.5600e-003 | 0.1812 | | 502.0532 | 502.0532 | 0.0121 | 0.0127 | 506.1507 |
| **Total** | **0.2122** | **1.7180** | **2.0756** | **0.0117** | **0.9180** | **0.0148** | **0.9328** | **0.2456** | **0.0141** | **0.2597** | | **1,292.3062** | **1,292.3062** | **0.0804** | **0.1391** | **1,335.7665** |

## 3.5 Installation - Trenchless - 2025

**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 | 0.5096 | 4.2750 | 3.5470 | 0.0116 | | 0.1588 | 0.1588 | | 0.1490 | 0.1490 | | 1,090.3090 | 1,090.3090 | 0.3148 | | 1,098.1786 |
| **Total** | **0.5096** | **4.2750** | **3.5470** | **0.0116** | | **0.1588** | **0.1588** | | **0.1490** | **0.1490** | | **1,090.3090** | **1,090.3090** | **0.3148** | | **1,098.1786** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2025

### 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 | 0.0632 | 4.1445 | 1.2404 | 0.0184 | 0.5937 | 0.0301 | 0.6238 | 0.1627 | 0.0288 | 0.1914 | | 2,053.3134 | 2,053.3134 | 0.1535 | 0.3276 | 2,154.7662 |
| 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 |
| Worker | 0.2238 | 0.1383 | 1.8076 | 5.1500e-003 | 0.6736 | 3.3300e-003 | 0.6769 | 0.1787 | 3.0700e-003 | 0.1817 | | 536.2594 | 536.2594 | 0.0156 | 0.0149 | 541.0942 |
| **Total** | **0.2870** | **4.2828** | **3.0480** | **0.0235** | **1.2673** | **0.0334** | **1.3007** | **0.3413** | **0.0319** | **0.3732** | | **2,589.5728** | **2,589.5728** | **0.1691** | **0.3425** | **2,695.8603** |

### 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 | 0.5096 | 4.2750 | 3.5470 | 0.0116 | | 0.1588 | 0.1588 | | 0.1490 | 0.1490 | 0.0000 | 1,090.3090 | 1,090.3090 | 0.3148 | | 1,098.1786 |
| **Total** | **0.5096** | **4.2750** | **3.5470** | **0.0116** | | **0.1588** | **0.1588** | | **0.1490** | **0.1490** | **0.0000** | **1,090.3090** | **1,090.3090** | **0.3148** | | **1,098.1786** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2025

**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 | 0.0632 | 4.1445 | 1.2404 | 0.0184 | 0.5937 | 0.0301 | 0.6238 | 0.1627 | 0.0288 | 0.1914 | | 2,053.3134 | 2,053.3134 | 0.1535 | 0.3276 | 2,154.7662 |
| 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 |
| Worker | 0.2238 | 0.1383 | 1.8076 | 5.1500e-003 | 0.6736 | 3.3300e-003 | 0.6769 | 0.1787 | 3.0700e-003 | 0.1817 | | 536.2594 | 536.2594 | 0.0156 | 0.0149 | 541.0942 |
| **Total** | **0.2870** | **4.2828** | **3.0480** | **0.0235** | **1.2673** | **0.0334** | **1.3007** | **0.3413** | **0.0319** | **0.3732** | | **2,589.5728** | **2,589.5728** | **0.1691** | **0.3425** | **2,695.8603** |

## 3.5 Installation - Trenchless - 2026

**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 | 0.5096 | 4.2750 | 3.5470 | 0.0116 | | 0.1588 | 0.1588 | | 0.1490 | 0.1490 | | 1,090.3090 | 1,090.3090 | 0.3148 | | 1,098.1786 |
| **Total** | **0.5096** | **4.2750** | **3.5470** | **0.0116** | | **0.1588** | **0.1588** | | **0.1490** | **0.1490** | | **1,090.3090** | **1,090.3090** | **0.3148** | | **1,098.1786** |

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2026

### 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 | 0.0625 | 4.0688 | 1.2675 | 0.0180 | 0.5938 | 0.0299 | 0.6237 | 0.1627 | 0.0286 | 0.1913 | | 2,011.1709 | 2,011.1709 | 0.1580 | 0.3211 | 2,110.8096 |
| 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 |
| Worker | 0.2107 | 0.1258 | 1.7027 | 4.9800e-003 | 0.6736 | 3.1700e-003 | 0.6768 | 0.1787 | 2.9100e-003 | 0.1816 | | 523.5994 | 523.5994 | 0.0143 | 0.0141 | 528.1482 |
| **Total** | **0.2732** | **4.1946** | **2.9702** | **0.0229** | **1.2674** | **0.0331** | **1.3004** | **0.3413** | **0.0315** | **0.3729** | | **2,534.7702** | **2,534.7702** | **0.1723** | **0.3352** | **2,638.9578** |

### 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 | 0.5096 | 4.2750 | 3.5470 | 0.0116 | | 0.1588 | 0.1588 | | 0.1490 | 0.1490 | 0.0000 | 1,090.3090 | 1,090.3090 | 0.3148 | | 1,098.1786 |
| **Total** | **0.5096** | **4.2750** | **3.5470** | **0.0116** | | **0.1588** | **0.1588** | | **0.1490** | **0.1490** | **0.0000** | **1,090.3090** | **1,090.3090** | **0.3148** | | **1,098.1786** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.5 Installation - Trenchless - 2026

**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 | 0.0625 | 4.0688 | 1.2675 | 0.0180 | 0.5938 | 0.0299 | 0.6237 | 0.1627 | 0.0286 | 0.1913 | | 2,011.1709 | 2,011.1709 | 0.1580 | 0.3211 | 2,110.8096 |
| 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 |
| Worker | 0.2107 | 0.1258 | 1.7027 | 4.9800e-003 | 0.6736 | 3.1700e-003 | 0.6768 | 0.1787 | 2.9100e-003 | 0.1816 | | 523.5994 | 523.5994 | 0.0143 | 0.0141 | 528.1482 |
| **Total** | **0.2732** | **4.1946** | **2.9702** | **0.0229** | **1.2674** | **0.0331** | **1.3004** | **0.3413** | **0.0315** | **0.3729** | | **2,534.7702** | **2,534.7702** | **0.1723** | **0.3352** | **2,638.9578** |

## 3.6 Paving - Open Trench - 2028

**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 | 0.4339 | 4.0658 | 5.7647 | 0.0118 | | 0.1841 | 0.1841 | | 0.1701 | 0.1701 | | 1,130.1965 | 1,130.1965 | 0.3586 | | 1,139.1614 |
| Paving | 0.6550 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.0889** | **4.0658** | **5.7647** | **0.0118** | | **0.1841** | **0.1841** | | **0.1701** | **0.1701** | | **1,130.1965** | **1,130.1965** | **0.3586** | | **1,139.1614** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Paving - Open Trench - 2028

### 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 | 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 |
| Worker | 0.0297 | 0.0168 | 0.2434 | 7.5000e-004 | 0.1068 | 4.4000e-004 | 0.1072 | 0.0283 | 4.1000e-004 | 0.0287 | | 79.5938 | 79.5938 | 1.9100e-003 | 2.0200e-003 | 80.2434 |
| **Total** | **0.0297** | **0.0168** | **0.2434** | **7.5000e-004** | **0.1068** | **4.4000e-004** | **0.1072** | **0.0283** | **4.1000e-004** | **0.0287** | | **79.5938** | **79.5938** | **1.9100e-003** | **2.0200e-003** | **80.2434** |

### 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 | 0.4339 | 4.0658 | 5.7647 | 0.0118 | | 0.1841 | 0.1841 | | 0.1701 | 0.1701 | 0.0000 | 1,130.1965 | 1,130.1965 | 0.3586 | | 1,139.1614 |
| Paving | 0.6550 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.0889** | **4.0658** | **5.7647** | **0.0118** | | **0.1841** | **0.1841** | | **0.1701** | **0.1701** | **0.0000** | **1,130.1965** | **1,130.1965** | **0.3586** | | **1,139.1614** |

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 3.6 Paving - Open Trench - 2028

**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 | 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 |
| Worker | 0.0297 | 0.0168 | 0.2434 | 7.5000e-004 | 0.1068 | 4.4000e-004 | 0.1072 | 0.0283 | 4.1000e-004 | 0.0287 | | 79.5938 | 79.5938 | 1.9100e-003 | 2.0200e-003 | 80.2434 |
| **Total** | **0.0297** | **0.0168** | **0.2434** | **7.5000e-004** | **0.1068** | **4.4000e-004** | **0.1072** | **0.0283** | **4.1000e-004** | **0.0287** | | **79.5938** | **79.5938** | **1.9100e-003** | **2.0200e-003** | **80.2434** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

# 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 | 2.2800e-003 | 1.1700e-003 | 0.0108 | 0.0000 | 9.0000e-005 | 1.0000e-005 | 1.0000e-004 | 2.0000e-005 | 1.0000e-005 | 3.0000e-005 | | 0.3316 | 0.3316 | 2.1000e-004 | 1.1000e-004 | 0.3687 |
| Unmitigated | 2.2800e-003 | 1.1700e-003 | 0.0108 | 0.0000 | 9.0000e-005 | 1.0000e-005 | 1.0000e-004 | 2.0000e-005 | 1.0000e-005 | 3.0000e-005 | | 0.3316 | 0.3316 | 2.1000e-004 | 1.1000e-004 | 0.3687 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| Other Asphalt Surfaces | 1.96 | 0.00 | 0.00 | 31 | 31 |
| Total | 1.96 | 0.00 | 0.00 | 31 | 31 |

## 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 |
| Other Asphalt Surfaces | 0.06 | 7.30 | 7.30 | 100.00 | 0.00 | 0.00 | 100 | 0 | 0 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other Asphalt Surfaces | 0.564931 | 0.058891 | 0.167885 | 0.120679 | 0.025398 | 0.007381 | 0.013024 | 0.006272 | 0.000657 | 0.000386 | 0.028170 | 0.000621 | 0.005705 |

## 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 | | | | | |
| Other Asphalt Surfaces | 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** |

## 5.2 Energy by Land Use - NaturalGas

**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 | | | | | |
| Other Asphalt Surfaces | 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 | 0.0862 | 1.8000e-004 | 0.0200 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0429 | 0.0429 | 1.1000e-004 | | 0.0457 |
| Unmitigated | 0.0862 | 1.8000e-004 | 0.0200 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0429 | 0.0429 | 1.1000e-004 | | 0.0457 |

Calleguas SMP Phase 4 - AQ - Ventura County APCD Air District, Winter

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 0.0149 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.0694 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.8400e-003 | 1.8000e-004 | 0.0200 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0429 | 0.0429 | 1.1000e-004 | | 0.0457 |
| **Total** | **0.0862** | **1.8000e-004** | **0.0200** | **0.0000** | | **7.0000e-005** | **7.0000e-005** | | **7.0000e-005** | **7.0000e-005** | | **0.0429** | **0.0429** | **1.1000e-004** | | **0.0457** |

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 | 0.0149 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.0694 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.8400e-003 | 1.8000e-004 | 0.0200 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0429 | 0.0429 | 1.1000e-004 | | 0.0457 |
| **Total** | **0.0862** | **1.8000e-004** | **0.0200** | **0.0000** | | **7.0000e-005** | **7.0000e-005** | | **7.0000e-005** | **7.0000e-005** | | **0.0429** | **0.0429** | **1.1000e-004** | | **0.0457** |

# 7.0 Water Detail

## 7.1 Mitigation Measures Water

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied**

## 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 |
|---|---|---|---|---|---|---|

## 10.0 Stationary Equipment

**Fire Pumps and Emergency Generators**

| Equipment Type | Number | Hours/Day | Hours/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|

**Boilers**

| Equipment Type | Number | Heat Input/Day | Heat Input/Year | Boiler Rating | Fuel Type |
|---|---|---|---|---|---|

**User Defined Equipment**

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation

# Appendix B

Energy Calculations

# Calleguas SMP - Phase 3

Last Updated: 1/20/2023

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

| | | | |
|---|---|---|---|
| HP: 0 to 100 | 0.0588 | HP: Greater than 100 | 0.0529 |

*Values above are expressed in gallons per horsepower-hour/BSFC.*

**CONSTRUCTION EQUIPMENT**

| Construction Equipment | # | Hours per Day | Horsepower | Load Factor | Construction Phase | Fuel Used (gallons) |
|---|---|---|---|---|---|---|
| Excavators | 1 | 4 | 158 | 0.38 | Excavation - Pipe in a Bridge | 127 |
| Tractors/Loaders/Backhoes | 1 | 4 | 97 | 0.37 | Installation - Pipe in a Bridge | 84 |
| Concrete/Industrial Saws | 1 | 5 | 81 | 0.73 | Excavation - Trenchless | 1,373 |
| Excavators | 1 | 5 | 158 | 0.38 | Excavation - Trenchless | 1,254 |
| Generator Sets | 1 | 5 | 84 | 0.74 | Excavation - Trenchless | 1,443 |
| Off-Highway Trucks | 1 | 2 | 402 | 0.38 | Excavation - Trenchless | 1,276 |
| Air Compressors | 1 | 5 | 78 | 0.48 | Excavation - Open Trench | 3,542 |
| Concrete/Industrial Saws | 1 | 5 | 81 | 0.73 | Excavation - Open Trench | 5,594 |
| Excavators | 1 | 5 | 158 | 0.38 | Excavation - Open Trench | 5,110 |
| Generator Sets | 1 | 5 | 84 | 0.74 | Excavation - Open Trench | 5,881 |
| Off-Highway Trucks | 1 | 2 | 402 | 0.38 | Excavation - Open Trench | 5,200 |
| Rubber Tired Loaders | 1 | 5 | 203 | 0.36 | Excavation - Open Trench | 6,219 |
| Bore/Drill Rigs | 1 | 5 | 221 | 0.5 | Installation - Trenchless | 964 |
| Cranes | 1 | 5 | 231 | 0.29 | Installation - Trenchless | 584 |
| Dumpers/Tenders | 1 | 5 | 16 | 0.38 | Installation - Trenchless | 59 |
| Welders | 1 | 5 | 46 | 0.45 | Installation - Trenchless | 201 |
| Plate Compactors | 1 | 5 | 8 | 0.43 | Installation/Backfill - Open Trench | 325 |
| Tractors/Loaders/Backhoes | 1 | 5 | 97 | 0.37 | Installation/Backfill - Open Trench | 3,396 |
| Cement and Mortar Mixers | 1 | 5 | 9 | 0.56 | Paving - Open Trench | 15 |
| Pavers | 1 | 5 | 130 | 0.42 | Paving - Open Trench | 144 |
| Paving Equipment | 1 | 5 | 132 | 0.36 | Paving - Open Trench | 126 |
| Rollers | 1 | 5 | 80 | 0.38 | Paving - Open Trench | 89 |
| Surfacing Equipment | 1 | 5 | 263 | 0.3 | Paving - Open Trench | 209 |
| | | | | | **Total Fuel Used** | **43,214** |
| | | | | | | **(Gallons)** |

| Construction Phase | Days of Operation |
|---|---|
| Excavation - Pipe in a Bridge | 10 |
| Installation - Pipe in a Bridge | 10 |
| Excavation - Trenchless | 79 |
| Excavation - Open Trench | 322 |
| Installation - Trenchless | 33 |
| Installation/Backfill - Open Trench | 322 |
| Paving - Open Trench | 10 |
| Total Days | 786 |

**WORKER TRIPS**

| Constuction Phase | MPG [2] | Trips | Trip Length (miles) | Fuel Used (gallons) |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Excavation - Pipe in a Bridge | 24.1 | 3 | 10.8 | 13.44 |
| Installation - Pipe in a Bridge | 24.1 | 45 | 10.8 | 201.66 |
| Excavation - Trenchless | 24.1 | 10 | 10.8 | 354.02 |
| Excavation - Open Trench | 24.1 | 15 | 10.8 | 2164.48 |
| Installation - Trenchless | 24.1 | 45 | 10.8 | 665.48 |
| Installation/Backfill - Open Trench | 24.1 | 45 | 10.8 | 6493.44 |
| Paving - Open Trench | 24.1 | 13 | 10.8 | 58.26 |
| | | | **Total Fuel Used** | **9,950.79** |

**HAULING AND VENDOR TRIPS**

| Trip Class | MPG [2] | Trips | Trip Length (miles) | (gallons) |
|---|---|---|---|---|
| **HAULING TRIPS** | | | | |
| Excavation - Pipe in a Bridge | 7.5 | 0 | 20.0 | 0.00 |
| Installation - Pipe in a Bridge | 7.5 | 140 | 20.0 | 373.33 |
| Excavation - Trenchless | 7.5 | 1095 | 20.0 | 2920.00 |
| Excavation - Open Trench | 7.5 | 0 | 20.0 | 0.00 |
| Installation - Trenchless | 7.5 | 451 | 20.0 | 1202.67 |
| Installation/Backfill - Open Trench | 7.5 | 4505 | 20.0 | 12013.33 |
| | | | **Total Fuel Used** | **16,509.33** |
| **VENDOR TRIPS** | | | | |
| Excavation - Pipe in a Bridge | 7.5 | 0 | 14.7 | 0.00 |
| Installation - Pipe in a Bridge | 7.5 | 0 | 14.7 | 0.00 |
| Excavation - Trenchless | 7.5 | 0 | 14.7 | 0.00 |
| Excavation - Open Trench | 7.5 | 0 | 14.7 | 0.00 |
| Installation - Trenchless | 7.5 | 0 | 14.7 | 0.00 |
| Installation/Backfill - Open Trench | 7.5 | 0 | 14.7 | 0.00 |
| | | | **Total Fuel Used** | **-** |

| | |
|---|---|
| **Total Gasoline Consumption (gallons)** | **9,951** |
| **Total Diesel Consumption (gallons)** | **59,723** |

**Sources:**

**[1]** United States Environmental Protection Agency. 2021. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2* . September. Available at: https://www.epa.gov/system/files/documents/2021-08/420r21021.pdf.

**[2]** United States Department of Transportation, Bureau of Transportation Statistics. 2021. *National Transportation Statistics* . Available at: https://www.bts.gov/topics/national-transportation-statistics.

# Calleguas SMP - Phase 4

Last Updated: 1/20/2023

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

| | | | |
|---|---|---|---|
| HP: 0 to 100 | 0.0588 | HP: Greater than 100 | 0.0529 |

*Values above are expressed in gallons per horsepower-hour/BSFC.*

**CONSTRUCTION EQUIPMENT**

| Construction Equipment | # | Hours per Day | Horsepower | Load Factor | Construction Phase | Fuel Used (gallons) |
|---|---|---|---|---|---|---|
| Concrete/Industrial Saws | 1 | 5 | 81 | 0.73 | Excavation - Trenchless | 1,181 |
| Excavators | 1 | 5 | 158 | 0.38 | Excavation - Trenchless | 1,079 |
| Generator Sets | 1 | 5 | 84 | 0.74 | Excavation - Trenchless | 1,242 |
| Off-Highway Trucks | 1 | 2 | 402 | 0.38 | Excavation - Trenchless | 1,098 |
| Air Compressors | 1 | 5 | 78 | 0.48 | Excavation - Open Trench | 6,688 |
| Concrete/Industrial Saws | 1 | 5 | 81 | 0.73 | Excavation - Open Trench | 10,563 |
| Excavators | 1 | 5 | 158 | 0.38 | Excavation - Open Trench | 9,648 |
| Generator Sets | 1 | 5 | 84 | 0.74 | Excavation - Open Trench | 11,104 |
| Off-Highway Trucks | 1 | 2 | 402 | 0.38 | Excavation - Open Trench | 9,819 |
| Rubber Tired Loaders | 1 | 5 | 203 | 0.36 | Excavation - Open Trench | 11,743 |
| Bore/Drill Rigs | 1 | 5 | 221 | 0.5 | Installation - Trenchless | 818 |
| Cranes | 1 | 5 | 231 | 0.29 | Installation - Trenchless | 496 |
| Dumpers/Tenders | 1 | 5 | 16 | 0.38 | Installation - Trenchless | 50 |
| Welders | 1 | 5 | 46 | 0.45 | Installation - Trenchless | 170 |
| Plate Compactors | 1 | 5 | 8 | 0.43 | Installation/Backfill - Open Trench | 615 |
| Tractors/Loaders/Backhoes | 1 | 5 | 97 | 0.37 | Installation/Backfill - Open Trench | 6,412 |
| Cement and Mortar Mixers | 1 | 5 | 9 | 0.56 | Paving - Open Trench | 27 |
| Pavers | 1 | 5 | 130 | 0.42 | Paving - Open Trench | 260 |
| Paving Equipment | 1 | 5 | 132 | 0.36 | Paving - Open Trench | 226 |
| Rollers | 1 | 5 | 80 | 0.38 | Paving - Open Trench | 161 |
| Surfacing Equipment | 1 | 5 | 263 | 0.3 | Paving - Open Trench | 375 |
| | | | | | **Total Fuel Used** | **73,775** |
| | | | | | | **(Gallons)** |

| Construction Phase | Days of Operation |
|---|---|
| Excavation - Trenchless | 68 |
| Excavation - Open Trench | 608 |
| Installation - Trenchless | 28 |
| Installation/Backfill - Open Trench | 608 |
| Paving - Open Trench | 18 |
| Total Days | 1330 |

**WORKER TRIPS**

| Constuction Phase | MPG [2] | Trips | Trip Length (miles) | Fuel Used (gallons) |
|---|---|---|---|---|
| Excavation - Trenchless | 24.1 | 10 | 10.8 | 304.73 |
| Excavation - Open Trench | 24.1 | 15 | 10.8 | 4086.97 |
| Installation - Trenchless | 24.1 | 82 | 10.8 | 1028.91 |
| Installation/Backfill - Open Trench | 24.1 | 82 | 10.8 | 22342.11 |
| Paving - Open Trench | 24.1 | 13 | 10.8 | 104.86 |

| | | | | |
|---|---|---|---|---|
| | | | **Total Fuel Used** | **27,867.59** |

**HAULING AND VENDOR TRIPS**

| Trip Class | MPG [2] | Trips | Trip Length (miles) | (gallons) |
|---|---|---|---|---|
| **HAULING TRIPS** | | | | |
| Excavation - Trenchless | 7.5 | 392 | 20.0 | 1045.33 |
| Excavation - Open Trench | 7.5 | 0 | 20.0 | 0.00 |
| Installation - Trenchless | 7.5 | 952 | 20.0 | 2538.67 |
| Installation/Backfill - Open Trench | 7.5 | 8505 | 20.0 | 22680.00 |
| Paving - Open Trench | 7.5 | 0 | 20.0 | 0.00 |
| | | | **Total Fuel Used** | **26,264.00** |
| **VENDOR TRIPS** | | | | |
| Excavation - Trenchless | 7.5 | 0 | 14.7 | 0.00 |
| Excavation - Open Trench | 7.5 | 0 | 14.7 | 0.00 |
| Installation - Trenchless | 7.5 | 0 | 14.7 | 0.00 |
| Installation/Backfill - Open Trench | 7.5 | 0 | 14.7 | 0.00 |
| Paving - Open Trench | 7.5 | 0 | 14.7 | 0.00 |
| | | | **Total Fuel Used** | **-** |

| | |
|---|---|
| **Total Gasoline Consumption (gallons)** | **27,868** |
| **Total Diesel Consumption (gallons)** | **100,039** |

**Sources:**

**[1]** United States Environmental Protection Agency. 2021. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES3.0.2* . September. Available at: https://www.epa.gov/system/files/documents/2021-08/420r21021.pdf.

**[2]** United States Department of Transportation, Bureau of Transportation Statistics. 2021. *National Transportation Statistics* . Available at: https://www.bts.gov/topics/national-transportation-statistics.

# Appendix B

Scoping Comment Letters Received

**DEPARTMENT OF TRANSPORTATION**
DISTRICT 7
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE (213) 269-1124
FAX (213) 897-1337
TTY 711
www.dot.ca.gov

*Making Conservation a California Way of Life*

March 15, 2023

Ms. Jennifer Lancaster
Calleguas Municipal Water District
2100 Olsen Road
Thousand Oaks, CA 91360

RE: Calleguas Regional Salinity Management Pipeline Phases 3 and 4
SCH # 2023020421
Vic. VEN-Various Locations: SR-23/SR34/ US-101/SR-01
GTS # VEN-2023-00534-NOP

Dear Ms. Lancaster:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above-referenced NOP. The Calleguas Regional Salinity Management Pipeline (CRSMP) is a brine and treated wastewater conveyance pipeline designed to manage the use of high salinity groundwater and treated municipal wastewater, dispose of the brine produced by enhanced water treatment, and facilitate the development of water sources otherwise unavailable due to poor water quality. The proposed project would extend the CRSMP approximately 14 miles inland from the existing eastern terminus, enabling connections to additional dischargers in Simi Valley and unincorporated Ventura County. Discharges from these phases, as well as previously constructed phases, would intermingle and combine to create the effluent discharged through the existing ocean outfall. Dischargers connecting to Phases 3 and 4 would be subject to existing NPDES constituent limits at the outfall. Any new infrastructure needed to connect specific dischargers to the project would be subject to separate CEQA review.

The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. Senate Bill 743 (2013) has codified into CEQA law and mandated that CEQA review of transportation impacts of proposed development be modified by using Vehicle Miles Traveled (VMT) as the primary metric in identifying transportation impacts for all future development projects. You may reference the Governor's Office of Planning and Research (OPR) for more information:

https://opr.ca.gov/ceqa/#guidelines-updates

As a reminder, VMT is the standard transportation analysis metric in CEQA for land use projects after July 1, 2020, which is the statewide implementation date.

Caltrans is aware of challenges that the region faces in identifying viable solutions to alleviating congestion on State and Local facilities. With limited room to expand vehicular capacity, this development should incorporate multi-modal and complete streets transportation elements that will actively promote alternatives to car use and better manage existing parking assets. Prioritizing and allocating space to efficient modes of travel such as bicycling and public transit can allow streets to transport more people in a fixed amount of right-of-way.

Caltrans supports the implementation of complete streets and pedestrian safety measures such as road diets and other traffic calming measures. Please note the Federal Highway Administration (FHWA) recognizes the road diet treatment as a proven safety countermeasure, and the cost of a road diet can be significantly reduced if implemented in tandem with routine street resurfacing. Overall, the environmental report should ensure all modes are served well by planning and development activities. This includes reducing single occupancy vehicle trips, ensuring safety, reducing vehicle miles traveled, supporting accessibility, and reducing greenhouse gas emissions.

We encourage the Lead Agency to evaluate the potential of Transportation Demand Management (TDM) strategies and Intelligent Transportation System (ITS) applications in order to better manage the transportation network, as well as transit service and bicycle or pedestrian connectivity improvements. For additional TDM options, please refer to the Federal Highway Administration's *Integrating Demand Management into the Transportation Planning Process: A Desk Reference* (Chapter 8). This reference is available online at:

http://www.ops.fhwa.dot.gov/publications/fhwahop12035/fhwahop12035.pdf

You can also refer to the 2010 *Quantifying Greenhouse Gas Mitigation Measures* report by the California Air Pollution Control Officers Association (CAPCOA), which is available online at:

http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

Also, Caltrans has published the VMT-focused Transportation Impact Study Guide (TISG), dated May 20, 2020 and the Caltrans Interim Land Development and Intergovernmental Review (LD-IGR) Safety Review Practitioners Guidance, prepared in

On December 18, 2020. You can review the SB 743 Implementation Resource at the following link:

https://dot.ca.gov/programs/sustainability/sb-743/sb743-resources

Construction of the proposed project would temporarily increase traffic associated with project roadways. Project-generated traffic during construction would include worker-related commuter trips, trucks used for delivering construction equipment, and trucks used for delivering and hauling construction materials and wastes. Trenchless construction methods would be used to cross Somis Road, Santa Rosa Road, and busy intersections to minimize traffic impacts. However, lane closures during pipeline construction activities would be necessary. Project construction would result in temporary disruption to the existing circulation system. Other than a short segment of alignment along Santa Rosa Road and in front of certain driveways requiring flagger-controlled traffic controls, a minimum of one lane of traffic in each direction would be open during project construction. Construction phasing across arterial roads and driveways would be implemented to maintain access across these locations. Properties with multiple driveways and access points would have only one driveway closed at a time to maintain access to the property. In addition, traffic control plans would be prepared as part of the encroachment permitting process for all work within the public ROW.

Potential impacts associated with construction-related traffic, project-related operational traffic on local and regional transportation facilities, vehicle miles traveled, site access/internal circulation, traffic hazards, and emergency access in the project area should be lightly discussed in the Draft EIR.

Caltrans encourages lead agencies to prepare traffic safety impact analysis for this development in the California Environmental Quality Act (CEQA) review process using Caltrans guidelines above on the State facilities so that, through partnerships and collaboration, California can reach zero fatalities and serious injuries by 2050.

If you have any questions, please feel free to contact Mr. Alan Lin the project coordinator at (213) 269-1124 and refer to GTS # VEN-2023-00534AL-NOP.

Sincerely,

Miya Edmonson

MIYA EDMONSON
LDR/CEQA Branch Chief

email: State Clearinghouse

# City of Camarillo

601 Carmen Drive, Camarillo, CA 93010 / Ph: 805.388.5360 / planning@cityofcamarillo.org


March 23, 2023

Jennifer Lancaster
Calleguas Municipal Water District
2100 Olsen Drive
Thousand Oaks, CA 91360-6800

**SUBJECT: Notice of Preparation – SMP, Phases 3 and 4**

Dear Ms. Lancaster,

The City of Camarillo received a Notice of Preparation of an Environmental Impact Report circulated by the Calleguas Municipal Water District (Lead Agency). The Lead Agency's EIR is for the construction of phases 3 and 4 of the Calleguas Regional Salinity Management Pipeline (CRSMP [Project]), pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect the City of Camarillo.

The City of Camarillo is also submitting comments as a Responsible Agency under CEQA, (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). The City expects that it may need to exercise regulatory authority as the plan checking, permitting, and inspection agency for Capital Improvement Projects (CIP) that occur within Camarillo City limits.

**COMMENTS AND RECOMMENDATIONS**

The City of Camarillo offers the following comments and recommendations to assist the Lead Agency in adequately identifying and/or mitigating the Project's significant or potentially significant impacts.

1. The City of Camarillo had adopted Guidelines for Thresholds of Significance by which the City measures and evaluates all projects in regard to environmental impacts. For all CEQA analyses that will be performed for project review in Camarillo, the City's adopted thresholds must be used.
2. The new construction cannot affect the operation of the City of Camarillo's Desalter. Traffic access to the facility must be always maintained. The shutdown for tie-in to the existing SMP must be coordinated during a scheduled maintenance event at the Desalter Facility.
3. Ensure that the new/future discharges from the upstream user will not affect the future availability in the brine line for Camarillo's Desalter.
4. Connection to the existing SMP appears to be near the southwest corner of the Desalter property. Construction shall not impact the intersection of Lewis/Somis Road and Las Posas/Upland Road.

5. It is assumed that the start of construction will be to Jack and Bore across Somis Road and the Railroad Tracks. The launch pit will likely be in the private lot with the trees and the receiving pit (20'x20') will be located either in the private driveway or the private landscaping area at the corner of Lewis Road and Las Posas/Upland Roads. Please confirm that all construction work will be located on either private property or in the Lewis/Somis Road Right-of-Way. If work will be located within or impact City of Camarillo public right-of-way, then a plan shall be submitted to the City of Camarillo for review and comment, and subject to City of Camarillo approval.
6. Construction on Upland Road will be disruptive to the existing street and inconvenient to travelers. Upland Road is two lanes both ways with residential homes along the alignment which will be exposed to construction impacts, such as: noise, dust, diesel exhaust, etc.
    a. Identify options to relocate the alignment to reduce/eliminate construction in Upland Road. For example, investigate installation along the same alignment as the Calleguas water main.
7. When the alignment reaches Santa Rosa Road, the disruption at that intersection will be significant. In addition, the SMP will need to cross the Quito Drain and the Camrosa Drain, prior to proceeding into Unincorporated Ventura County. Consider an alternative alignment that will not disrupt the intersection of Upland Road and Santa Rosa Road.
8. Any construction work within or impacting City of Camarillo public right-of-way, including the bridge on Upland Road, will require an encroachment permit from the City of Camarillo in advance of construction and will be subject to all associated requirements.
9. There is a potential to significantly impact the City of Camarillo's Fixed Transit Route between Lewis Road and Mission Oaks Blvd. Work must be closely coordinated with Transit staff to ensure that scheduled pickups and drop off times will be maintained.
10. Prior to construction on Upland Road, Calleguas will need to upgrade the traffic signal controllers at each of the intersections from Lewis Road to Santa Rosa Road to utilize traffic cameras. The new traffic control systems and cameras shall be approved by the City of Camarillo during design of SMP Phase 3. The previous phase of the SMP installation had the same requirement to keep traffic flowing while the work in the road is being performed.

If you have any questions or if clarification is needed, please feel free to contact Paul McClaren, Senior Planner, at 805.388.5365 or via e-mail at pmcclaren@cityofcamarillo.org.

Sincerely,

Joseph R. Vacca, Director
Department of Community Development

Copy: City Manager, Greg Ramirez
Public Works Director, David Klotzle

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

***GAVIN NEWSOM, Governor***
***CHARLTON H. BONHAM, Director***

March 23, 2023

Ms. Jennifer Lancaster
Calleguas Municipal Water District
2100 Olsen Road
Thousand Oaks, CA 91362
JLancaster@calleguas.com

**Subject: Calleguas Regional Salinity Management Pipeline Phase 3 and 4, Notice of Preparation, SCH No. 2023020421; Cities of Camarillo, Moorpark, Simi Valley, and Thousand Oaks; Ventura County**

Dear Ms. Lancaster:

The California Department of Fish and Wildlife (CDFW) has reviewed the Calleguas Municipal Water District's (District; Lead Agency) Notice of Preparation (NOP) for a subsequent Draft Environmental Impact Report (DEIR) for the Calleguas Regional Salinity Management Pipeline Phase 3 and 4 (Project). Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

**CDFW's Role**

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State [Fish & Game Code, §§ 711.7, subdivision (a) & 1802; Public Resources Code, § 21070; California Environmental Quality Act (CEQA) Guidelines, § 15386, subdivision (a)]. CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect state fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Public Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code, including lake and streambed alteration regulatory authority (Fish & Game Code, § 1600 *et seq*.). Likewise, to the extent implementation of the Project as proposed may result in "take", as defined by State law, of any species protected under the California Endangered Species Act (CESA) (Fish & Game Code, § 2050 *et seq.*), or CESA-listed rare plant pursuant to the Native Plant Protection Act (NPPA; Fish & Game Code, §1900 *et seq.*), CDFW recommends the Project proponent obtain appropriate authorization under the Fish and Game Code.

**Project Description and Summary**

**Objective:** The Project aims to address the high salinity of water within the Calleguas watershed by adding another branch to an existing effluent pipeline. The pipeline will be largely placed by traditional trenching methods except when crossing waterways where trenchless methods would be employed. The additional pipeline would transport additional recycled water and brine to the current ocean outfall off Port Hueneme. The proposed pipeline would be built in two phases, Phase 3 and Phase 4. Phase 3 of the Project will initiate at the eastern end of existing Calleguas River Salinity Management Pipeline (CRSMP) in the City of Camarillo, on the west side of Somis Road. Phase 3 would extend 5.1 miles, mostly along public Right of Way (ROW) and terminate along Santa Rosa Road in unincorporated Ventura County. Phase 3 is anticipated to take 16 months. Phase 4 will extend from the end of Phase 3 and follow several roadways into Moorpark and eventually into Simi Valley. Phase 4 is anticipated to take 30 months. Three potential dischargers are included within the Project and are currently existing, planned for development, or under consideration. These dischargers will be in close proximity to the pipeline alignment.

The alignment mostly follows roadways but a portion cuts across the width of the Tierra Rejada critical wildlife passage and the Santa Monica-Sierra Madre wildlife corridor. The pipeline would also pass designated critical habitat for several special status species. The pipeline would cross several waterways. Although the alignment largely follows ROWs, it was noted that mature trees are present along some of these roadways that may be impacted.

**Location:** Phase 3 of the alignment will begin at the existing CRSMP pipeline near the intersection of Las Posas Road and Upland Road and travel east on Santa Rosa Road into unincorporated Ventura County. The alignment will continue north onto Moorpark Road, east onto Read Road, and north onto Sunset Valley Road. The alignment will briefly travel north-east into Moorpark along Tierra Reijada Road and continue eastward into unincorporated Ventura County. The pipeline will terminate on Tierra Rejada Road within Simi Valley just before the intersection with Madera Road. Surrounding land uses include residential, agricultural, open spaces, and commercial.

**Comments and Recommendations**

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

**COMMENTS AND RECOMMENDATIONS**

**Specific Comments – Marine**

1) Impacts to Marine Resources. The CRSMP has an existing National Pollutant Discharge Elimination System permit (NDPES CA0064521) for ocean outfall discharges via the Hueneme Outfall, located in the vicinity of Port Hueneme Beach, into the Pacific Ocean. The waters in this area support many resident and migratory fish, important marine plants such as eelgrass (*Zostera marina*), and special status wildlife such as seabirds, marine mammals, and sea turtles. Additionally, the waters also support commercially and recreationally important fish and invertebrate species such as California halibut (*Paralichthys californicus*),

California spiny lobster (*Panulirus interruptus*), and the important forage fish Northern anchovy (*Engraulis mordax*). Brine disposal through the outfall may increase salinity at and around the discharge point and could also release contaminants into the marine environment. CDFW recommends that the Biological Resources section of the DEIR include an assessment on the potential impacts to marine life as a result of the ocean outfall discharge. The DEIR should also discuss potential changes to the zone of initial dilution (ZID), salinity differences, potential changes to pollutant amounts, and other changes associated with the discharge.

**Specific Comments – Terrestrial**

1) Impacts on Wildlife Corridors and Habitat Connectivity. According to the Ventura County's GIS viewer, the following roads along the Project alignment are within the Santa Monica-Sierra Madre wildlife corridor: Read Road, Sunset Valley Road, and Tierra Rejada Road. Tierra Rejada Road is also within the Tierra Rejada critical wildlife passage and permeable essential connectivity areas (Ventura County 2023; CDFW 2023a; CDFW 2023b). Likewise, several wildlife crossing areas are present along these roadways (Ventura County 2023). Although the Project will follow established roads and be done incrementally, increased noise, vibration, light, and human activity may impede wildlife movement in areas of Project implementation. Increased activity may lead wildlife, including special status species, to less permeable areas and increase the likelihood of vehicle strikes.

    a. Analysis and Disclosure. CDFW recommends the Applicant analyze whether the Project would impact wildlife corridors and essential connectivity blocks within the entirety of the Project area. Impacts include (but are not limited to) habitat loss and fragmentation, narrowing of a wildlife corridor, and introduction of barriers to wildlife movement. CDFW recommends such an analysis be supported by studies to document wildlife activity and movement through Project area where development is proposed. Further, the DEIR should analyze the cumulative impacts of the Project within these important movement areas as part of their analysis. The Applicant should consider current, planned, and future Projects when analyzing Project impacts.

    b. Avoidance. To more effectively avoid and mitigate within passage areas the Applicant should at a minimum consider the following datasets on the Biographic Information and Observations System (BIOS): Essential Connectivity Areas (ds620) and Habitat Connectivity Ventura County (ds565) (CDFW 2023b & CDFW 2023a). Based on these datasets, the Applicant should identify areas of possible impact. Project implementation should not exacerbate existing barriers to wildlife movement. Project activities should be avoided during dusk and dawn when wildlife movement and foraging is more likely. Proper setbacks in corridors, passage areas, crossings, and essential connectivity areas should be established.

    c. Mitigation. CDFW recommends the Project avoid developing and encroaching onto wildlife corridors, essential connectivity blocks, critical wildlife passage areas, or potential linkage areas. If avoidance is not feasible, CDFW recommends the DEIR provide measures to minimize and mitigate for the Project's significant impacts on wildlife corridors (see General Comments 7 & 8). If impacts are anticipated to occur within movement areas, the Applicant should be required to construct a crossing or passage with wildlife fencing to maintain safe wildlife movement in the impacted area as

part of the Project. The DEIR should provide the dimensions and locations of potential crossings. If temporary or permanent impacts occur to habitat or sensitive natural communities within these movement areas, the Applicant may also consider acquiring contiguous adjacent land parcels to be protected in perpetuity from encroachment and development.

2) Sensitive Habitats and Open Space. The Project alignment passes by several sensitive habitat areas (critical habitat for coastal California gnatcatcher (*Polioptila californica californica*), Riverside fairy shrimp (*Streptocephalus woottoni)*, and Lyon's pentachaeta (*Lyon's pentachaeta*)) and open space areas. These areas offer nesting, breeding, and foraging habitat for species. Project activities abutting the sensitive habitats and open space could impact sensitive species due to increased noise, light, dust, vibrations, and human activity.

   a. Analysis and Disclosure. CDFW recommends the Applicant analyze and discuss the Project's direct and indirect impacts on sensitive habitats/open space within the Project area. Analysis should include but not be limited to:

      1. Direct impacts that could result in loss of sensitive habitats/open space due to development, grading, excavation, and fuel modifications.
      2. Indirect impacts that could result in habitat loss due to edge effects and introduction of non-native/invasive plants.
      3. The DEIR should disclose the acreage of sensitive habitats and open space that would be impacted/lost as a result of both direct and indirect impacts from the proposed Project.

   b. Avoidance. CDFW recommends the Project avoid developing and encroaching onto sensitive habitats/open space. Encroachment onto sensitive habitats/open space creates an abrupt transition between two different land uses. Encroachment onto sensitive habitats/open space could affect environmental and biological conditions and increase the magnitude of edge effects on biological resources. CDFW recommends the DEIR provide alternatives to the Project that would not result in the development of areas within close proximity of sensitive habitat or open space. CDFW also recommends the DEIR provide alternatives that would not encroach onto sensitive habitats/open space. Pursuant to CEQA Guidelines section 15126.6, a DEIR "shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasible attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives." Furthermore, a DEIR "shall include sufficient information about alternatives to allow meaningful evaluation, analysis, and comparison with the proposed project" (CEQA Guidelines, § 15126.6) (see General Comment 9).

   c. Mitigation. If avoidance is not feasible, CDFW recommends the DEIR provide measures to mitigate for impacts to sensitive habitats/open space. There should be no net loss of sensitive habitats/open space. CDFW recommends the DEIR provide a measure where any future development facilitated by the Project establishes unobstructed vegetated buffers and setbacks. The DEIR should provide standards for an effective buffer and setback; however, the buffer and setback distance should be increased at a project-

level as needed. The DEIR should provide justifications for the effectiveness of all proposed mitigation measures. The DEIR should provide sufficient information and disclosure to facilitate meaningful public review, analysis, and comment on the adequacy of proposed mitigation measures to offset Project-related impacts on sensitive habitats/open space.

3) Least Bell's Vireo (*Vireo bellii pusillus*). The Project's alignment will pass through several areas documented with least Bell's vireo presence according to the CNDDB (CDFW 2023c). Project implementation during the least Bell's vireo nesting season could adversely affect breeding behavior of least Bell's vireo. Elevated noise and ground-disturbance could result in least Bell's vireo abandoning nesting territory. In addition, elevated noise could result in the incidental loss of nests, fertile eggs, or nestlings. Likewise, Project activities conducted outside of the nesting season may cause the abandonment of more favorable territory and increase the likelihood of mortality due to reduced habitat resources (see Specific Comment 10).

- Phase 3 of the alignment within Camarillo along Santa Rosa Road (34.23726, -118.96733) passes near Arroyo Conejo Creek. Populations of least Bell's vireo have been documented near this location according to the CNDDB. Populations were document just upstream of the confluence between Arroyo Conejo Creek and Arroyo Santa Rosa. The Camrosa discharger station will also be placed close to this section of the Creek.

a. Protection Status. Least Bell's vireo is a listed Endangered Species Act (ESA-) and CESA-listed species. ESA-listed species are considered endangered, rare, or threatened species under CEQA (CEQA Guidelines, § 15380). Take under the ESA is more broadly defined than CESA. Take under ESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. CDFW considers impacts to CESA-listed species a significant direct and cumulative adverse effect without implementing appropriate avoidance and/or mitigation measures.

b. Surveys and Analysis. CDFW recommends the DEIR analyze and discuss the Project's potential impacts on least Bell's vireo and their habitat. The DEIR should have a discussion regarding how the Project avoids and mitigates least Bell's vireo and their associated habitat. The DEIR should be conditioned to perform project-level surveys for least Bell's vireo in the Project alignment and within an appropriate buffer around areas of potential impact. Surveys should follow the USFWS Least Vireo Survey Guidelines (USFWS 2001a).

c. Avoidance. To more effectively avoid areas occupied by least Bell's vireo, the Project should review the CNDDB (ds45) BIOS datasets (CDFW 2023d). CDFW recommends the DEIR provide measures where Project activities avoid encroachment or fragmentation of least Bell's vireo habitat. The Project should avoid natural communities and alliances/associations associated with riparian vegetation. Ground disturbance and vegetation clearing should avoid the nesting bird season (see Specific Comment 10).

d. Mitigation. If avoidance is not feasible, the Applicant should protect or create habitat suitable for least Bell's vireo. Replacement habitat should be protected in perpetuity (see General Comments 7 & 8). CDFW recommends the DEIR be conditioned to provide replacement habitat to ensure no net loss to least Bell's vireo habitat. The DEIR should discuss why mitigation measures proposed would be adequate to avoid or offset impacts to least Bell's vireo and associated habitat. If presence is confirmed, the Applicant should consult with the USFWS and CDFW before ground disturbing activities.

e. CESA ITP. If impacts to least Bell's vireo are possible, appropriate authorization from CDFW under CESA may include an ITP or a Consistency Determination in certain circumstances, among other options [Fish & Game Code, §§ 2080.1, 2081, subds. (b) and (c)]. Early consultation is encouraged, as significant modification to the project and mitigation measures may be required to obtain an ITP. Revisions to the Fish and Game Code, effective January 1998, may require that CDFW issue a separate CEQA document for the issuance of an ITP for the Project unless the Project's CEQA document addresses all the Project's impact on CESA endangered, threatened, and/or candidate species. The Project's CEQA document should also specify a mitigation monitoring and reporting program that will meet the requirements of an ITP. It is important that the take proposed to be authorized by CDFW's ITP be described in detail in the Project's CEQA document. Also, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for an ITP. However, it is worth noting that mitigation for the Project's impact on a CESA endangered, threatened, and/or candidate species proposed in the Project's CEQA document may not necessarily satisfy mitigation required to obtain an ITP.

4) Rare Plants. The Project's alignment passes several areas where rare and protected plants could exist. Impacts could occur during construction, staging (trampling, crushing, loss of seed bank), and throughout the life of the Project with the establishment of invasive plant species.

- Phase 4 alignment located west of SR 23 and to the north of Tierra Rejada Road will pass critical habitat for Lyon's pentachaeta (*Lyon's pentachaeta*) (CDFW 2023e). Lyon's Pentachaeta is only found in the Conejo Valley and may be present in or around the Project area. California Orcutt grass (*Orcuttia californica*) is also present in this same area (CDFW 2023f).

a. Protection Status. Lyon's pentachaeta is CESA- and ESA- listed species. Take of any endangered, threatened, candidate species that results from the Project is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9) under CESA. As to CEQA, potential impacts on rare plants should be analyzed, disclosed, and mitigated in the Project's DEIR. CDFW considers adverse impacts to a species protected by CESA and ESA to be significant without mitigation under CEQA.

California Orcutt grass has California Rare Plant Ranking (CRPR) of 1B.1. Plants that have a California Native Plant Society (CNPS) CRPR of 1A, 1B, 2A, and 2B are rare throughout their range, endemic to California, and are seriously or moderately threatened in California. All plants constituting CRPR 1A, 1B, 2A, and 2B meet

the definitions of CESA and are eligible for State listing. Impacts to these species or their habitat must be analyzed during preparation of environmental documents relating to CEQA, as they meet the definition of rare or endangered (CEQA Guidelines, § 15380). Please see CNPS Rare Plant Ranks page for additional rank definitions (CNPS 2023).

b. Survey and Analysis. CDFW recommends the Applicant retain a qualified biologist to perform focused botanical surveys for rare plants with potential to occur. Surveys should identify all individual rare and protected plants and populations, as well as the plant communities supporting those rare plants which may be impacted. Surveys should be conducted within the Project site and in all areas subject to ground-disturbing activities (e.g., staging, mobilization, vegetation clearing). Surveys should be performed at the times of the year when plants will be both evident and identifiable. Botanical surveys should be spaced out throughout the growing season (CDFW 2018g).

c. Disclosure. The DEIR should fully disclose any impacts related to rare plants. At minimum the Applicant should disclose where impacts would occur, number of individual plants impacted, population size and density, and acres of habitat/plant communities impacted.

d. Avoidance. If rare plants are present and anticipated to be impacted, CDFW recommends the DEIR provide measures to fully avoid impacts on rare plants and their habitat.

e. Mitigation. If take or adverse impacts to rare plants cannot be avoided, the DEIR should provide measures to mitigate for those impacts. Appropriate mitigation may include obtaining appropriate take authorization under CESA prior to implementing the Project (pursuant to Fish & Game Code, § 2080 et seq.). Appropriate authorization may include an ITP or Consistency Determination, among other options [Fish & G. Code, §§ 2080.1, 2081, subds. (b) and (c)]. Additionally, CDFW recommends the Applicant provide compensatory mitigation for loss of rare plants and habitat.

5) Coastal California Gnatcatcher (*Polioptila californica californica*). Project implementation will occur next to habitat utilized by ESA-listed and Species of Special Concern (SSC) coastal California gnatcatcher (CDFW 2023h). Project activities occurring during the breeding and nesting season could result in the incidental loss of fertile eggs or nestlings. Project implementation surrounding occupied habitat may result in permanent impacts to coastal California gnatcatcher through alteration, fragmentation, and/or loss of suitable nesting and foraging habitat (see Specific Comment 10). Use of heavy machinery, increased light, dust, vibrations, and human activity may disrupt or alter behaviors necessary for species survival and lead to nest abandonment. Outside of the breeding season the species could be forced from their territory into adjacent habitat that may be less suitable where they would be at risk of predation, starvation, or other injury. Coastal California gnatcatcher are non-migratory, territorial, and have been found not to disperse far from their natal nests (Bailey 1998; Vandergast 2019). Thus, the preservation of sensitive natural communities where they have been documented to utilize is of conservational importance.

- Phase 4 alignment would pass by designated final critical habitat for coastal California gnatcatcher located just east of State Route (SR 23) and north of Tierra Rejada Road (see Specific Comment 2).

- Phase 4 alignment would traverse past several areas documented by the California Natural Diversity Database (CNDDB) to house coastal California gnatcatcher. Observations of gnatcatcher have been made west of the SR 23 and north of Tierra Rejada Road in areas associated with Moorpark's Carlsberg Specific Plan residential tract. Populations are also documented in the open space area east of SR 23 and south of Tierra Rejada Road (34.2693, -118.8182).

a. Protection Status. Coastal California gnatcatcher is an ESA-listed species and a California SSC. ESA-listed species are considered endangered, rare, or threatened species under CEQA (CEQA Guidelines, § 15380). Take under the ESA is more broadly defined than CESA. Take under ESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. CEQA provides protection not only for State and federally listed species, but for any species including, but not limited to SSC, which can be shown to meet the criteria for State listing. SSC's meet the CEQA definition of rare, threatened, or endangered species (CEQA Guidelines, § 15065). Take of SSC's s could require a mandatory finding of significance (CEQA Guidelines, § 15065).

b. Survey and Analysis. CDFW recommends the DEIR analyze and discuss the Project's potential impacts on coastal California gnatcatcher and their habitat. The DEIR should have a discussion regarding how the project avoids and mitigates impacts to coastal California gnatcatcher and associated habitat. The DEIR should be conditioned to perform project-level surveys for coastal California gnatcatcher in the development footprint and within an appropriate buffer around areas of potential impact. Surveys should follow protocols outlined in the U.S. Fish and Wildlife Service's Coastal California Gnatcatcher Presence/Absence Survey Guidelines (USFWS 1993b).

c. Avoidance. To more effectively avoid areas occupied by costal California gnatcatcher, the Project should review the Coastal California Gnatcatcher Final Critical Habitat (ds404) and the CNDDB (ds45) BIOS datasets (CDFW 2023d). CDFW recommends the DEIR provide measures where Project activities avoid encroachment or fragmentation of coastal California gnatcatcher habitat and critical habitat. The Project should avoid natural communities and alliances/associations that fall under the coastal sage scrub umbrella. Ground disturbance and vegetation clearing should avoid the nesting bird season (see Specific Comment 10).

d. Mitigation. If avoidance is not feasible, the Applicant should protect or create habitat suitable for coastal California gnatcatcher. Replacement habitat should be protected in perpetuity (see General Comments 7 & 8). CDFW recommends the DEIR be conditioned to provide replacement habitat to ensure no net loss to gnatcatcher habitat. The DEIR should discuss why mitigation measures proposed would be adequate to avoid or offset impacts to gnatcatcher and associated habitat. If presence is confirmed, the Applicant should consult with USFWS and CDFW before ground disturbing activities.

6) Riverside Fairy Shrimp (*Streptocephalus woottoni).* Although the Project alignment follows established roads, Project activities such as dewatering may impact the adjacent vernal pool

housing Riverside fairy shrimp. Impacts due to increased dust and vibration may also negatively impact Riverside fairy shrimp.

- Phase 4 of the alignment follows Tierra Rejada Road including the section directly west of SR 23 (34.26595, -118.85550). This area is designated as critical habitat for the Riverside fairy shrimp (CDFW 2023i).

a. Protection Status. Riverside fairy shrimp is an ESA-listed species. ESA-listed species are considered endangered, rare, or threatened species under CEQA (CEQA Guidelines, § 15380). Take under the ESA is more broadly defined than CESA. Take under ESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting.

b. Analysis and Surveys. CDFW recommends the analyze any potential impacts due to dewatering given the close proximity to the critical habitat area (see Specific Comment 2). Analysis on indirect impacts such as increased dust and vibrations should also be included. CDFW recommends the Project retain a qualified biologist familiar with Riverside fairy shrimp. The qualified biologist should use protocols outlined within the USFW's Survey Guidelines for the Listed Vernal Pool Branchiopods (USFWS 2017c).

c. Avoidance. To more effectively avoid areas occupied by Riverside fairy shrimp the Project should review the Riverside fairy shrimp Final Critical Habitat (ds149) and the CNDDB (ds45) BIOS datasets (CDFW 2023i & CDFW 2023d). The DEIR should provide measures to fully avoid impacts to Riverside fairy shrimp and their habitat.

d. Mitigation. The DEIR should include mitigation measures to reduce potential impacts from dewatering and increased vibration and dust. The Applicant should consult with USFWS to determine if an Incidental Take Permit (ITP) is necessary. If an ITP is necessary, the Project should adhere to any additional requirements set by the permit. CDFW recommends early consultation with USFWS to avoid potential impacts to Riverside fairy shrimp.

7) Reptiles of SSC. Project activities related to ground disturbance, such as grading, staging, and grubbing, may result in reptile habitat destruction and death or injury of adults, juveniles, eggs, or hatchlings. Moreover, the Project may remove essential foraging and breeding habitat for the species. A review of the CNDDB revealed several SSC reptiles along the Project's alignment.

- Along the Phase 3 alignment near the intersection of Upland Road and Santa Rosa Road, Project activities will occur close to Conejo Creek. A review of the CNDDB reveal western pond turtle (*Emys marmorata*) have potential to occur there and throughout Conejo Creek (CDFW 2023j).

- Along the Phase 4 alignment, California legless lizard (*Anniella spp*.) observations were recorded near the intersection of Santa Rosa Road and Moorpark Road (34.24697, -118.87002) (CDFW 2023k).

a. Surveys. CDFW recommends qualified biologists familiar with the reptile species behavior and life history conduct focused surveys to determine the presence/absence of

SSC prior to vegetation removal and/or grading. Surveys should be conducted during active season when the reptile species is most likely to be detected. Surveys for western pond turtle should be conducted in accordance to the U.S. Geological Surveys Draft USGS Visual Survey Protocol for the Southcoast Region (USGS 2006).

b. Mitigation. To further avoid direct mortality, CDFW recommends that a qualified biological monitor be on site during ground and habitat disturbing activities to move out of harm's way special status species that would be injured or killed by grubbing or Project-related grading activities. It should be noted that the temporary relocation of on-site wildlife does not constitute effective mitigation for the purposes of offsetting Project impacts associated with habitat loss (see General Comment 6).

c. Scientific Collections Permit. CDFW has the authority to issue permits for the take or possession of wildlife, including mammals; birds, nests, and eggs; reptiles, amphibians, fish, plants; and invertebrates (Fish & Game Code, §§ 1002, 1002.5, 1003). Effective October 1, 2018, a Scientific Collecting Permit is required to monitor project impacts on wildlife resources, as required by environmental documents, permits, or other legal authorizations; and, to capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with otherwise lawful activities (Cal. Code Regs., tit. 14, § 650). Please visit CDFW's Scientific Collecting Permit webpage for information (CDFW 2022l). Pursuant to the California Code of Regulations, title 14, section 650, the qualified biologist must obtain appropriate handling permits to capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with Project construction and activities.

8) Lake and Streambed Alteration (LSA) Agreement. The Project alignment crosses several riparian areas as depicted by Figures 3-6 of the related Initial Study. Although trenchless methods would be utilized in these areas, impacts could still occur through frac-outs, or at trenchless implementation entrance and exit points.

a. Stream Delineation and Assessment. A preliminary delineation of the streams and their associated riparian habitats should be included in the environmental document. Be advised that some wetland and riparian habitats subject to CDFW's authority may extend beyond the jurisdictional limits of the U.S. Army Corps of Engineers' Section 404 permit and Regional Water Quality Control Board Section 401 Certification.

b. Avoidance and Setbacks. In Project areas which may support ephemeral or episodic streams, herbaceous vegetation, woody vegetation, and woodlands also serve to protect the integrity of these resources and help maintain natural sedimentation processes. Therefore, CDFW recommends effective setbacks be established to maintain appropriately sized vegetated buffer areas adjoining ephemeral drainages. The environmental document should provide a justification for the effectiveness of the chosen distance for the setback.

c. Lake and Streambed Alteration Program. As a Responsible Agency under CEQA, CDFW has authority over activities in streams and/or lakes that will divert or obstruct the natural flow, or change the bed, channel, or bank (including vegetation associated with the stream or lake) of a river or stream or use material from a streambed. For any such activities, the Project applicant (or "entity") must provide written notification to CDFW

pursuant to Fish and Game Code Section 1600 *et seq.* CDFW's issuance of a LSA Agreement for a Project that is subject to CEQA will require CEQA compliance actions by CDFW as a Responsible Agency. As a Responsible Agency, CDFW may consider the environmental document of the local jurisdiction (Lead Agency) for the Project. To minimize additional requirements by CDFW pursuant to section 1600 *et seq.* and/or under CEQA, the environmental document should fully identify the potential impacts to the stream or riparian resources and provide adequate avoidance, mitigation, monitoring, and reporting commitments for issuance of the LSA Agreement. Please visit CDFW's Lake and Streambed Alteration Program webpage for information about LSA Notification (CDFW 2022m).

d. Hydrologic Evaluation. Project-related changes in upstream and downstream drainage patterns, runoff, and sedimentation should be included and evaluated in the environmental document.

9) Oak Trees (*Quercus* genus) and Oak Woodlands (*Quercus* Woodland Alliance). The Initial Study states that the roadways that align with the Project are surrounded by mature trees. If these trees include any trees within the oak genus or comprise oak woodland, Project activities could result in loss and removal. Oak woodlands are locally important communities and serve various ecological functions. Oak woodlands also have higher levels of biodiversity than any other terrestrial ecosystem in California (Block et al. 1990). Oak trees provide nesting and perching habitat for approximately 170 species of birds (Griffin and Muick 1990). Moreover, oak trees and woodlands are protected by the Oak Woodlands Conservation Act (pursuant under Fish and Game Code sections 1360-1372) and Public Resources Code section 21083.4 due to the historic and on-going loss of these resources.

a. Arborist Report. CDFW recommends the District retain a qualified arborist to survey all oak trees that could be impacted by the Project. The tree survey should provide information on the presence of pests and diseases, including (but not limited to): sudden oak death *(Phytophthora ramorum*), thousand canker fungus (*Geosmithia morbida*), Polyphagous shot hole borer (*Euwallacea spp.*), and goldspotted oak borer (*Agrilus auroguttatus*) (Phytosphere Research 2012; TCD 2021; UCANR 2018; UCIPM 2021). A tree report should be included in the DEIR.

b. Disclosure. Adequate disclosure includes providing the following information at a minimum: 1) location of each tree and area of oak woodland impacted; 2) scientific (Genus, species, subspecies, or variety) and common name of each tree and understory plant species impacted; 3) the size (diameter at breast height, inches) of each tree impacted; 4) a clear identifier to distinguish heritage trees; 5) acres of oak woodlands impacted; 6) mitigation ratio for individual trees and acres of oak woodlands; 7) total number of replacement trees and acres of oak woodlands; and, 8) total number of replacement trees and appropriate understory species to occur in suitable on- and/or offsite mitigation lands.

c. Avoidance. CDFW recommends the DEIR provide measures to avoid impacts to oak trees and oak woodlands during the Project. The DEIR should provide measures to fully protect the Critical Root Zone of all oak trees not targeted for removal. The DEIR should also provide measures to protect the outer edge of oak woodlands with appropriate setbacks. The DEIR should provide a justification as to why proposed setback

distance(s) would be effective to avoid impacts on oak trees and oak woodlands in perpetuity.

d. Mitigation. For unavoidable Project impacts, CDFW recommends creating or restoring on- or off-site oak woodland habitat or planting individual oaks. The number of replacement trees and oak woodland habitat acres should be higher if the Project would impact large oak trees; impact an oak woodland supporting rare, sensitive, or special status plants and wildlife; or impact an oak woodland with a State rarity ranking of S1, S2, or S3 (see General Comment 2a). CDFW recommends the DEIR discuss why mitigation proposed by the District would reduce impacts on oak woodlands to less than significant and would be effective to mitigate for the number of trees, size of trees (e.g., heritage trees), and acres of habitat impacted. CDFW recommends the DEIR provide an on- or off-site mitigation plan and discuss the suitability of selected location(s) for mitigating impacts to oak trees and oak woodlands. The DEIR should provide information about reference sites, with similar species and habitat as being mitigated and the suitability of selected reference site(s) to inform the Project's mitigation plan. Lastly, a mitigation plan should provide specific mitigation goals and actions to achieve those goals to establish self-sustaining oak trees and oak woodlands.

e. Pest Management. Project activities have the potential to spread tree pests and diseases throughout the Project site and into adjacent natural habitat not currently exposed to these stressors. This could result in expediting the loss of native trees and woodlands. As such, CDFW recommends the DEIR include an infectious tree disease management plan or provide mitigation measures, developed in consultation with an arborist, and describe how the plan or mitigation measures will avoid or reduce the spread of tree insect pests and diseases.

10) Special Status Bird Species. Mature trees and vegetation have been identified along the Project alignment. Project activities and vegetation removal that occur during the breeding season may result in incidental loss of fertile eggs, or nestlings, or nest abandonment in trees and shrubs directly adjacent to the Project. The Project could also lead to the loss of foraging habitat for sensitive bird species.

a. Protection Status. Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (Code of Federal Regulations, Title 50, § 10.13). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the MBTA).

b. Avoidance. CDFW recommends that measures be taken, primarily, to avoid Project impacts to nesting birds. The DEIR should be conditioned with measures to avoid impacts on special status birds. Proposed Project activities including (but not limited to) staging and disturbances to native and nonnative vegetation, structures, and substrates should occur outside of the avian breeding season which generally runs from February 15 through August 31 (as early as January 1 for some raptors) to avoid take of birds or their eggs.

c. Mitigation. If avoidance of the avian breeding season is not feasible, CDFW recommends surveys by a qualified biologist with experience in conducting breeding bird surveys to detect protected native birds occurring in suitable nesting habitat that is to be

disturbed and (as access to adjacent areas allows) any other such habitat within 300 feet of the disturbance area (within 500 feet for raptors). Project personnel, including all contractors working on site, should be instructed on the sensitivity of the area. Reductions in the nest buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors.

11) Weed Management Plan. Weed management plans should be developed along the Project alignment both during, and for at least 3 years post-Project. Non-native weeds including noxious weeds (as listed by the California Invasive Plant Council) (CALIPC 2022) should be prevented from becoming established to control the local spread if invasive plants, both during and after construction. Site visits should be conducted monthly and weekly during the rainy season. The Project areas should be monitored via mapping for new introductions and expansions of non-native weeds. Annual threshold limits, eradication targets, and monitoring should be included in this plan. Monitoring for spread of invasive weeds to adjacent lands should also be included.

**General Comments**

1) Disclosure. The DEIR should provide an adequate, complete, and detailed disclosure about the effect which a proposed Project is likely to have on the environment (Pub. Resources Code, § 20161; CEQA Guidelines, §15151). Adequate disclosure is necessary so CDFW may provide comments on the appropriateness of proposed avoidance, minimization, or mitigation measures, as well as to assess the significance of the specific impact relative to the species (e.g., current range, distribution, population trends, and connectivity).

2) Biological Baseline Assessment. CDFW recommends providing a complete assessment and impact analysis of the flora and fauna within and adjacent to the Project area, with emphasis upon identifying endangered, threatened, sensitive, regionally, and locally unique species and sensitive habitats. Impact analysis will aid in determining any direct, indirect, and cumulative biological impacts, as well as specific mitigation or avoidance measures necessary to offset those impacts. CDFW recommends avoiding any sensitive natural communities found on or adjacent to the Project. The DEIR should include the following information:

   a. Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region [CEQA Guidelines, § 15125(c)]. The DEIR should include measures to fully avoid and otherwise protect Sensitive Natural Communities (CDFW 2022n) from Project-related impacts. Project implementation may result in impacts to rare or endangered plants or plant communities that have been recorded adjacent to the Project vicinity;

   b. A complete floristic assessment within and adjacent to the Project area, with particular emphasis upon identifying endangered, threatened, sensitive, and locally unique species and sensitive habitats. This should include a thorough, recent, floristic-based assessment of special status plants and natural communities;

   c. Floristic, alliance- and/or association-based mapping and vegetation impact assessments conducted at the Project site and within the neighboring vicinity. The

Manual of California Vegetation (MCV), second edition, should also be used to inform this mapping and assessment (CNPS 2023). Adjoining habitat areas should be included in this assessment where site activities could lead to direct or indirect impacts off-site. Habitat mapping at the alliance level will help establish baseline vegetation conditions;

d. A complete, recent, assessment of the biological resources associated with each habitat type on-site and within adjacent areas that could also be affected by the Project. CDFW's CNDDB in Sacramento should be contacted to obtain current information on any previously reported sensitive species and habitat. CDFW recommends that CNDDB Field Survey Forms (CDFW 2022o) be completed and submitted to CNDDB to document survey results;

e. A complete, recent, assessment of rare, threatened, and endangered, and other sensitive species on-site and within the area of potential effect, including California SSC and California Fully Protected Species (Fish & G. Code, §§ 3511, 4700, 5050 and 5515). Species to be addressed should include all those which meet the CEQA definition of endangered, rare, or threatened species (CEQA Guidelines, § 15380). Seasonal variations in use of the Project area should also be addressed. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with CDFW and the USFWS; and,

f. A recent, wildlife and rare plant survey. CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to two years as long as there was not a prevailing drought during the time of the botanical survey. Some aspects of the proposed Project may warrant periodic updated surveys for certain sensitive taxa, particularly if build out could occur over a protracted time frame, or in phases.

3) Data. CEQA requires that information developed in environmental impact reports be incorporated into a database which may be used to make subsequent or supplemental environmental determinations [Pub. Resources Code, § 21003, subd. (e)]. Accordingly, please report any special status species and natural communities detected by completing and submitting CNDDB Field Survey Forms (CDFW 2021o). The applicant should ensure data collected for the preparation of the DEIR be properly submitted, with all data fields applicable filled out. The data entry should also list pending development as a threat and then update this occurrence after impacts have occurred.

4) Biological Direct, Indirect, and Cumulative Impacts. To provide a thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts, the following should be addressed in the DEIR:

a. A discussion regarding indirect Project impacts on biological resources, including resources in nearby public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated and/or proposed or existing reserve lands (e.g., preserve lands associated with a Natural Community Conservation Plan (NCCP, Fish &

Game Code, § 2800 et. seq.). Impacts on, and maintenance of, wildlife corridor/movement areas, including access to undisturbed habitats in adjacent areas, should be fully evaluated in the DEIR;

b. A discussion of both short-term and long-term effects to species population distribution and concentration and alterations of the ecosystem supporting the species impacted [CEQA Guidelines, § 15126.2(a)];

c. A discussion of adverse impacts due to increased noise, sound, vibrations, and human activity during Project activities and daily operations;

d. An analysis of impacts from land use designations and zoning located nearby or adjacent to natural areas that may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the DEIR;

e. A discussion of Project-related changes on drainage patterns and downstream of the Project site; the volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and, post-Project fate of runoff from the Project site. The discussion should also address the proximity of the extraction activities to the water table, whether dewatering would be necessary and the potential resulting impacts on the habitat (if any) supported by the groundwater. Mitigation measures proposed to alleviate such Project impacts should be included; and,

f. A cumulative effects analysis, as described under CEQA Guidelines section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats. If the applicant determines that the Project would not have a cumulative impact, the DEIR should indicate why the cumulative impact is not significant. The Applicant's conclusion should be supported by facts and analyses [CEQA Guidelines, § 15130(a)(2)].

5) Mitigation Measures. Public agencies have a duty under CEQA to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of feasible alternatives or mitigation measures [CEQA Guidelines, §§ 15002(a)(3), 15021]. Pursuant to CEQA Guidelines section 15126.4, an environmental impact report shall describe feasible measures which could mitigate for impacts below a significant level under CEQA.

a. Level of Detail. Mitigation measures must be feasible, effective, implemented, and fully enforceable/imposed by the lead agency through permit conditions, agreements, or other legally binding instruments (Pub. Resources Code, § 21081.6(b); CEQA Guidelines, §§ 15126.4, 15041). A public agency shall provide the measures that are fully enforceable through permit conditions, agreements, or other measures (Pub. Resources Code, § 21081.6). CDFW recommends that the District prepare mitigation measures that are specific, detailed (i.e., responsible party, timing, specific actions, location), and clear in order for a measure to be fully enforceable and implemented

successfully via a mitigation monitoring and/or reporting program (CEQA Guidelines, § 15097; Pub. Resources Code, § 21081.6). Adequate disclosure is necessary so CDFW may provide comments on the adequacy and feasibility of proposed mitigation measures.

b. Disclosure of Impacts. If a proposed mitigation measure would cause one or more significant effects, in addition to impacts caused by the Project as proposed, the environmental document should include a discussion of the effects of proposed mitigation measures [CEQA Guidelines, § 15126.4(a)(1)]. In that regard, the environmental document should provide an adequate, complete, and detailed disclosure about a project's proposed mitigation measure(s). Adequate disclosure is necessary so CDFW may assess the potential impacts of proposed mitigation measures.

6) Translocation/Salvage of Plants and Animal Species. Translocation and transplantation is the process of moving an individual from a project site and permanently moving it to a new location. CDFW generally does not support the use of translocation or transplantation as the primary mitigation strategy for unavoidable impacts to rare, threatened, or endangered plant or animal species. Studies have shown that these efforts are experimental and the outcome unreliable. CDFW has found that permanent preservation and management of habitat capable of supporting these species is often a more effective long-term strategy for conserving sensitive plants and animals and their habitats.

7) Compensatory Mitigation. An environmental document should include mitigation measures for adverse Project related direct or indirect impacts to sensitive plants, animals, and habitats. Mitigation measures should emphasize avoidance and reduction of project-related impacts. For unavoidable impacts, on-site habitat restoration or enhancement should be discussed in detail. If on-site mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, off-site mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed. Areas proposed as mitigation lands should be protected in perpetuity with a conservation easement, financial assurance and dedicated to a qualified entity for long-term management and monitoring. Under Government Code, section 65967, the Lead Agency must exercise due diligence in reviewing the qualifications of a governmental entity, special district, or nonprofit organization to effectively manage and steward land, water, or natural resources on mitigation lands it approves.

8) Long-term Management of Mitigation Lands. For proposed preservation and/or restoration, an environmental document should include measures to protect the targeted habitat values from direct and indirect negative impacts in perpetuity. The objective should be to offset the project-induced qualitative and quantitative losses of wildlife habitat values. Issues that should be addressed include (but are not limited to) restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, and increased human intrusion. An appropriate non-wasting endowment should be set aside to provide for long-term management of mitigation lands.

9) Project Description and Alternatives. To enable CDFW to adequately review and comment on the proposed Project from the standpoint of the protection of plants, fish, and wildlife, we recommend the following information be included in the DEIR:

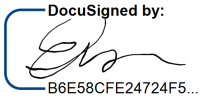
a. A complete discussion of the purpose and need for, and description of, the proposed Project, including all staging areas and access routes to the construction and staging areas; and,

b. A range of feasible alternatives to Project component location and design features to ensure that alternatives to the proposed Project are fully considered and evaluated. Potential impacts to wildlife movement areas should also be evaluated, avoided, or mitigated consistent with applicable requirements of the applicable City's General Plan.

**Conclusion**

We appreciate the opportunity to comment on the Project to assist the District in adequately analyzing and minimizing/mitigating impacts to biological resources. CDFW requests an opportunity to review and comment on any response that the District has to our comments and to receive notification of any forthcoming hearing date(s) for the Project [CEQA Guidelines, § 15073(e)]. If you have any questions or comments regarding this letter, please contact Angela Castanon, Environmental Scientist, at Angela.Castanon@wildlife.ca.gov or (626) 513-6308 or Leslie Hart, Environmental Scientist at Leslie.Hart@wildlife.ca.gov.

Sincerely,

DocuSigned by:

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ec: CDFW

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**References:**

Bailey, E.A. and Mock, P.J. 1998. Dispersal Capability of the California Gnatcatcher: A Landscape Analysis of Distribution Data. Accessed from: https://archive.westernfieldornithologists.org/archive/V29/29(4)-p0351-p0360.pdf

Block, W.M., Morrison, M.M., Verner, J. 1990. Wildlife and oak-woodland interdependency. Fremontia 18(3):72-76.

[CALIPC] California Invasive Plant Council. 2022. Invasive Plants. Accessed at: https://www.cal-ipc.org/solutions/prevention/landscaping/

[CDFWa] California Department of Fish and Wildlife. 2023. California Natural Diversity Database (CNDDB) Government [ds565] Habitat Connectivity-Ventura County. Biogeographic Information and Observation System (BIOS 6). [Accessed 2023 February 21]. Accessed at: https://wildlife.ca.gov/Data/BIOS

[CDFWb] California Department of Fish and Wildlife. 2023. California Natural Diversity Database (CNDDB) Government [ds620] Essential Connectivity Areas. Biogeographic Information and Observation System (BIOS 6). [Accessed 2023 February 21]. Accessed at: https://wildlife.ca.gov/Data/BIOS

[CDFWc] California Department of Fish and Wildlife. 2023. California Natural Diversity Database (CNDDB) Government [ds45] Object TID ABPB01114 Least Bell's Vireo Biogeographic Information and Observation System (BIOS 6). [Accessed 2023 February 21]. Accessed at: https://wildlife.ca.gov/Data/BIOS

[CDFWd] California Department of Fish and Wildlife. 2023. California Natural Diversity Database (CNDDB) Government [ds45] CNDDB Dataset. Biogeographic Information and Observation System (BIOS 6). [Accessed 2023 February 21]. Accessed at: https://wildlife.ca.gov/Data/BIOS

[CDFWe] California Department of Fish and Wildlife. 2023. California Natural Diversity Database (CNDDB) Government [ds755] Lyon's Pentachaeta-Final Critical Habitat. Biogeographic Information and Observation System (BIOS 6). [Accessed 2023 February 21]. Accessed at: https://wildlife.ca.gov/Data/BIOS

[CDFWf] California Department of Fish and Wildlife. 2023. California Natural Diversity Database (CNDDB) Government [ds45] Object TID PMPOA4G010 California Orcutt Grass Biogeographic Information and Observation System (BIOS 6). [Accessed 2023 February 21]. Accessed at: https://wildlife.ca.gov/Data/BIOS

[CDFWg] California Department of Fish and Wildlife. 2018. CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. Available from: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959

[CDFWh] California Department of Fish and Wildlife. 2023. California Natural Diversity Database (CNDDB) Government [ds45] Object TID ABPBJ08081 Coastal California

Gnatcatcher. Biogeographic Information and Observation System (BIOS 6). [Accessed 2023 February 21]. Accessed at: https://wildlife.ca.gov/Data/BIOS

[CDFWi] California Department of Fish and Wildlife. 2023. California Natural Diversity Database (CNDDB) Government [ds149] Riverside Fairy Shrimp-Final Critical Habitat. Biogeographic Information and Observation System (BIOS 6). [Accessed 2023 February 21]. Accessed at: https://wildlife.ca.gov/Data/BIOS

[CDFWj] California Department of Fish and Wildlife. 2023. California Natural Diversity Database (CNDDB) Government [ds45] Object TID ARAAD02030 Western Pond Turtle Biogeographic Information and Observation System (BIOS 6). [Accessed 2023 February 21]. Accessed at: https://wildlife.ca.gov/Data/BIOS

[CDFWk] California Department of Fish and Wildlife. 2023. California Natural Diversity Database (CNDDB) Government [ds45] Object TID ARACC01070 California Legless Lizard Biogeographic Information and Observation System (BIOS 6). [Accessed 2023 February 21]. Accessed at: https://wildlife.ca.gov/Data/BIOS

[CDFWl] California Department of Fish and Wildlife. 2022. Scientific Collecting Permit. Available from: https://wildlife.ca.gov/Licensing/Scientific-Collecting#53949678

[CDFWm] California Department of Fish and Wildlife. 2022. Lake and Streambed Alteration Program. Available from: https://wildlife.ca.gov/Conservation/LSA.

[CDFWn] California Department of Fish and Wildlife. 2018. Natural Communities. Available from: https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities

[CDFWo] California Department of Fish and Wildlife. 2022. Submitting to the CNDDB. Available from: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data

[CNPS] California Native Plant Society. 2023. Manual of California Vegetation. Available from: https://www.cnps.org/vegetation/manual-of-california-vegetation

Phytosphere Research. 2012. Understanding and Managing Sudden Oak Death in California. Available from: http://phytosphere.com/SODmgtPUB/pg6Sidebar1-1SODmgntpub.htm

[TCD] Thousand Cankers Disease. 2021. What is Thousand Cankers? Available from: https://thousandcankers.com/

[UCANR] UC Agriculture and Natural Science. 2018. Managing Invasive Shot Hole Borers in Southern California. Available from: https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=28508

[UCIPM] UC Integrated Pest Management Program. 2021. Goldspotted Oak Borer. Available from: http://ipm.ucanr.edu/PMG/PESTNOTES/pn74163.html

[USFWSa] United States Fish and Wildlife Service. 2001. Least Bell's Vireo Survey Guidelines. Available from: https://www.fws.gov/sites/default/files/documents/survey-protocol-for-least-bells-vireo.pdf

[USFWSb] United States Fish and Wildlife Service. 1997. Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Guidelines. Available from: https://www.fws.gov/sites/default/files/documents/survey-protocol-for-coastal-californiagnatcatcher.pdf

[USFWSc] United States Fish and Wildlife Service. 2007. Survey Guidelines for the Listed Large Branchiopods. Available from: https://www.fws.gov/sites/default/files/documents/survey-guidelines-for-large-branchiopods.pdf

[USGS] United States Geological Survey. 2006. USGS Western Pond Turtles Visual Survey Protocol for the Southcoast Ecoregion. Available from: https://sdmmp.com/upload/SDMMP_Repository/0/4fnpv18xm0sqtw29j7d3rz56bkychg.pdf

Vandergast, A., Kus, B., Preston, K., & Barr, R. 2019. Distinguishing recent dispersal from historical genetic connectivity in the coastal California gnatcatcher. Available from: https://www.nature.com/articles/s41598-018-37712-2

Ventura County. 2023. County View- Ventura County, California. Available from: https://maps.ventura.org/countyview/

STATE OF CALIFORNIA Gavin Newsom, *Governor*

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February 17, 2023

RECEIVED
FEB 21 2023
CALLEGUAS M.W.D

Jennifer Lancaster
Calleguas Municipal Water District
2100 Olsen Road
Thousand Oaks, CA 91360

**Re: 2023020421, Calleguas Regional Salinity Management Pipeline Phase 3 and 4 Project, Ventura County**

Dear Ms. Lancaster:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

**Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

**1.** Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

**2.** Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

**3.** Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

**4.** Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

**5.** Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

**6.** Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

**7.** Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

**a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

**b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

**8.** Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

**9.** Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

**10.** Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

**a.** Avoidance and preservation of the resources in place, including, but not limited to:

**i.** Planning and construction to avoid the resources and protect the cultural and natural context.

**ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

**b.** Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

**i.** Protecting the cultural character and integrity of the resource.

**ii.** Protecting the traditional use of the resource.

**iii.** Protecting the confidentiality of the resource.

**c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

**d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)).

**e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

**f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

**11.** Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

**a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

**b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

**c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

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

Sincerely,

Cody Campagne

Cody Campagne
Cultural Resources Analyst

cc: State Clearinghouse

COUNTY of VENTURA
RESOURCE MANAGEMENT AGENCY
DAVE WARD, AICP
Planning Director

March 23, 2023

Calleguas Municipal Water District
Attn: Jennifer Lancaster
2100 Olsen Road
Thousand Oaks, CA 91360

Subject: Calleguas Regional Salinity Management Pipeline, Phases 3 and 4

Dear Ms. Lancaster,

Thank you for the opportunity to review and comment on the subject document. Attached are the comments that we have received resulting from intra-county review of the subject document. Additional comments may have been sent directly to you by other County agencies.

Your proposed responses to these comments should be sent directly to the commenter, with a copy to Anthony Ciuffetelli, Ventura County Planning Division, L#1740, 800 S. Victoria Avenue, Ventura, CA 93009.

If you have any questions regarding any of the comments, please contact the appropriate respondent. Overall questions may be directed to Anthony Ciuffetelli at (805) 654-2443.

Sincerely,

Tricia Maier

Tricia Maier, Manager
Planning Programs Section

Attachments

County RMA Reference Number 23-003

Ventura County
Air Pollution
Control District

4567 Telephone Rd
Ventura, California 93003

tel 805/303-4005
fax 805/456-7797
www.vcapcd.org

Ali Reza Ghasemi, PE
Air Pollution Control Officer

# VENTURA COUNTY
# AIR POLLUTION CONTROL DISTRICT
Memorandum

TO: Jennifer Lancaster, Principal Resource Specialist

DATE: March 22, 2023

FROM: Nicole Collazo, Air Quality Specialist, VCAPCD Planning Division

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report and Initial Study for the Calleguas Municipal Water District's Regional Salinity Management Pipeline Project (RMA 23-003)

Ventura County Air Pollution Control District (APCD) staff has reviewed the subject Notice of Preparation (NOP) for the draft environmental impact report (DEIR), which will analyze the environmental impacts of a construction project for pipeline alignments which would be located in Ventura County, extending approximately 14.4 miles from near the northeast boundary of the City of Camarillo to the western boundary of the City of Simi Valley. The NOP also contained an associated Initial Study (IS) for the project. The Lead Agency is the Calleguas Municipal Water District.

APCD has the following comments regarding the project's NOP and IS.

**IS Comments**

Page 23, last paragraph. The APCD adopted its latest air quality attainment plan on December 13, 2022. Please amend this to indicate the proper adopted plan.

Page 25, Item a. The AQMP consistency analysis (CEQA Appendix G Checklist Item 2a) in the IS was prepared after this and such, should follow our guidelines and state guidelines in using the "applicable air quality plan".

Page 47, GHG. The analysis uses an outdated state plan, the 2017 Scoping Plan by the California Air Resources Board (CARB). We recommend using the latest applicable plan, the CARB 2022 Scoping Plan, which was adopted on December 15, 2022, which has new climate targets and goals.

**NOP Comments**

1) *Air Quality Section*- The air quality assessment should consider project consistency, as included in the Ventura County Air Quality Assessment Guidelines, with the recently adopted 2022 Air Quality Management Plan (AQMP). The 2022 AQMP is the air plan to attain the 2015 federal 8-

hr ozone standard with updated emission factors and population forecasts. The 2016 AQMP was the plan to attain the 2008 federal ozone standard; that standard has been met. More information on the 2022 AQMP can be found here http://www.vcapcd.org/AQMP-2022.htm.

2) The Ventura County Air Quality Assessment Guidelines (AQAG) can also be used to evaluate all potential air quality impacts. The AQAG are also downloadable from our website here: http://www.vcapcd.org/environmental-review.htm. Specifically, the air quality assessment should consider reactive organic compound (ROC) and nitrogen oxide (NOx) emissions from all project-related motor vehicles for all proposed uses, energy emissions such as heating, lighting and electricity, and area emissions such as landscaping equipment and maintenance. The trips per day or VMT should be from a project-specific traffic study. We note that the AQAG has not been updated since 2003 and the recommended list of mitigation measures in the AQAG are also limited and outdated. Current air quality determinations follow the same methodology but using different tools (CalEEMod vs. URBEMIS, updated OEHHA standards health risk assessments). The recommended list of mitigation measures in the AQAG are also limited and outdated. Construction emission reduction measures such as requiring Tier 4 off-road construction equipment can reduce pollutants by up to 85% and is highly recommended if emissions are above local and state thresholds adopted. This mitigation can also be quantified using the CalEEMod air emissions model. Another reduction measure is using 2010 and newer on-road engine vehicles for exporting material that comply with California State Regulation for In-Use On-Road Diesel Vehicles Title 13, CCR §2025 since they emit less diesel emissions. Using low-VOC paints may also reduce ROC emissions once construction estimates are known for paving.

Thank you for the opportunity to comment on the project. If you have any questions, you may contact me at nicole@vcapcd.org.

COUNTY of VENTURA

RESOURCE MANAGEMENT AGENCY
**CHARLES R. GENKEL**
**Environmental Health Director**

March 15, 2023

Calleguas Municipal Water District
ATTN: Jennifer Lancaster, Principal Resource Specialist
2100 Olsen Road,
Thousand Oaks, CA 91360

**Calleguas Regional Salinity Management Pipeline, Phases 3 & 4, Environmental Document Review – Notice of Preparation of Subsequent Draft Environmental Impact, (RMA REF # 23-003)**

Ventura County Environmental Health Division (Division) staff reviewed the information submitted for the subject project.

The Division provides the following comment:

1. Project includes infrastructure improvements that may handle, store, or transport hazardous materials. Hazardous materials and/or hazardous wastes at or above the reportable thresholds must be reported to this Division's Certified Unified Program Agency (CUPA). Contact the CUPA for reporting and/or permitting requirements.

https://vcrma.org/cupa

If you have any questions, please contact me at (805) 654-5040 or Timothy.Krone@ventura.org.

Timothy Krone, R.E.H.S.
Land Use Section
Environmental Health Division



HALL OF ADMINISTRATION #1730
805-654-2813 • FAX 805-654-2480 • 800 South Victoria Avenue, Ventura, CA 93009 • vcrma.org

COUNTY of VENTURA

RESOURCE MANAGEMENT AGENCY
**DAVE WARD**
Planning Director

**SUSAN CURTIS**
Assistant Planning Director

March 21, 2023

Jennifer Lancaster
Calleguas Municipal Water District
2100 Olsen Road
Thousand Oaks, CA 91360

**SUBJECT: Response to Notice of Preparation for Subsequent Environmental Impact Report: Calleguas Regional Salinity Management Pipeline, Phases 3 and 4**

Dear Jennifer Lancaster,

Thank you for providing the Ventura County Planning Division (Planning Division) with the opportunity to comment regarding the Initial Study and Notice of Preparation for a Draft Subsequent Environmental Impact Report (SEIR) for the Calleguas Regional Salinity Management Pipeline, Phases 3 and 4. The Planning Division coordinates with neighboring jurisdictions and provides review and comment on environmental documents prepared for projects that could affect the unincorporated area.

**Background**
The Calleguas Regional Salinity Management Pipeline (CRSMP) is a brine and treated wastewater conveyance pipeline designed to manage high salinity groundwater and municipal wastewater, dispose of the brine produced by enhanced water treatment processes, and facilitate the development of water sources otherwise unavailable due to poor water quality. There is a line currently in operation that extends approximately 22 miles from its upstream end in Camarillo to its downstream terminus at the legally permitted ocean outfall in Port Hueneme. The proposed project as shown in Attachment 1 would extend the CRSMP approximately 14 miles inland from the existing eastern terminus in Camarillo, enabling connections to additional dischargers in Simi Valley and unincorporated Ventura County.

The Initial Study states the pipeline alignment would primarily be located within the public right-of-way consisting of paved roads and dirt shoulders. Roadways along the project alignment include Upland Road, Santa Rosa Road, Moorpark Road, Read Road, Sunset Valley Road, and Tierra Rejada Road. Construction is anticipated to require approximately 16 months for Phase 3 and 30 months for Phase 4. There will be no road closures during construction activities The alignment for the pipeline phases is shown in colored segments in (Attachment 1).

**Biological Resources Analysis**

The Initial Study finds that there may be potentially significant impacts to habitats, waterways, sensitive natural communities and wildlife corridors. Due to the approximately 14-mile contiguous project length that encompasses diverse types of land uses and habitat, the SEIR should thoroughly analyze impacts to regional habitat connectivity corridors. Areas near the eastern portions of the CRSMP are within the Tierra Rejada Critical Wildlife Passage Area, which has been scientifically determined to be necessary for wildlife movement needed to support species' habitat. This corridor and any others that intersect the project should be mapped, described, and evaluated in the SEIR. The Ventura County Habitat Connectivity and Wildlife Corridors map[1] as shown in (Attachment 2) can be used as a reference. Furthermore, impacts to wildlife movement that occur within the corridor due to lighting, noise, wildlife impermeable fencing, and increased human activity, including during construction, should be thoroughly analyzed in the SEIR.

The SEIR should also discuss the proposed project with respect to the Ventura County General Plan *Goals, Policies and Programs (GPP)* for biological resources. Several goals and policies in the GPP support the protection of biological resources as follows:

1. **Goal: COS-1**
   To identify, preserve, protect, and restore sensitive biological resources, including federal and state-designated endangered, threatened, rare, or candidate species and their supporting habitats; wetland and riparian habitats; coastal habitats; habitat connectivity and wildlife corridors; and habitats and species identified as "locally important" by the County.

2. **Policy: COS-1.10 Evaluation of Potential Impacts of Discretionary Development on Wetlands**
   The County shall require discretionary development that is proposed to be located within 300 feet of a wetland to be evaluated by a County-approved biologist for potential impacts on the wetland and its associated habitats pursuant to the applicable provisions of the County's Initial Study Assessment Guidelines.

3. **Policy: COS-1.11 Discretionary Development Sited Near Wetlands**
   The County shall require discretionary development to be sited 100 feet from wetland habitats, except as provided below. The 100-foot setback may be increased or decreased based upon an evaluation and recommendation by a qualified biologist and approval by the decision-making body based on factors that include, but may not be limited to, soil type, slope stability, drainage patterns, the potential for discharges that may impair water quality, presence or absence of endangered, threatened or rare plants or animals, direct and indirect effects to wildlife movement, and compatibility of the proposed development with use of the wetland habitat area by wildlife. Discretionary development that would have a significant impact on a wetland habitat shall be prohibited unless mitigation measures are approved that would reduce the impact to a less than significant

[1] https://vcrma.org/en/habitat-connectivity-and-wildlife-movement-corridors

level. Notwithstanding the foregoing, discretionary development that would have a significant impact on a wetland habitat on land within a designated Existing Community may be approved in conjunction with the adoption of a statement of overriding considerations by the decision-making body.

4. **Policy: COS-1.5 Development Within Habitat Connectivity and Wildlife Corridors**

   Development within the Habitat Connectivity and Wildlife Corridors overlay zone and Critical Wildlife Passage Areas overlay zone shall be subject to the applicable provisions and standards of these overlay zones as set forth in the Non-Coastal Zoning Ordinance (8109-4.8).

Furthermore, the proposed CRSMP alignment as shown in the Initial Study (also Attachment 1, below) does not identify if there is any development planned for outside of the road right of way that would necessitate biological resource mitigations. Thus, the SEIR should specify if there are any project areas that extend beyond paved roads and dirt shoulders and have the potential for biological resource impacts. If there is potential for significant biological resource impacts, these sites should be identified in the SEIR, and the SEIR should include the following mitigation measures:

5. *Pre-Construction Wildlife Surveys, Monitoring, and Relocation*. Pre-construction protocol surveys and relocation must be conducted for all special status wildlife species, including (but not limited to) Locally Important Species that may occur within habitat planned to be removed by development of the CRSMP. For a complete listing of Locally Important Species, please see the following link: https://vcrma.org/en/ventura-county-locally-important-species-list. Typically, a biological monitor, with any appropriate permits needed, should survey the construction area prior to construction and relocate special-status wildlife outside of the construction area, which should be fenced to prevent wildlife from returning to the construction area. The biological monitor should also be present during project implementation.

6. *Bird Nesting Mitigation*. If feasible, construction activities including brush removal, tree trimming, building demolition, or grading activities, should be conducted outside of the nesting season which has been defined by California Department of Fish and Wildlife biologists as occurring between January 1st through September 15th. If construction activity occurs during the nesting season, construction areas should be surveyed by a biologist for nesting birds and active nests should be avoided. Mitigation measures should include details on requirements, timing, monitoring, and success criteria. The mitigation measures must include nesting and breeding considerations for any special status birds identified anywhere on the project's premises. Please refer to this Planning Division handout on the protection of nesting birds during project construction for more information. [2]

Thank you again for the opportunity to comment on this Notice of Preparation for a

[2] https://docs.vcrma.org/images/pdf/planning/bio/VC_Protection_of_Nesting_Birds_2020.pdf

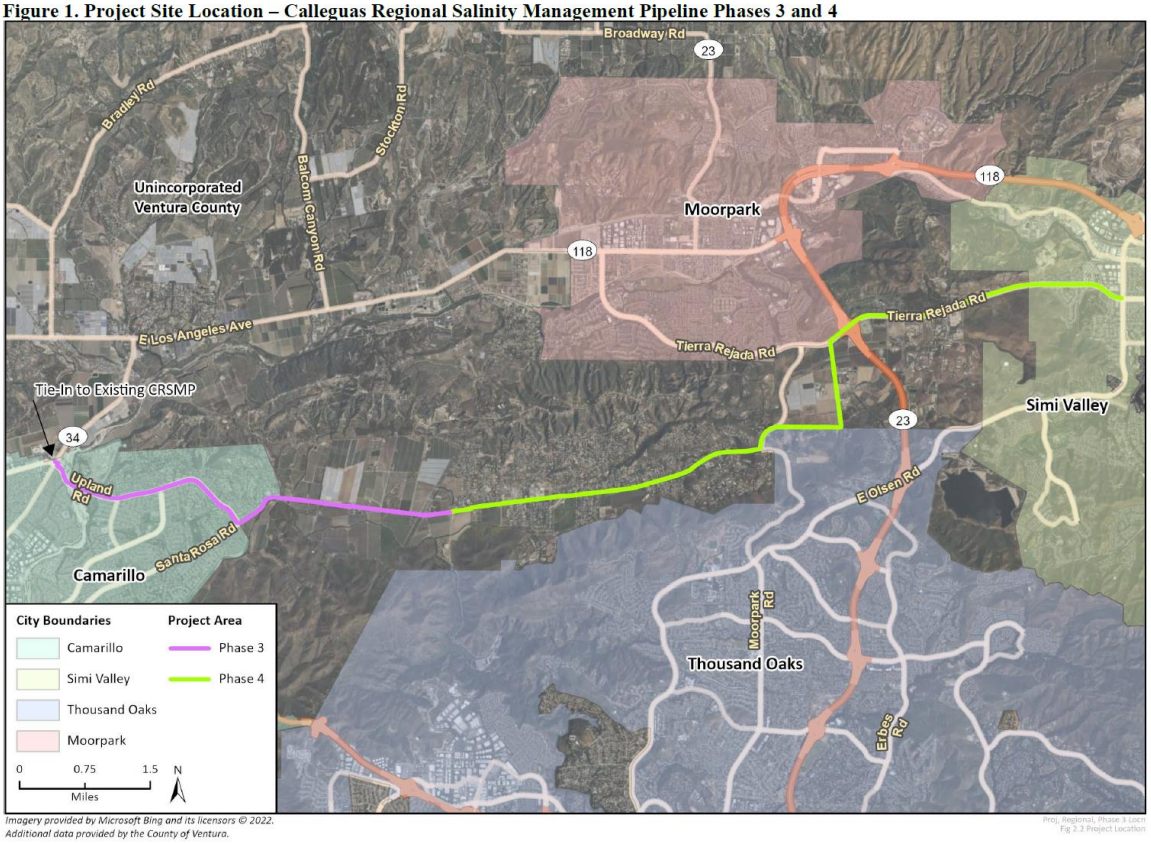
Draft Subsequent Environmental Impact Report. If you have any questions about this letter, please contact Joel Hayes at Joel.Hayes@ventura.org or 805.654.2834.

Sincerely,

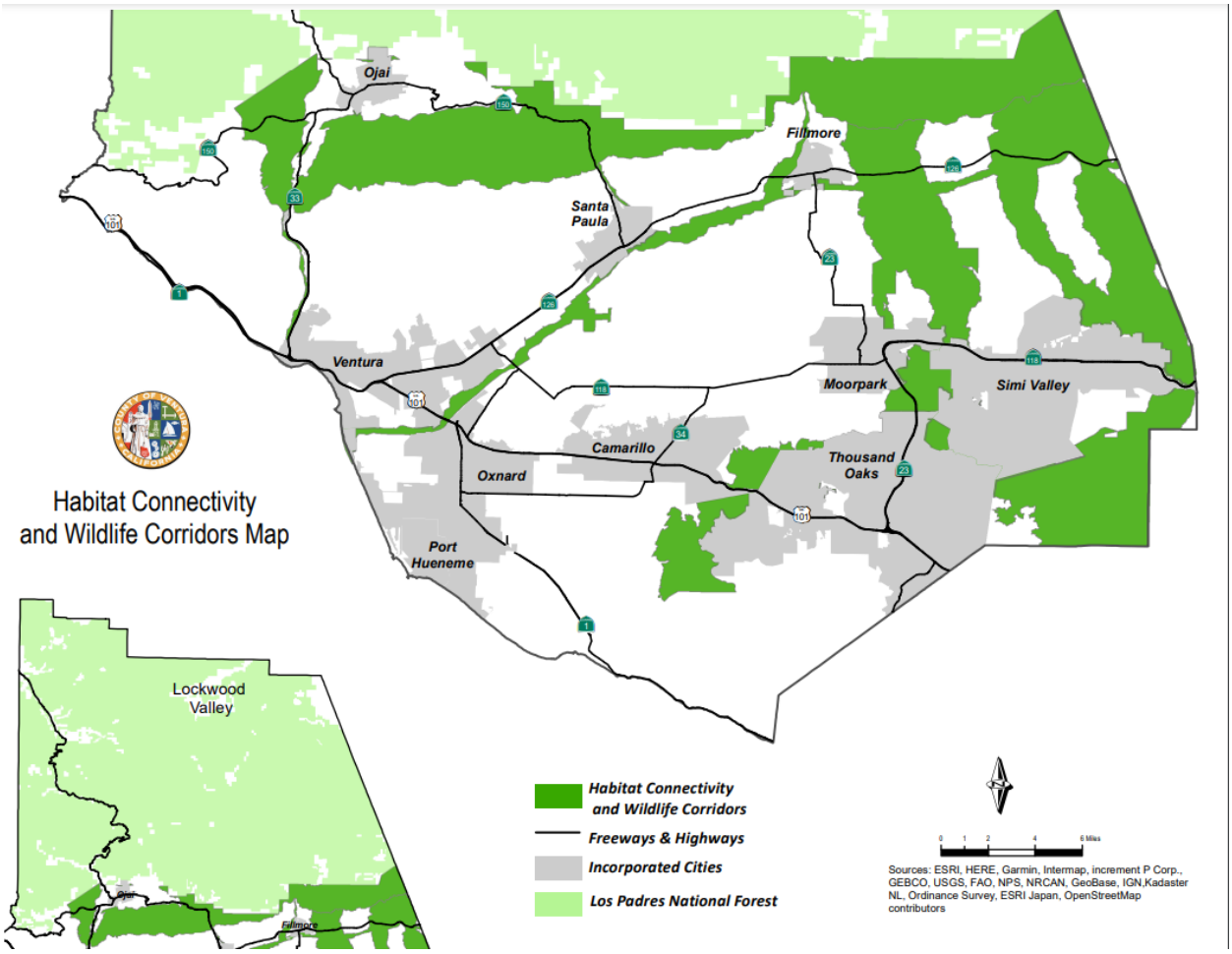
Dave Ward, AICP I Planning Director
County of Ventura, Planning Division

Attachment 1

**Figure 1. Project Site Location – Calleguas Regional Salinity Management Pipeline Phases 3 and 4**



Attachment 2



PUBLIC VENTURA COUNTY WORKS

COUNTY of VENTURA

**Jeff Pratt**
Agency Director

**David Fleisch**
Assistant Director

Central Services **Joan Araujo**, Director | Engineering Services **Christopher Cooper**, Director | Roads & Transportation **Christopher Kurgan**, Director | Water & Sanitation **Joseph Pope**, Director | Watershed Protection **Glenn Shephard**, Director

**Date:** February 27, 2023

**To:** Calleguas Municipal Water District

**From:** Ventura County Public Works Roads and Transportation
Glenn Derossett, Engineering Manager

**Subject:** **REVIEW OF THE NOTICE OF PREPARATION OF AN EIR AND NOTICE OF PUBLIC SCOPING MEETING FOR CALLEGUAS MUNICIPAL WATER DISTRICT REGIONAL SALINITY MANAGEMENT PIPELINE PHASES 3 AND 4; COUNTY OF VENTURA RMA #23-003**

Pursuant to your request, the Public Works Agency – Roads and Transportation Department has reviewed the Notice of Preparation that was received February 27, 2023.

The proposed project involves installation of a pipeline and associated improvements in County-maintained streets.

We offer the following comments:

1. According to County policy, trenching shall not be permitted on any street that was rehabilitated within the last five years, unless a full width pavement improvement is provided after trenching is completed. Please be aware that Moorpark Road, from Santa Rosa Road to Tierra Rejada Road, where your pipeline project is planned, is listed in the County's 2022 to 2026 Multi-Year Pavement Plan as a Priority 3 (out of 5) project. Please contact the County during your design for information regarding what type, and the extent, of pavement treatment will be necessary with your project.
2. The Water District shall repair any damage to County roads due to trenching and the traffic generated by this project up to and including providing a new overlay as determined by the Ventura County Public Works Agency-Roads and Transportation Department ("Transportation Department"). The overlay shall be done in

accordance with the County of Ventura, Public Works Agency, Road Standards, in particular Plate E-11.

3. Prior to any work conducted within the County right-of-way, the Water District shall obtain an encroachment permit from the Transportation Department. The applicant shall contact (805) 654-2055 for the requirements of this permit.
4. The Water District must provide a Traffic Management Plan (TMP) to identify the construction-related vehicle route, especially for trucks, if there are any. The TMP must be submitted to the Transportation Department for review and approval. If the applicant uses the County roads for truck and construction related trips, proper precautions shall be taken to protect all pavements, curb and gutter, sidewalks, and drainage structures from damage. Any portion damaged by the project's operations, in the opinion of the Transportation Department or designee, shall be replaced in accordance with current Standard Construction Details and/or in a manner acceptable to the Transportation Department or designee.
5. The proposed project would require construction in local roadways, including temporary closures of traffic lanes. Construction would cause driver inconvenience and could occur in proximity to homes, therefore, construction activity is recommended to take place during off-peak hours.

Our review is limited to the impacts this project may have on the County's Regional Road Network. If you have any questions, please contact Robert Zastrow at 805-477-7157, or by email at Robert.Zastrow@ventura.org.

Watershed Protection have the following conditions.

## WATERSHED PROTECTION CONDITIONS:

1. Watercourse/Encroachment Permit:
   The proposed pipeline will cross several Ventura County Watershed Protection District's jurisdictional flood control channels. Project proponent shall obtain a Watercourse/Encroachment Permit from the Ventura County Watershed Protection District to perform any work within, under, or over the channels, or utilize the District's Right of Way. Project findings will be required to comply with the Ventura County Watershed Protection District hydrology data and the 2017 Hydrology Manual and follow the WP "Guide for Hydrology and Hydraulic Study Report" found at following website: **http://pwaportal.ventura.org/WPD/onestop/guidelines/Guide%20for%20Hydra.pdf**.

Please let us know if you have any questions.

Thank you,

Dawn Husted
*Management Assistant II*
**Watershed Protection – Planning & Permits**

PUBLIC VENTURA COUNTY WORKS

800 S. Victoria Ave. / #1610
Ventura, CA 93009
P: 805.662-6882
VCPWA Online | Facebook | Twitter

# Appendix C

Biological Resources Assessment

# Calleguas Regional Salinity Management Pipeline Phases 3 & 4

## Biological Resources Assessment

*prepared for*

**Calleguas Municipal Water District**
2100 Olsen Road
Thousand Oaks, California 91360
Contact: Jennifer Lancaster

*prepared by*

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

**March 2024**

RINCON CONSULTANTS, INC. SINCE 1994

# Table of Contents

## Tables



## Figures



## Appendices

# 1 Introduction

Rincon Consultants, Inc. (Rincon) has prepared this Biological Resources Assessment (BRA) Report for the Calleguas Municipal Water District (Calleguas) to document existing conditions and provide a basis for evaluation of potential impacts to special-status and sensitive biological and jurisdictional resources associated with Calleguas Regional Salinity Management Pipeline, Phases 3 and 4 (project) in Ventura County, California.

## 1.1 Project Location

The proposed pipeline alignment would be located in Ventura County, extending approximately 14.4 miles from near the northeast boundary of the city of Camarillo to the western boundary of the city of Simi Valley. The alignment would traverse portions of Camarillo, Moorpark, Thousand Oaks, and Simi Valley, as well as unincorporated Ventura County.

The pipeline alignment would mostly be located within the public right-of-way (ROW) within paved roads and dirt shoulders. A portion of the alignment would extend under private property at the northeast corner of the intersection of Las Posas Road and Upland Road, which is currently developed for agricultural production. Roadways along the project alignment include Upland Road, Santa Rosa Road, Moorpark Road, Read Road, Sunset Valley Road, and Tierra Rejada Road. Each of these roads would provide access to the project alignment during construction activities. Regional access would be provided by State Route 118, State Route 23, State Route 34, and U.S. 101.

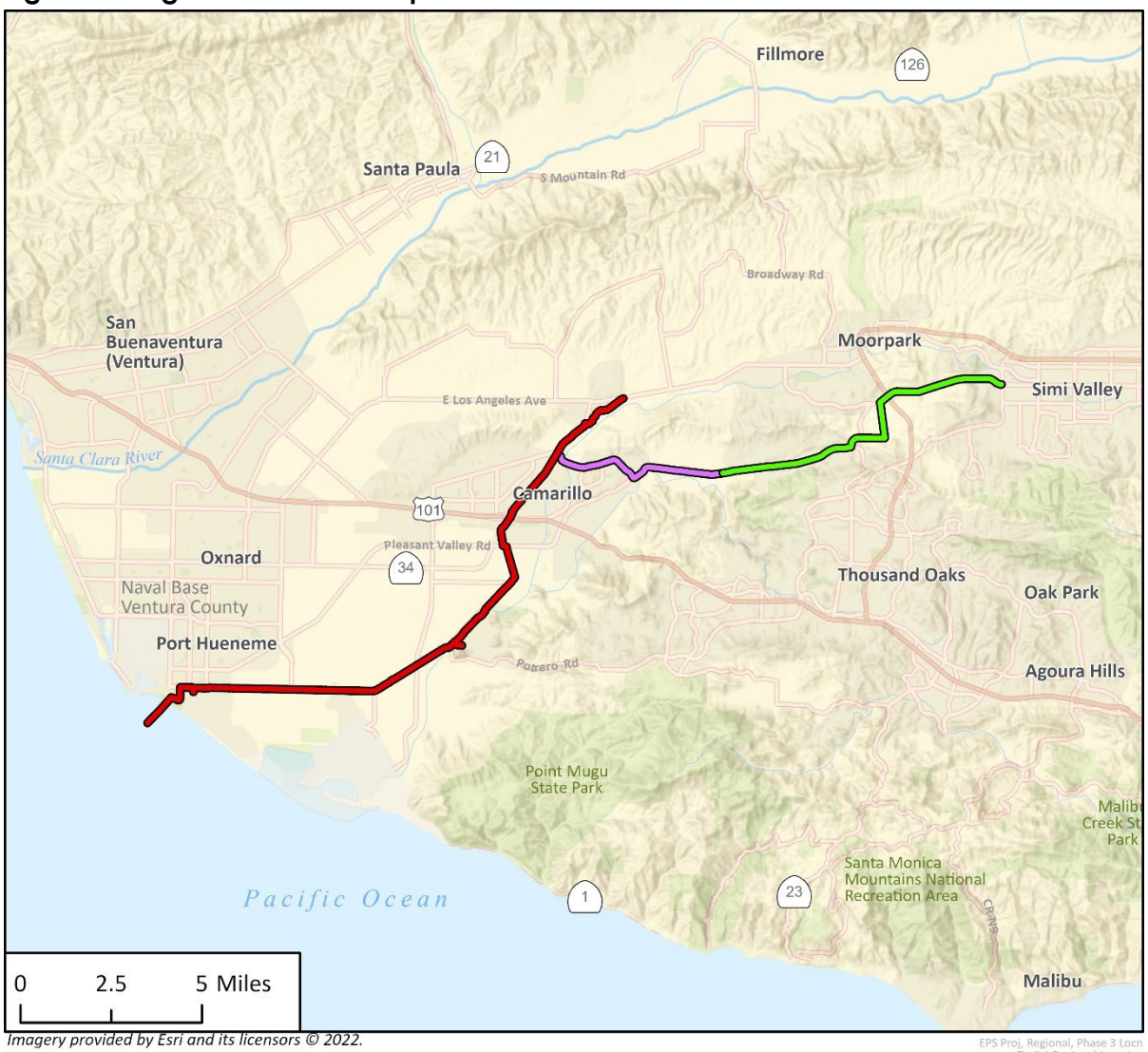
Figure 1 shows the regional location of the project alignment and Figure 2 shows the alignments of both phases of the proposed project. For the purposes of this report, it is assumed that the project would avoid construction within areas subject to regulatory agency approval (e.g., wetlands, critical habitat).

## 1.2 Project Description

The current project consists of Phases 3 and 4 of the Calleguas Regional Salinity Management Pipeline (CRSMP). The proposed project would install an underground pipeline composed of polyvinyl chloride (PVC) and high-density polyethylene (HDPE) materials.

The CRSMP was assessed programmatically in a 2002 Final Program Environmental Impact Report (PEIR) which provided California Environmental Quality Act (CEQA) clearance for the overall CRSMP and project-specific clearance for Phase 1 of the CRSMP. It also discussed Phase 2 as a logical extension of Phase 1, with the acknowledgment additional project-level CEQA review would be required at the time of alignment development for Phase 2 and subsequent phases of the CRSMP. As stated in the 2002 PEIR (pages 1-2), future project-specific analyses would be required "…when assumptions become commitments and fundamental parameters such as the identity, volume and water quality of each potential pipeline contributor are fully identified, and the alignment of pipelines can be finalized."

## Figure 1 Regional Location Map




*Imagery provided by Esri and its licensors © 2022.*

EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N

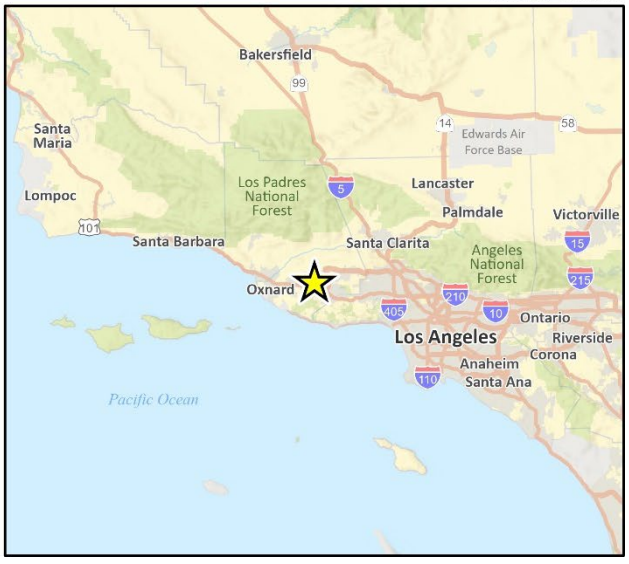
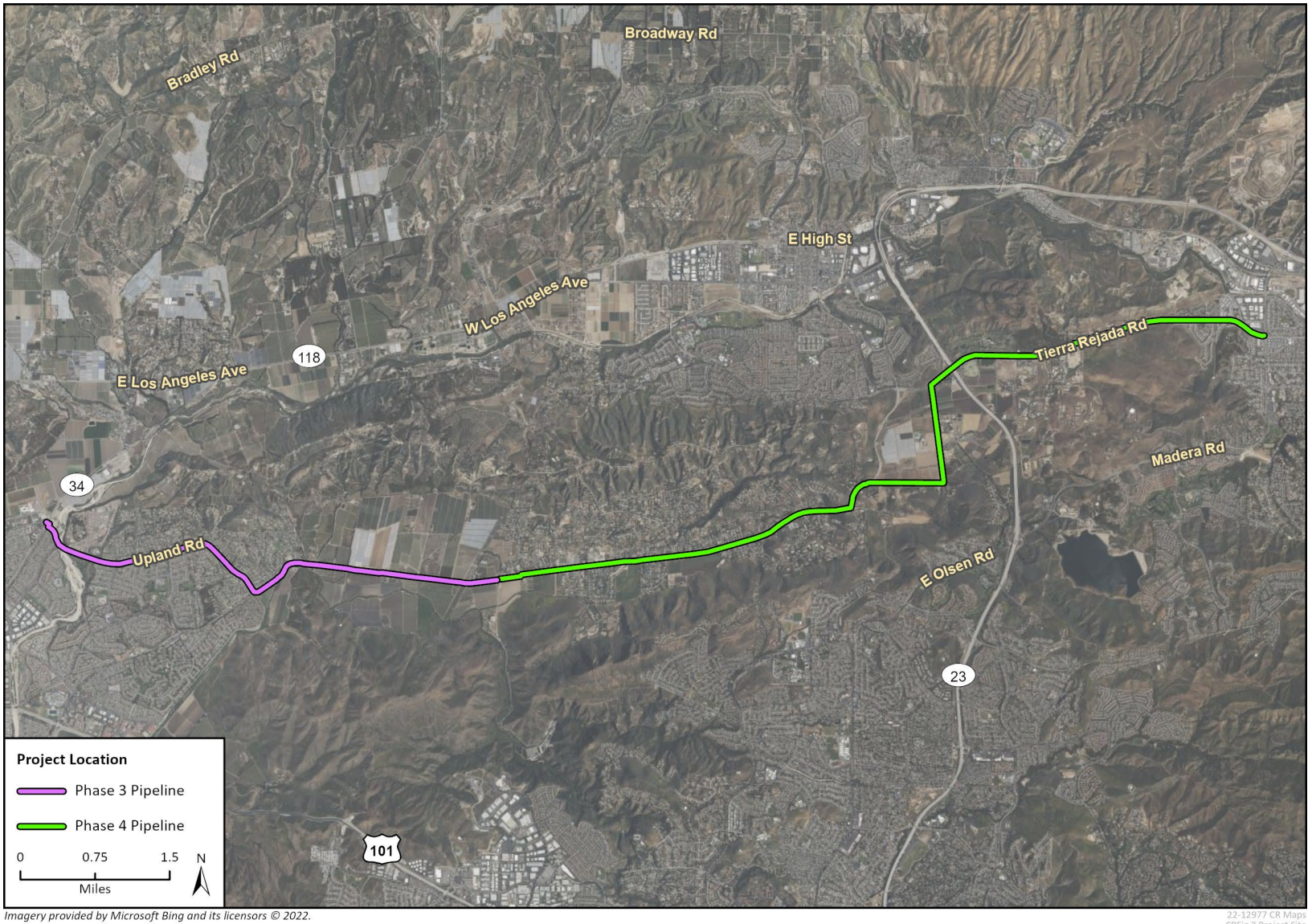


**Figure 2 Project Location**



Phases 3 and 4 would connect additional dischargers to the CRSMP. Discharges from these phases, as well as previously constructed phases, would intermingle and combine to create the effluent discharged through the existing ocean outfall. Effluent would be subject to existing National Pollutant Discharge Elimination Standard (NPDES) permit constituent limits at the outfall. Prescribed sampling requirements in the NPDES permit necessitate weekly, monthly, quarterly, and semi-annual monitoring of effluent, as well as monitoring of receiving water twice a year, monitoring of sediment every two years, and a biological monitoring study involving mussels that would occur once during the term of the permit. Additionally, while not required by the NPDES permit, Calleguas monitors the individual discharges quarterly for all effluent limit constituents except toxicity and radioactivity.

Phases 3 and 4 of the CRSMP would typically be installed in 20- to 40-foot sections. The majority of the pipeline would be installed via conventional open-cut trench construction methods. Trenchless construction methods would be used to cross below existing drainage channels. Trenchless construction methods would also be used to cross Somis Road, Santa Rosa Road, and busy intersections to minimize traffic impacts.

### 1.2.1 Project Construction

The typical construction sequence for the proposed project would include the following pipeline installation activities:

- **Open-cut trench pipeline installation** typically consists of trench excavation (including saw cutting of pavement where applicable), pipe bedding stabilization, pipe installation, and backfill. The construction crew would typically operate a backhoe and/or excavator, compaction equipment (attachment on an excavator and hand-operated equipment), dump trucks for stockpiling of soils and delivery of backfill material, utility trucks (with truck-mounted or towed generator and hand tools), and water trucks/water buffalos. Where required by the jurisdictional agency to backfill with sand cement slurry, concrete trucks would deliver slurry to the project site.
- **Trenchless installation** typically consists of excavation of launching and receiving pits (including saw cutting of pavement where applicable), installation of shoring system and boring equipment, installation of steel casing and pipeline, removal of equipment, and backfill. This step typically includes the excavation and backfill of the pits using an excavator, dump truck, and potentially a second mini excavator inside the pits. The trenchless installation would be performed by operating a crane to lower and remove equipment and materials.
- **Paving** and **ground restoration** typically is performed at the completion of each segment of pipeline and then at the end of a project once all excavation and backfill operations have been completed.

The maximum depth of excavation typically would be 8 feet. Where the pipeline would need to cross below an existing utility or drainage channel, the depths may be greater and would depend on the characteristics of the utility or channel.

Based on an installation rate of 80 feet per day and a 4-foot-wide trench, the average amount of excess spoils requiring removal would be approximately 60 cubic yards per day and would require approximately 7 haul roundtrips per day. The average daily number of heavy-duty trucks hauling material to and from the construction site (including the delivery of pipe sections and miscellaneous

supplies, hauling of pipe bedding and backfill materials, and removal of excess spoils) would be approximately 14 haul roundtrips per day.

Generally, trench spoils would be temporarily stockpiled within the construction staging and storage area, then backfilled to the trench after pipeline installation or hauled away for re-use or disposal at an appropriately licensed landfill. Storage of materials and equipment would be dependent upon the location of the contractor and subcontractors. If the contractors are local, they may store equipment and materials in their own yards.

If groundwater dewatering is required based on site conditions, the project would adhere to applicable rules and regulations related to discharge. Depending on the quality of the dewatered groundwater, water could be trucked off-site for reuse for dust control and irrigation.

### Construction Schedule

Construction would mostly be limited to normal construction hours between 7:00 am and 4:30 pm, Monday through Friday. Weekend work, as well as evening and nighttime work between the hours of 4:30 pm and 7:00 am, may be required to install the trenchless portions of the pipelines. In areas where traffic conditions require non-traditional working hours, night and weekend work could also be necessary. Additionally, the tie-in connection to the CRSMP would require the shutdown of the CRSMP, consequently requiring work be performed continuously until complete. Work hours would be finalized through the roadway encroachment permitting and design process.

Construction is anticipated to require approximately 16 months for Phase 3 and 30 months for Phase 4. Due to uncertainties about the anticipated timing of dischargers, duration of permitting and design, and other considerations, there is currently no planned start date.

## 1.2.2 Project Operation and Maintenance

Once construction is complete, Calleguas staff would periodically inspect the pipeline and perform routine maintenance. Valves on the appurtenances would be exercised roughly once per year and the pipeline alignment would be marked as needed in response to DigAlert (utility marking) requests.

The proposed project would operate under open channel flow, meaning the contents of the pipeline would be propelled by gravity. Project operation would not introduce new electricity demands.

In the event any project component is compromised during operation, Calleguas would temporarily cease operations and conduct emergency repairs as soon as possible; emergency response and repairs are part of Calleguas' normal operations to maintain system integrity and reliability and are not a new or increased activity associated with the project.

# 1.3 Regulatory Summary

Regulated or sensitive resources studied and analyzed herein include special-status plant and wildlife species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, and locally protected resources, such as protected trees. Regulatory authority over biological resources is shared by federal, state, and local authorities. Primary authority for regulation of general biological resources lies with local jurisdictions (in this instance, Calleguas).

### 1.3.1 Definition of Special-Status Species

For the purposes of this report, special-status species include:

- Species listed as threatened or endangered under the federal Endangered Species Act (FESA), including proposed and candidate species
- Species listed as candidate, threatened, or endangered under the California Endangered Species Act (CESA)
- Species designated as Fully Protected by the California Fish and Game Code (CFGC), and Species of Special Concern or Watch List by the California Department of Fish and Wildlife (CDFW)
- Native Plant Protection Act (NPPA) – state rare (SR)
- California Native Plant Society (CNPS) California Rare Plant Ranks (CRPR) 1A, 1B, 2A and 2B
- Species designated as locally important by the Local Agency and/or otherwise protected through ordinance, or local policy
- Ventura County Locally Important Species Lists (Ventura County 2018)

### 1.3.2 Environmental Statutes

For the purpose of this report, potential impacts to biological resources were analyzed based on the following statutes (Appendix A):

- CEQA
- FESA
- CESA
- Federal Clean Water Act (CWA)
- CFGC
- Migratory Bird Treaty Act (MBTA)
- Bald and Golden Eagle Protection Act
- Porter-Cologne Water Quality Control Act
- Ventura County General Plan
- City of Camarillo General Plan
- City of Moorpark General Plan
- City of Simi Valley General Plan
- City of Thousand Oaks General Plan

### 1.3.3 Guidelines for Determining CEQA Significance

The following threshold criteria, as defined by the CEQA Guidelines Appendix G Initial Study Checklist, were used to evaluate potential environmental effects. Based on these criteria, the proposed project would have a significant effect on biological resources if it would:

*a) Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*

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

# 2 Methodology

## 2.1 Biological Survey Area

Rincon biologists conducted the survey within the Biological Survey Area (BSA), defined for this project as the proposed pipeline alignment and a 25-foot buffer on either side of each road. The BSA is approximately 183 acres in total area.

## 2.2 Literature Review

Rincon conducted a literature review to characterize the nature and extent of biological resources on and adjacent to the BSA. The literature review included an evaluation of current and historical aerial photographs of the site (Google Earth Pro 2022), regional and site-specific topographic maps, and climatic data.

Queries of the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation system (IPaC; USFWS 2022a), CDFW California Natural Diversity Database (CNDDB; CDFW 2022a), and CNPS online Inventory of Rare and Endangered Plants of California (2022b) were conducted to obtain comprehensive information regarding state and federally listed species, and other special-status species, with potential to occur within the United States Geological Survey (USGS) 7.5-minute topographic quadrangles (USGS 2022b) crossed by the BSA (*Camarillo, Newbury Park, Thousand Oaks,* and *Simi Valley West*). The CNDDB query also included a search of special-status resources within five miles of the BSA. The results of database queries and lists of special-status species were reviewed by Rincon's regional biological experts for accuracy and completeness. The final list of special-status biological resources (species and sensitive natural communities) was evaluated based on documented occurrences within the four-quadrangle search area and biologists' expert opinions on species known to occur in the region.

The following resources were reviewed for additional information on existing conditions relating to biological resources within the BSA:

- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA NRCS 2022b)
- The State Hydric Soils List (USDA NRCS 2022a)
- USFWS Critical Habitat Portal (USFWS 2022b)
- CDFW Biogeographic Information and Observation System (CDFW 2022a)
- CDFW Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2022d)
- CDFW Special Animals List (CDFW 2022c)
- USFWS National Wetland Inventory (NWI) Mapper (USFWS 2022c)
- USGS National Hydrography Dataset (NHD) (USGS 2022a)

The vegetation community characterizations for this analysis were based on the classification systems presented in *A Manual of California Vegetation, Second Edition* (MCV2; Sawyer et al. 2009). Updates to the MCV2 provided in the online database (CNPS 2022a) were taken into consideration.

The potential for wildlife movement corridors was evaluated based on the California Essential Habitat Connectivity Project commissioned by the California Department of Transportation and CDFW (Spencer et al. 2010).

## 2.3 Field Reconnaissance Survey

The reconnaissance field survey was conducted to document the existing site conditions and to evaluate the potential presence of sensitive biological resources, including special-status plant and animal species, sensitive plant communities, potentially jurisdictional wetlands and aquatic resources, and habitat for federally and state protected species. The survey was conducted by Rincon biologists Carolyn Welch and Kyle Gern on October 6, 2022, between 8:00 AM and 3:00 PM. Weather conditions during the survey included temperatures between 66 and 82 degrees Fahrenheit (°F), calm winds up to five miles per hour, and overcast to clear skies.

The survey was conducted primarily by driving along the proposed pipeline alignment, with stops as necessary to evaluate potential sensitive resources. The majority of the BSA was accessible and was evaluated on foot or from a vehicle, as necessary. Portions of the BSA located on private property or behind fences were surveyed from adjacent accessible areas, using 10x25 binoculars.

Biological resources observed in the BSA were recorded, including plant and wildlife species. Plant species nomenclature and taxonomy follows *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al. 2012).

## 2.4 Impact Evaluation

Impacts are defined as project-related activities that destroy, damage, alter, or otherwise affect biological resources. This may include injury or mortality to plant or wildlife species, effects on an animal's behavior (such as through harassment or frightening off an animal by construction noise), as well as the loss, modification, or disturbance of natural resources or habitats. Impacts are defined as either direct or indirect, and either permanent or temporary.

Direct impacts are generally those that occur during project implementation and at the same time and location as the cause of the impact. Direct impacts for this project may include injury, death, and/or harassment of special-status wildlife species, if present in the work areas or vicinity. Direct impacts may also include the destruction of vegetation communities necessary for special-status wildlife species breeding, feeding, or sheltering. Direct impacts to plants can include crushing of plants, bulbs, or seeds where present in the impact areas.

Indirect impacts are those that are reasonably foreseeable and caused by a project but occur later in time and/or potentially at locations of some distance from the source of the impact. If a direct physical change in the environment in turn causes another change in the environment, then the other change is an indirect impact. Specific examples for this project may include dust that drifts outside of project disturbance areas and covers native plants, thereby decreasing their photosynthetic capacity, and unintentional introduction of invasive species (particularly weedy plant species that outcompete native plant species) that over time negatively affect the local ecology.

Permanent impacts are those that result in the long-term or irreversible loss of biological resources. Temporary impacts to biological resources are those that are reversible over time, with or without implementation of mitigation measures. Examples include the generation of fugitive dust and noise during project implementation, trimming or crushing vegetation that will regrow following project

completion, and removed vegetation that will be actively restored. These temporary impacts are anticipated to last during project implementation and shortly thereafter. However, the biological resources are anticipated to return to a baseline condition after project completion.

# 3 Existing Conditions

This section summarizes the existing biological conditions of the BSA and results of biological resource database inquiries and field surveys. Brief discussions regarding the general physical characteristics within the BSA are presented below. Representative photographs of the BSA are provided in Appendix B, and complete lists of all plants and wildlife species observed within the BSA are presented in Appendix C.

## 3.1 Physical Characteristics

### 3.1.1 Topography and Geography

The BSA is situated in a region that is characterized by a Mediterranean climate with warm, dry summers and cool, wet winters. Average high temperatures range from 77 to 89°F and average low temperatures range from 61 to 68°F. The average annual precipitation in the region is 15.56 inches with the majority falling in February (Western Regional Climate Center 2022).

The topography of the BSA is generally level, as it follows the contours of developed roadways. The elevation ranges between approximately 150 and 700 feet above mean sea level. The elevation is highest in the eastern portion of the BSA along Tierra Rejada Road, and lowest in the western portion of the BSA along Upland Road. Land uses surrounding the BSA include agriculture, recreation, open space, and residential, commercial, and industrial development.

### 3.1.2 Watershed and Drainages

The eastern portion of the BSA along Tierra Rejada Road between Madera Road and Llevarancho Road is within the Lower Simi Arroyo watershed (HUC12 number 180701030101). The central portion of the BSA, extending west until the intersection of Upland Road and Woodcreek Road, is within the Lower Conejo Arroyo watershed (HUC12 number 180701030105). The western portion of the BSA along Upland Road between Woodcreek Road and Lewis Road is within the Las Posas Arroyo watershed (HUC12 number 180701030103; USGS 2022a).

The NWI identifies 15 hydrologic features that cross the BSA, 10 of which are intermittent and five of which are ephemeral (USFWS 2022c). Eight of these features are also identified in the NHD (USGS 2022a). Named hydrologic features within the BSA include Calleguas Creek, Conejo Creek, and Arroyo Santa Rosa. The remainder of the features identified in the NWI are unnamed, and most of these features correspond with agricultural ditches.

An overview of these features and watersheds is shown in Figure 3 below and more detail is found in Appendix E. The mapping presented in the NHD and NWI provide useful context, but not a completely accurate depiction of current conditions or extent of regulatory agency jurisdiction in the BSA, particularly regarding alignment and flow regime of streams.

During the field reconnaissance survey, 15 potentially jurisdictional features were observed within the BSA, and include Calleguas Creek, Conejo Creek, Arroyo Santa Rosa, and multiple agricultural and/or drainage ditches. Most of these features flow in the southerly or southwesterly direction within the BSA. Additional details on these resources can be found in Section 4.3 below.

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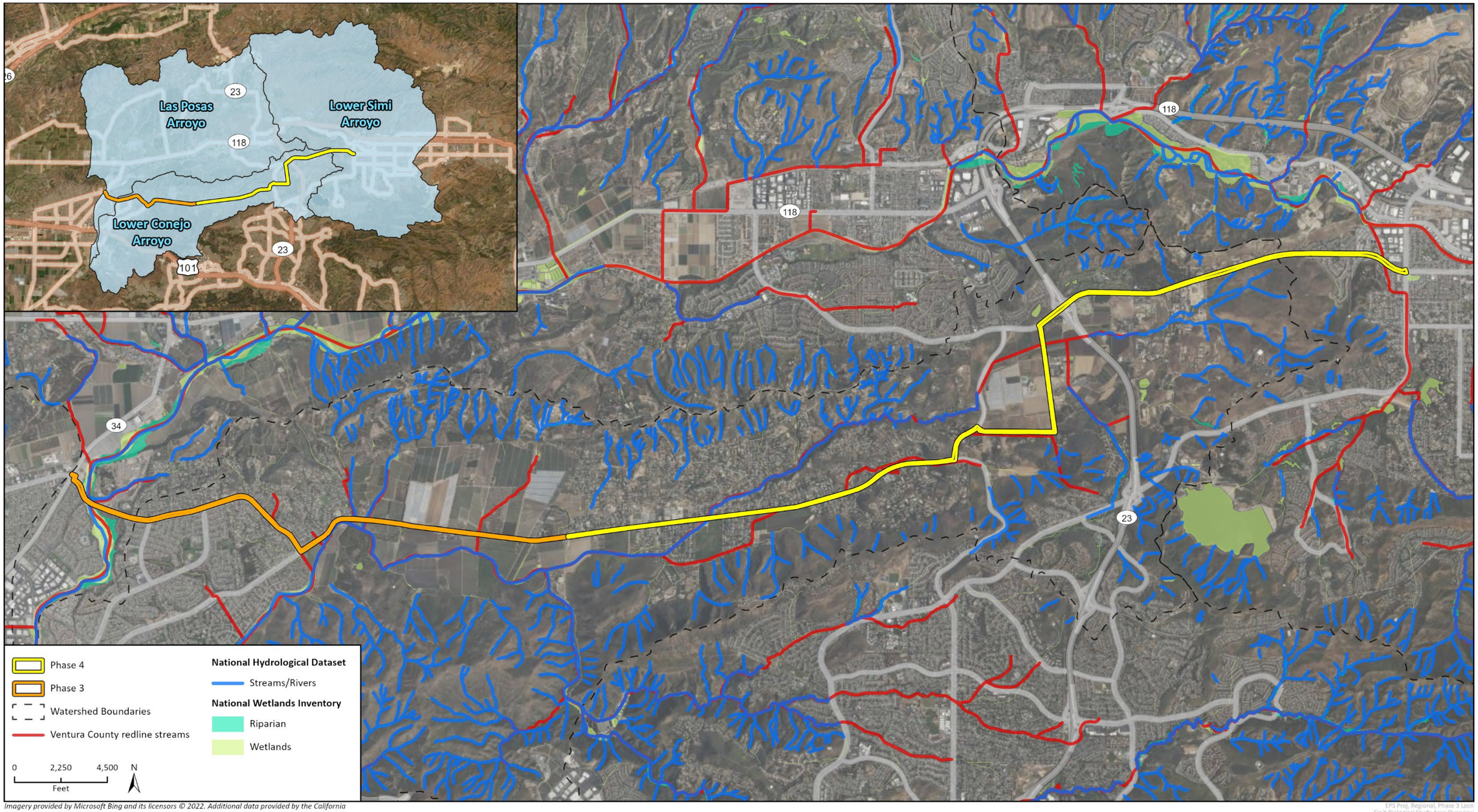
**Figure 3 Hydrology Overview**




*Imagery provided by Microsoft Bing and its licensors © 2022. Additional data provided by the California Water Service, the National Hydrological Dataset and the National Wetlands Inventory, 2022*

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Fig X Biological Study Area Overview

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### 3.1.3 Soils

According to the NRCS Web Soil Survey, the BSA includes 44 soil map units (Table 1) (USDA NRCS 2022b). One soil type, riverwash, is classified as a hydric soil (USDA NRCS 2022a).

**Table 1 Soil Units in the BSA**

| Soil Unit Name | Hydric Soil Rating | Acreage |
|---|---|---|
| Topdeck loam, 10 to 35 percent slopes | No | 3.84 |
| Urban land-Typic Xerorthents, terraced-Gilroy complex, 5 to 20 percent slopes | No | 0.16 |
| Urban land-Typic Xerorthents, very gravelly-Topdeck complex, 10 to 35 percent slopes | No | 1.91 |
| Anacapa sandy loam, 0 to 2 percent slopes | No | 5.36 |
| Anacapa sandy loam, 2 to 9 percent slopes | No | 3.09 |
| Calleguas very channery loam, 30 to 50 percent slopes | No | 3.78 |
| Calleguas-Arnold complex, 30 to 50 percent slopes, eroded | No | 1.56 |
| Camarillo loam | No | 3.25 |
| Castaic-Balcom complex, 15 to 30 percent slopes | No | 0.01 |
| Cibo clay, 15 to 30 percent slopes, MLRA 20 | No | 6.93 |
| Corralitos loamy sand, 2 to 9 percent slopes | No | 0.47 |
| Cropley clay, 0 to 2 percent slopes, warm MAAT, MLRA 19 | No | 6.05 |
| Cropley clay, 2 to 9 percent slopes, warm MAAT, MLRA 19 | No | 50.80 |
| Garretson loam, 2 to 9 percent slopes | No | 0.99 |
| Gilroy-Cibo complex, 5 to 15 percent slopes | No | 5.81 |
| Gilroy loam, 15 to 50 percent slopes, very rocky | No | 0.24 |
| Gullied land | No | 1.64 |
| Hambright very rocky loam, 15 to 75 percent slopes | No | 0.99 |
| Huerhuero very fine sandy loam, 0 to 5 percent slopes | No | 0.24 |
| Huerhuero very fine sandy loam, 5 to 9 percent slopes, eroded | No | 2.58 |
| Huerhuero very fine sandy loam, 9 to 15 percent slopes, eroded | No | 3.52 |
| Huerhuero very fine sandy loam, 9 to 30 percent slopes, severely eroded | No | 12.38 |
| Linne silty clay loam, 15 to 30 percent slopes, eroded | No | 0.18 |
| Metz loamy fine sand, 2 to 9 percent slopes | No | 3.19 |
| Metz loamy sand, 2 to 9 percent slopes | No | 0.11 |
| Metz loamy sand, loamy substratum, 0 to 2 percent slopes | No | 5.99 |
| Mocho loam, 0 to 2 percent slopes, warm MAAT, MLRA 19 | No | 10.61 |
| Mocho gravelly loam, 2 to 9 percent slopes | No | 0.06 |
| Pico sandy loam, 0 to 2 percent slopes | No | 2.44 |
| Pico sandy loam, 2 to 9 percent slopes | No | 1.44 |
| Pico loam, sandy substratum, 0 to 2 percent slopes | No | 2.60 |
| Rincon silty clay loam, 2 to 9 percent slopes, MLRA 19 | No | 17.47 |
| Rincon silty clay loam, 15 to 30 percent slopes, eroded | No | 1.34 |
| Rincon silty clay loam, 9 to 30 percent slopes, severely eroded | No | 2.42 |

| Soil Unit Name | Hydric Soil Rating | Acreage |
|---|---|---|
| Riverwash | Yes | 1.92 |
| Salinas clay loam, 2 to 9 percent slopes | No | 4.01 |
| Soper loam, 15 to 30 percent slopes, eroded | No | 2.17 |
| Sorrento loam, 0 to 2 percent slopes, MLRA 14 | No | 2.85 |
| Sorrento loam, 2 to 9 percent slopes, warm MAAT, MLRA 19 | No | 0.24 |
| Sorrento silty clay loam, 0 to 2 percent slopes, warm MAAT, MLRA 19 | No | 1.80 |
| Vina loam, 0 to 4 percent slopes, MLRA 19 | No | 1.00 |
| Vina loam, 2 to 9 percent slopes | No | 1.38 |
| Vina gravelly loam, 2 to 9 percent slopes | No | 1.83 |
| Vina silty clay loam, 2 to 9 percent slopes | No | 2.72 |

## 3.2 Vegetation Communities and Other Land Cover

Six vegetation communities and four land cover types were identified within the BSA. Figure 4 below provides an overview of these vegetation communities and land cover types, as well as other resources such as protected native trees and potential heritage trees under Ventura County regulations. More detailed figures are available in Appendix E. A list of plant species encountered during the field reconnaissance survey is provided in Appendix C.

**Figure 4 Biological Resources Overview**

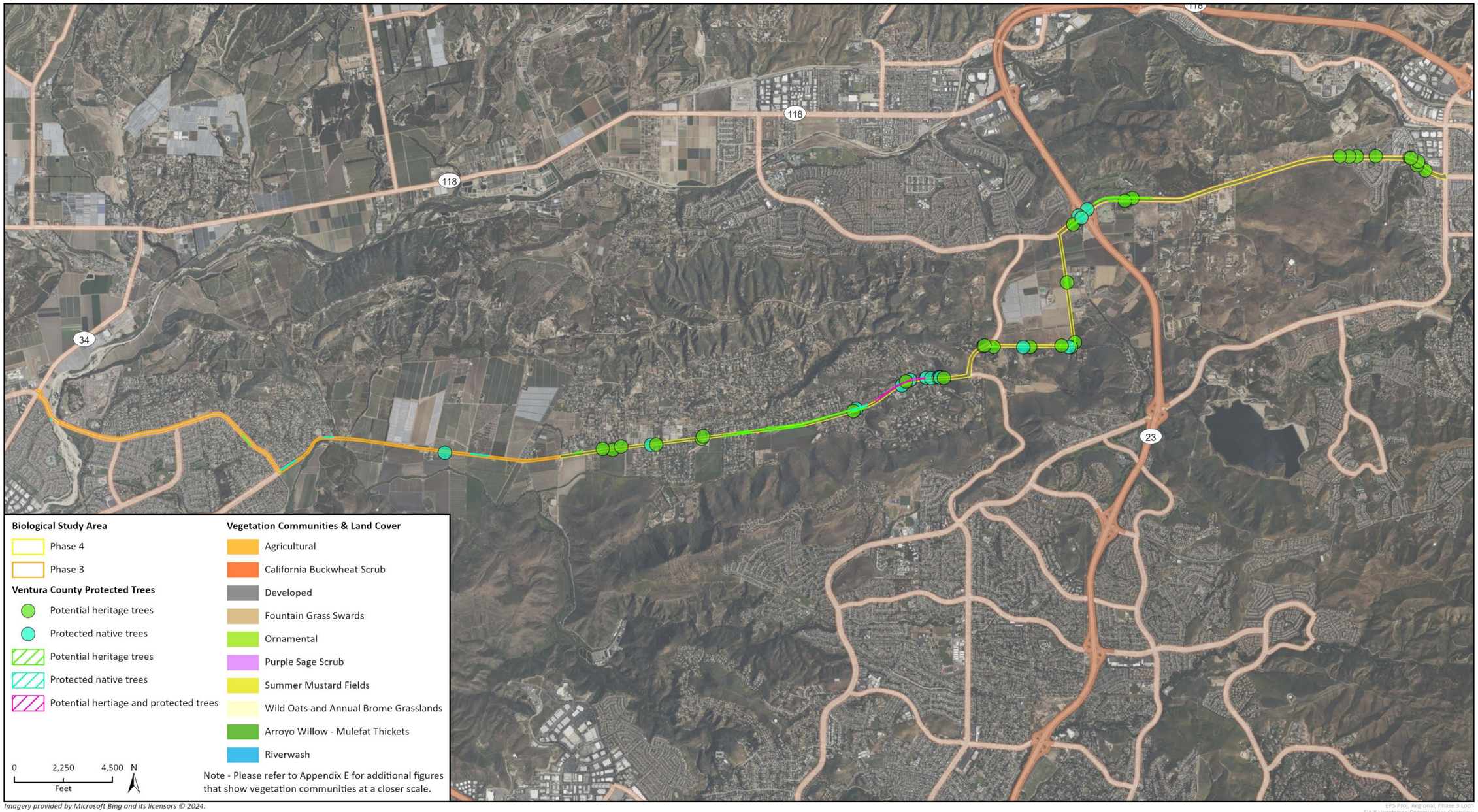


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Fig X Vegetation Communities Overview

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### 3.2.1 Arroyo Willow - Mulefat Thickets

Arroyo willow thickets (*Salix lasiolepis* Shrubland Alliance) are typically found along stream banks and benches, slope seeps, and stringers along drainages from sea level to 7,120 feet (2,170 meters) in elevation. Arroyo willow (*Salix lasiolepis*) provides at least 50 percent relative cover in the tree or shrub canopy, at least 25 percent absolute cover in the tree or shrub canopy, or at least 30 percent relative cover in the shrub canopy. Mulefat (*Baccharis salicifolia*) is present as a subdominant species in the shrub layer of this association. This vegetation community is ranked G4S4 and is not classified as sensitive (CDFW 2022b).

In the BSA, this vegetation community is characterized by the arroyo willow – mulefat thickets association, in which the variable shrub layer is dominated by arroyo willow and mulefat. Other shrub species present include tree tobacco (*Nicotiana glauca*), and giant reed (*Arundo donax*). The sparse herbaceous layer includes prickly lettuce (*Lactuca serriola*) and castor bean (*Ricinus communis*). This community is present on the far west end of the BSA, on the banks of Calleguas Creek.

### 3.2.2 California Buckwheat Scrub

California buckwheat scrub (*Eriogonum fasciculatum* Shrubland Alliance) is typically found along upland sloped, intermittently flooded arroyos, channels and washes, and rarely within flooded low-gradient deposits, between sea level and 3,940 feet (1,200 meters) in elevation. Soils are typically coarse, well drained, and moderately acidic to slightly saline. This vegetation community is characterized by a continuous to intermittent shrub layer and a variable herbaceous layer. California buckwheat (*Eriogonum fasciculatum*) contributes to at least 50% relative cover in the shrub layer. This vegetation community is ranked G5S5 and is not a CDFW sensitive natural community (CDFW 2022b).

In the BSA, this community has an open shrub layer dominated by California buckwheat. Other widespread species include deerweed (*Acmispon glaber*), coastal prickly pear (*Opuntia littoralis*), and California sagebrush (*Artemisia californica*). The dense herbaceous layer is dominated by weeds including summer mustard (*Hirschfeldia incana*), fountain grass (*Pennisetum setaceum*), and fennel (*Foeniculum vulgare*). Patches of this community are found along the roadsides in the BSA, primarily on hillsides.

### 3.2.3 Purple Sage Scrub

Purple sage scrub (*Salvia leucophylla* Shrubland Alliance) is typically found along steep slopes of variable aspect or on low-gradient deposits along streams with alluvial or colluvial soils between sea level and 3,937 feet (1,200 meters) in elevation. This vegetation community is characterized by an intermittent to continuous one- or two-tiered shrub canopy and a variable herbaceous layer. Purple sage (*Salvia leucophylla*) is present at over 30% relative cover, and is often codominant with California sagebrush in the shrub layer. This vegetation community is ranked G4S4 and is not a CDFW sensitive natural community (CDFW 2022b).

In the BSA, this alliance is dominated by purple sage. Other shrubs present include coastal prickly pear and chaparral yucca (*Hesperoyucca whipplei*). The herbaceous layer is sparse and includes summer mustard and wild oats (*Avena* sp.). One patch of this community is found on a steep south-facing hillside north of Tierra Rejada Road.

### 3.2.4 Wild Oats and Annual Brome Grasslands

Wild oats and annual brome grasslands (*Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance) are found in all topographic settings in foothills, waste places, rangelands, and openings in woodlands at elevations of sea level to 7,215 feet (2,200 meters) in elevation. Wild oats, annual bromes (*Bromus* spp.), purple false brome (*Brachypodium distachyon*), fillaree (*Erodium* spp.), rattlesnake grass (*Briza* spp.) or cat's ear (*Hypochaeris* spp.) are dominant or co-dominant with other non-native species in the herbaceous layer. Emergent trees and shrubs may be present at low cover. The alliance is ranked GNA/SNA (global/state rank not applicable) and is not a CDFW sensitive natural community. There are no sensitive associations of this community (CDFW 2022b).

In the BSA, this community has a dense herbaceous layer dominated by wild oats, annual bromes, summer mustard, and Russian thistle (*Salsola tragus*). Scattered coast live oak (*Quercus agrifolia*) trees and ornamental trees and shrubs are present. Patches of this community are present throughout the BSA on the road shoulders.

### 3.2.5 Summer Mustard Fields

Upland mustards (*Brassica nigra* Herbaceous Semi-Natural Alliance) are typically found in fallow fields, grasslands, roadsides, levee slopes, disturbed coastal scrub, riparian areas, cleared roadsides, and waste places between sea level and 9,186 feet (2,800 meters) in elevation. This vegetation community is characterized by an open to continuous herbaceous layer. Black mustard (B*rassica nigra*), summer mustard, wild radish (*Raphanus sativus*), or other mustards occur with non-native plants at over 80% cover in the herbaceous layer. This vegetation community is unranked and is not a CDFW sensitive natural community (CDFW 2022b).

In the BSA, this community is characterized by the summer mustard fields association. The dense herbaceous layer is dominated by summer mustard. Other species include fennel, Russian thistle, and telegraphweed (*Heterotheca grandiflora*). Parts of this community in the BSA were mowed during the field survey. Scattered ornamental trees and shrubs are present.

### 3.2.6 Fountain Grass Swards

Fountain grass swards (*Pennisetum setaceum - Pennisetum ciliare* Herbaceous Semi-Natural Alliance) are generally found on steep coastal cliffs, bluffs, road-cuts, coastal dunes, coastal scrub, or desert scrub types in areas with mild, frost-free winters. Elevations range between sea level and 330 feet (100 meters) in elevation. This community is characterized by an open to intermittent herbaceous layer. Fountain grasses (*Pennisetum* spp.) have at least 50 percent relative cover in the herbaceous layer and non-native plants have over 90 percent relative cover in the herbaceous layer. Fountain grass swards are ranked GNASNA and are not a CDFW sensitive natural community (CDFW 2022b).

In the BSA, this community is dominated by fountain grass. Other species present include summer mustard and scattered California buckwheat and ornamental trees. This community is found on roadside shoulders in the eastern portion of the BSA.

### 3.2.7 Riverwash

This land cover type is located within the open, unvegetated or sparsely vegetated channel of Calleguas Creek in the western end of the BSA. The substrate is comprised of gravel, cobble, and sand. Riverwash is a naturally dynamic habitat and may shift and change position within the drainage, depending on flood volumes and regularity.

### 3.2.8 Ornamental

Ornamental areas have been planted for the purpose of landscaping, generally with non-native species that require regular irrigation or other maintenance. Much of the BSA is characterized by ornamental vegetation, primarily including street trees, shrubs, grass lawns, and plant nurseries. Occasionally native trees are included in this land cover type.

### 3.2.9 Agricultural

This land cover type includes active agricultural fields, orchards, fallow fields, and associated access roads. Common crops in the BSA during the field survey include avocados, pumpkins, and tomatoes.

### 3.2.10 Developed

Developed areas consist of paved areas, roadways, and gravel or hardpacked dirt road shoulders with little to no vegetation. Buildings and scattered ornamental vegetation are included in this land cover type. This is the most abundant land cover type in the BSA.

## 3.3 General Wildlife

A total of 13 wildlife species were observed during the field reconnaissance survey (Appendix C). Common mammalian species occurring in the region include California ground squirrel (*Otospermophilus beecheyi*), domesticated dog (*Canis lupus familiaris*), and domesticated cat (*Felis catus*). Common avian species in the region include common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*), and mourning dove (*Zenaida macroura*), among others. These species, with the exception of domesticated dog and cat, would be expected to use the BSA for foraging, nesting, and/or shelter.

# 4 Sensitive Biological Resources

This section discusses special-status species and sensitive biological resources observed in the BSA and evaluates the potential for the BSA to support additional sensitive biological resources. Assessments for the potential occurrence of special-status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB and other sources, species occurrence records from other sites in the vicinity of the BSA, previous reports for the BSA, and the results of surveys of the BSA. An assessment of each special-status species evaluated is included in Appendix D. The potential for each special-status species to occur in the BSA was evaluated according to the following criteria:

- **Not Expected.** Habitat on and adjacent to the BSA is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), or species would have been identifiable in the BSA if present (e.g., oak trees).
- **Low Potential.** Few of the habitat components (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime) meeting the species requirements are present, and/or the majority of habitat in and adjacent to the BSA is unsuitable or of very poor quality. The species is not likely to be found in the BSA.
- **Moderate Potential**. Some of the habitat components (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime) meeting the species requirements are present, and/or only some of the habitat on or adjacent to the BSA is unsuitable. The species has a moderate probability of being found in the BSA.
- **High Potential.** All the habitat components (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime) meeting the species requirements are present and/or most of the habitat in or adjacent to the BSA is highly suitable. The species has a high probability of being found on the BSA.
- **Present.** Species is observed in the BSA or has been recorded (e.g., CNDDB, other reports) on the site recently (within the last five years).

## 4.1 Special-Status Species

### 4.1.1 Special-Status Plants

Special-status plants typically have specialized habitat requirements, including plant community types, soils, and elevational ranges. The CNDDB and CNPS queries identified 24 special-status plant species that have been previously recorded in either the four USGS 7.5-minute topographic quadrangles crossed by the BSA or within five miles of the BSA.

The BSA consists primarily of landscaped areas and developed areas; however, some natural habitats are present and may be suitable for some of special-status plant species. Of the 24 special-status plants identified in the database queries, 22 are not expected to occur because habitat on and adjacent to the BSA is unsuitable for the species (i.e., the area does not meet minimum habitat requirements). One species has a low potential to occur and one has a moderate potential to occur in the BSA. Special-status plant species with a low potential to occur are omitted from further discussion, because they are not expected to be present. Species with moderate potential to occur

or which have been documented in the BSA are discussed below, and, if applicable, evaluated under Section 5.1.1:

- **Present**
  - Southern California black walnut (*Juglans californica*; CRPR 4.2)
- **Moderate Potential**
  - Lyon's pentachaeta (*Pentachaeta lyonii*; Federally Endangered [FE], California Endangered [CE], CRPR 1B.1)

One southern California black walnut (*Juglans californica*) [CRPR 4.2] was documented within the BSA; however, this species is not typically evaluated as a special-status species under CEQA. The species reasonably anticipated to occur were determined based on the published ranges of the species, and the type, extent, and condition of habitat available within the BSA. Potential to occur conclusions are further discussed in Appendix D.

### Lyon's Pentachaeta

Lyon's pentachaeta is an annual herbaceous plant in the sunflower family (Asteraceae). This plant ranges between 6-48 centimeters (cm) in height, with small, linear leaves. The plant is generally hairy. The head inflorescence is composed of 17-42 yellow ray flowers and 21-91 yellow disk flowers. The fruit has 8-12 pappus bristles. Lyon's pentachaeta flowers between March and August (Jepson Flora Project 2022).

Lyon's pentachaeta is endemic to California, and its range is limited to coastal Ventura and Los Angeles Counties. This plant can be found in openings in coastal scrub, chaparral, and grasslands. It is often found at the edges between different habitats.

Critical habitat for Lyon's pentachaeta is adjacent to a small portion of the BSA north of Tierra Rejada Road and west of State Route 23. This area is dominated by California buckwheat scrub and characterized by a dense to open shrub layer.

## 4.1.2 Special-Status Wildlife

Based on the database and literature review, 30 special-status wildlife are known or have the potential to occur in the vicinity of the BSA. Of these, six have a moderate potential to occur, ten have a low potential, and the remaining 14 special-status species are not expected to occur based on a lack of suitable habitat. No special-status wildlife were observed within the BSA during the reconnaissance field survey.

Species with a low potential to occur are omitted from further discussion because they are not expected to be present. Special-status species or other protected species with moderate potential to occur within the BSA are discussed below:

- **Moderate Potential**
  - Western spadefoot toad (*Spea hammondii*; CDFW Species of Special Concern [SSC])
  - California legless lizard (*Anniella* spp.; SSC)
  - Coastal whiptail (*Aspidoscelis tigris stejnegeri*; SSC)
  - Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; CDFW Watch List [WL])

- Coastal California gnatcatcher (*Polioptila californica californica*; federally Threatened [FT], SSC)
- Least Bell's vireo (*Vireo bellii pusillus*; FE, CE)

The species reasonably anticipated to occur were determined based on the published ranges of the species; known records in the general vicinity; and the type, extent, and condition of habitat available within the BSA. Potential to occur conclusions are further discussed in Appendix D.

## Western Spadefoot Toad

The western spadefoot toad [SSC] is typically found in sandy washes and flood plains of the Central Valley and the central and southern coast ranges of California (Stebbins 2003). The species prefers open areas with sandy or gravelly soils and is found in a variety of habitats, including mixed woodlands, grasslands, sandy washes, foothills, and mountains. The species spends most of the year in underground burrows which they construct themselves, although some individuals may use small mammal burrows. Vernal pools or other temporary ponds are required for breeding and larval development. Pools that are suitable for breeding do not contain bullfrogs, fish, or crayfish and hold water for at least 30 days to support successful completion of larval development (Morey and Reznick 2004). The breeding period for western spadefoot toad is typically January to May and takes place after heavy rainfall (Nafis 2020).

Potentially suitable grasslands are present in the BSA. However, these natural areas are limited and are adjacent to busy roadways. No vernal pools are present within the BSA; however, several vernal pools are present within a mile of the BSA. Multiple CNDDB occurrences are located within the quadrangles crossed by the BSA, including one occurrence from 2013 located approximately 0.3 mile north of the BSA. This species has a moderate potential to occur in the BSA.

## California Legless Lizard

California legless lizard [SSC] is found in the Coast Ranges from Contra Costa County to the Mexican border. California legless lizard occurs in a variety of habitats including sparsely vegetated areas of coastal dunes, valley-foothill grasslands, chaparral, and coastal scrub that contain sandy or loose organic soils with leaf litter and moist soils for burrowing. Areas disturbed by agriculture or other human uses are typically not suitable habitat for the species (Zeiner 1988).

Potentially suitable natural areas with sparse vegetation are present in the BSA; however, these natural areas are limited and are adjacent to roadways. Three CNDDB occurrences are located within the quadrangles crossed by the BSA, including one from 2015 located approximately 3.8 miles south of the BSA. This species has a moderate potential to occur in the BSA.

## Coastal Whiptail

Coastal whiptail [SSC] is found in deserts and semi-arid areas with sparse vegetation within Ventura, Los Angeles, Riverside, and San Diego Counties. The species is commonly found in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, mixed conifer, pine-juniper, chamise-redshank chaparral, mixed chaparral, desert scrub, desert wash, alkali scrub, and annual grasslands (Zeiner 1988).

Potentially suitable natural areas with sparse vegetation are present in the BSA; however, these natural areas are limited and are adjacent to roadways. Multiple CNDDB occurrences are located

within the surveyed quadrangles, including one from 1996 located approximately 0.8 mile north of the BSA. This species has a moderate potential to occur in the BSA.

## Southern California Rufous-crowned Sparrow

The southern California rufous-crowned sparrow [WL] is a small songbird found in southern California coastal sage scrub and sparse mixed chaparral, typically in elevation ranges from 200-4,500 feet. It frequents relatively steep, often rocky hillsides with grass and forb patches. The species prefers south- or west-facing slopes with scattered scrub cover interspersed with grasses and forbs or rock outcrops. Its diet is not well documented but likely includes grasses, forb seeds, and insects, depending on the season, locality, and availability (Collins 2020).

Potentially suitable coastal sage scrub is present in the BSA; however, these natural areas are very limited and are adjacent to busy roadways. Three CNDDB occurrences are located in the quadrangles crossed by the BSA, including one occurrence from 2017 located approximately 0.6 mile north of the BSA. This species has a moderate potential to occur in the BSA.

## Coastal California Gnatcatcher

The coastal California gnatcatcher [FT, SSC] is a non-migratory songbird found on the coastal slopes of southern California. It ranges from Ventura County south to northwest Baja California, Mexico (Atwood et al. 1999). It is strongly associated with coastal sage scrub habitat below 820 feet in coastal areas and between 820 and 1,640 feet in inland areas; however, not all types of coastal sage scrub communities are used or preferred (Atwood and Bolsinger 1992). This species appears to be most abundant in areas dominated by California sagebrush and California buckwheat. The breeding season extends from late February through August with peaks nesting in mid-March to mid-May (USFWS 2010).

Potentially suitable coastal scrub and grasslands are present in the BSA; however, these natural areas are limited and are adjacent to busy roadways. The eastern portion of the BSA overlaps critical habitat for this species. Multiple CNDDB occurrences are located within the quadrangles crossed by the BSA, including two occurrences from 2012 which are adjacent to the BSA. This species has a moderate potential to occur in the BSA.

## Least Bell's Vireo

The least Bell's vireo [FE, CE] is a summer resident of southern California in riparian areas in the vicinity of water or in dry river bottoms below 2,000 feet. The least Bell's vireo arrives at breeding grounds mid to late March and leaves late September. Its nests are placed along margins of bushes or on twigs projecting into pathways, usually willow species. The species prefers dense shrubby understory.

Potentially suitable riparian habitat is present in the BSA, in the arroyo willow – mulefat thickets along Calleguas Creek. Multiple CNDDB occurrences are located within the quadrangles crossed by the BSA, including one historical occurrence from 1940 which overlaps the BSA and one occurrence from 2017 located approximately 0.3 mile south of the BSA in Conejo Creek. This species has a moderate potential to occur in the BSA.

### 4.1.3 Other Protected Species

The BSA contains suitable habitat to support regulated nesting birds and raptors protected under CFGC Sections 3503, 3503.5, and 3513, and the MBTA (16 United States Code Sections 703 to 712). Potential nesting habitat for birds and raptors was observed throughout the BSA, with the most suitable locations being mature ornamental and landscape trees along roadways, and the arroyo willow – mulefat thickets along Calleguas Creek in the western end of the BSA. No inactive or potentially active nests were observed within the BSA during the reconnaissance field survey.

## 4.2 Sensitive Natural Communities and Critical Habitat

### Sensitive Natural Communities

The CDFW California Natural Community List identifies sensitive natural communities throughout California, based in part on global and state rarity ranks (CDFW 2022b). Natural communities having a rank of 1 to 3 are generally considered sensitive, though some communities with other ranks may also be considered sensitive. No CDFW-designated sensitive vegetation communities occur within the BSA.

### Designated Critical Habitat

Critical habitat designated by USFWS for coastal California gnatcatcher overlaps the BSA. The BSA is also adjacent to critical habitat for Lyon's pentachaeta and Riverside fairy shrimp (*Streptocephalus woottoni*; FE).

Critical habitat for coastal California gnatcatcher is present in the eastern portion of the BSA, along Tierra Rejada Road between State Route 23 and North Madera Road. Most of the area mapped as critical habitat within the BSA consists of paved roadways, sidewalks, buildings, and ornamental plants, and is not suitable habitat for coastal California gnatcatcher. Natural areas consist primarily of summer mustard fields dominated by dense non-native herbaceous vegetation. One small patch of California buckwheat scrub is present in this area, and additional coastal scrub communities potentially suitable for coastal California gnatcatcher are present to the north and south of the BSA.

Designated critical habitat for both Lyon's pentachaeta and Riverside fairy shrimp is confined to the extent of a vernal pool located north of Tierra Rejada Road and west of State Route 23. The vernal pool is located in a flat area uphill from Tierra Rejada Road and outside the BSA. The nearby road shoulder within the BSA is characterized by upland vegetation consisting of California buckwheat scrub and purple sage scrub.

## 4.3 Jurisdictional Waters and Wetlands

Based upon the findings of the field survey, many features within the BSA may be subject to United States Army Corps of Engineers (USACE), Los Angeles Regional Water Quality Control Board (RWQCB), CDFW, and/or Ventura County Watershed Protection District (VCWPD) jurisdiction. This assessment herein is intended for internal project planning and is not a formal jurisdictional delineation; therefore, certain agency-required elements are intentionally not included (e.g., stringent USACE mapping protocols and narrative descriptions of each feature). This report is intended to help inform decisions regarding work areas and staging areas to minimize impacts to jurisdictional features.

A summary of observed potentially jurisdictional features is presented in Table 2 and these areas are identified on Figure 5 and in Appendix E. Representative photographs of the features observed are included in Appendix B.

For this assessment, 15 features were mapped, including one natural streambed, six culverts, and eight roadside ditches. Four of these features are redline channels regulated by VCWPD (Calleguas Creek, Camrosa Drain, Santa Rosa, and Santa Rosa Tributary). Calleguas Creek has a natural streambed and is characterized by a sandy stream channel with a bridge crossing. Six features are only present in the BSA as underground culverts. The aboveground portions of these features are outside the BSA. Culverts range in type from corrugated metal pipe culverts to large concrete box culverts. The eight roadside ditches are located alongside roads in the BSA, generally between the road shoulder and adjacent residential buildings or agricultural fields. These ditches may be concrete-lined or natural-bottomed.

**Table 2 Potentially Jurisdictional Features**

| Feature ID | Category | Potential Jurisdiction |
|---|---|---|
| **Phase 3** | | |
| Calleguas Creek | Natural streambed | USACE, RWQCB, CDFW, VCWPD |
| Camrosa Drain | Culvert | USACE, RWQCB, CDFW, VCWPD |
| Unnamed Feature No. 1 | Culvert | USACE, RWQCB, CDFW |
| Unnamed Feature No. 2 | Culvert | USACE, RWQCB, CDFW |
| Unnamed Feature No. 3 | Culvert | USACE, RWQCB, CDFW |
| Unnamed Feature No. 4 | Roadside ditch | USACE, RWQCB, CDFW |
| **Phase 4** | | |
| Unnamed Feature No. 4 | Roadside ditch | USACE, RWQCB, CDFW |
| Unnamed Feature No. 5 | Culvert | USACE, RWQCB, CDFW |
| Santa Rosa | Culvert | USACE, RWQCB, CDFW, VCWPD |
| Santa Rosa Tributary | Roadside ditch | USACE, RWQCB, CDFW, VCWPD |
| Unnamed Feature No. 6 | Roadside ditch | USACE, RWQCB, CDFW |
| Unnamed Feature No. 7 | Roadside ditch | USACE, RWQCB, CDFW |
| Unnamed Feature No. 8 | Roadside ditch | USACE, RWQCB, CDFW |
| Unnamed Feature No. 9 | Roadside ditch | USACE, RWQCB, CDFW |
| Unnamed Feature No. 10 | Roadside ditch | USACE, RWQCB, CDFW |
| Unnamed Feature No. 11 | Roadside ditch | USACE, RWQCB, CDFW |

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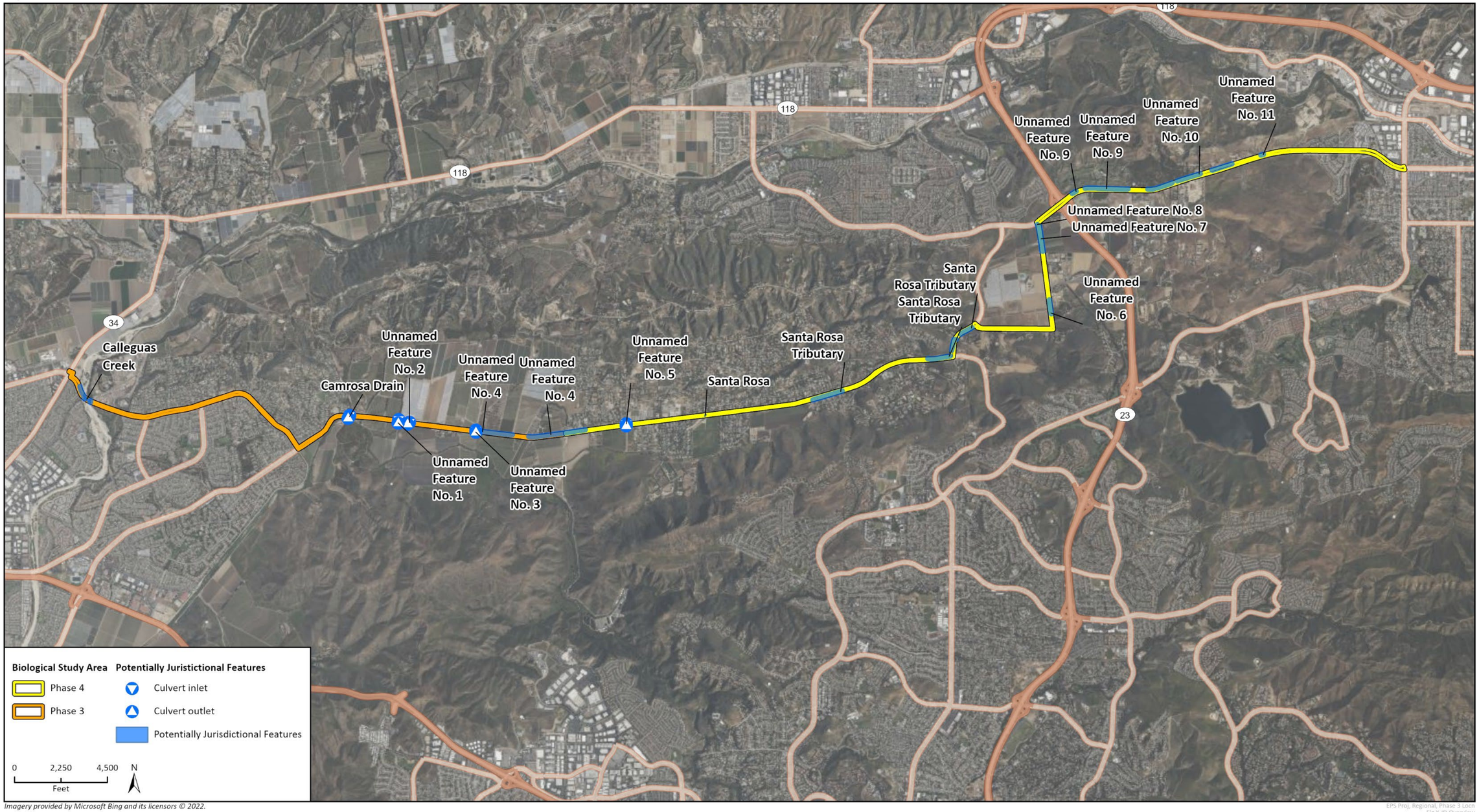
**Figure 5 Potentially Jurisdictional Features Overview**




*Imagery provided by Microsoft Bing and its licensors © 2022.*

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Fig X JD Overview

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## 4.4 Wildlife Movement

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

The habitats in the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link merely needs to contain sufficient cover and forage to allow temporary inhabitation by ground-dwelling species. Typically, habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (e.g., rock outcroppings, vernal pools, or oak trees) may need to be in the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time.

Portions of the BSA along much of Tierra Rejada Road, Read Road, and Moorpark Road are located within an Essential Connectivity Area as described in the *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California* (Spencer et al. 2010). This connectivity area connects the Santa Monica Mountains to the south and the Los Padres National Forest to the north. In addition, Calleguas Creek functions as a local route for wildlife movement. Calleguas Creek (or Arroyo Las Posas) extends from the Simi Hills to the northeast and empties into the Pacific Ocean at Mugu Lagoon. The creek connects highly diverse habitat types and provides a valuable movement and migration corridor for many types of wildlife, including terrestrial and semiaquatic species.

## 4.5 Resources Protected by Local Policies and Ordinances

### 4.5.1 Ventura County Policies and Ordinances

#### VCWPD Redline Channels

The list of redline channels under the jurisdiction of the VCWPD was adopted by the District Board of Supervisors in 1960, and then updated and confirmed by them in 1994. Four redline channels were observed in the BSA during the field survey, further described in Section 4.3 above.

#### Ventura County Protected Trees

Ventura County regulations for protected trees outside the coastal zone apply in the unincorporated portion of the BSA. In accordance with the County's tree protection ordinance, protected trees include oaks and sycamores that measure 9.5 inches in girth (circumference) or larger (generally measured 4.5 feet above ground), trees of any species that have "heritage" status because they measure 90 inches in girth or larger, and trees of any species with a historical designation (Ventura County 2020).

No historical trees were observed in the BSA. The field survey did not include a detailed arborist assessment; however, trees that potentially meet the qualifications to be classified as protected were mapped (Figure 4 and Appendix E). Between 80 and 115 potential protected native trees and between 164 and 229 potential heritage trees were documented in the BSA. Native trees included coast live oaks, valley oaks (*Quercus lobata*), and western sycamores (*Platanus racemosa*). Potential heritage trees included Peruvian pepper trees (*Schinus molle*), blue gum eucalyptus (*Eucalyptus globulus*), pines (*Pinus* spp.), coastal redwoods (*Sequoiadendron sempervierens*), and Canary Island date palms (*Phoenix canariensis*).

## Ventura County General Plan

Applicable policies and actions put forth in the Conservation and Open Space Element of the General Plan (County of Ventura 2020) are intended to decrease development pressure on more sensitive or biologically productive areas within the scope of the General Plan. Such policies include the following:

- **Policy COS-1.1: Protection of Sensitive Biological Resources.** The County shall ensure that discretionary development that could potentially impact sensitive biological resources be evaluated by a qualified biologist to assess impacts and, if necessary, develop mitigation measures that fully account for the impacted resource. When feasible, mitigation measures should adhere to the following priority: avoid impacts, minimize impacts, and compensate for impacts. If the impacts cannot be reduced to a less than significant level, findings of overriding considerations must be made by the decision-making body. (MPSP, IGC, RDR)
- **Policy COS-1.4: Consideration of Impacts to Wildlife Movement.** When considering proposed discretionary development, County decision-makers shall consider the development's potential project-specific and cumulative impacts on the movement of wildlife at a range of spatial scales including local scales (e.g., hundreds of feet) and regional scales (e.g., tens of miles). (RDR)
- **Policy COS-1.5: Development Within Habitat Connectivity and Wildlife Corridors.** Development within the Habitat Connectivity and Wildlife Corridors overlay zone and Critical Wildlife Passage Areas overlay zone shall be subject to the applicable provisions and standards of these overlay zones as set forth in the Non-Coastal Zoning Ordinance. (RDR)
- **Policy COS-1.10: Evaluation of Potential Impacts of Discretionary Development on Wetlands.** The County shall require discretionary development that is proposed to be located within 300 feet of a wetland to be evaluated by a County-approved biologist for potential impacts on the wetland and its associated habitats pursuant to the applicable provisions of the County's Initial Study Assessment Guidelines. (RDR)
- **Policy COS-1.11: Discretionary Development Sited Near Wetlands.** The County shall require discretionary development to be sited 100 feet from wetland habitats, except as provided below. The 100-foot setback may be increased or decreased based upon an evaluation and recommendation by a qualified biologist and approval by the decision making body based on factors that include, but may not be limited to, soil type, slope stability, drainage patterns, the potential for discharges that may impair water quality, presence or absence of endangered, threatened or rare plants or animals, direct and indirect effects to wildlife movement, and compatibility of the proposed development with use of the wetland habitat area by wildlife. Discretionary development that would have a significant impact on a wetland habitat shall be prohibited unless mitigation measures are approved that would reduce the impact to a less than significant level. Notwithstanding the foregoing, discretionary development that would have a significant impact on a wetland habitat on land within a designated Existing community may be

approved in conjunction with the adoption of a statement of overriding considerations by the decision-making body. (RDR)

### Ventura County Initial Study Assessment Guidelines/ Initial Study Biological Assessment

The Initial Study Assessment Guidelines (ISAG) were prepared in accordance with the County of Ventura's Administrative Supplement to State CEQA Guidelines. The Guidelines were originally adopted in 1992 by the directors of those County agencies/departments responsible for evaluating environmental issues and by the County's Environmental Quality Advisory Committee. Discretionary projects that have the potential to impact biological resources require a biological survey and report as part of the application submittal to the County Planning Division. This report is called an Initial Study Biological Assessment (ISBA). Because Calleguas is the Lead Agency, there is no need to submit an ISBA; nevertheless, this report has been prepared in accordance with the ISAG and ISBA requirements to identify the general parameters of "significant impacts" and determine whether any threshold criteria are exceeded by the project.

## 4.5.2 City Policies and Ordinances

### City of Camarillo

#### *General Plan Policies*

Applicable policies and actions put forth in the Open Space Element of the General Plan (City of Camarillo 2006) are intended to decrease development pressure on more sensitive or biologically productive areas within the scope of the General Plan. Such policies include the following:

- Policy 7: Identify and protect natural watersheds, natural drainage beds and water recharge areas to achieve recovery of local water and the preservation of natural plant and animal habitat.
- Policy 10: Encourage development in areas where services and facilities already exist and are underused. Promote efficient extension of utilities and services.

#### *Applicable Ordinances (Ord. 663 § 2 (part), 1988.)*

- Municipal Code 13.04.630 – Removal and/or trimming of trees.
- Municipal Code 13.12.060 – Maintenance and removal of trees and other plantings.
- Municipal Code 13.12.070 – Protection of trees and other plantings.

### City of Moorpark

#### *General Plan Policies*

Applicable policies and actions put forth in the Open Space Element of the General Plan (City of Moorpark 1986) are intended to decrease development pressure on more sensitive or biologically productive areas within the scope of the General Plan. Such policies include the following:

- Policy 4.2: Conserve and protect water quality supplies through cooperative efforts with the Ventura County Water Conservation Plan and any future regional water quality and water

supply plans and programs that may be instrumental in reducing water quality-related problems.

- Policy 4.3: Conserve, preserve and enhance the quality of biological and physical environments throughout the City of Moorpark. Require restoration of those areas unsatisfactorily maintained or subsequently degraded.

### *Applicable Ordinances (Ord. 101 § 1, 1988)*

- Municipal Code Chapter 12.12 – Historic Trees, Native Oak Trees and Mature Trees

## City of Simi Valley

### *General Plan Policies*

Applicable policies and actions put forth in the Natural Resources Element of the General Plan (City of Simi Valley 2012) are intended to decrease development pressure on more sensitive or biologically productive areas within the scope of the General Plan. Such policies include the following:

- NR 2.1: Tree Preservation. Encourage the preservation of trees and native vegetation in development projects. Require that new development utilize creative land planning techniques to preserve any existing healthy, protected trees to the greatest extent possible. (Imp A-1, A-2, LU-1, LU-7, LU-18, NR-4, NR-5)
- NR 2.4: Habitat Connectivity. Ensure that projects within areas identified as regional wildlife corridors are designed and constructed so as to preserve the ability of wildlife to travel through the region. (Imp A-1, A-2, LU-7, LU-18, NR-4)
- NR 2.6: Site Assessments. Require assessment by a qualified professional for development applications that may adversely affect sensitive biological or wetland resources, including occurrences of special-status species, occurrences of sensitive natural communities, and important wildlife areas and movement corridors. Ensure that individual projects incorporate measures to reduce impacts to special-status species, sensitive natural communities, and important wildlife areas and movement corridors according to Simi Valley's environmental review process. (Imp A-1, A-2, LU-1, LU-2, LU-18, NR-2, NR-5)

### *Applicable Ordinances (Ord. 1085 § 5, 2006)*

- Municipal Code Chapter 9-38 – Tree Preservation, Cutting, and Removal

## City of Thousand Oaks

### *General Plan Policies*

Applicable policies and actions put forth in the Conservation Element of the General Plan (City of Thousand Oaks 2013) are intended to decrease development pressure on more sensitive or biologically productive areas within the scope of the General Plan. Such policies include the following:

- CO-21: The City shall encourage the proper management, conservation and protection of native plant communities throughout the City's Planning Area, including developed areas and undeveloped open space lands.

- CO-23: Critical wildlife habitat resources such as movement corridors, surface water impoundments, streams and springs should be given special consideration for protection, restoration or enhancement, in order to maintain biodiversity, biological productivity and ecological integrity of natural open space areas.
- CO-30: Preserve wetlands and associated wetland buffers as open space and maintain these areas in a natural state to protect the community's water quality, biodiversity and aesthetic value.
- CO-32: The City shall encourage and promote the conservation and protection of all rare, threatened, endangered or sensitive species listed by State and Federal agencies (United States Fish and Wildlife Service and California Department of Fish and Wildlife), the California Native Plant Society (CNPS), the County of Ventura and the City of Thousand Oaks.

### *Applicable Ordinances (Ord. 1610-NS, 2016)*

- Municipal Code Section 9-4.42 – Oak Tree Preservation and Protection
- Municipal Code Section 9-4.43 – Landmark Tree Preservation and Protection

## 4.6 Habitat Conservation Plans

The BSA does not occur within any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan area.

# 5 Impact Analysis and Mitigation Measures

## 5.1 Special-Status Species

The proposed project would have a significant effect on biological resources if it would:

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

### 5.1.1 Special-Status Plants

As discussed in Section 4.1.1, the CNDDB and CNPS queries identified 24 special-status plants that have been previously recorded in either the four USGS 7.5-minute topographic quadrangles crossed by the BSA or within five miles of the BSA. Of these, one has a moderate potential to occur. The remaining 23 species are not expected to occur within the BSA based on the lack of suitable habitat and the non-detection of special-status plant species during field reconnaissance survey.

Lyon's pentachaeta has moderate potential to occur in the California buckwheat scrub community in the BSA north of Tierra Rejada Road and west of State Route 23, where the BSA is adjacent to critical habitat for this species. The project would occur within the existing road at these locations, which is greater than 20 feet away from suitable habitat for Lyon's pentachaeta. Similarly, the direct impacts to the southern California black walnut tree due to injury or mortality during construction are not anticipated given it is greater than 20 feet from the proposed work area.

Implementation of the project would result in impacts to the developed and ornamental land cover types that do not provide suitable habitat for these special-status plant species. Indirect impacts could result from habitat modifications by the introduction of invasive plants from construction equipment, contamination of soils, and habitat degradation due to accidental fuel spills and dust during construction.

Implementation of Measure BIO-1 is recommended to ensure all construction personnel are trained in identifying special-status plant species with potential to occur in the BSA. Indirect impacts to potential habitat for Lyon's pentachaeta would also be avoided via implementation of Measure BIO-2, which is to ensure adherence to general Best Management Practices (BMPs). In addition to general BMPs, the project would prepare and implement a stormwater pollution prevention plan (SWPPP) to prevent stormwater contamination, control sedimentation and erosion, and comply with the requirements of the CWA, which is necessary to receive NPDES permit coverage for stormwater discharges. Compliance with the project's SWPPP would avoid and/or minimize potential direct and indirect impacts to special-status species. With implementation of Measures BIO-1 and BIO-2 and the SWPPP, potential direct and indirect impacts to special-status plant species would be reduced to a less-than-significant level.

#### *BIO-1 Biological and Environmental Awareness Training (BEAT) Program*

Prior to initiation of construction activities (including staging and mobilization), all personnel associated with project construction shall attend a BEAT Program sensitivity training conducted by a qualified biologist, to assist workers in recognizing special-status biological resources which may

occur in the BSA. The specifics of the BEAT Program shall include information about nesting birds and identification of special-status species and habitats at the project site, a description of the regulatory status and general ecological characteristics of special-status resources, and review of the limits of construction and measures required to avoid and minimize impacts to biological resources within the work area. The BEAT Program shall provide specific training on construction BMPs required under Measure BIO-2, presented below. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employees, and other personnel involved with construction of the project.

All employees shall sign a form provided by the trainer documenting they have attended the BEAT Program sensitivity training and understand the information presented to them. If new construction personnel are added to the project, the contractor shall confirm the new personnel receive the BEAT Program sensitivity training before starting work. The subsequent training of personnel can include a video recording of the initial training and/or the use of written materials rather than in-person training by a biologist.

The BEAT Program sensitivity training may be provided jointly with the Cultural and Archeological Resources Education (CARE) Program, if required for this project. If provided as a joint BEAT/CARE sensitivity training session, all requirements of both programs will be explicitly addressed.

### *BIO-2 General Best Management Practices for Biological Resources*

To avoid and/or minimize potential direct and indirect impacts to special-status species and potentially jurisdictional waters and water quality, the following BMPs shall be implemented. The proposed project will be phased and construction is anticipated to be conducted in a linear fashion along the alignment; thus BMPs shall be implemented as necessary along the alignment ahead of or during anticipated construction.

- No native vegetation with a diameter at breast height (DBH) of more than 4 inches shall be removed or damaged without approval by Calleguas.
- Staging and parking areas shall be limited to sites which are unvegetated and/or previously disturbed areas comprising ruderal vegetation or non-native annual grasslands, ornamental landscaping, and paved/graded areas, to the extent practicable.
- Fugitive dust from ground disturbance activities shall be minimized using water trucks and covering of soil stockpiles.
- A speed limit of 15 miles per hour for construction vehicles shall be implemented on unpaved roads adjacent to native vegetation and potentially jurisdictional waters.
- All food related trash shall be disposed of in closed containers and removed from the project site each day during the construction period. Construction personnel shall not feed or otherwise attract wildlife to the construction area. At project completion, all project-generated debris, vehicles, building materials, and rubbish shall be removed from the project site.
- No project construction, activities, and equipment staging shall occur within the bed or banks of Calleguas Creek. No vegetation shall be removed from the channel, bed, or banks of Calleguas Creek.
- Excavated material from trenching along any potentially jurisdictional feature shall be side cast away to prevent sediment deposition within the feature.
- All hollow posts and pipes shall be capped, and metal fence stakes shall be plugged with bolts or other plugging materials to prevent wildlife entrapment and mortality.

- All night-time lighting shall be shielded and downcast to avoid potential impacts to wildlife migration.
- No pets shall be allowed on the project site.
- If vehicle or equipment maintenance is necessary, it shall be performed in the designated staging areas.
- While encounters with special-status species are not likely or anticipated, any worker who inadvertently injures or kills a special-status species or finds one dead, injured, or entrapped shall immediately report the incident to the construction superintendent or biological monitor. The construction superintendent or biological monitor shall immediately notify Calleguas.
- Before starting or moving construction vehicles, especially after a few days of non-operation, operators shall inspect under all vehicles to avoid impacts to any wildlife that may have sought refuge under equipment. All large building materials and pieces with crevices where wildlife can potentially hide shall be inspected before moving. If wildlife is detected, a qualified biologist shall move wildlife out of harm's way or temporarily stop activities until the animal leaves the area.

### 5.1.2 Special-Status Wildlife

As discussed in Section 4.1.2, the CNDDB query identified 30 special-status wildlife that have been previously recorded either in the four USGS 7.5-minute topographic quadrangles crossed by the BSA or within five miles of the BSA. Of these, six have a moderate potential to occur and the remaining 24 special-status species are not expected to occur based on a lack of suitable habitat.

#### Special-Status Amphibians and Reptiles

Marginally suitable habitat for western spadefoot toad, California legless lizard, and coastal whiptail, is limited to the natural habitats dominated by native shrubs (i.e., California buckwheat scrub, and purple sage scrub) on the margins of the BSA. These areas are not anticipated to be directly impacted by this project. Therefore, direct impacts to these species would not occur. If individuals are present during construction, potential indirect impacts could result from noise, vibrations, and dust, which could cause individuals to flush out of cover and become exposed to predators or vehicle strikes. Nonetheless, given the marginally suitable nature and limited amount of potential habitat adjacent to the project site, and the fact that project impacts would occur within existing developed areas subject to heavy traffic and ornamental landscaping, potential project impacts are unlikely to cause the regional populations of these species to drop below self-sustaining levels. Implementation of Measures BIO-1 and BIO-2 above would further reduce the potential for indirect impacts. Therefore, potential impacts to western spadefoot toad, California legless lizard, and coastal whiptail would be less than significant.

#### Special-Status and Nesting Birds

Marginally suitable habitat for southern California rufous-crowned sparrow and coastal California gnatcatcher is limited to the California buckwheat scrub and purple sage scrub habitats on the margins of the BSA. The Phase 4 alignment would traverse past several areas documented by the CNDDB to support coastal California gnatcatcher. As described, the project would avoid natural communities and alliances/associations associated with coastal sage scrub vegetation.

In addition, marginally suitable arroyo willow – mulefat thicket habitat for least Bell's vireo occurs within Calleguas Creek. Phase 3 of the alignment within Camarillo along Santa Rosa Road passes

near Arroyo Conejo Creek where populations of least Bell's vireo have been documented according to the CNDDB. As described, the project would avoid natural communities and alliances/associations associated with riparian vegetation. These areas are not anticipated to be directly impacted by this project; therefore, direct impacts to these species are not anticipated. If individuals are present during construction, potential indirect impacts could result from noise, vibrations, and dust, which could cause individuals to flush out of cover and become exposed to predators or vehicle strikes, or cause nest failures.

While impacts to common nesting birds do not generally rise to the level of significance under CEQA, the loss of a nest due to construction activities would be a violation of the MBTA and CFGC Section 3503 and must be avoided.

Therefore, in addition to BIO-1 and BIO-2 above, implementation of Measure BIO-3 is recommended to reduce potential indirect effects to special-status and nesting birds to a less than significant level.

### *BIO-3 Protection of Nesting Birds*

Project-related activities shall occur outside of the bird breeding season (generally February 1 to August 31) to the extent practicable. If construction must occur within the bird breeding season and will impact potentially suitable nesting habitat (i.e., natural / ornamental habitats), then no more than three days prior to initiation of ground-disturbing activities (including, but not limited to, vegetation removal, site preparation, grading, excavation, and trenching) within the project site, a nesting bird pre-construction survey shall be conducted by a qualified biologist within the disturbance footprint plus a 100-foot buffer (300-foot for potential raptor nesting habitat), where accessible and public. The proposed project will be phased and construction is anticipated to be conducted in a linear fashion along the alignment; thus pre-construction nesting bird surveys shall be completed as necessary along the alignment (i.e., rolling surveys) ahead of anticipated construction. Surveys shall be completed no more than seven days before anticipated construction activities.

Pre-construction nesting bird surveys shall be conducted during the time of day when birds are active and shall factor in sufficient time to perform this survey adequately and completely. A report of the nesting bird survey results, if applicable, shall be submitted to Calleguas.

If no nesting birds are observed during pre-construction surveys, no further actions are necessary. Modifications to the buffer size shall occur only in consultation with the qualified biologist. Active nests shall be monitored at a minimum of once per week while construction is occurring until it has been determined the young have fledged the nest. No ground disturbance or vegetation removal shall occur within this buffer until the qualified biologist confirms breeding/nesting has ended, and young are no longer dependent on the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist, and any encroachment shall be monitored by the biologist for the duration of the activities within the buffer.

If active nests of federally or state-listed species (e.g., least Bell's vireo, coastal California gnatcatcher) are detected during the survey, a 500-foot avoidance buffer from the nest shall be established and demarcated by the biologist with flagging, construction lathe, or other means to mark the boundary. If the 500-foot avoidance buffer is infeasible, then Calleguas' contractor(s) shall implement noise reduction measures, such as mufflers and temporary sound walls, that reduce construction noise levels to at or below 60 dBA $L_{eq}$ at the nest site. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No ground-disturbing activities shall occur inside this buffer until the avian biologist

has confirmed breeding/nesting is completed and the young have fledged the nest, or noise levels remain at or below 60 dBA $L_{eq}$ at the nest site. Encroachment into the buffer shall occur only at the discretion of the qualified biologist, and any encroachment shall be monitored by the biologist for the duration of the activities within the buffer.

## 5.2 Sensitive Natural Communities and Critical Habitat

The proposed project would have a significant effect on biological resources if it would:

*b) Have a substantial adverse impact 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 US Fish and Wildlife Service.*

No sensitive natural communities are located within the BSA. The BSA overlaps with critical habitat for coastal California gnatcatcher and is adjacent to critical habitat for Lyon's pentachaeta and Riverside fairy shrimp.

Critical habitat for coastal California gnatcatcher is present in the eastern portion of the BSA; however, the majority of the BSA within the area mapped as critical habitat consists of developed areas and ornamental plants not suitable for coastal California gnatcatcher. One small patch of California sagebrush scrub is present in this area, and additional coastal scrub communities potentially suitable for coastal California gnatcatcher are present to the north and south of the BSA.

Implementation of the project would result in impacts to the developed, disturbed, or ornamental land cover types. California sagebrush scrub is limited to hilly roadway shoulders approximately 15 to 20 feet from proposed construction areas, which are not anticipated to be affected by project activities. No direct impacts to natural areas that could potentially support coastal California gnatcatcher will occur. Further, implementation of BIO-1 and BIO-2 would reduce the potential for indirect impacts to adjacent habitat.

The designated critical habitat for Lyon's pentachaeta and Riverside fairy shrimp is defined by the extent of a vernal pool located uphill and outside the BSA. The nearby road shoulder within the BSA is characterized by upland vegetation consisting of California buckwheat scrub and purple sage scrub. If groundwater dewatering is required based on site conditions, the project would adhere to applicable rules and regulations related to discharge. Depending on the quality of the dewatered groundwater, water would be utilized on-site or trucked off-site for reuse for dust control and irrigation. Given that vernal pools are rain-fed ecosystems perched on a hard layer of soil (e.g., clay), they are not appreciably affected by fluctuations in groundwater levels. Thus, dewatering would not be expected to directly impact water levels within the vernal pool. In addition, implementation of BIO-1, BIO-2, and the project SWPPP would help assure direct and indirect impacts to critical habitat within the vernal pool are avoided.

In addition, the CRSMP has an existing National Pollution Discharge Elimination System (NDPES) permit for ocean outfall discharges via the Hueneme Outfall, located in the vicinity of Port Hueneme Beach, into the Pacific Ocean. The waters in this area support many resident and migratory fish, important marine plants such as eelgrass (*Zostera marina*), and special-status wildlife such as seabirds, marine mammals, and sea turtles. Potential impacts to these marine resources are described in the 2002 Final PEIR which provided CEQA clearance for the overall CRSMP and project-specific clearance for Phase 1 of the CRSMP. Discharge from Phases 3 and 4 would be subject to the same NPDES discharge requirements as existing conditions.

Based on the analysis above, impacts to sensitive natural communities and critical habitat would be less than significant.

## 5.3 Jurisdictional Waters and Wetlands

The proposed project would have a significant effect on biological resources if it would:

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.*

The reconnaissance field survey identified 15 potentially jurisdictional features in the BSA. Project construction will include a combination of trench excavation and trenchless methods (e.g., boring and jacking). Using trenchless methods, impacts to jurisdictional features would be minimized or avoided. Adherence to Measures BIO-1 and BIO-2 would reduce potential direct and indirect impacts to a less than significant level by educating construction personnel on protective measures for jurisdictional features, and implementation of BMPs that would reduce the potential for indirect impacts.

## 5.4 Wildlife Movement

The proposed project would have a significant effect on biological resources if it would:

d) *Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.*

The BSA is located within an Essential Connectivity Area which connects the Santa Monica Mountains to the south and the Los Padres National Forest to the north. However, the majority of the BSA located within the Essential Connectivity Area is characterized by paved roads, unvegetated road shoulders, and ornamental vegetation. Limited native vegetation is present, and direct impacts to these communities are not anticipated.

Calleguas Creek likely functions as a local route for wildlife movement. Pipe would be installed within existing utility conduit on the bridge over Calleguas Creek; therefore, no direct impacts would occur to this feature.

Project activities would not interfere with wildlife movement because the construction work areas would occur along existing roads and developed / disturbed areas, and the pipelines would be located below the soil surface following completion of the project. These temporary work areas would not exacerbate existing barriers to wildlife movement. Furthermore, project activities would mostly be avoided during dusk and dawn when wildlife movement and foraging is more likely. Therefore, direct impacts to wildlife movement are not anticipated to occur as a result of the project.

Potential indirect impacts to wildlife movement could occur through lighting of the project site temporarily during construction, which could deter wildlife migration at night. As such, implementation of Measure BIO-2, including the provision for all lighting to be shielded and downcast, is recommended to reduce indirect impacts to wildlife movement to a less than significant level.

# 5.5 Resources Protected by Local Policies and Ordinances

The proposed project would have a significant effect on biological resources if it would:

*e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance*

Trees meeting the County of Ventura and/or cities of Camarillo, Moorpark, Simi Valley, or Thousand Oaks tree protection standards were observed throughout the BSA. A large portion of the project alignment is located within developed public rights-of-way which are lined with protected trees (e.g., coast live oak, California sycamore, southern California black walnut). Potential impacts to protected trees may include, but are not limited to, construction equipment compacting soil around the trees, disturbance of the canopy and the root zone, and trenching in the root zone.

The project is not anticipated to include tree-altering activities requiring a discretionary permit from the County (e.g., tree removal or damage), and a comprehensive arborist report is not required to fully survey and document all protected trees in the BSA. Should project construction necessitate a tree-altering activities, then an arborist-prepared study and Tree Protection Plan, as outlined under Measure BIO-4, would be prepared to address the tree protection measures during construction and mitigation requirements if protected trees are impacted by the project. Based on the current project description and construction methodologies, the project would not conflict with any local policies or ordinances protecting biological resources.

### *BIO-4 Arborist Report*

Based on final design, if project construction is anticipated to impact protected trees, then prior to construction, an Arborist Report shall be prepared to address tree protection measures during construction and mitigation requirements for those protected trees impacted by the project. The report shall be prepared by an arborist certified by the International Society of Arboriculture (ISA) or a related professional, such as a landscape architect, with qualifying education, knowledge, and experience. The report shall meet the specific content requirements for Arborist Reports as outlined in any applicable municipal code. The Arborist Report shall include, at minimum, the following:

- An inventory of all trees containing a canopy drip line within 20 feet of the project footprint, as feasible without trespassing on private lands. Inventory data should record, at minimum: diameter at breast height (DBH), height, canopy cover information/mapping, health and vigor rating
- Representative photographs of each regulated tree which may be encroached upon
- Description of proposed site development activities including, but not limited to, excavation for trenching, any tree trimming for access, and construction access routes
- Requirements for protective tree fencing, and designated tree protection zones (identifying an area sufficiently large enough to protect the tree and its roots from disturbance), and measures for addressing roots and limbs that are cut during trenching
- Description of activities prohibited/permitted within the tree protection zone, encroachment boundaries
- Description of any potential transplanting or replacement tree plantings.

## 5.6 Habitat Conservation Plans

The proposed project would have a significant effect on biological resources if it would:

*f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.*

The BSA is not located within any Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plan area. Therefore, no impact would occur, and no mitigation measures are recommended.

# 6 Limitations, Assumptions, and Use Reliance

This Biological Resources Assessment has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed. Reconnaissance biological surveys for certain taxa may were not performed during a particular blooming period, nesting period, or particular portion of the season when positive identification would be expected if present, and therefore, cannot be considered definitive. The biological surveys are limited also by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis, or re-establish populations in the future. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, review of potentially jurisdictional areas, review of CNDDB RareFind5, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDB, may vary with regard to accuracy and completeness. In particular, the CNDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

# 7 References

Atwood and J.S. Bolsinger. 1992. Elevational distribution of California Gnatcatchers in the United States. Journal of Field Ornithology 63: 159-168.

Atwood, J. L., C. A. Reynolds, and S. L. Grove. 1999. Distribution of California Gnatcatchers on Camp Pendleton Marine Corps Base. Prepared for U.S. Marine Corps, Oceanside, California (Contract No. M00681-97-C-0035). Unpublished technical report, February 14, Manomet Center for Conservation Sciences, MA.

Baldwin, B.G. (Ed.), D.H. Goldman (Ed.), D. J. Keil (Ed.), R. Patterson (Ed.), T. J. Rosatti (Ed.), D. H. Wilken (Ed.). 2012. *The Jepson Manual: Vascular Plants of California, Second Edition, Thoroughly Revised and Expanded*. University of California Press. Berkeley, California.

California Department of Fish and Wildlife (CDFW). 2022a. Biogeographic Information and Observation System (BIOS). Retrieved October 2022 from www.wildlife.ca.gov/data/BIOS

_____. 2022b. California Natural Community List. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153398&inline. Accessed October 2022.

_____. 2022c. Special Animals List. Biogeographic Data Branch, California Natural Diversity Database. Accessed October 2022.

_____. 2022d. Special Vascular Plants, Bryophytes, and Lichens List. Biogeographic Data Branch, California Natural Diversity Database. Accessed October 2022.

California Native Plant Society. 2022a. A Manual of California Vegetation, Online Edition. http://www.cnps.org/cnps/vegetation/. Accessed October 2022.

_____. 2022b. Inventory of Rare and Endangered Plants. V.7-08c-Interim 8-22-02. Updated online and accessed via: www.rareplants.cnps.org.

Collins, P. W. 2020. Rufous-crowned Sparrow (Aimophila ruficeps), version 1.0. In Birds of the World (A. F. Poole and F. B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.rucspa.01

Google Earth Pro 2022. Earth Version 7.3.3.

Jepson Flora Project (eds.) 2022. Jepson eFlora. https://ucjeps.berkeley.edu/eflora/. Accessed October 2022.

Morey, S. R., & Reznick, D. N. 2004. The relationship between habitat permanence and larval development in California spadefoot toads: field and laboratory comparisons of developmental plasticity. Oikos, 104(1), 172-190.

Nafis, G. 2000-2022 California Herps - A Guide to the Amphibians and Reptiles of California. Available at: http://www.californiaherps.com/. Accessed October 2022.

Sawyer, J. O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation, Second Edition*. California Native Plant Society, Sacramento, California.

Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and federal Highways Administration.

Stebbins, R. C. 2003. A Field Guide to Western Reptiles and Amphibians. 2nd ed. Houghton-Mifflin Company. Boston, Massachusetts.

United States Department of Agricultural, Natural Resources Conservation Service. 2022a. Lists of Hydric Soils. National Cooperative Soil Survey, U.S. Department of Agriculture: https://efotg.sc.egov.usda.gov/references/Public/IL/State_List_NRCS_Hydric_Soils_Report_Dynamic_Data.html. Accessed October 2022.

_____. 2022b. Web Soil Survey. https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed October 2022.

United States Geological Survey (USGS). 2022a. National Hydrography Dataset. https://viewer.nationalmap.gov/advanced-viewer/ Accessed October 2022.

_____. 2022b. USGS US Topo 7.5-minute map for *Simi, Thousand Oaks, Newbury Park,* and *Camarillo, California* 2022.

United States Fish and Wildlife Service (USFWS). 2010. federal Register, Coastal California gnatcatcher 5-year Review. September 29.

_____. 2022a. Critical Habitat Portal. Available at: https://ecos.fws.gov/ecp/report/table/critical-habitat.html

_____. 2022b. Information for Planning and Consultation online project planning tool. Available at: https://ecos.fws.gov/ipac/

_____. 2022c. National Wetlands Inventory Interactive Mapper. https://www.fws.gov/wetlands/data/mapper.html. Accessed October 2022.

Ventura County. 2018. *Ventura County 2040 General Plan*. Section 8.2, Biological Resources. Lists available at https://vcrma.org/ventura-county-locally-important-species-list. Accessed October 2022.

_____. 2020. *Ventura County 2040 General Plan*. Updated September 15, 2020. Accessed October 2022.

Western Regional Climate Center. 2022. Climate of California. www.wrcc.dri.edu/Climate/narrative_ca.php. Accessed October 2022.

Zeiner, D., W.F. Laudenslayer, Jr., and K.E. Mayer (May 1988). California's Wildlife. California Statewide Wildlife Habitat Relationship System, Volumes I, II, & III. California Department of Fish and Wildlife.

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# Appendix A

Regulatory Setting

# Regulatory Setting

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources within the project site include the following:

- U.S. Army Corps of Engineers (wetlands and other waters of the United States)
- U.S. Fish and Wildlife Service (federally listed species and migratory birds)
- Los Angeles Regional Water Quality Control Board (waters of the State)
- California Department Fish and Wildlife (riparian areas, streambeds, and lakes; state-listed species; nesting birds, marine resources)
- Ventura County General Plan
- City of Camarillo General Plan
- City of Moorpark General Plan
- Simi Valley General Plan

## United States Army Corps of Engineers

The United States Army Corps of Engineers (USACE) is responsible for administering several federal programs related to ensuring the quality and navigability of the nation's waters.

### Clean Water Act Section 404

Congress enacted the Clean Water Act (CWA) "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Section 404 of the CWA authorizes the Secretary of the Army, acting through the USACE, to issue permits regulating the discharge of dredged or fill materials into the "navigable waters at specified disposal sites."

Section 502 of the CWA further defines "navigable waters" as "waters of the United States, including the territorial seas." "Waters of the United States" are broadly defined at 33 CFR Part 328.3 to include navigable waters, perennial and intermittent streams, lakes, rivers, ponds, as well as wetlands, marshes, and wet meadows. In recent years, the USACE and US Environmental Protection Agency (USEPA) have undertaken several efforts to modernize their regulations defining "waters of the United States" (e.g., the 2015 Clean Water Rule and 2020 Navigable Waters Protection Rule), but these efforts have been frustrated by legal challenges which have invalidated the updated regulations. Thus, the agencies' longstanding definition of "waters of the United States," which dates from 1986, remains in effect albeit with supplemental guidance interpreting applicable court decisions as described below.

#### Waters of the U.S.

In summary, USACE and USEPA regulations define "waters of the United States" as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
    i. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    ii. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    iii. Which are used or could be used for industrial purpose by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States;
5. Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;
6. The territorial sea;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in items 1-6 above.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the USEPA.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA are not waters of the United States.

The lateral limits of USACE jurisdiction in non-tidal waters is defined by the "ordinary high-water mark" (OHWM) unless adjacent wetlands are present. The OHWM is a line on the shore or edge of a channel established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed upon the bank, shelving, changes in the character of soil, destruction of vegetation, or the presence of debris (33 CFR 328.3(e)). As such, waters are recognized in the field by the presence of a defined watercourse with appropriate physical and topographic features. If wetlands occur within, or adjacent to, waters of the United States, the lateral limits of USACE jurisdiction extend beyond the OHWM to the outer edge of the wetlands (33 CFR 328.4 (c)). The upstream limit of jurisdiction in the absence of adjacent wetlands is the point beyond which the OHWM is no longer perceptible (33 CFR 328.4; see also 51 FR 41217).

## Wetlands

The USACE defines wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3). The USACE’s delineation procedures identify wetlands in the field based on indicators of three wetland parameters: hydrophytic vegetation, hydric soils, and wetland hydrology. The following is a discussion of each of these parameters.

### *Hydrophytic Vegetation*

Hydrophytic vegetation dominates areas where frequency and duration of inundation or soil saturation exerts a controlling influence on the plant species present. Plant species are assigned

wetland indicator status according to the probability of their occurring in wetlands. More than fifty percent of the dominant plant species must have a wetland indicator status to meet the hydrophytic vegetation criterion. The USACE published the National Wetland Plant List (USACE 2018), which separates vascular plants into the following four basic categories based on plant species frequency of occurrence in wetlands:

- **Obligate Wetland (OBL).** Almost always occur in wetlands
- **Facultative Wetland (FACW).** Usually occur in wetlands, but occasionally found in non-wetlands
- **Facultative (FAC).** Occur in wetlands or non-wetlands
- **Facultative Upland (FACU).** Usually occur in non-wetlands, but may occur in wetlands
- **Obligate Upland (UPL).** Almost never occur in wetlands

The USACE considers OBL, FACW and FAC species to be indicators of wetlands. An area is considered to have hydrophytic vegetation when greater than 50 percent of the dominant species in each vegetative stratum (tree, shrub, and herb) fall within these categories. Any species not appearing on the United States Fish and Wildlife Service's list is assumed to be an upland species, almost never occurring in wetlands. In addition, an area needs to contain at least 5% vegetative cover to be considered as a vegetated wetland.

### *Hydric Soils*

Hydric soils are saturated or inundated for a sufficient duration during the growing season to develop anaerobic or reducing conditions that favor the growth and regeneration of hydrophytic vegetation. Field indicators of wetland soils include observations of ponding, inundation, saturation, dark (low chroma) soil colors, bright mottles (concentrations of oxidized minerals such as iron), gleying (indicates reducing conditions by a blue-grey color), or accumulation of organic material. Additional supporting information includes documentation of soil as hydric or reference to wet conditions in the local soils survey, both of which must be verified in the field.

### *Wetland Hydrology*

Wetland hydrology is inundation or soil saturation with a frequency and duration long enough to cause the development of hydric soils and plant communities dominated by hydrophytic vegetation. If direct observation of wetland hydrology is not possible (as in seasonal wetlands), or records of wetland hydrology are not available (such as stream gauges), assessment of wetland hydrology is frequently supported by field indicators, such as water marks, drift lines, sediment deposits, or drainage patterns in wetlands.

## Limitations on Jurisdiction based on Sackett v. USEPA Supreme Court Decision

On May 25, 2023, the Supreme Court issued its decision on the petition from the Sacketts, a family in Idaho that was subject to a compliance order from the USEPA for backfilling their lot near Priest Lake, which the USEPA claimed contained federally regulated wetlands. The wetlands in question were adjacent to a ditch that fed a creek that ultimately drained into Priest Lake, a navigable water body. The USEPA asserted that the Sacketts had violated the law by filling the wetlands on their property without a permit. The Court's decision addressed controversy over whether, and under what conditions, the CWA reaches navigable waters' tributaries or adjacent wetlands. The Supreme Court's decision in Sackett provides definitive guidance to the agencies in determining the limits of

their Clean Water Act authority. Major tenets of the decision have been incorporated into the agencies' current regulations through the September 2023 Conforming Rule.

The Court decided:

- "Adjacent wetlands" are WOTUS only if there is a continuous surface connection between the wetland and a navigable or relatively permanent water body, such that it is difficult to determine the boundary between the wetland and the water body. The opinion notes that "temporary interruptions to surface connection may sometimes occur because of phenomena like low tides or dry spells." The agencies addressed this element by defining the term "adjacent" to mean "having a continuous surface connection" in the Conforming Rule.
- The Significant Nexus Standard, introduced by the Court in prior decisions, is not mentioned in the Clean Water Act and should not be used. The Court determined that the standard applies ecological factors whose use in determining jurisdiction is not supported by the statute. The Conforming Rule removed significant nexus considerations from the definition.
- Although jurisdiction over tributaries was not addressed by the Court, the decision stated that "…the [Clean Water Act's] use of "waters" encompasses only those relatively permanent, standing or continuously flowing bodies of water forming geographical features that are described in ordinary parlance as streams, oceans, rivers, and lakes." The Conforming Rule makes clear that only relatively permanent tributaries qualify as "waters of the United States."

### Rivers and Harbors Act Section 10

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the USACE for the construction of any structure in or over any navigable water of the United States. Structures or work outside the limits defined for navigable waters of the United States require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, re-channelization, or any other modification of a navigable water of the United States, and applies to all structures and work. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, bank protection (e.g., riprap, revetment, bulkhead), mooring structures such as pilings, aerial or subaqueous power transmission lines, intake or outfall pipes, permanently moored floating vessel, tunnel, artificial canal, boat ramp, aids to navigation, and any other permanent, or semi-permanent obstacle or obstruction. It is important to note that Section 10 applies only to navigable waters, and thus does not apply to work in non-navigable wetlands or tributaries. In some cases, Section 10 authorization is issued by the USACE concurrently with CWA Section 404 authorization, such as when certain Nationwide Permits are used.

## Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs) have jurisdiction over "waters of the State," which are defined as any surface water or groundwater, including saline waters, within the boundaries of the state (California Water Code sec. 13050(e)). These agencies also have responsibilities for administering portions of the CWA.

### Clean Water Act Section 401

Section 401 of the CWA requires an applicant requesting a federal license or permit for an activity that may result in any discharge into navigable waters (such as a Section 404 Permit) to provide

state certification that the proposed activity will not violate state and federal water quality standards. In California, CWA Section 401 Water Quality Certification (Section 401 Certification) is issued by the RWQCBs and by the SWRCB for multi-region projects. The process begins when an applicant submits an application to the RWQCB and informs the USACE (or the applicable agency from which a license or permit was requested) that an application has been submitted. The USACE will then determine a "reasonable period of time" for the RWQCB to act on the application; this is typically 60 days for routine projects and longer for complex projects but may not exceed one year. When the period has elapsed, if the RWQCB has not either issued or denied the application for Section 401 Certification, the USACE may determine that Certification has been waived and issue the requested permit. If a Section 401 Certification is issued it may include binding conditions, imposed either through the Certification itself or through the requested federal license or permit.

## Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code section 13000 et seq.), the policy of the State is as follows:

- The quality of all the waters of the State shall be protected
- All activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason
- The State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation

The Porter-Cologne Act established nine RWQCBs (based on watershed boundaries) and the SWRCB, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The SWRCB provides program guidance and oversight, allocates funds, and reviews RWQCB decisions. In addition, the SWRCB allocates rights to the use of surface water. The RWQCBs have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The SWRCB and RWQCBs have numerous nonpoint source related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

Section 13260 of the Porter-Cologne Act requires any person discharging or proposing to discharge waste that could affect the quality of waters of the State to file a Report of Waste Discharge with the appropriate RWQCB. The RWQCB may then authorize the discharge, subject to conditions, by issuing Waste Discharge Requirements (WDRs). While this requirement was historically applied primarily to outfalls and similar point source discharges, the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*, effective May 2020, make it clear that the agency will apply the Porter-Cologne Act's requirements to discharges of dredge and fill material as well. The *Procedures* state that they are to be used in issuing CWA Section 401 Certifications and WDRs, and largely mirror the existing review requirements for CWA Section 404 Permits and Section 401 Certifications, incorporating most elements of the USEPA's *Section 404(b)(1) Guidelines*. Following issuance of the *Procedures*, the SWRCB produced a consolidated application form for dredge/fill discharges that can be used to obtain a CWA Section 401 Water Quality Certification, WDRs, or both.

### Non-Wetland Waters of the State

The SWRCB and RWQCBs have not established regulations for field determinations of waters of the state except for wetlands currently. In many cases the RWQCBs interpret the limits of waters of the State to be bounded by the OHWM unless isolated conditions or ephemeral waters are present. However, in the absence of statewide guidance each RWQCB may interpret jurisdictional boundaries within their region and the SWRCB has encouraged applicants to confirm jurisdictional limits with their RWQCB before submitting applications. As determined by the RWQCB, waters of the State may include riparian areas or other locations outside the OHWM, leading to a larger jurisdictional area over a given water body compared to the USACE.

### Wetland Waters of the State

Procedures for defining wetland waters of the State pursuant to the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* went into effect May 28, 2020. The SWRCB defines an area as wetland if, under normal circumstances:

(i) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;

(ii) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and

(iii) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The SWRCB's *Implementation Guidance for the Wetland Definition and Procedures for Discharges of Dredge and Fill Material to Waters of the State* (2020), states that waters of the U.S. and waters of the State should be delineated using the standard USACE delineation procedures, taking into consideration that the methods shall be modified only to allow for the fact that a lack of vegetation does not preclude an area from meeting the definition of a wetland.

## United States Fish and Wildlife Service

The United States Fish and Wildlife Service (USFWS) implements several laws protecting the Nation's fish and wildlife resources, including the Endangered Species Act (ESA; 16 United States Code [USC] Sections 153 et seq.), the Migratory Bird Treaty Act (MBTA; 16 USC Sections 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668).

### Endangered Species Act

The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the ESA. Generally, the USFWS implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in "take" of any threatened or endangered wildlife species, or a threatened or endangered plant species if occurring on federal land, are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of the ESA, depending on the involvement by the federal government in funding, authorizing, or carrying out the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. "Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to

engage in any such conduct. Proposed or candidate species do not have the full protection of the ESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

## Migratory Bird Treaty Act

The MBTA of 1918 implements four international conservation treaties that the U.S. entered into with Canada in 1916, Mexico in 1936, Japan in 1972, and Russia in 1976. It is intended to ensure the sustainability of populations of all protected migratory bird species. The law has been amended with the signing of each treaty, as well as when any of the treaties were amended, such as with Mexico in 1976 and Canada in 1995. The MBTA prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the USFWS.

The list of migratory bird species protected by the law, in regulations at 50 CFR Part 10.13, is primarily based on bird families and species included in the four international treaties. A migratory bird species is included on the list if it meets one or more of the following criteria:

1. It occurs in the United States or U.S. territories as the result of natural biological or ecological processes and is currently, or was previously listed as, a species or part of a family protected by one of the four international treaties or their amendments.
2. Revised taxonomy results in it being newly split from a species that was previously on the list, and the new species occurs in the United States or U.S. territories as the result of natural biological or ecological processes.
3. New evidence exists for its natural occurrence in the United States or U.S. territories resulting from natural distributional changes and the species occurs in a protected family.

In 2004, the Migratory Bird Treaty Reform Act limited the scope of the MBTA by stating the MBTA applies only to migratory bird species that are native to the United States or U.S. territories, and that a native migratory bird species is one that is present as a result of natural biological or ecological processes. The MBTA requires the USFWS to publish a list of all nonnative, human-introduced bird species to which the MBTA does not apply, and an updated list was published in 2020. The 2020 update identifies species belonging to biological families referred to in treaties the MBTA implements but are not protected because their presence in the United States or U.S. territories is solely the result of intentional or unintentional human-assisted introductions.

## Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act prohibits anyone, without a permit issued by the USFWS, from "taking" bald or golden eagles, including their parts (including feathers), nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."

"Disturb" means “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment.

# California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) derives its authority from the Fish and Game Code of California and administers several State laws protecting fish and wildlife resources and the habitats upon which they depend.

## California Endangered Species Act

The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened or endangered. Take under CESA is defined as “Hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” (Fish and Game Code sec. 86). This definition does not prohibit indirect harm by way of habitat modification, except where such harm is the proximate cause of death of a listed species. Where incidental take would occur during construction or other lawful activities, CESA allows the CDFW to issue an Incidental Take Permit upon finding, among other requirements, that impacts to the species have been minimized and fully mitigated. Unlike the federal ESA, CESA’s protections extend to candidate species during the period (typically one year) while the California Fish and Game Commission decides whether the species warrants CESA listing.

## Native Plant Protection Act

The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare, and prohibits the take of listed plant species. Effective in 2015, CDFW promulgated regulations (14 CCR 786.9) under the authority of the NPPA, establishing that the CESA’s permitting procedures would be applied to plants listed under the NPPA as "Rare." With this change, there is little practical difference for the regulated public between plants listed under CESA and those listed under the NPPA.

## Fully Protected Species Laws

The CDFW enforces Sections 3511, 4700, 5050, and 5515 of the Fish and Game Code, which prohibit take of species designated as Fully Protected. The CDFW is not allowed to issue an Incidental Take Permit for Fully Protected species; therefore, impacts to these species must be avoided. The exception is situations where a Natural Community Conservation Plan (NCCP) is in place that authorizes take of the fully protected species.

## Avian Protection Laws

California Fish and Game Code sections 3503, 3503.5, and 3513 describe unlawful take, possession, or destruction of native birds, nests, and eggs. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Section 3513 makes it a state-level offense to take any bird in violation of the federal Migratory Bird Treaty Act.

## Protection of Lakes and Streambeds

California Fish and Game Code section 1602 states that it is unlawful for any person to "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake" without first notifying the California Department of Fish and Wildlife (CDFW) of that activity. Thereafter, if CDFW determines and informs the entity that the activity will not substantially adversely affect any existing fish or wildlife resources, the entity may commence the activity. If, however, CDFG determines that the activity may substantially adversely affect an existing fish or wildlife resource, the entity may be required to obtain from CDFW a Streambed Alteration Agreement (SAA), which will include reasonable measures necessary to protect the affected resource(s), before the entity may conduct the activity described in the notification. Upon receiving a complete Notification of Lake/Streambed Alteration, CDFW has 60 days to present the entity with a Draft SAA. Upon review of the Draft SAA by the applicant, any problematic terms are negotiated with CDFW and a final SAA is executed.

The CDFW has not defined the term “stream” for the purposes of implementing its regulatory program under Section 1602, and the agency has not promulgated regulations directing how jurisdictional streambeds may be identified, or how their limits should be delineated. However, four relevant sources of information offer insight as to the appropriate limits of CDFW jurisdiction as discussed below.

- **The plain language of Section 1602 of CFGC** establishes the following general concepts:
  - References “river,” “stream,” and “lake”
  - References “natural flow”
  - References “bed,” “bank,” and “channel”
- **Applicable court decisions**, in particular *Rutherford v. State of California* (188 Cal App. 3d 1276 (1987), which interpreted Section 1602’s use of “stream” to be as defined in common law. The Court indicated that a “stream” is commonly understood to:
  - Have a source and a terminus
  - Have banks and a channel
  - Convey flow at least periodically, but need not flow continuously and may at times appear outwardly dry
  - Represent the depression between the banks worn by the regular and usual flow of the water
  - Include the area between the opposing banks measured from the foot of the banks from the top of the water at its ordinary stage, including intervening sand bars
  - Include the land that is covered by the water in its ordinary low stage
  - Include lands below the OHWM
- **CDFW regulations** defining “stream” for other purposes, including sport fishing (14 CCR 1.72) and streambed alterations associated with cannabis production (14 CCR 722(c)(21)), which indicate that a stream:
  - Flows at least periodically or intermittently
  - Flows through a bed or channel having banks
  - Supports fish or aquatic life
  - Can be dry for a period of time

- Includes watercourses where surface or subsurface flow supports or has supported riparian vegetation

- **Guidance documents**, *including A Field Guide to Lake and Streambed Alteration Agreements* (CDFG 1994) and *Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants* (Brady and Vyverberg 2013), which suggest the following:
  - A stream may flow perennially or episodically
  - A stream is defined by the course in which water currently flows, or has flowed during the historic hydrologic course regime (approximately the last 200 years)
  - Width of a stream course can reasonably be identified by physical or biological indicators
  - A stream may have one or more channels (single thread vs. compound form)
  - Features such as braided channels, low-flow channels, active channels, banks associated with secondary channels, floodplains, islands, and stream-associated vegetation, are interconnected parts of the watercourse
  - Canals, aqueducts, irrigation ditches, and other means of water conveyance can be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife
  - Biologic components of a stream may include aquatic and riparian vegetation, all aquatic wildlife including fish, amphibians, reptiles, invertebrates, and terrestrial species which derive benefits from the stream system
  - The lateral extent of a stream can be measured in different ways depending on the particular situation and the type of fish or wildlife resource at risk

The tenets listed above, among others, are applied to establish the boundaries of streambeds in various environments. The importance of each factor may be weighted based on site-specific considerations and the applicability of the indicators to the streambed at hand.

# Local Jurisdictions

## Ventura County

The Ventura County General Plan, which is mandated by State law, sets forth the goals, policies, and programs the County will implement to manage future growth and land uses. The General Plan, adopted by the Board of Supervisors, embodies the vision for the future of unincorporated Ventura County.

### Ventura County Protected Trees

Ventura County regulations for protected trees outside the coastal zone apply in unincorporated portions of the County. In accordance with the County's tree protection ordinance, protected trees include oaks and sycamores that measure 9.5 inches in girth (circumference) or larger (generally measured 4.5 feet above ground), trees of any species that have "heritage" status because they measure 90 inches in girth or larger, and trees of any species with a historical designation.

## City of Camarillo

The City of Camarillo's General Plan is a comprehensive, long-range guide for the development of the community. It consists of nine elements: CURB, Land Use, Circulation, Housing, Recreation, Open Space and Conservation, Community Design, Safety, and Noise. Each element contains specific goals, policies, and programs to be implemented. The General Plan, which is adopted by the City Council, establishes policy for the physical development of the city.

### Applicable Ordinances (Ord. 663 § 2 (part), 1988.)

- Municipal Code 13.04.630 – Removal and/or trimming of trees.
- Municipal Code 13.12.060 – Maintenance and removal of trees and other plantings.
- Municipal Code 13.12.070 – Protection of trees and other plantings.

## City of Moorpark

The City of Moorpark's General Plan is a long-range policy document that sets forth broad goals and objectives for the growth and development of the City of Moorpark. As required by state law, the General Plan takes a long-term view and is designed to guide growth and development in the city over the next 20 to 25 years.

### Applicable Ordinances (Ord. 101 § 1, 1988)

- Municipal Code Chapter 12.12 – Historic Trees, Native Oak Trees and Mature Trees

## City of Simi Valley

The City of Simi Valley's General Plan is intended to provide a meaningful guide for the future growth and development of Simi Valley over the next twenty years and fulfills statutory requirements. It is a comprehensive framework for the City's physical, economic, and social development that sustains natural environmental resources. It is also long range—looking ahead to 2030 and beyond—while at the same time presenting policies to guide day-to-day decisions.

### Applicable Ordinances (Ord. 1085 § 5, 2006)

- Municipal Code Chapter 9-38 – Tree Preservation, Cutting, and Removal

## City of Thousand Oaks

The Thousand Oaks General Plan provides a long-range comprehensive guide for the physical development of the City's Planning Area. The General Plan comprises a statement of goals and policies related to the community's development, and various elements which provide more detailed policies and standards in certain topic areas. Together, these serve as the foundation for guiding public and private activities related to the City's development.

### Applicable Ordinances (Ord. 1610-NS, 2016)

- Municipal Code Section 9-4.42 – Oak Tree Preservation and Protection
- Municipal Code Section 9-4.43 – Landmark Tree Preservation and Protection

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# Appendix B

Site Photographs

**Photograph 1.** Example of the ornamental and developed land cover types along Tierra Rejada Road. View facing southeast. October 6, 2022.

**Photograph 2.** Example of a potential heritage tree along Tierra Rejada Road. View facing southwest. October 6, 2022.

**Photograph 3.** Unnamed Feature No. 8. Concrete-lined roadside ditch along Sunset Valley Road. View facing southwest. October 6, 2022.

**Photograph 4.** California buckwheat scrub on hillside along the shoulder of Tierra Rejada Road. View facing northwest. October 6, 2022.

**Photograph 5.** View of Calleguas Creek crossing under Upland Road. Riverwash land cover type is shown in the active channel. View facing southeast. October 6, 2022.

**Photograph 6.** Arroyo willow – mulefat thickets on bank of Calleguas Creek. View facing southwest. October 6, 2022.

**Photograph 7.** Unnamed Feature No. 9. Concrete roadside ditch along Tierra Rejada Road. View facing northeast. October 6, 2022.

**Photograph 8.** Southern California black walnut. View facing south. October 6, 2022.

# Appendix C

Floral and Faunal Compendiums

## Floral Compendium

| Scientific Name[1] | Common Name | Origin and Status[2] |
|---|---|---|
| *Acmispon glaber* | deerweed | Native |
| *Artemisia californica* | California sagebrush | Native |
| *Arundo donax* | giant reed | Introduced; Cal-IPC - High |
| *Atriplex lentiformis* | big saltbush | Native |
| *Avena barbata* | slender oat | Introduced; Cal-IPC - Moderate |
| *Avena fatua* | wild oat | Introduced; Cal-IPC - Moderate |
| *Encelia californica* | California brittlebush | Native |
| *Baccharis pilularis* | coyote brush | Native |
| *Baccharis salicifolia* | mule fat | Native |
| *Bromus diandrus* | ripgut brome | Introduced; Cal-IPC - Moderate |
| *Agapanthus africanus* | lily of the Nile | Introduced |
| *Bromus hordeaceus* | soft chess | Introduced; Cal-IPC - Limited |
| *Muhlenbergia rigens* | deergrass | Native |
| *Cortaderia selloana* | pampas grass | Introduced; Cal-IPC - High |
| *Bromus rubens* | red brome | Introduced; Cal-IPC - High |
| *Carduus pycnocephalus* ssp. *pycnocephalus* | Italian thistle | Introduced |
| *Centaurea melitensis* | tocalote | Introduced; Cal-IPC - Moderate |
| *Centaurea solstitialis* | yellow star-thistle | Introduced; Cal-IPC - High |
| *Erigeron bonariensis* | flax-leaved horseweed | Introduced |
| *Erigeron canadensis* | Canada horseweed | Native |
| *Carpobrotus edulis* | iceplant | Introduced; Cal-IPC - High |
| *Tamarix ramosissima* | tamarisk | Introduced; Cal-IPC - High |
| *Erodium cicutarium* | redstem filaree | Introduced; Cal-IPC - Limited |
| *Foeniculum vulgare* | fennel | Introduced; Cal-IPC - Moderate |
| *Hesperoyucca whipplei* | chaparral yucca | Native |
| *Hirschfeldia incana* | perennial mustard | Introduced; Cal-IPC - Moderate |
| *Hordeum murinum* | foxtail barley | Introduced; Cal-IPC - Moderate |
| *Pinus* spp. | ornamental pine | Introduced |
| *Bougainvillea* spp. | Bougainvillea | Introduced |
| *Jacaranda mimosifolia* | blue jacaranda | Introduced |
| *Juglans californica* | southern California black walnut | Native; CRPR 4.2 |
| *Malva parviflora* | cheeseweed | Introduced |
| *Nicotiana glauca* | tree tobacco | Introduced; Cal-IPC - Moderate |
| *Platanus racemosa* | western sycamore | Native |
| *Platanus acerifolia* | London plane | Introduced |
| *Quercus agrifolia* | coast live oak | Native |
| *Acacia redolens* | bank catclaw | Introduced |
| *Quercus lobata* | valley oak | Native |
| *Rhus integrifolia* | lemonade berry | Native |

| Scientific Name[1] | Common Name | Origin and Status[2] |
|---|---|---|
| *Rhus ovata* | sugarbush | Native |
| *Helianthus annuus* | annual sunflower | Native |
| *Ricinus communis* | castor bean | Introduced; Cal-IPC - Limited |
| *Salix lasiolepis* | arroyo willow | Native |
| *Salsola tragus* | Russian thistle | Introduced; Cal-IPC - Limited |
| *Salvia apiana* | white sage | Native |
| *Salvia leucophylla* | purple sage | Native |
| *Salvia mellifera* | black sage | Native |
| *Schinus molle* | Peruvian pepper | Introduced; Cal-IPC - Limited |
| *Tribulus terrestris* | puncture vine | Introduced; Cal-IPC - Limited |
| *Stephanomeria cichoriacea* | chicory leaved stephanomeria | Native |
| *Opuntia littoralis* | coastal prickly pear | Native |
| *Pennisetum setaceum* | fountain grass | Introduced; Cal-IPC - Watch |
| *Heterotheca grandiflora* | telegraph weed | Native |
| *Washingtonia robusta* | Mexican fan palm | Introduced; Cal-IPC - Moderate |
| *Ficus macrophylla* | Morton bay fig | Introduced |
| *Syagrus romanzoffiana* | queen palm | Introduced |
| *Cupaniopsis anacardioides* | carrotwood | Introduced |
| *Sequoia sempervirens* | redwood | Native |
| *Xanthium strumarium* | rough cocklebur | Native |

[1] Jepson Flora Project 2022.

[2] Cal-IPC 2022; CNPS 2022b.

**CNPS California Rare Plant Rank (CRPR)**

1A = Presumed extirpated in California, and rare or extinct elsewhere

1B = Rare, Threatened, or Endangered in California and elsewhere

4 = Limited Distribution (Watch List)

**CRPR Threat Code Extension**

.1 = Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat)

.2 = Moderately threatened in California (20-80% of occurrences threatened/ moderate degree and immediacy of threat)

## Faunal Compendium

| Scientific Name | Common Name | Status | Native or Introduced |
|---|---|---|---|
| **Birds[1]** | | | |
| *Buteo jamaicensis* | red-tailed hawk | – | Native |
| *Calypte anna* | Anna's hummingbird | – | Native |
| *Cathartes aura* | turkey vulture | – | Native |
| *Corvus brachyrhynchos* | American crow | – | Native |
| *Corvus corax* | common raven | – | Native |
| *Haemorhous mexicanus* | house finch | – | Native |
| *Psaltriparus minimus* | bushtit | – | Native |
| *Sayornis nigricans* | black phoebe | – | Native |
| *Zenaida macroura* | mourning dove | – | Native |
| **Mammals** | | | |
| *Canis lupus familiaris* | domesticated dog | – | Introduced |
| *Felis catus* | domesticated cat | – | Introduced |
| *Otospermophilus beecheyi* | California ground squirrel | – | Native |
| **Reptiles[2]** | | | |
| *Sceloporus occidentalis* | western fence lizard | – | Native |

[1] Rodewald 2015

[2] California Herps 2022

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# Appendix D

Special-status Species Evaluation Tables

## Special-status Plant Species in the Regional Vicinity of the BSA

| Scientific Name<br>Common Name | Status<br>Fed/State<br>CRPR | Habitat Requirements | Potential to Occur | Rationale |
|---|---|---|---|---|
| *Astragalus brauntonii*<br>Braunton's milk-vetch | FE/None<br>G2/S2<br>1B.1 | Perennial herb. Chaparral, coastal scrub, valley and foothill grassland. Recent burns or disturbed areas; usually on sandstone with carbonate layers. Soil specialist; requires shallow soils to defeat pocket gophers and open areas, preferably on hilltops, saddles or bowls between hills. Elevations: 15-2100ft. (4-640m.) Blooms Jan-Aug. | Not expected | Potentially suitable coastal scrub and grasslands are present in the BSA. However, these natural areas are very limited. Many CNDDB occurrences are located within the surveyed quadrangles, including 12 from 2019 and 2020. |
| *Baccharis malibuensis*<br>Malibu baccharis | None/None<br>G1/S1<br>1B.1 | Perennial deciduous shrub. Chaparral, cismontane woodland, coastal scrub, riparian woodland. In Conejo volcanic substrates, often on exposed roadcuts. Sometimes occupies oak woodland habitat. Elevations: 490-1000ft. (150-305m.) Blooms Aug. | Not expected | Potentially suitable coastal scrub is present in the BSA. However, these natural areas are very limited. Volcanic substrate is limited. The only CNDDB located within the surveyed quadrangles is from 2008 and is located approximately 3.5 miles southeast of the BSA. |
| *Calochortus clavatus* var. *gracilis*<br>slender mariposa-lily | None/None<br>G4T2T3/S2<br>S3<br>1B.2 | Perennial bulbiferous herb. Chaparral, coastal scrub, valley and foothill grassland. Shaded foothill canyons; often on grassy slopes within other habitat. Elevations: 1050-3280ft. (320-1000m.) Blooms Mar-Jun(Nov). | Not expected | Potentially suitable coastal scrub is present in the BSA. However, these natural areas are very limited. The BSA is outside the elevation range for this species. Both CNDDB occurrences located within the surveyed quadrangles are from 2019, and the closest is located approximately 3.2 miles southeast of the BSA. |
| *Centromadia parryi* ssp. *australis*<br>southern tarplant | None/None<br>G3T2/S2<br>1B.1 | Annual herb. Marshes and swamps, valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. Elevations: 0-1575ft. (0-480m.) Blooms May-Nov. | Not expected | Potentially suitable grasslands are present in the BSA. However, these natural areas are very limited and dominated by dense non-native species. Vernally mesic areas are not present. The only CNDDB occurrence located within the surveyed quadrangles is from 2003 and is located approximately 3.4 miles south of the BSA. |
| *Deinandra minthornii*<br>Santa Susana tarplant | None/SCR<br>G2/S2<br>1B.2 | Perennial deciduous shrub. Chaparral, coastal scrub. On sandstone outcrops and crevices, in shrubland. Elevations: 920-2495ft. (280-760m.) Blooms Jul-Nov. | Not expected | Potentially suitable coastal scrub is present in the BSA. However, these natural areas are very limited and sandstone outcrops are absent. The BSA is outside the elevation range for this species. Multiple CNDDB occurrences are located within the surveyed quadrangles, the most recent of which is from 2019 and is located approximately 4.5 miles south of the BSA. |
| *Delphinium parryi* ssp. *blochmaniae*<br>dune larkspur | None/None<br>G4T2/S2<br>1B.2 | Perennial herb. Chaparral, coastal dunes. On rocky areas and dunes. Elevations: 0-655ft. (0-200m.) Blooms Apr-Jun. | Not expected | No suitable chaparral, coastal dunes, or rocky areas are present in the BSA. The only CNDDB occurrence located within the surveyed quadrangles is an undated observation from before 1987 located approximately 8 miles south of the BSA. |

| Scientific Name<br>Common Name | Status<br>Fed/State<br>CRPR | Habitat Requirements | Potential to Occur | Rationale |
|---|---|---|---|---|
| *Dudleya blochmaniae* ssp. *blochmaniae*<br>Blochman's dudleya | None/None<br>G3T2/S2<br>1B.1 | Perennial herb. Chaparral, coastal bluff scrub, coastal scrub, valley and foothill grassland. Open, rocky slopes; often in shallow clays over serpentine or in rocky areas with little soil. Elevations: 15-1475ft. (5-450m.) Blooms Apr-Jun. | Not expected | Potentially suitable coastal scrub and grasslands are present in the BSA. However, these natural areas are very limited. Serpentine soils are not present. Multiple CNDDB occurrence are located within the surveyed quadrangles, the closest of which is from 2015 and is located approximately 2.3 miles south of the BSA. |
| *Dudleya cymosa* ssp. *agourensis*<br>Agoura Hills dudleya | FT/None<br>G5T1/S1<br>1B.2 | Perennial herb. Chaparral, cismontane woodland. Rocky, volcanic breccia. Elevations: 655-1640ft. (200-500m.) Blooms May-Jun. | Not expected | No suitable chaparral or woodland are present in the BSA, and rocky volcanic breccia is absent. Multiple CNDDB occurrence are located within the surveyed quadrangles, all of which are over 7 miles south of the BSA. |
| *Dudleya cymosa* ssp. *marcescens*<br>marcescent dudleya | FT/SCR<br>G5T2/S2<br>1B.2 | Perennial herb. Chaparral. On sheer rock surfaces and rocky volcanic cliffs. Elevations: 490-1705ft. (150-520m.) Blooms Apr-Jul. | Not expected | No suitable chaparral or sheer rock surfaces or cliffs are present in the BSA. Two CNDDB occurrences are located within the surveyed quadrangles. Both are from 2010 and are over 8.5 miles south of the BSA. |
| *Dudleya cymosa* ssp. *ovatifolia*<br>Santa Monica dudleya | FT/None<br>G5T1/S1<br>1B.1 | Perennial herb. Chaparral, coastal scrub. In canyons on volcanic or sedimentary substrates; primarily on north-facing slopes. Elevations: 490-5495ft. (150-1675m.) Blooms Mar-Jun. | Not expected | Potentially suitable coastal scrub is present in the BSA. However, these natural areas are very limited. No CNDDB occurrences are located within the surveyed quadrangles. |
| *Dudleya parva*<br>Conejo dudleya | FT/None<br>G1/S1<br>1B.2 | Perennial herb. Coastal scrub, valley and foothill grassland. In clay or volcanic soils on rocky slopes and grassy hillsides. Elevations: 195-1475ft. (60-450m.) Blooms May-Jun. | Low potential | Potentially suitable coastal scrub and grasslands are present in the BSA. However, these natural areas are very limited. Multiple CNDDB occurrences are located within the surveyed quadrangles, including several within 0.5 miles of the BSA. |
| *Dudleya verityi*<br>Verity's dudleya | FT/None<br>G1/S1<br>1B.1 | Perennial herb. Chaparral, cismontane woodland, coastal scrub. On volcanic rock outcrops in the Santa Monica Mountains. Elevations: 195-395ft. (60-120m.) Blooms May-Jun. | Not expected | Potentially suitable coastal scrub is present in the BSA. However, these natural areas are very limited and rock outcrops are absent. Multiple CNDDB occurrences are located within the surveyed quadrangles, the closest of which is located approximately 3 miles south of the BSA. |
| *Eriogonum crocatum*<br>Conejo buckwheat | None/SCR<br>G1/S1<br>1B.2 | Perennial herb. Chaparral, coastal scrub, valley and foothill grassland. Conejo volcanic outcrops; rocky sites. Elevations: 165-1905ft. (50-580m.) Blooms Apr-Jul. | Not expected | Potentially suitable coastal scrub and grasslands are present in the BSA. However, these natural areas are very limited and volcanic outcrops are absent. Multiple CNDDB occurrences are located within the surveyed quadrangles, including several located approximately 0.5 miles south of the BSA. |

| Scientific Name<br>Common Name | Status<br>Fed/State<br>CRPR | Habitat Requirements | Potential to Occur | Rationale |
|---|---|---|---|---|
| *Horkelia cuneata* var. *puberula*<br>mesa horkelia | None/None<br>G4T1/S1<br>1B.1 | Perennial herb. Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. Elevations: 230-2660ft. (70-810m.) Blooms Feb-Jul(Sep). | Not expected | Potentially suitable coastal scrub is present in the BSA. However, these natural areas are very limited. Three CNDDB occurrences are located within the surveyed quadrangles, the closest of which is from 2011 and is located approximately 1 mile north of the BSA. |
| *Lupinus paynei*<br>Payne's bush lupine | None/None<br>G1Q/S1<br>1B.1 | Perennial shrub. Coastal scrub, riparian scrub, valley and foothill grassland. Sandy. Elevations: 720-1380ft. (220-420m.) Blooms Mar-Apr(May-Jul). | Not expected | Potentially suitable coastal scrub, riparian scrub, and grasslands are present in the BSA. However, these natural areas are very limited. The only CNDDB occurrence is from 2008 and is located approximately 1.2 miles north of the BSA. |
| *Monardella hypoleuca* ssp. *hypoleuca*<br>white-veined monardella | None/None<br>G4T3/S3<br>1B.3 | Perennial herb. Chaparral, cismontane woodland. Dry slopes. Elevations: 165-5005ft. (50-1525m.) Blooms (Apr)May-Aug(Sep-Dec). | Not expected | No suitable chaparral or woodlands are present in the BSA. The only CNDDB occurrence located within the surveyed quadrangles is from 2008 and is located approximately 6.5 miles south of the BSA. |
| *Monardella sinuata* ssp. *gerryi*<br>Gerry's curly-leaved monardella | None/None<br>G3T1/S1<br>1B.1 | Annual herb. Coastal scrub. Sandy openings. Elevations: 490-805ft. (150-245m.) Blooms Apr-Jun. | Not expected | Potentially suitable coastal scrub is present in the BSA. However, these natural areas are very limited. Three CNDDB occurrences are located within the surveyed quadrangles, including one from 2015 which is located approximately 1 mile north of the BSA. |
| *Navarretia ojaiensis*<br>Ojai navarretia | None/None<br>G2/S2<br>1B.1 | Annual herb. Chaparral, coastal scrub, valley and foothill grassland. Openings in shrublands or grasslands. Elevations: 900-2035ft. (275-620m.) Blooms May-Jul. | Not expected | Potentially suitable coastal scrub and grasslands are present in the BSA. However, these natural areas are very limited. The BSA is outside the elevation range for this species. Three CNDDB occurrences are located within the surveyed quadrangles, including one from 2014 located approximately 2.2 miles south of the BSA. |
| *Nolina cismontana*<br>chaparral nolina | None/None<br>G3/S3<br>1B.2 | Perennial evergreen shrub. Chaparral, coastal scrub. Primarily on sandstone and shale substrates; also known from gabbro. Elevations: 460-4185ft. (140-1275m.) Blooms (Mar)May-Jul. | Not expected | Potentially suitable coastal scrub is present in the BSA. However, these natural areas are very limited. Multiple CNDDB occurrences are located within the surveyed quadrangles, including one from 2017 that is located approximately 3.6 miles southeast of the BSA. |
| *Orcuttia californica*<br>California Orcutt grass | FE/SCE<br>G1/S1<br>1B.1 | Annual herb. Vernal pools. Elevations: 50-2165ft. (15-660m.) Blooms Apr-Aug. | Not expected | No suitable vernal pools are present in the BSA. Three CNDDB occurrences are located within the surveyed quadrangles, including one from 2011 that is located approximately 0.8 miles north of the BSA. |

| Scientific Name<br>Common Name | Status<br>Fed/State<br>CRPR | Habitat Requirements | Potential to Occur | Rationale |
|---|---|---|---|---|
| *Pentachaeta lyonii*<br>Lyon's pentachaeta | FE/SE<br>G1/S1<br>1B.1 | Annual herb. Chaparral, coastal scrub, valley and foothill grassland. Edges of clearings in chaparral, usually at the ecotone between grassland and chaparral or edges of firebreaks. Elevations: 100-2265ft. (30-690m.) Blooms (Feb)Mar-Aug. | Moderate potential | Potentially suitable coastal scrub and grasslands are present in the BSA. However, these natural areas are very limited. The BSA is adjacent to critical habitat for this species. Multiple CNDDB occurrences are located within the surveyed quadrangles, including one from 2011 which overlaps the BSA. |
| *Pseudognaphalium leucocephalum*<br>white rabbit-tobacco | None/None<br>G4/S2<br>2B.2 | Perennial herb. Chaparral, cismontane woodland, coastal scrub, riparian woodland. Sandy, gravelly sites. Elevations: 0-6890ft. (0-2100m.) Blooms (Jul)Aug-Nov(Dec). | Not expected | Potentially suitable coastal scrub is present in the BSA. However, these natural areas are very limited. The only CNDDB occurrence located within the surveyed quadrangles is from 1959 and is located approximately 4.5 miles south of the BSA. |
| *Quercus dumosa*<br>Nuttall's scrub oak | None/None<br>G3/S3<br>1B.1 | Perennial evergreen shrub. Chaparral, closed-cone coniferous forest, coastal scrub. Generally on sandy soils near the coast; sometimes on clay loam. Elevations: 50-1310ft. (15-400m.) Blooms Feb-Apr(May-Aug). | Not expected | Potentially suitable coastal scrub is present in the BSA. However, these natural areas are very limited. The only CNDDB occurrence located within the surveyed quadrangles is from 2016 and is located approximately 6 miles south of the BSA. |
| *Senecio aphanactis*<br>chaparral ragwort | None/None<br>G3/S2<br>2B.2 | Annual herb. Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. Elevations: 50-2625ft. (15-800m.) Blooms Jan-Apr(May). | Not expected | Potentially suitable coastal scrub is present in the BSA. However, these natural areas are very limited. Multiple CNDDB occurrences are located within the surveyed quadrangles, including one from 2016 that is located approximately 1.3 miles south of the BSA. |

Regional Vicinity refers to within the four USGS 7.5-minute topographic quadrangles crossed by the BSA

**Status (Federal/State)**

FE = federal Endangered
FT = federal Threatened
SE = state Endangered
SCE = state Candidate Endangered
SR = state Rare
SCR = state Candidate Rare

**CRPR (CNPS California Rare Plant Rank)**

1B = Rare, Threatened, or Endangered in California and elsewhere
2B= Rare, Threatened, or Endangered in California, but more common elsewhere
4 = Limited Distribution (Watch List)

**CRPR Threat Code Extension**

.1 = Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat)
.2 = Moderately threatened in California (20-80% of occurrences threatened/moderate degree and immediacy of threat)
.3 = Not very endangered in California (<20% of occurrences threatened/low degree and immediacy of threat)

**Other Statuses**

G1 or S1 Critically Imperiled Globally or Subnationally (state)
G2 or S2 Imperiled Globally or Subnationally (state)
G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4/5 or S4/5 Apparently secure, common and abundant
GH or SH Possibly Extirpated – missing; known from only historical occurrences but still some hope of rediscovery

## Special-status Wildlife Species in the Regional Vicinity of the Project Site

| Scientific Name<br>Common Name | Status<br>Fed/State<br>CDFW | Habitat Requirements | Potential to Occur | Rationale |
|---|---|---|---|---|
| **Invertebrates** | | | | |
| *Bombus crotchii*<br>Crotch bumble bee | None/None<br>G2/S1S2 | Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum. | Low potential | Potential food sources are located in small portions of the BSA. Four CNDDB occurrences are located within the quadrangles surveyed, including three from 2019 and 2020. |
| *Streptocephalus woottoni*<br>Riverside fairy shrimp | FE/None<br>G1G2/S1S2 | Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season. | Not expected | No swales or vernal pools are present in the BSA. The BSA is adjacent to critical habitat for this species. The only CNDDB occurrence located within the surveyed quadrangles is from 2011 and is located approximately 300 feet north of the BSA, west of Moorpark Freeway and north of Tierra Rejada Road. |
| *Trimerotropis occidentiloides*<br>Santa Monica grasshopper | None/None<br>G1G2/S1S2 | Known only from the Santa Monica Mountains. Found on bare hillsides and along dirt trails in chaparral. | Not expected | The BSA is isolated from the Santa Monica Mountains. Two CNDDB occurrences are located within the surveyed quadrangles. The closest is from 1974 and is located approximately 5.4 miles south of the BSA. |
| **Fish** | | | | |
| *Gila orcuttii*<br>arroyo chub | None/None<br>G2/S2<br>SSC | Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave and San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates. | Not expected | Natural drainages in the BSA are dry most of the year. Multiple CNDDB occurrences are located within the surveyed quadrangles, including one from 2000 located in Conejo Creek approximately 500 feet south of the BSA. |
| *Oncorhynchus mykiss irideus* pop. 10<br>steelhead - southern California DPS | FE/None<br>G5T1Q/S1 | federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions. | Not expected | Natural drainages in the BSA are dry most of the year. The only CNDDB occurrence located within the surveyed quadrangles is from 2013 and is located in Conejo Creek approximately 2 miles 2 south of the BSA. |

| Scientific Name<br>Common Name | Status<br>Fed/State<br>CDFW | Habitat Requirements | Potential to Occur | Rationale |
|---|---|---|---|---|
| **Amphibians** | | | | |
| *Spea hammondii*<br>western spadefoot toad | None/None<br>G2G3/S3<br>SSC | Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying. | Moderate potential | Potentially suitable grasslands are present in the BSA. However, these natural areas are very limited and are adjacent to roadways. No vernal pools are present within the BSA; however several vernal pools are present within a mile of the BSA. Multiple CNDDB occurrences are located within the surveyed quadrangles, including one from 2013 that is located approximately 0.3 mile north of the BSA. |
| **Reptiles** | | | | |
| *Anniella* spp.<br>California legless lizard | None/None<br>G3G4/S3S4<br>SSC | Contra Costa County south to San Diego, within a variety of open habitats. This element represents California records of *Anniella* not yet assigned to new species within the *Anniella pulchra* (northern California legless lizard) complex. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content. | Moderate potential | Potentially suitable habitats with open soil are present in the BSA, though these natural areas are very limited and are adjacent to roadways. Multiple CNDDB occurrences are located within the surveyed quadrangles, including one from 2014 that is located within 0.4 mile of the BSA and one from 1982 that overlaps the BSA. |
| *Anniella stebbinsi*<br>southern California legless lizard | None/None<br>G3/S3<br>SSC | Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content. | Low potential | Potentially suitable natural areas with sparse vegetation are present in the BSA; however, these natural areas are very limited and are adjacent to roadways. Three CNDDB occurrences are located within the surveyed quadrangles, including one from 2015 that is located approximately 3.8 miles south of the BSA. |
| *Arizona elegans occidentalis*<br>California glossy snake | None/None<br>G5T2/S2<br>SSC | Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils. | Not expected | Potentially suitable coastal scrub and grasslands are present in the BSA. However, these natural areas are very limited and are adjacent to roadways. The only CNDDB occurrence located within the surveyed quadrangles is from 1995 and is located approximately 3.5 miles north of the BSA. |
| *Aspidoscelis tigris stejnegeri*<br>coastal whiptail | None/None<br>G5T5/S3<br>SSC | Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky. | Moderate potential | Potentially suitable natural areas with sparse vegetation are present in the BSA, however these natural areas are very limited and are adjacent to roadways. Multiple CNDDB occurrences are located within the surveyed quadrangles, including one from 1996 that is located approximately 0.8 mile north of the BSA. |

| Scientific Name<br>Common Name | Status<br>Fed/State<br>CDFW | Habitat Requirements | Potential to Occur | Rationale |
|---|---|---|---|---|
| *Diadophis punctatus modestus*<br>San Bernardino ringneck snake | None/None<br>G5T2T3/S2? | Most common in open, relatively rocky areas. Often in somewhat moist microhabitats near intermittent streams. Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous veg. | Low potential | Potentially suitable natural areas with sparse vegetation are present in the BSA, however these natural areas are very limited and are adjacent to roadways. The only CNDDB occurrence located within the surveyed quadrangles, is from 2015 and is located approximately 0.8 mile north of the BSA. |
| *Emys marmorata*<br>western pond turtle | None/None<br>G3G4/S3<br>SSC | A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying. | Not expected | Irrigation and drainage ditches are present in the BSA. Multiple CNDDB occurrences are located within the surveyed quadrangles, including one from 2000 that is located along Conejo Creek, adjacent to the BSA. |
| *Phrynosoma blainvillii*<br>coast horned lizard | None/None<br>G3G4/S3S4<br>SSC | Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects. | Low potential | No suitable sand washes with alluvial scrub vegetation are present in the BSA. Multiple CNDDB occurrences are located within the surveyed quadrangles, including one from 2007 that is located approximately 0.8 miles north of the BSA. |
| *Thamnophis hammondii*<br>two-striped gartersnake | None/None<br>G4/S3S4<br>SSC | Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth. | Not expected | No streams with permanent fresh water are present in the BSA. Multiple CNDDB occurrences are located within the surveyed quadrangles, including one from 1993 that is located approximately 0.3 mile north of the BSA. |
| **Birds** | | | | |
| *Agelaius tricolor*<br>tricolored blackbird | None/ST<br>G1G2/S1S2<br>SSC | Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony. | Not expected | No lakes or ponds are present in the BSA. The only CNDDB occurrence located within the surveyed quadrangles is from 1995 and is located approximately 7 miles south of the BSA, along Lake Sherwood. |
| *Aimophila ruficeps canescens*<br>southern California rufous-crowned sparrow | None/None<br>G5T3/S3<br>WL | Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches. | Moderate potential | Potentially suitable coastal sage scrub is present in the BSA; however, these natural areas are very limited and are adjacent to roadways. Three CNDDB occurrences are located in the surveyed quadrangles, including one from 2017 that is located approximately 0.6 mile north of the BSA. |

| Scientific Name<br>Common Name | Status<br>Fed/State<br>CDFW | Habitat Requirements | Potential to Occur | Rationale |
|---|---|---|---|---|
| *Aquila chrysaetos*<br>golden eagle | None/None<br>G5/S3<br>FP<br>WL | Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas. | Low potential | The BSA crosses primarily flat residential and agricultural areas. Tall trees are present. Three CNDDB occurrences are located within the surveyed quadrangles. All three occurrences are from 1989, and the closest is approximately 5.6 miles southeast of the BSA. |
| *Artemisiospiza belli belli*<br>Bell's sage sparrow | None/None<br>G5T2T3/S3<br>WL | Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart. | Low potential | Potentially suitable coastal sage scrub is present in the BSA; however, these natural areas are very limited and are adjacent to roadways. The only CNDDB occurrence located within the surveyed quadrangles is from 2015 and is located approximately 1.5 miles northeast of the BSA. |
| *Athene cunicularia*<br>burrowing owl | None/None<br>G4/S3<br>SSC | Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel. | Not expected | Potentially suitable coastal sage scrub and grasslands are present in the BSA; however, these natural areas are very limited and are adjacent to roadways. Multiple CNDDB occurrences are located within the surveyed quadrangles, the closest of which is from 1990 and is located approximately 3.6 miles northeast of the BSA. |
| *Elanus leucurus*<br>white-tailed kite | None/None<br>G5/S3S4<br>FP | Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching. | Low potential | The BSA crosses primarily flat residential and agricultural areas. Tall trees are present. Two CNDDB occurrences are located within the surveyed quadrangles, one of which is from 2011 and is located approximately 1.5 miles north of the BSA. |
| *Eremophila alpestris actia*<br>California horned lark | None/None<br>G5T4Q/S4<br>WL | Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats. | Low potential | The BSA crosses primarily flat residential and agricultural areas. The only CNDDB occurrence located within the surveyed quadrangles is from 2002 and is located approximately 5.8 miles west of the BSA. |
| *Falco peregrinus anatum*<br>American peregrine falcon | FD/SD<br>G4T4/S3S4<br>FP | Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site. | Not expected | The BSA crosses primarily flat residential and agricultural areas. No bodies of water or cliffs are present. The only CNDDB occurrence is from 2017 and is located approximately 6.6 miles west of the BSA. |

| Scientific Name<br>Common Name | Status<br>Fed/State<br>CDFW | Habitat Requirements | Potential to Occur | Rationale |
|---|---|---|---|---|
| *Polioptila californica californica*<br>coastal California gnatcatcher | FT/None<br>G4G5T3Q/S2<br>SSC | Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied. | Moderate potential | Potentially suitable coastal scrub and grasslands are present in the BSA. However, these natural areas are very limited and are adjacent to roadways. The BSA overlaps critical habitat for this species. Multiple CNDDB occurrences are located within the surveyed quadrangles, including two from 2012 which are adjacent to the BSA. |
| *Riparia riparia*<br>bank swallow | None/ST<br>G5/S2 | Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole. | Not expected | Potentially suitable riparian areas are present in the BSA along Calleguas Creek. However, this species is considered extirpated as a breeder from southern California. |
| *Vireo bellii pusillus*<br>least Bell's vireo | FE/SE<br>G5T2/S2 | Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite. | Moderate potential | Potentially suitable riparian areas are present in the BSA along Calleguas Creek. Multiple CNDDB occurrences are located within the surveyed quadrangles, including one from 1940 which overlaps the BSA and one from 2017 that is located approximately 0.3 mile south of the BSA in Conejo Creek. |
| **Mammals** | | | | |
| *Antrozous pallidus*<br>pallid bat | None/None<br>G4/S3<br>SSC | Found in a variety of habitats including deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in crevices of rock outcrops, caves, mine tunnels, buildings, bridges, and hollows of live and dead trees which must protect bats from high temperatures. Very sensitive to disturbance of roosting sites. | Not expected | Potentially suitable coastal scrub and grasslands are present in the BSA. However, these natural areas are very limited and are adjacent to busy roadways. Rocky areas are absent, but many buildings and trees are present. A bridge over Calleguas Creek is present but significantly disturbed by vehicle traffic. The only CNDDB occurrence within the surveyed quadrangles is from 2004 and is located approximately 4.4 miles southeast of the BSA. |
| *Eumops perotis californicus*<br>western mastiff bat | None/None<br>G4G5T4/S3S4<br>SSC | Occurs in open, semi-arid to arid habitats, including coniferous and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces and caves, and buildings. Roosts typically occur high above ground. | Not expected | Potentially suitable coastal scrub and grasslands are present in the BSA. However, these natural areas are very limited and are adjacent to busy roadways. Rocky areas are absent, but many buildings and trees are present. The only CNDDB occurrence within the surveyed quadrangles is from 2004 and is located approximately 4.4 miles southeast of the BSA. |

| Scientific Name<br>Common Name | Status<br>Fed/State<br>CDFW | Habitat Requirements | Potential to Occur | Rationale |
|---|---|---|---|---|
| *Myotis ciliolabrum*<br>western small-footed myotis | None/None<br>G5/S3 | Occurs in a wide range of arid and semiarid habitats including woodlands, open forests, riparian zones, and desert shrub. Roosts in rock crevices in caves, tunnels, and mines, also found beneath loose bark and in buildings. Forages for insects over water sources. | Not expected | Potentially suitable coastal scrub and grasslands are present in the BSA. However, these natural areas are very limited and are adjacent to busy roadways. Rocky areas are absent, but many buildings and trees are present. The only CNDDB occurrence within the surveyed quadrangles is from 2004 and is located approximately 4.4 miles southeast of the BSA. |
| *Neotoma lepida intermedia*<br>San Diego desert woodrat | None/None<br>G5T3T4/S3S4<br>SSC | Occurs in scrub habitats of southern California from San Luis Obispo County to San Diego County. | Low potential | Potentially suitable coastal scrub is present in the BSA. However, these natural areas are very limited and are adjacent to busy roadways. Three CNDDB occurrences are located within the surveyed quadrangles, the closest of which is from 1992 and is located approximately 0.6 mile north of the BSA. is from 2004 and is located approximately 4.4 miles southeast of the BSA. |
| *Taxidea taxus*<br>American badger | None/None<br>G5/S3<br>SSC | Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows. | Not expected | Potentially suitable coastal scrub and grasslands are present in the BSA. However, these natural areas are very limited and are adjacent to busy roadways. The only CNDDB occurrence within the surveyed quadrangles is from 2013 and is located approximately 2.5 miles south of the BSA. |

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**Status (Federal/State)**

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FT = Federal Threatened
FD = Federal Delisted
SE = State Endangered
ST = State Threatened
SD = State Delisted
SSC = CDFW Species of Special Concern
FP = CDFW Fully Protected
WL = CDFW Watch List

**Other Statuses**

G1 or S1 Critically Imperiled Globally or Subnationally (state)
G2 or S2 Imperiled Globally or Subnationally (state)
G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4/5 or S4/5 Apparently secure, common and abundant
GH or SH Possibly Extirpated – missing; known from only historical occurrences but still some hope of rediscovery

# Appendix E

Figures


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EPS Proj, Regional, Phase 3 Locn
Fig X Biological Study Area Map Series


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EPS Proj, Regional, Phase 3 Locn
Fig X Biological Study Area Map Series


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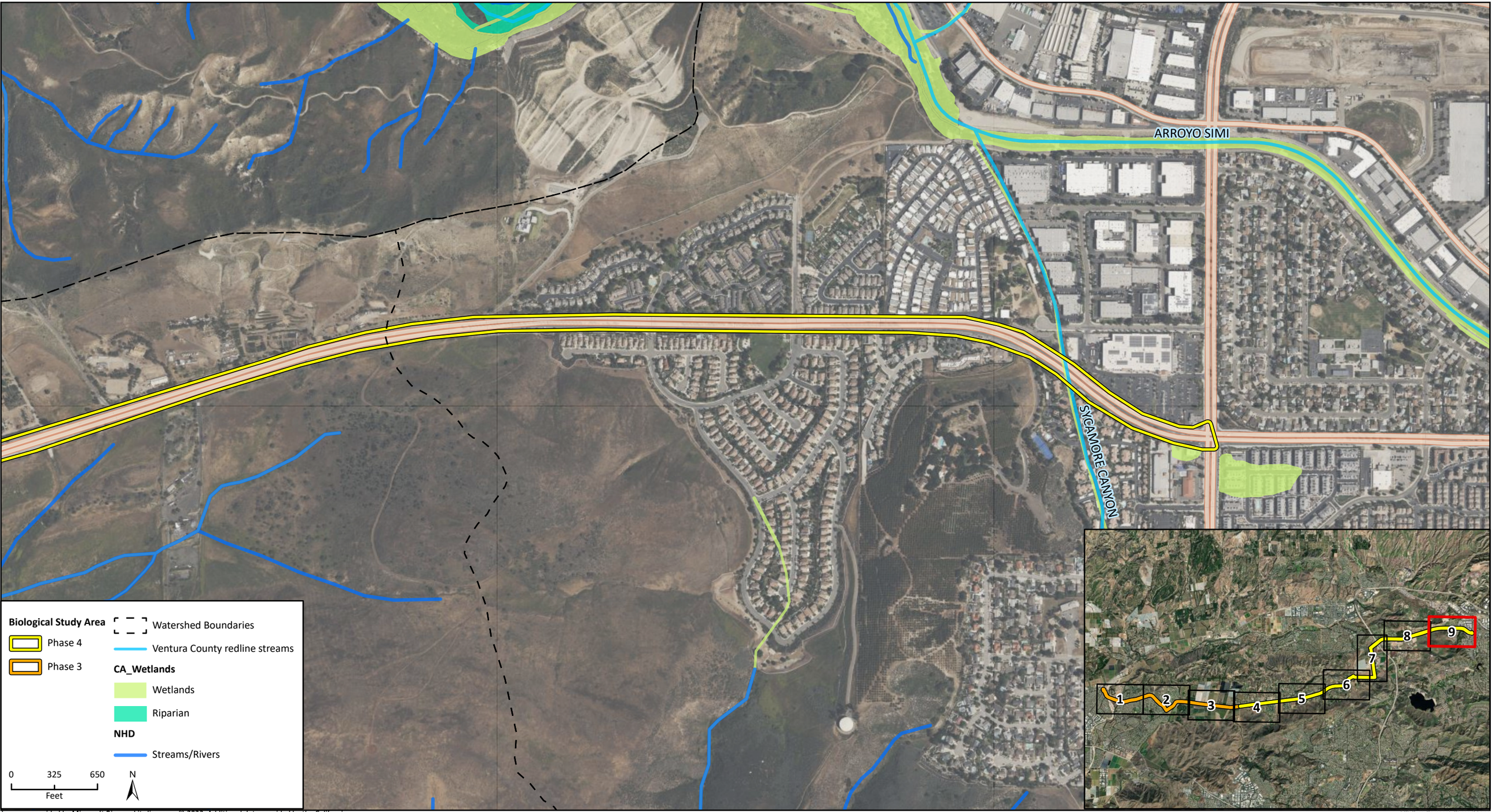
EPS Proj, Regional, Phase 3 Locn
Fig X Biological Study Area Map Series

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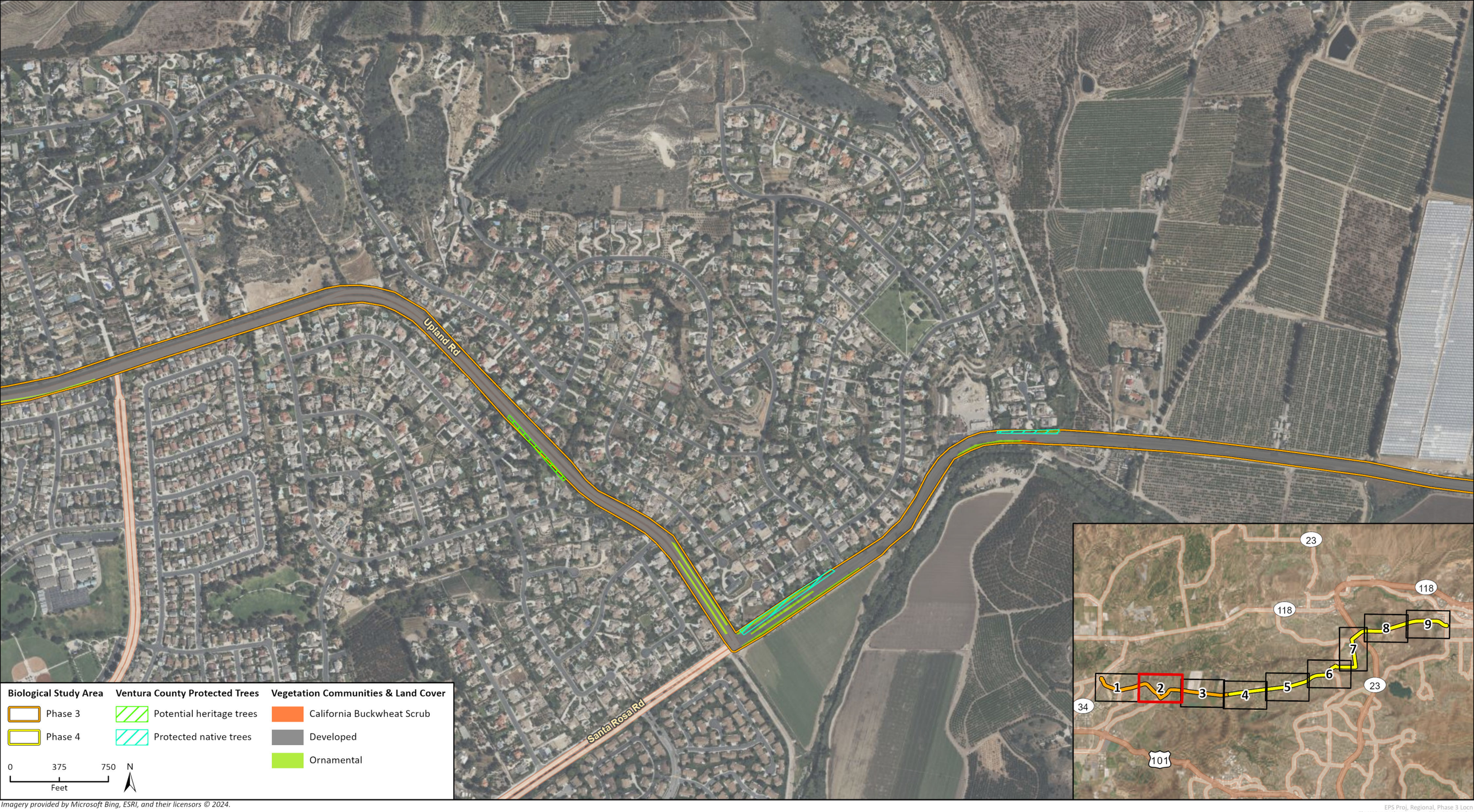
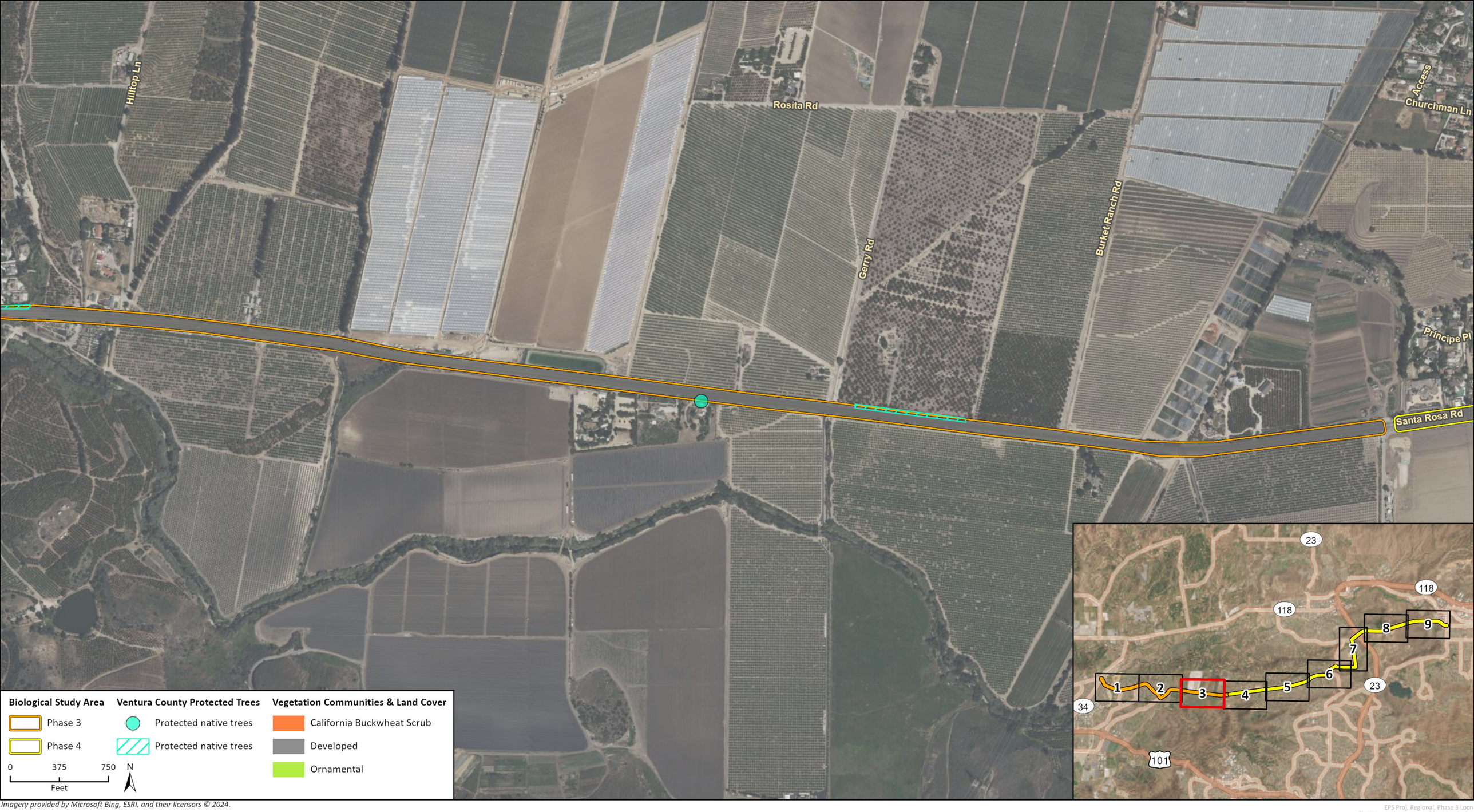
EPS Proj, Regional, Phase 3 Locn
Fig X Biological Study Area Map Series



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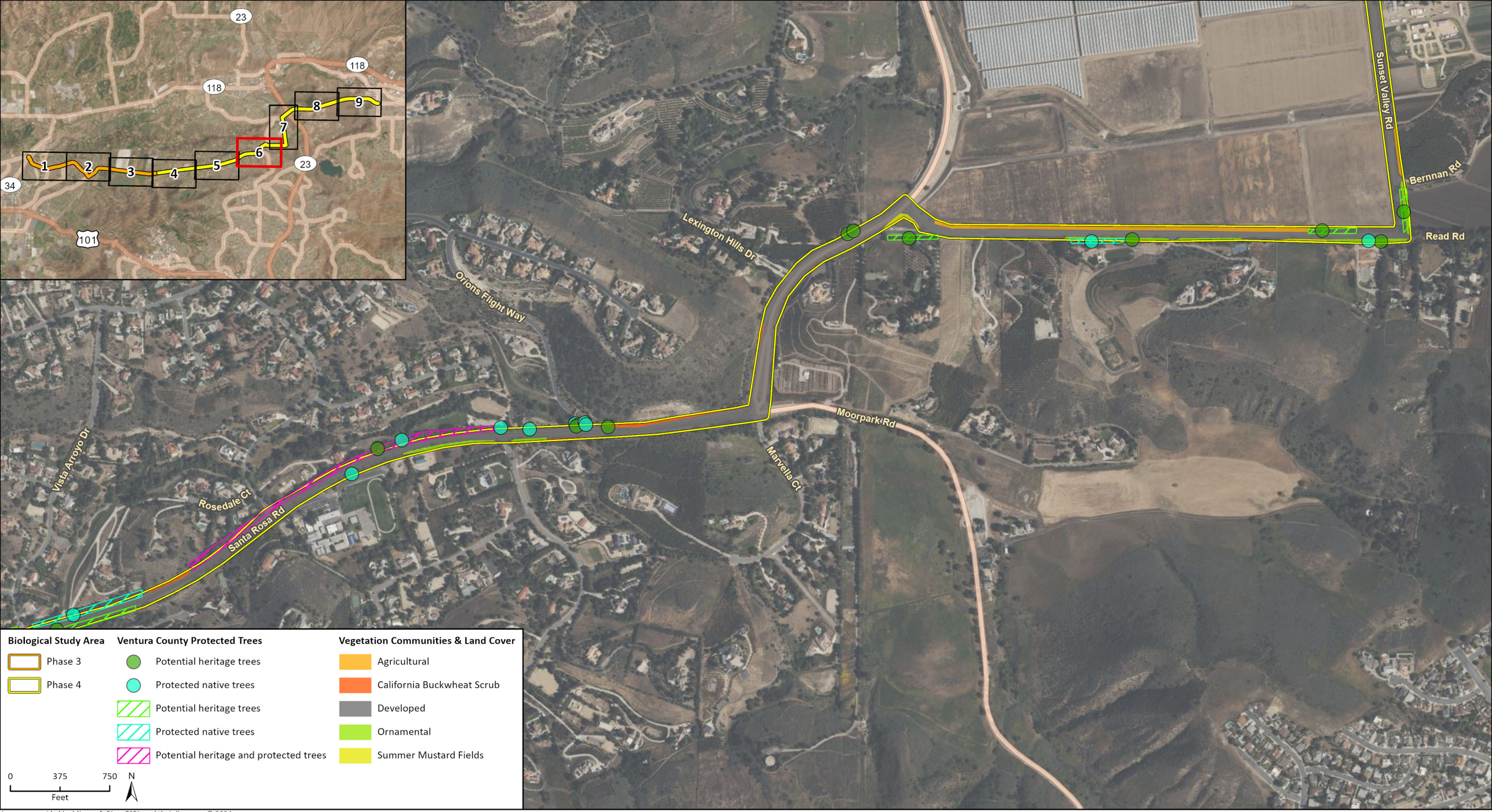
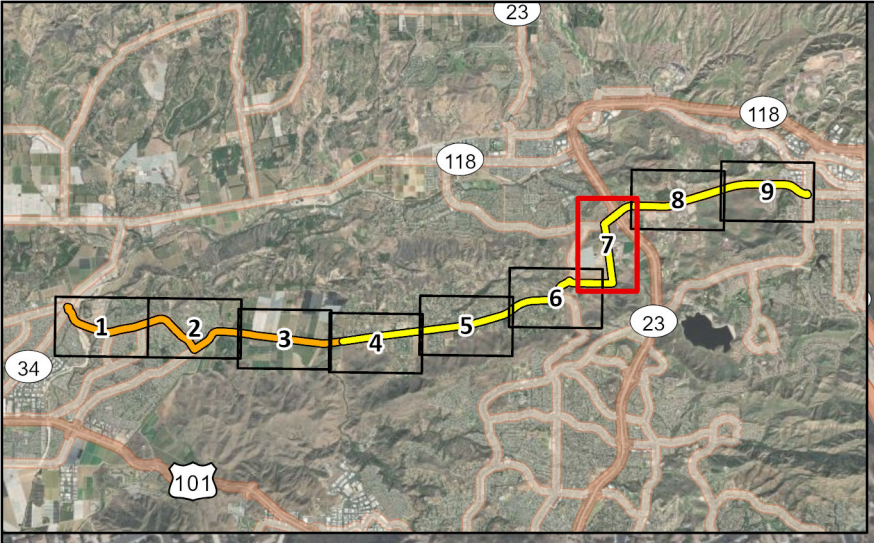
EPS Proj, Regional, Phase 3 Locn
Fig X Vegetation Communities Map Series






Dakota Dr
Illinois Ct
Delaware Dr
Tierra Rejada Rd
Moorpark Rd
Cassar Ln
Sunset Valley Rd
Bernnan Rd
Read Rd
Brennan Rd
Lippear Ranch Rd
23
23
23

**Biological Study Area**

- Phase 4
- Phase 3

**Ventura County Protected Trees**

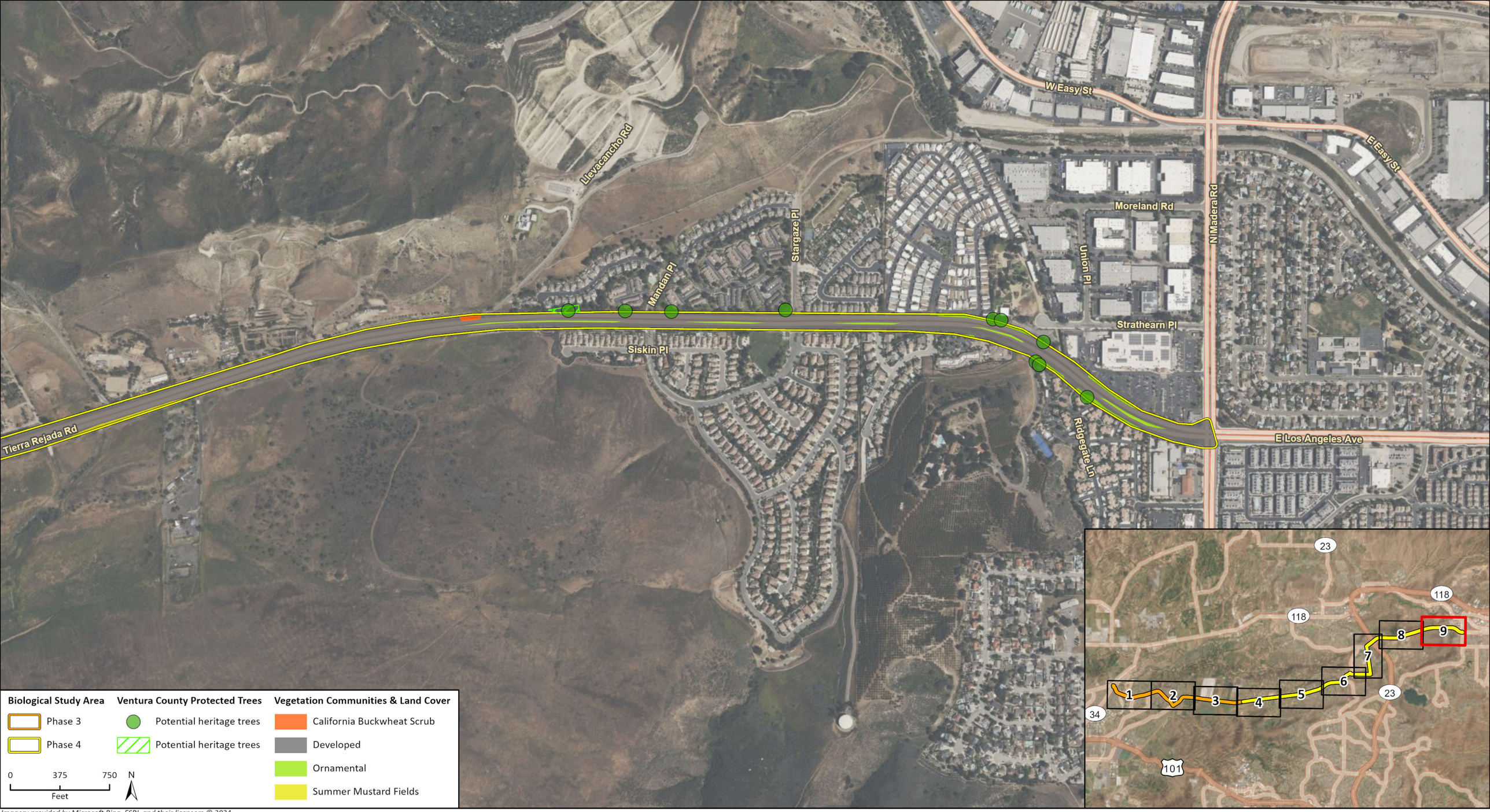
- Potential heritage trees
- Protected native trees
- Potential heritage trees
- Protected native trees

**Vegetation Communities & Land Cover**

- Agricultural
- California Buckwheat Scrub
- Developed
- Ornamental
- Purple Sage Scrub
- Summer Mustard Fields
- Wild Oats and Annual Brome Grasslands

0 375 750 Feet

N




**Biological Study Area**

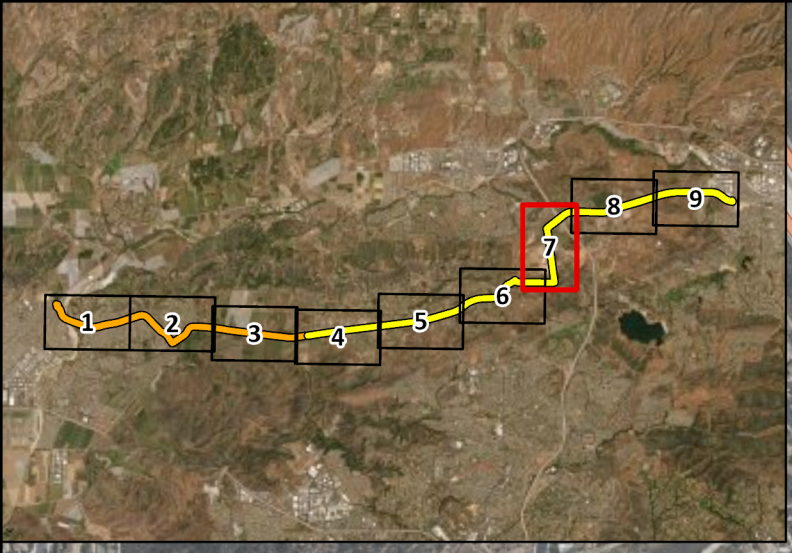
- Phase 4
- Phase 3

**Potentially Juristictional Features**

- Culvert inlet
- Culvert outlet
- Potentially Jurisdictional Features

0 325 650 Feet

N




Unnamed Feature No. 9

Unnamed Feature No. 9

23

23

Unnamed Feature No. 8

Unnamed Feature No. 7

Unnamed Feature No. 6

**Biological Study Area**

Phase 4

Phase 3

**Potentially Juristictional Features**

Culvert inlet

Culvert outlet

Potentially Jurisdictional Features

0 325 650

Feet

N

# Appendix D

Noise Sheets

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 4/5/2023
Case Descr Calleguas SMP Phase 3-4

---- Receptor #1 ----

| | Baselines (dBA) | | |
|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Residential | Residential | 70 | 70 | 70 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Excavator | No | 40 | | 80.7 | 15 | 0 |
| Backhoe | No | 40 | | 77.6 | 15 | 0 |
| Dump Truck | No | 40 | | 76.5 | 15 | 0 |
| Pickup Truck | No | 40 | | 75 | 15 | 0 |
| Dump Truck | No | 40 | | 76.5 | 15 | 0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | | | Noise Limit Exceedanc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax |
| Excavator | 91.2 | 87.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 88 | 84 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 86.9 | 82.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Pickup Truck | 85.5 | 81.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 86.9 | 82.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 91.2 | 91.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat ########
Case Descr Calleguas SMP Phase 3-4

---- Receptor #1 ----

| | Baselines (dBA) | | |
|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Residential | Residential | 70 | 70 | 70 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Excavator | No | 40 | | 80.7 | 3100 | 0 |
| Backhoe | No | 40 | | 77.6 | 3100 | 0 |
| Dump Truck | No | 40 | | 76.5 | 3100 | 0 |
| Pickup Truck | No | 40 | | 75 | 3100 | 0 |
| Dump Truck | No | 40 | | 76.5 | 3100 | 0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedanc | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | Evening |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax |
| Excavator | 44.9 | 40.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 41.7 | 37.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 40.6 | 36.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Pickup Truck | 39.2 | 35.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 40.6 | 36.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 44.9 | 44.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 3/16/2023
Case Descr Calleguas SMP Phase 3-4

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| Residential | Residential | 70 | 70 | 70 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Excavator | No | 40 | | 80.7 | 200 | 0 |
| Backhoe | No | 40 | | 77.6 | 200 | 0 |
| Dump Truck | No | 40 | | 76.5 | 200 | 0 |
| Pickup Truck | No | 40 | | 75 | 200 | 0 |
| Dump Truck | No | 40 | | 76.5 | 200 | 0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | | Noise Limit Exceedanc | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax |
| Excavator | 68.7 | 64.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 65.5 | 61.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 64.4 | 60.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Pickup Truck | 63 | 59 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 64.4 | 60.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 68.7 | 68.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 3/16/2023
Case Descr Calleguas SMP Phase 3-4

| | | Baselines (dBA) | | ---- Receptor #1 ---- |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Residential | Residential | 70 | 70 | 70 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Excavator | No | 40 | | 80.7 | 300 | 0 |
| Backhoe | No | 40 | | 77.6 | 300 | 0 |
| Dump Truck | No | 40 | | 76.5 | 300 | 0 |
| Pickup Truck | No | 40 | | 75 | 300 | 0 |
| Dump Truck | No | 40 | | 76.5 | 300 | 0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | | Noise Limit Exceedanc | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax |
| Excavator | 65.1 | 61.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 62 | 58 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 60.9 | 56.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Pickup Truck | 59.4 | 55.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 60.9 | 56.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 65.1 | 65.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 3/16/2023
Case Descr Calleguas SMP Phase 3-4

| | | Baselines (dBA) | | | ---- Receptor #1 ---- |
|---|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night | |
| Residential | Residential | 70 | 70 | 70 | |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Excavator | No | 40 | | 80.7 | 800 | 0 |
| Backhoe | No | 40 | | 77.6 | 800 | 0 |
| Dump Truck | No | 40 | | 76.5 | 800 | 0 |
| Pickup Truck | No | 40 | | 75 | 800 | 0 |
| Dump Truck | No | 40 | | 76.5 | 800 | 0 |

| | Calculated (dBA) | | Results Noise Limits (dBA) | | | | | | Noise Limit Exceedanc | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | Evening |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax |
| Excavator | 56.6 | 52.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Backhoe | 53.5 | 49.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 52.4 | 48.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Pickup Truck | 50.9 | 46.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 52.4 | 48.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 56.6 | 56.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 4/5/2023
Case Descr Calleguas SMP Phase 3-4

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| Residential | Residential | 70 | 70 | 70 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Paver | No | 50 | | 77.2 | 15 | 0 |
| Paver | No | 50 | | 77.2 | 15 | 0 |
| Roller | No | 20 | | 80 | 15 | 0 |

| Equipment | Calculated (dBA) *Lmax | Leq | Results Day Lmax | Noise Limits (dBA) Day Leq | Evening Lmax | Evening Leq | Night Lmax | Night Leq | Noise Limit Exceedanc Day Lmax | Day Leq | Evening Lmax |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Paver | 87.7 | 84.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Paver | 87.7 | 84.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 90.5 | 83.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 90.5 | 89.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 3/16/2023
Case Descr Calleguas SMP Phase 3-4

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| Residential | Residential | 70 | 70 | 70 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Paver | No | 50 | | 77.2 | 2400 | 0 |
| Paver | No | 50 | | 77.2 | 2400 | 0 |
| Roller | No | 20 | | 80 | 2400 | 0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | | Noise Limit Exceedanc | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax |
| Paver | 43.6 | 40.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Paver | 43.6 | 40.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 46.4 | 39.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 46.4 | 45 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat ########
Case Descr Calleguas SMP Phase 3-4

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| Residential | Residential | 70 | 70 | 70 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Paver | No | 50 | | 77.2 | 200 | 0 |
| Paver | No | 50 | | 77.2 | 200 | 0 |
| Roller | No | 20 | | 80 | 200 | 0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedanc | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | Evening |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax |
| Paver | 65.2 | 62.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Paver | 65.2 | 62.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 68 | 61 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 68 | 66.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 3/16/2023
Case Descr Calleguas SMP Phase 3-4

| | | ---- Receptor #1 ---- | | |
|---|---|---|---|---|
| | Baselines (dBA) | | | |
| Description | Land Use | Daytime | Evening | Night |
| Residential | Residential | 70 | 70 | 70 |

| | | | Equipment | | | |
|---|---|---|---|---|---|---|
| | | | Spec | Actual | Receptor | Estimated |
| | Impact | | Lmax | Lmax | Distance | Shielding |
| Description | Device | Usage(%) | (dBA) | (dBA) | (feet) | (dBA) |
| Paver | No | 50 | | 77.2 | 300 | 0 |
| Paver | No | 50 | | 77.2 | 300 | 0 |
| Roller | No | 20 | | 80 | 300 | 0 |

| | | | Results | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | | Noise Limit Exceedanc | |
| | | | Day | | Evening | | Night | | Day | | Evening |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax |
| Paver | 61.7 | 58.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Paver | 61.7 | 58.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 64.4 | 57.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 64.4 | 63.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 3/16/2023
Case Descr Calleguas SMP Phase 3-4

---- Receptor #1 ----

| Description | Land Use | Baselines (dBA) Daytime | Evening | Night |
|---|---|---|---|---|
| Residential | Residential | 70 | 70 | 70 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Paver | No | 50 | | 77.2 | 800 | 0 |
| Paver | No | 50 | | 77.2 | 800 | 0 |
| Roller | No | 20 | | 80 | 800 | 0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedanc | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | Evening |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax |
| Paver | 53.1 | 50.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Paver | 53.1 | 50.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Roller | 55.9 | 48.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 55.9 | 54.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 4/5/2023
Case Descr Calleguas SMP Phase 3-4

---- Receptor #1 ----

| | Baselines (dBA) | | |
|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Residential | Residential | 70 | 70 | 70 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Excavator | No | 40 | | 80.7 | 15 | 0 |
| Excavator | No | 40 | | 80.7 | 15 | 0 |
| Dump Truck | No | 40 | | 76.5 | 15 | 0 |
| Crane | No | 16 | | 80.6 | 15 | 0 |

Results

| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedanc | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | Evening |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax |
| Excavator | 91.2 | 87.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Excavator | 91.2 | 87.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 86.9 | 82.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Crane | 91 | 83 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 91.2 | 91.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 3/16/2023
Case Descr Calleguas SMP Phase 3-4

| | | Baselines (dBA) | | ---- Receptor #1 ---- |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Residential | Residential | 70 | 70 | 70 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Excavator | No | 40 | | 80.7 | 3250 | 0 |
| Excavator | No | 40 | | 80.7 | 3250 | 0 |
| Dump Truck | No | 40 | | 76.5 | 3250 | 0 |
| Crane | No | 16 | | 80.6 | 3250 | 0 |

| | Calculated (dBA) | | Results | | | | | | Noise Limits (dBA) | | | Noise Limit Exceedanc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening | |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | |
| Excavator | 44.5 | 40.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Excavator | 44.5 | 40.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Dump Truck | 40.2 | 36.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Crane | 44.3 | 36.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Total | 44.5 | 44.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 3/16/2023
Case Descr Calleguas SMP Phase 3-4

| | | Baselines (dBA) | | ---- Receptor #1 ---- |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Residential | Residential | 70 | 70 | 70 |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Excavator | No | 40 | | 80.7 | 200 | 0 |
| Excavator | No | 40 | | 80.7 | 200 | 0 |
| Dump Truck | No | 40 | | 76.5 | 200 | 0 |
| Crane | No | 16 | | 80.6 | 200 | 0 |

| | Calculated (dBA) | | Results | | | | | | | | Noise Limit Exceedanc |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | | Evening |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax |
| Excavator | 68.7 | 64.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Excavator | 68.7 | 64.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 64.4 | 60.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Crane | 68.5 | 60.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 68.7 | 69.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 3/16/2023
Case Descr Calleguas SMP Phase 3-4

| | | Baselines (dBA) | | ---- Receptor #1 ---- |
|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night |
| Residential | Residential | 70 | 70 | 70 |

| | | | Equipment | | | |
|---|---|---|---|---|---|---|
| | | | Spec | Actual | Receptor | Estimated |
| | Impact | | Lmax | Lmax | Distance | Shielding |
| Description | Device | Usage(%) | (dBA) | (dBA) | (feet) | (dBA) |
| Excavator | No | 40 | | 80.7 | 300 | 0 |
| Excavator | No | 40 | | 80.7 | 300 | 0 |
| Dump Truck | No | 40 | | 76.5 | 300 | 0 |
| Crane | No | 16 | | 80.6 | 300 | 0 |

| | | | Results | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Calculated (dBA) | | Noise Limits (dBA) | | | | | | Noise Limit Exceedanc | | |
| | | | Day | | Evening | | Night | | Day | | Evening |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax |
| Excavator | 65.1 | 61.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Excavator | 65.1 | 61.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 60.9 | 56.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Crane | 65 | 57 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 65.1 | 65.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 3/16/2023
Case Descr Calleguas SMP Phase 3-4

| | | Baselines (dBA) | | | ---- Receptor #1 ---- |
|---|---|---|---|---|---|
| Description | Land Use | Daytime | Evening | Night | |
| Residential | Residential | 70 | 70 | 70 | |

| Description | Impact Device | Usage(%) | Equipment Spec Lmax (dBA) | Actual Lmax (dBA) | Receptor Distance (feet) | Estimated Shielding (dBA) |
|---|---|---|---|---|---|---|
| Excavator | No | 40 | | 80.7 | 800 | 0 |
| Excavator | No | 40 | | 80.7 | 800 | 0 |
| Dump Truck | No | 40 | | 76.5 | 800 | 0 |
| Crane | No | 16 | | 80.6 | 800 | 0 |

| | Calculated (dBA) | | Results Noise Limits (dBA) | | | | | | Noise Limit Exceedanc | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Day | | Evening | | Night | | Day | Evening |
| Equipment | *Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax | Leq | Lmax |
| Excavator | 56.6 | 52.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Excavator | 56.6 | 52.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Dump Truck | 52.4 | 48.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Crane | 56.5 | 48.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | 56.6 | 57.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

*Calculated Lmax is the Loudest value.

# Appendix E

AB 52 Consultation

web site: www.calleguas.com

2100 OLSEN ROAD • THOUSAND OAKS, CALIFORNIA 91360-6800 805/526-9323 • FAX: 805/522-5730

December 8, 2022

Barbareño/Ventureño Band of Mission Indians
Annette Ayala, MLD
188 S. Santa Rosa Street
Ventura, CA 93001
Via Email: annetteayala78@yahoo.com

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear MLD Ayala,

The Calleguas Municipal Water District proposes the Calleguas Regional Salinity Management Pipeline (CRSMP) Phases 3 and 4 (proposed project), located in Ventura County, California. The CRSMP consists of a pipeline system to transport excess recycled water and brine concentrate generated within the watershed to an ocean outfall. The CRSMP currently extends approximately 22 miles from its upstream end in the Somis area near Camarillo to its downstream terminus at the ocean outfall in Port Hueneme. The proposed project would extend the CRSMP approximately 14 miles inland from the existing terminus, enabling connections to additional dischargers. The proposed project is subject to the California Environmental Quality Act.

The proposed project would install an underground pipeline. The Phases 3 and 4 pipeline alignments would traverse portions of Camarillo, Moorpark, Thousand Oaks, and Simi Valley, as well as unincorporated Ventura County. Pipeline alignments would mostly be located within the public right-of-way within paved roads and dirt shoulders. A portion of the alignment would extend under private property at the northeast corner of the intersection of Las Posas Road and Upland Road, which is currently developed for agricultural production. Roadways along the project alignments include Upland Road, Santa Rosa Road, Moorpark Road, Read Road, Sunset Valley Road, and Tierra Rejada Road. See attached project location maps. The majority of the pipeline would be installed via conventional open-cut trench construction methods. Trenchless construction methods would be used to cross below existing drainage channels. Trenchless construction methods would also be used to cross Somis Road, Santa Rosa Road, and busy intersections to minimize traffic impacts.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

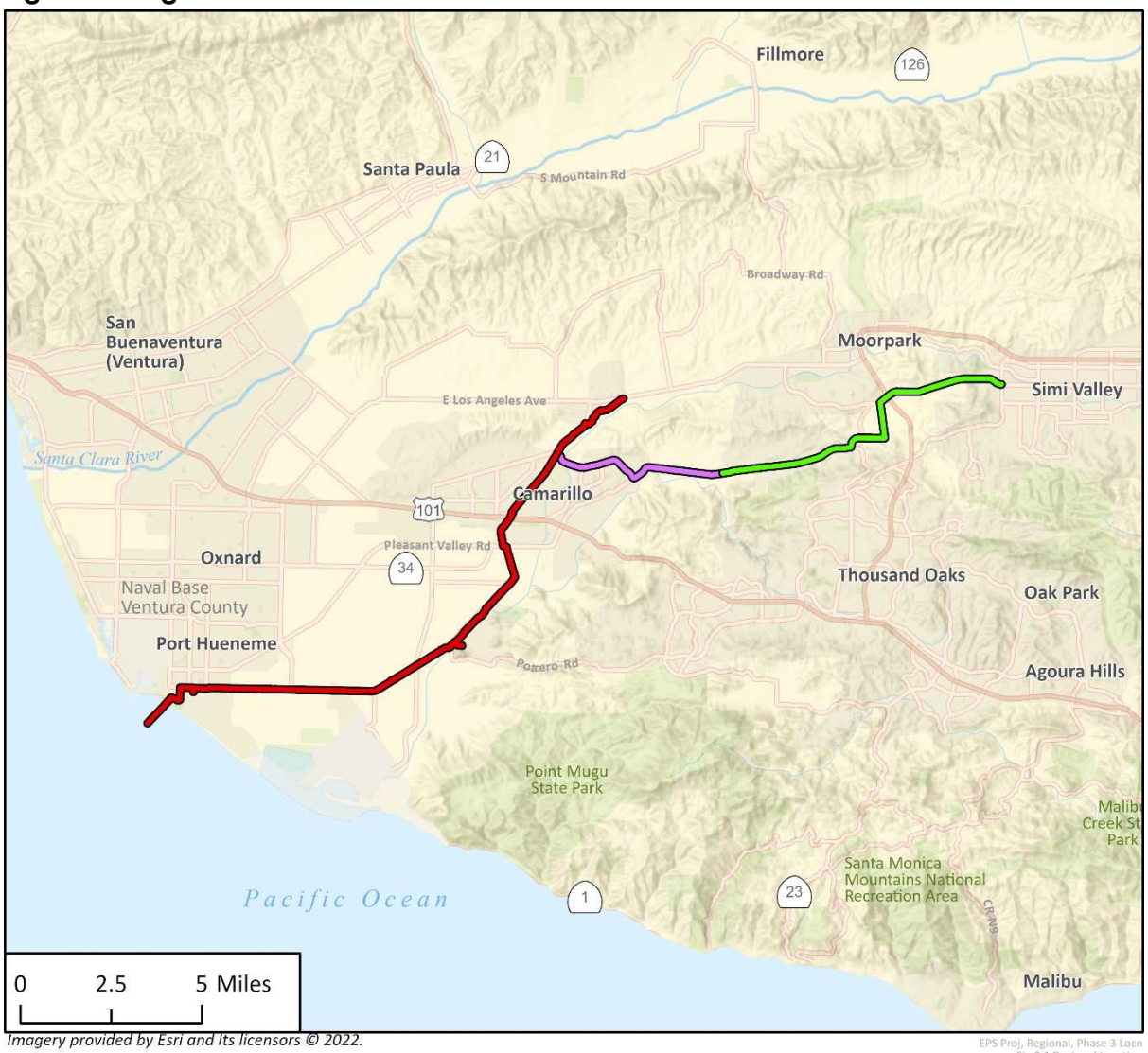
Your tribe's input is important to the Calleguas Municipal Water District planning process. Under AB 52, you have 30 days from receipt of this notification to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (805) 579-7194, or via e-mail at jlancaster@calleguas.com. Thank you for your assistance.

Sincerely,

Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

Enclosure: Project Location Maps

**Figure 1 Regional Location**

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EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N

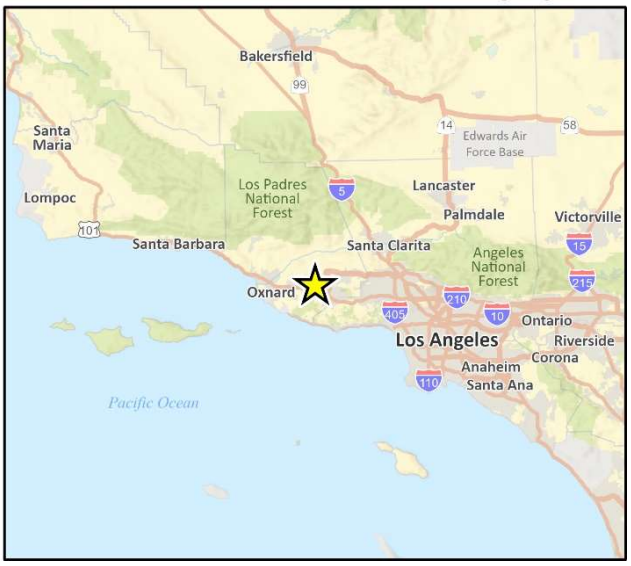
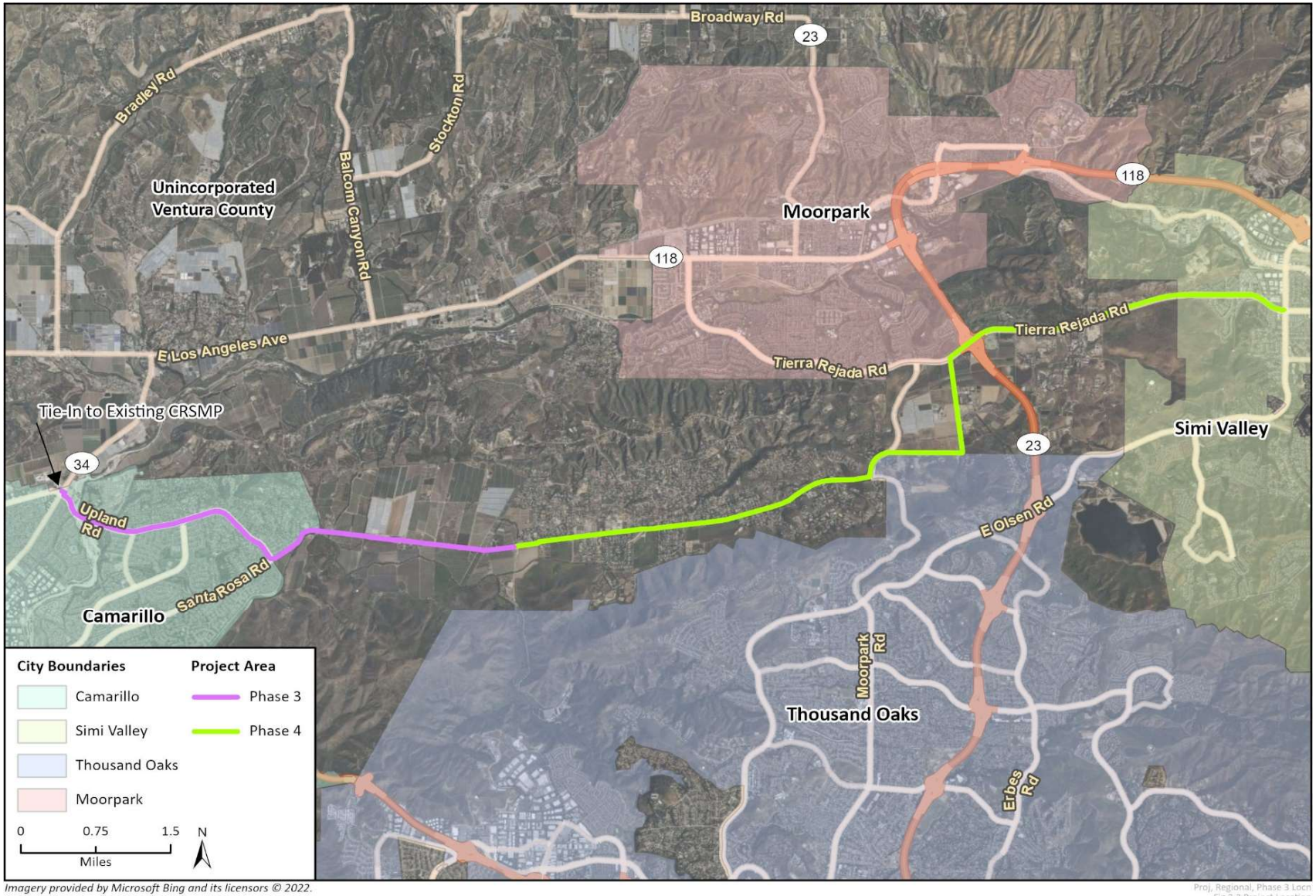


**Figure 2 Project Site Location**

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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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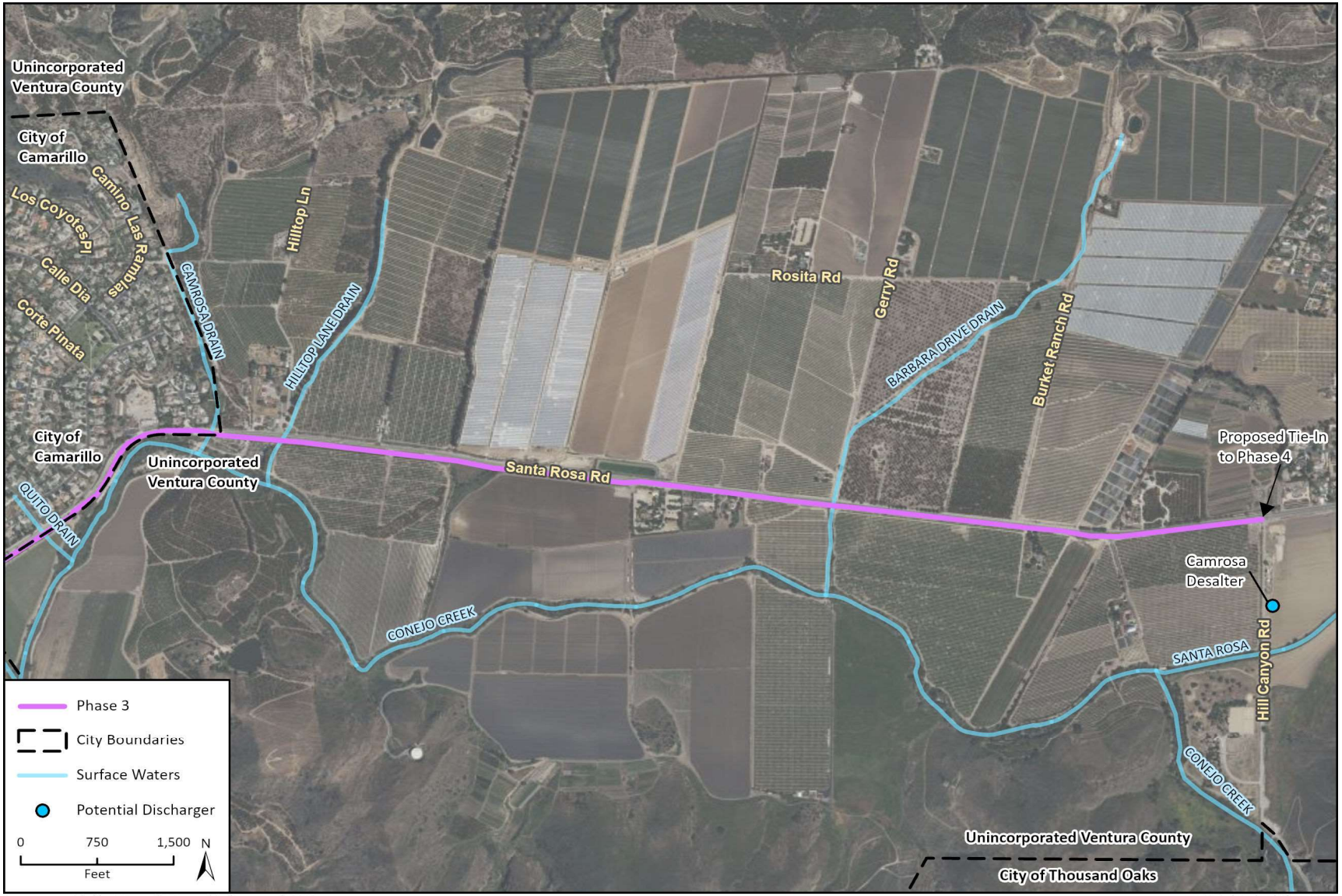
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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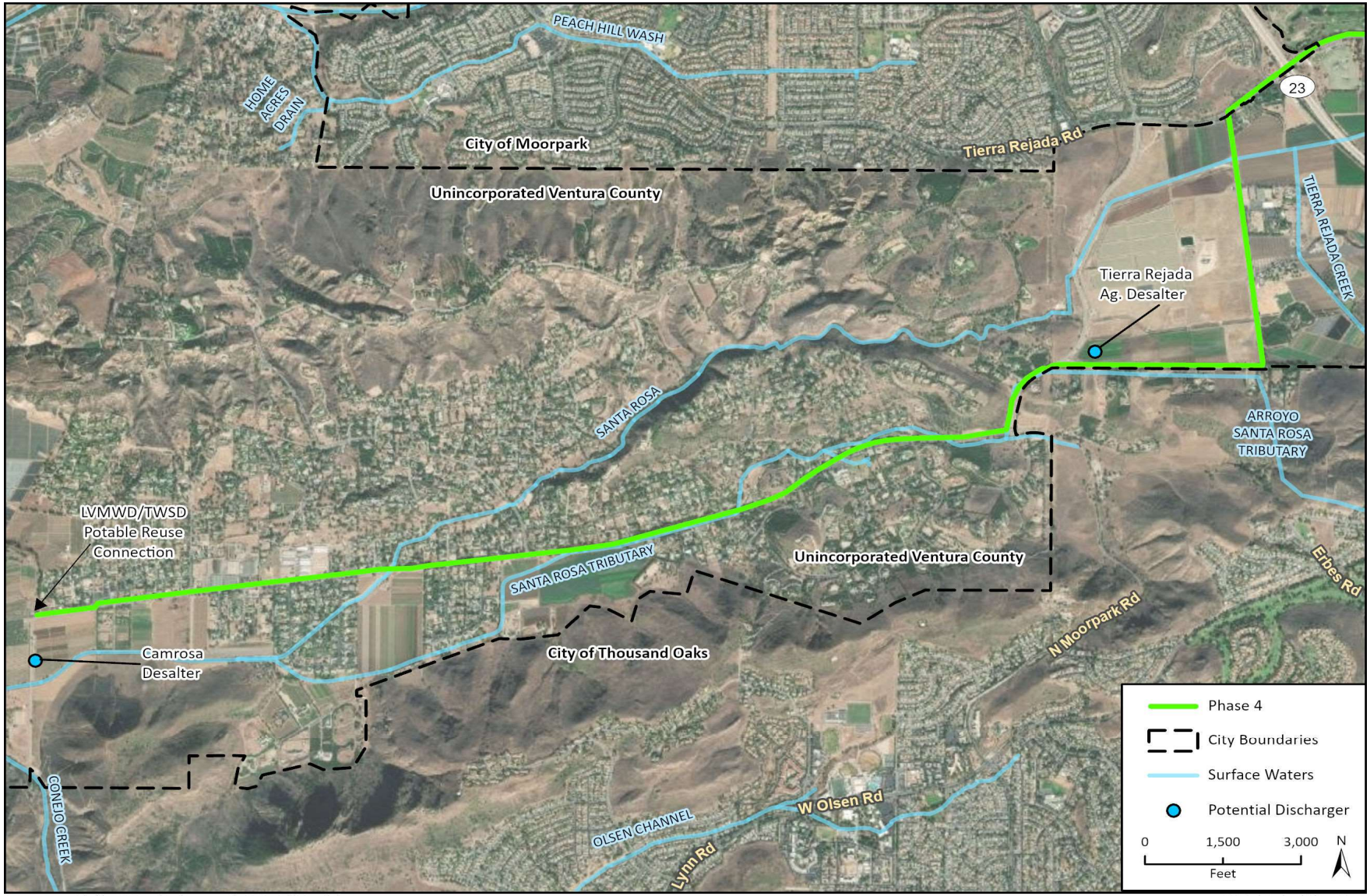
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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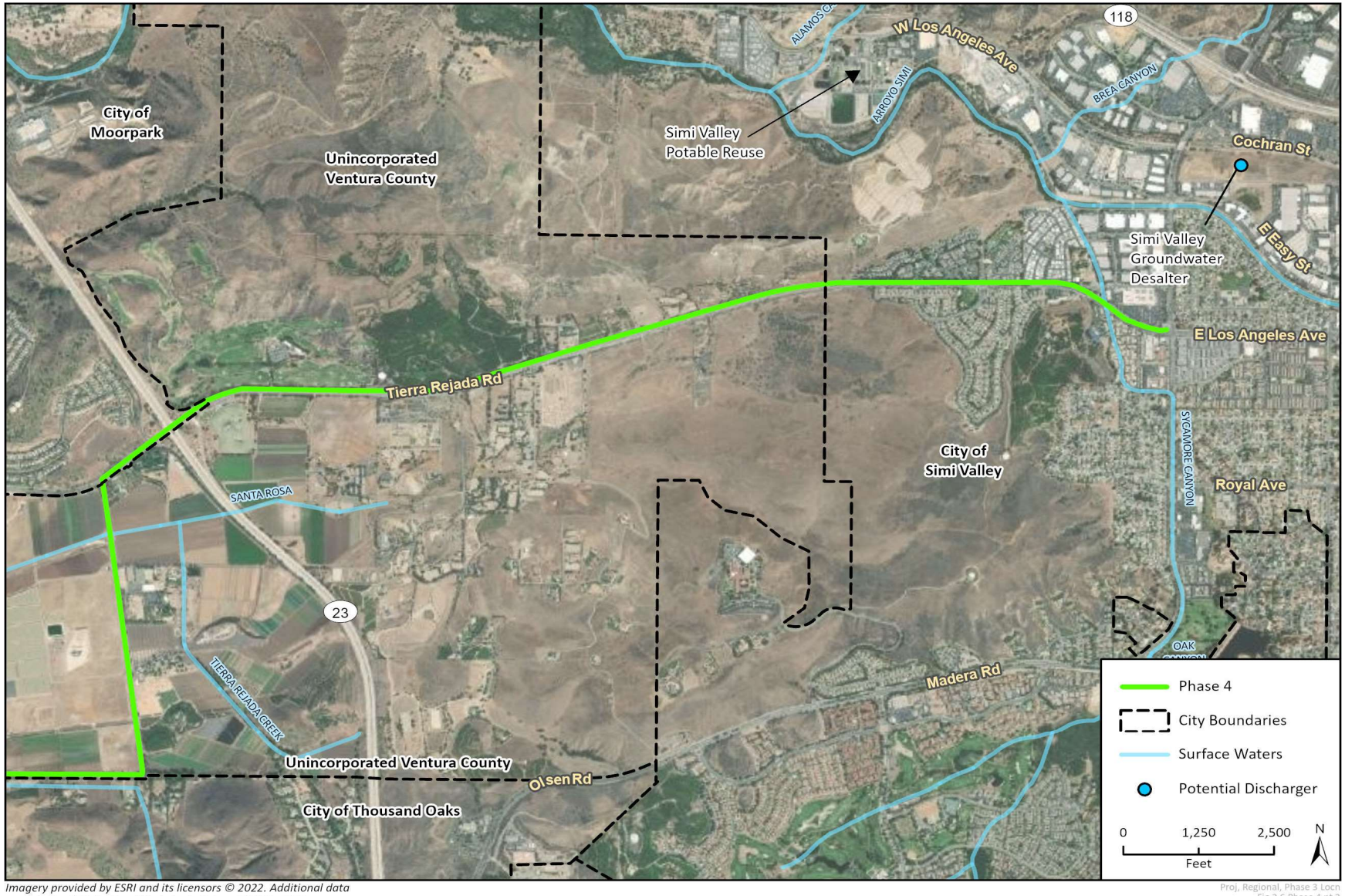
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

web site: www.calleguas.com

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December 8, 2022

Barbareño/Ventureño Band of Mission Indians
Dayna Barrios, Chairperson
365 North Poli Ave
Ojai, CA, 93023
Via Email: barrios_dayna@yahoo.com

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Chairperson Barrios,

The Calleguas Municipal Water District proposes the Calleguas Regional Salinity Management Pipeline (CRSMP) Phases 3 and 4 (proposed project), located in Ventura County, California. The CRSMP consists of a pipeline system to transport excess recycled water and brine concentrate generated within the watershed to an ocean outfall. The CRSMP currently extends approximately 22 miles from its upstream end in the Somis area near Camarillo to its downstream terminus at the ocean outfall in Port Hueneme. The proposed project would extend the CRSMP approximately 14 miles inland from the existing terminus, enabling connections to additional dischargers. The proposed project is subject to the California Environmental Quality Act.

The proposed project would install an underground pipeline. The Phases 3 and 4 pipeline alignments would traverse portions of Camarillo, Moorpark, Thousand Oaks, and Simi Valley, as well as unincorporated Ventura County. Pipeline alignments would mostly be located within the public right-of-way within paved roads and dirt shoulders. A portion of the alignment would extend under private property at the northeast corner of the intersection of Las Posas Road and Upland Road, which is currently developed for agricultural production. Roadways along the project alignments include Upland Road, Santa Rosa Road, Moorpark Road, Read Road, Sunset Valley Road, and Tierra Rejada Road. See attached project location maps. The majority of the pipeline would be installed via conventional open-cut trench construction methods. Trenchless construction methods would be used to cross below existing drainage channels. Trenchless construction methods would also be used to cross Somis Road, Santa Rosa Road, and busy intersections to minimize traffic impacts.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

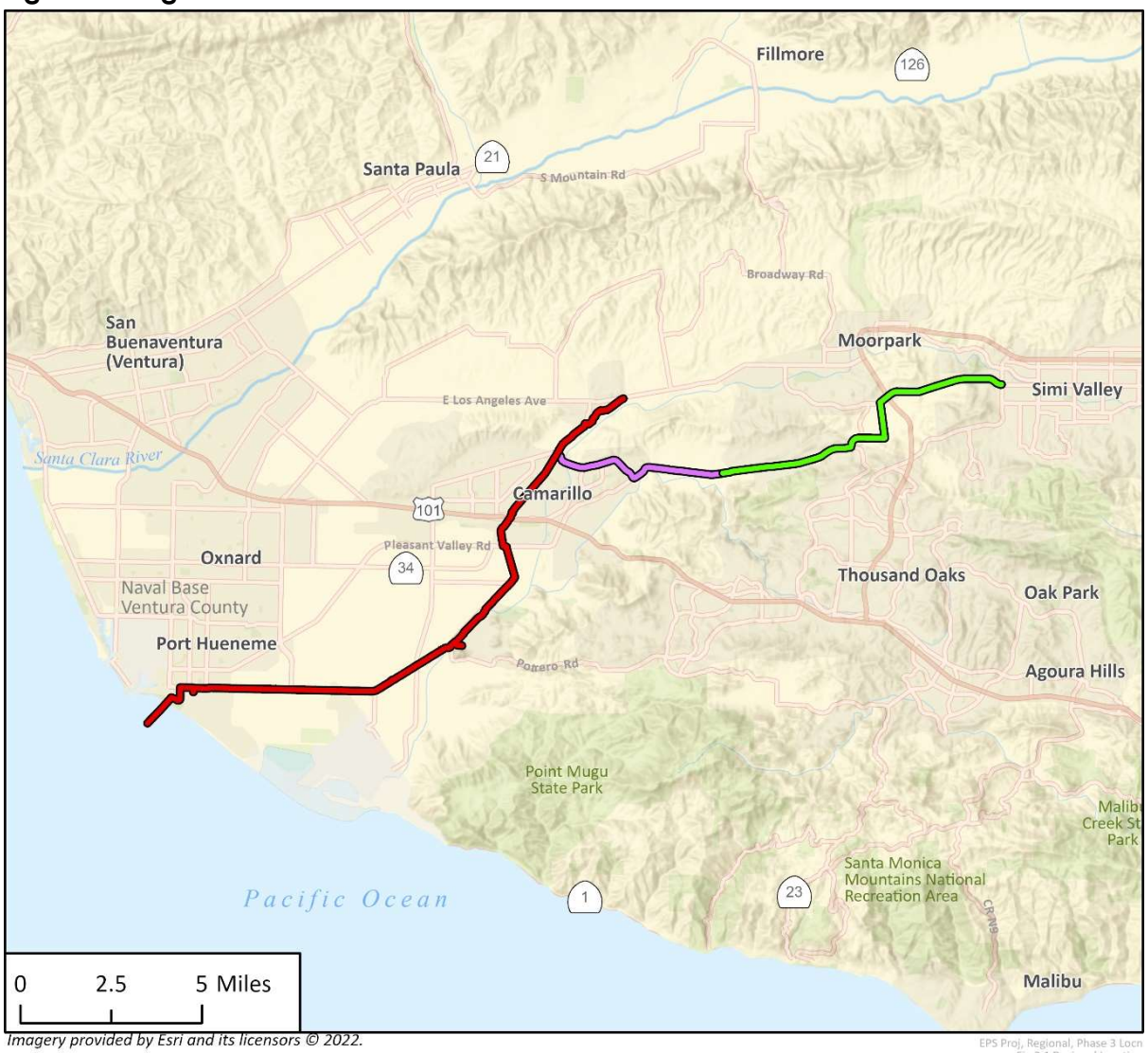
Your tribe's input is important to the Calleguas Municipal Water District planning process. Under AB 52, you have 30 days from receipt of this notification to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (805) 579-7194, or via e-mail at jlancaster@calleguas.com. Thank you for your assistance.

Sincerely,

Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

Enclosure: Project Location Maps

**Figure 1 Regional Location**

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EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N

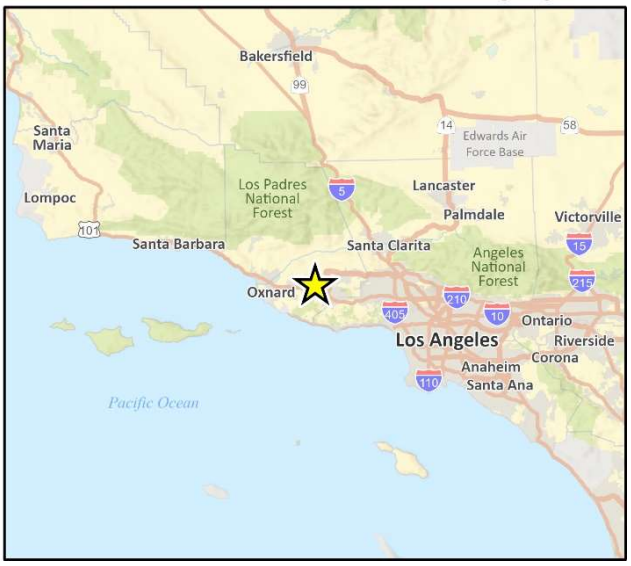
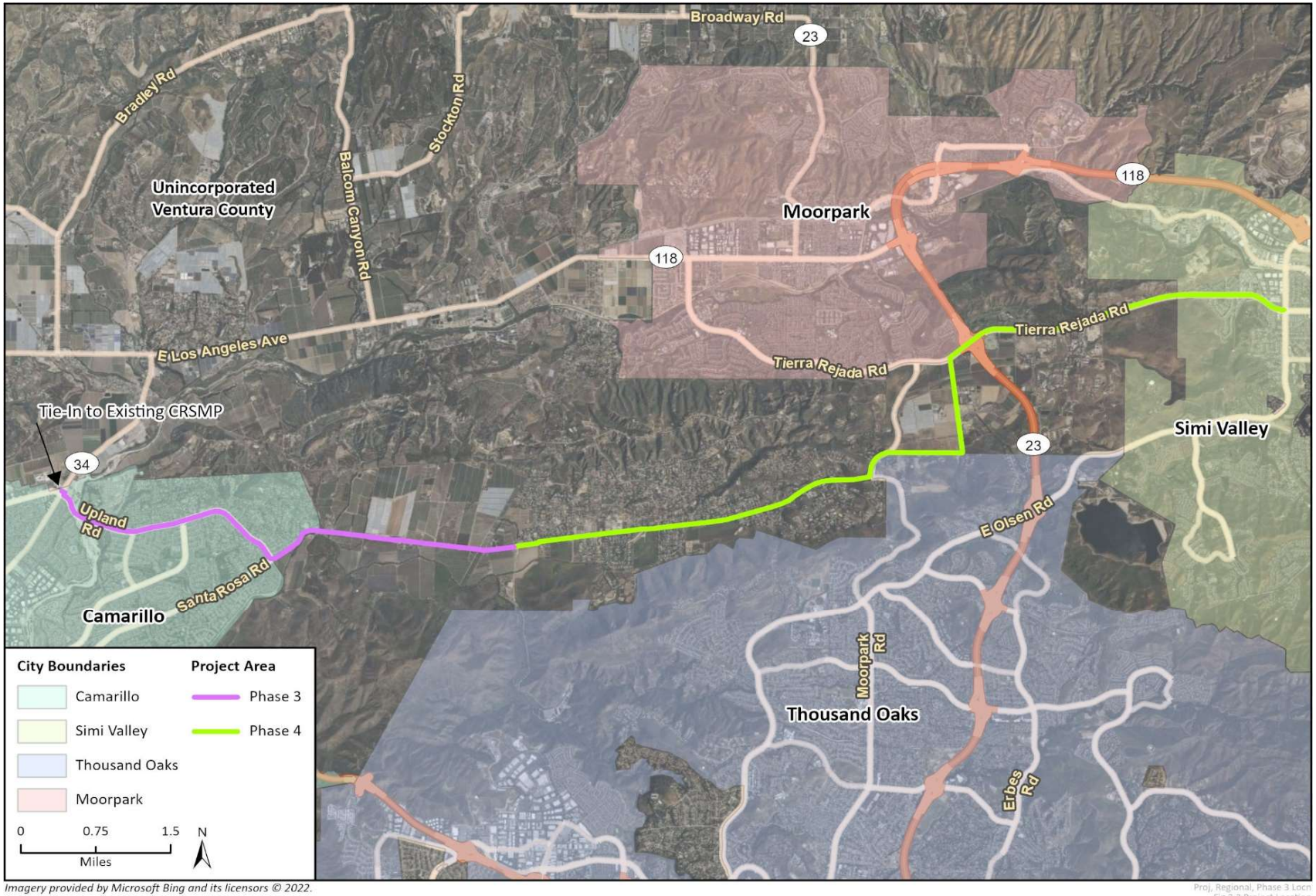


**Figure 2 Project Site Location**

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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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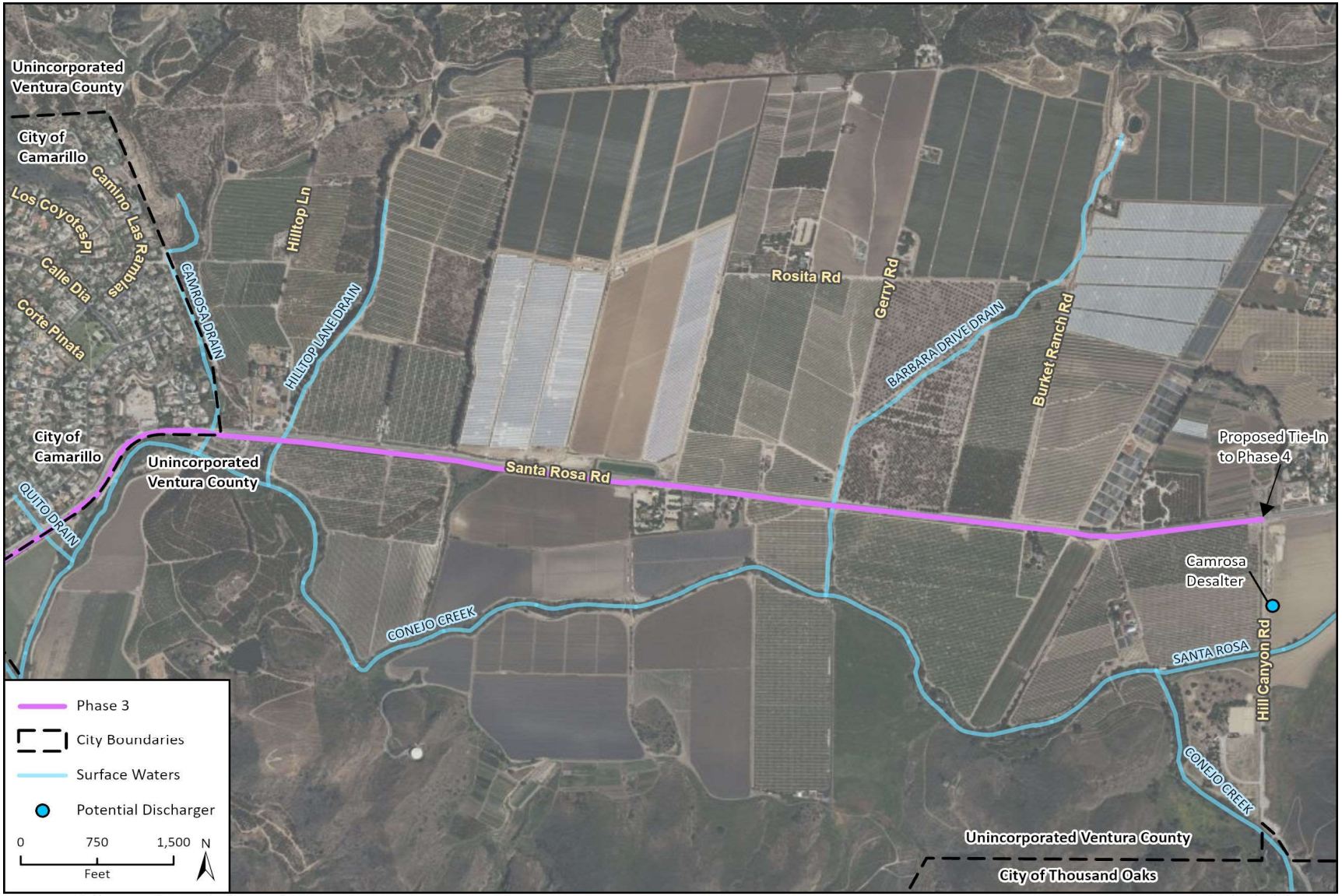
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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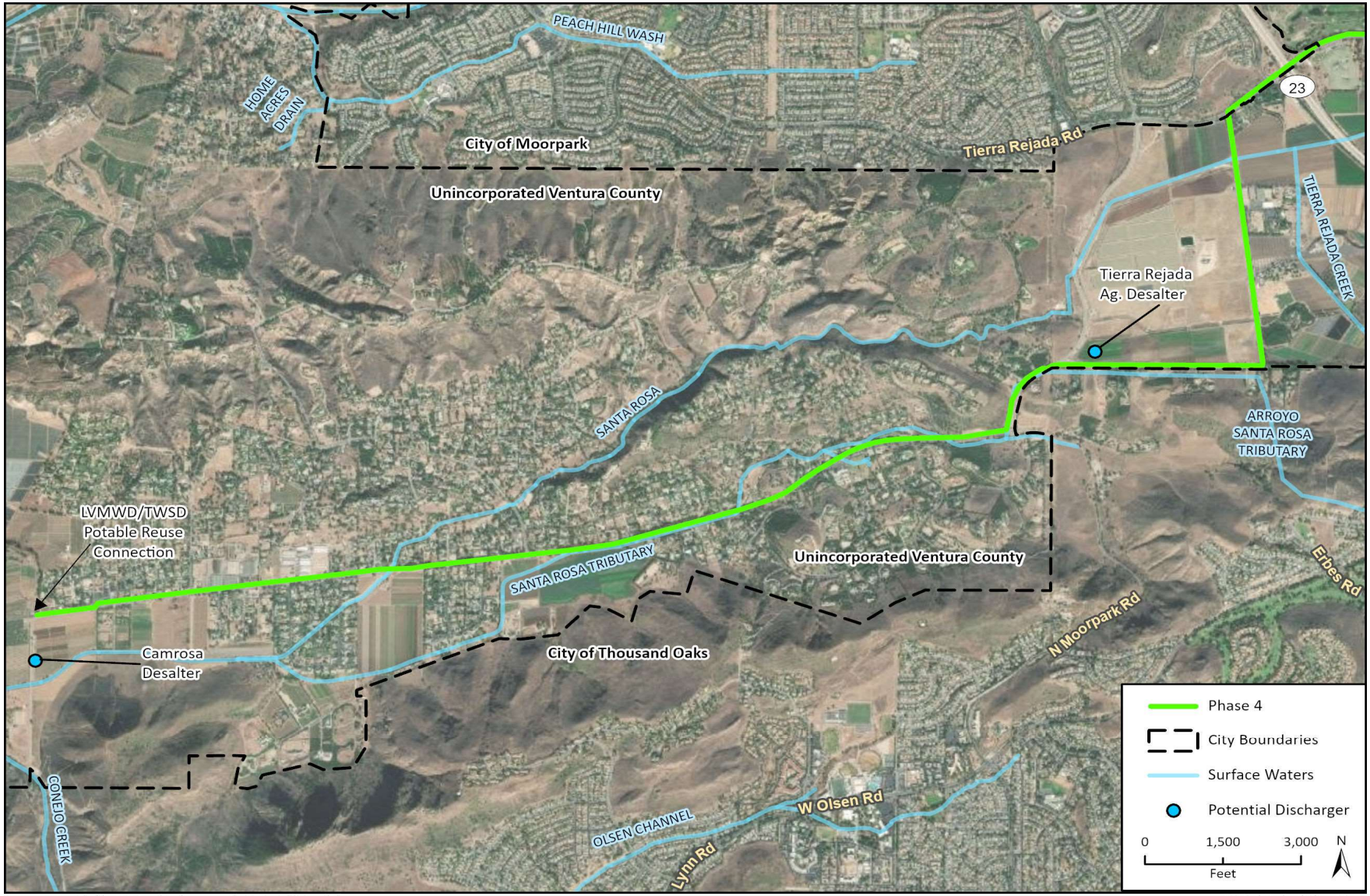
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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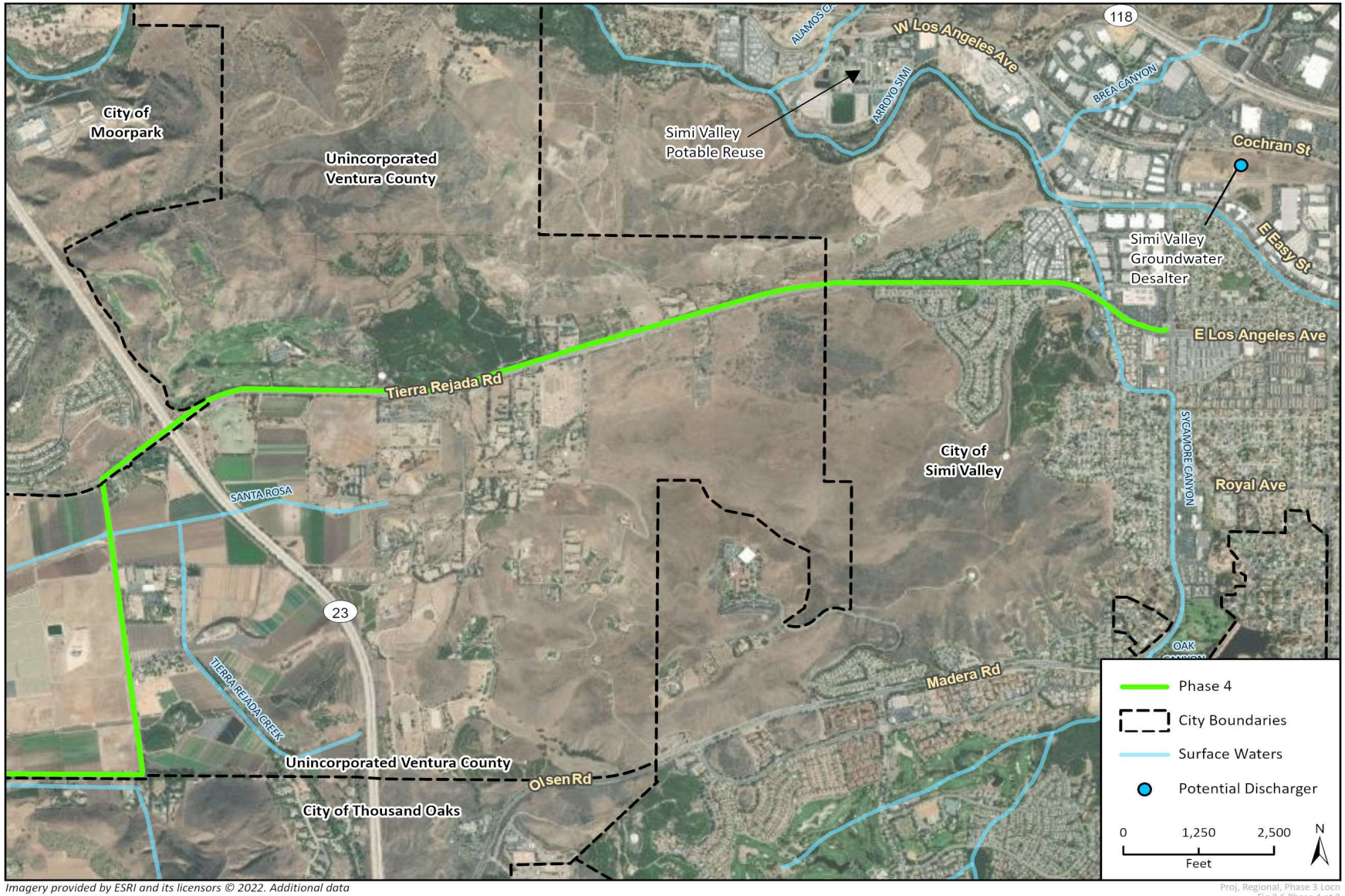
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

web site: www.calleguas.com

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December 8, 2022

Chumash Council of Bakersfield
Julio Quair, Chairperson
729 Texas Street
Bakersfield, CA 93307
Via Email: chumashtribe@sbcglobal.net

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Chairperson Quair,

The Calleguas Municipal Water District proposes the Calleguas Regional Salinity Management Pipeline (CRSMP) Phases 3 and 4 (proposed project), located in Ventura County, California. The CRSMP consists of a pipeline system to transport excess recycled water and brine concentrate generated within the watershed to an ocean outfall. The CRSMP currently extends approximately 22 miles from its upstream end in the Somis area near Camarillo to its downstream terminus at the ocean outfall in Port Hueneme. The proposed project would extend the CRSMP approximately 14 miles inland from the existing terminus, enabling connections to additional dischargers. The proposed project is subject to the California Environmental Quality Act.

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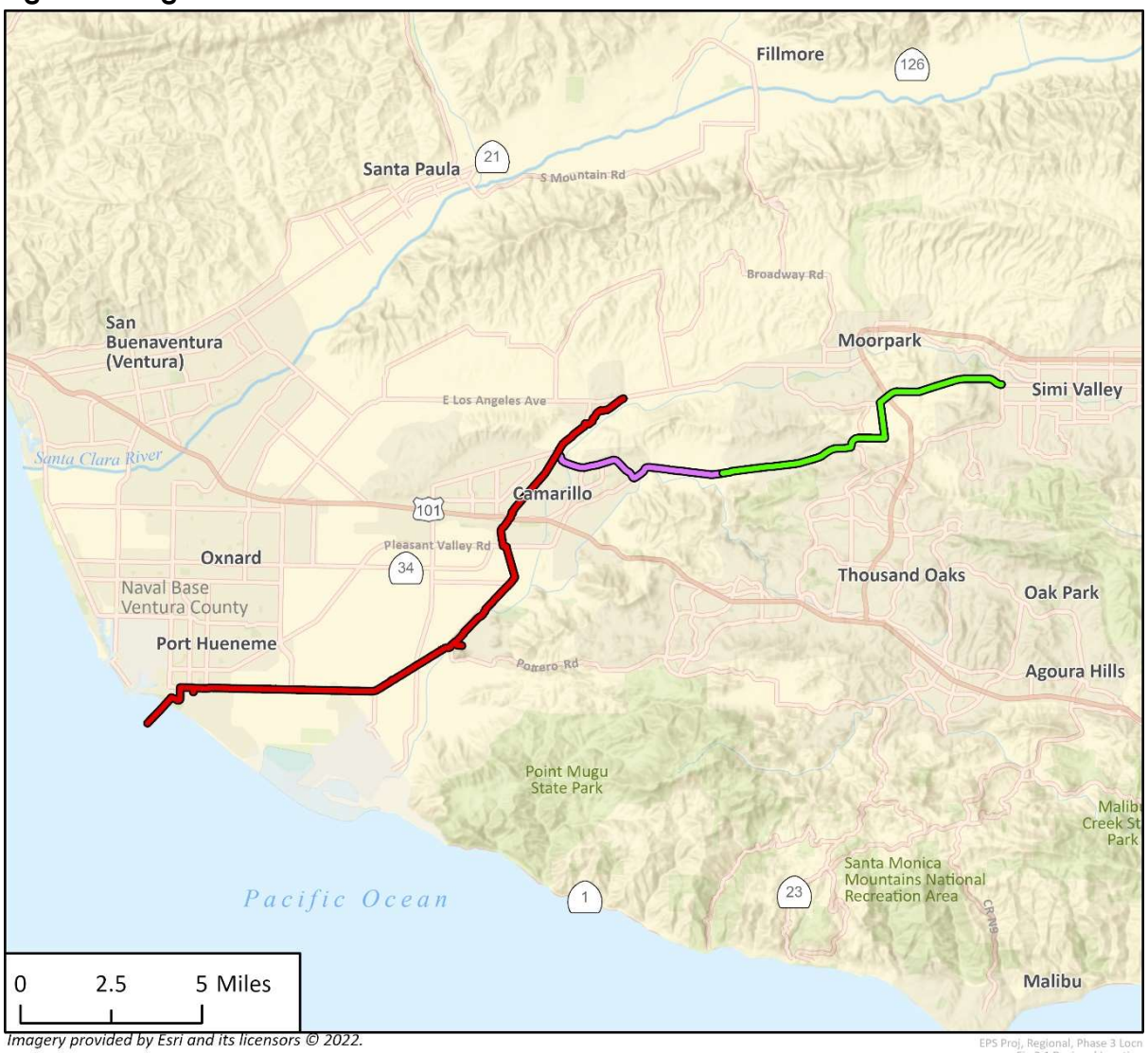
Your tribe's input is important to the Calleguas Municipal Water District planning process. Under AB 52, you have 30 days from receipt of this notification to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (805) 579-7194, or via e-mail at jlancaster@calleguas.com. Thank you for your assistance.

Sincerely,

Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

Enclosure: Project Location Maps

**Figure 1 Regional Location**

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EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N

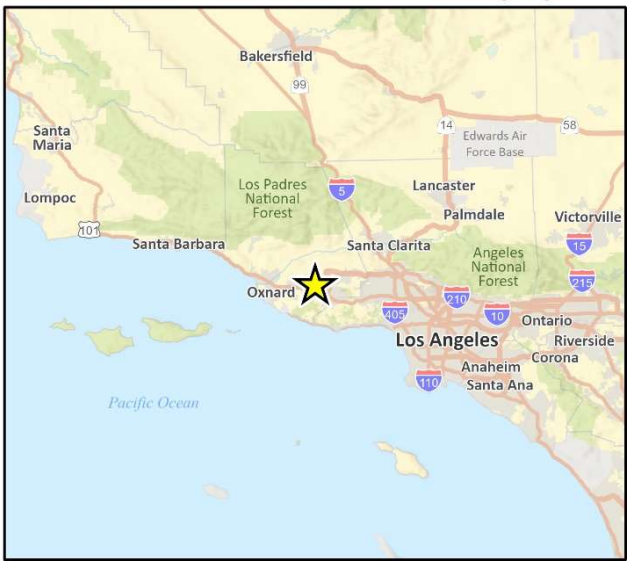
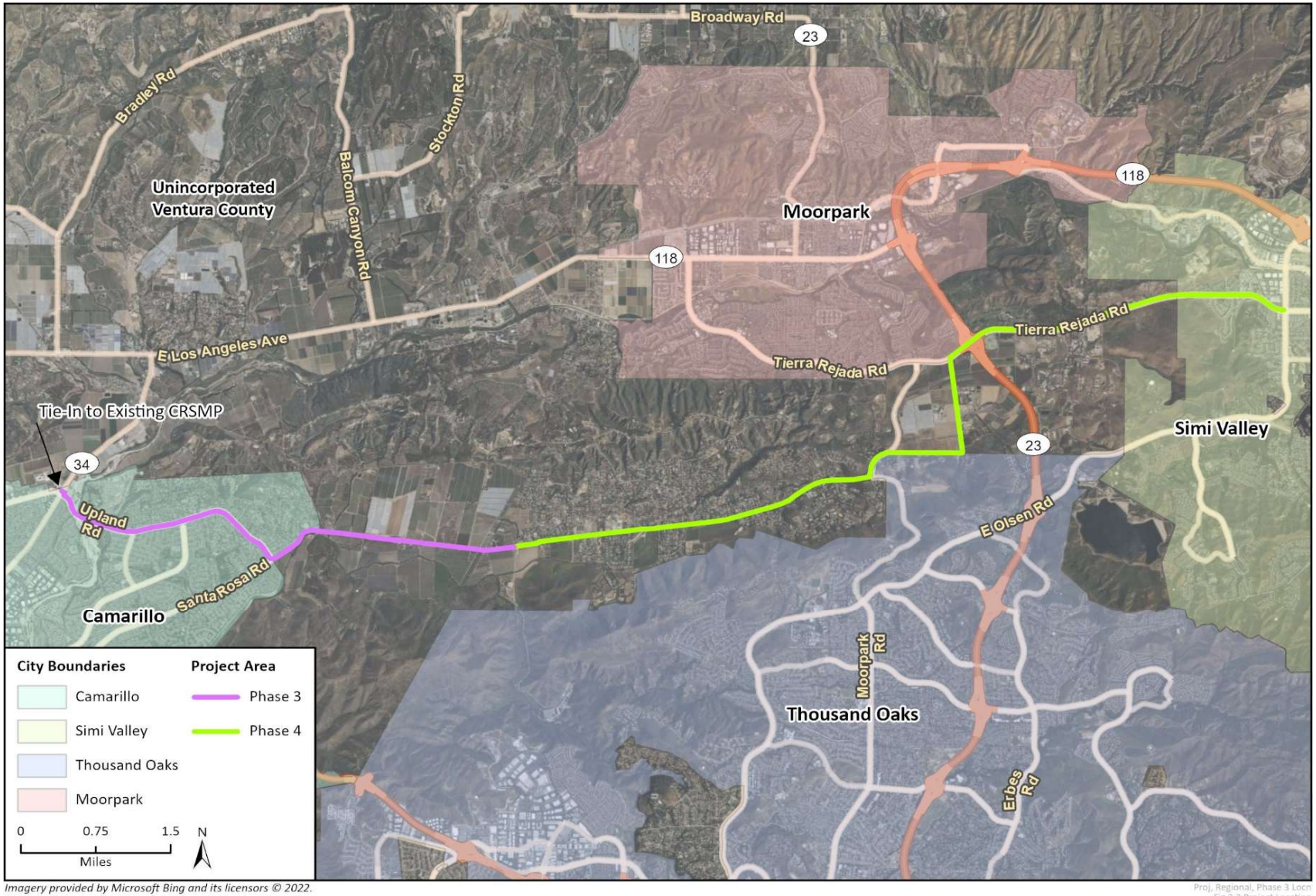


**Figure 2 Project Site Location**

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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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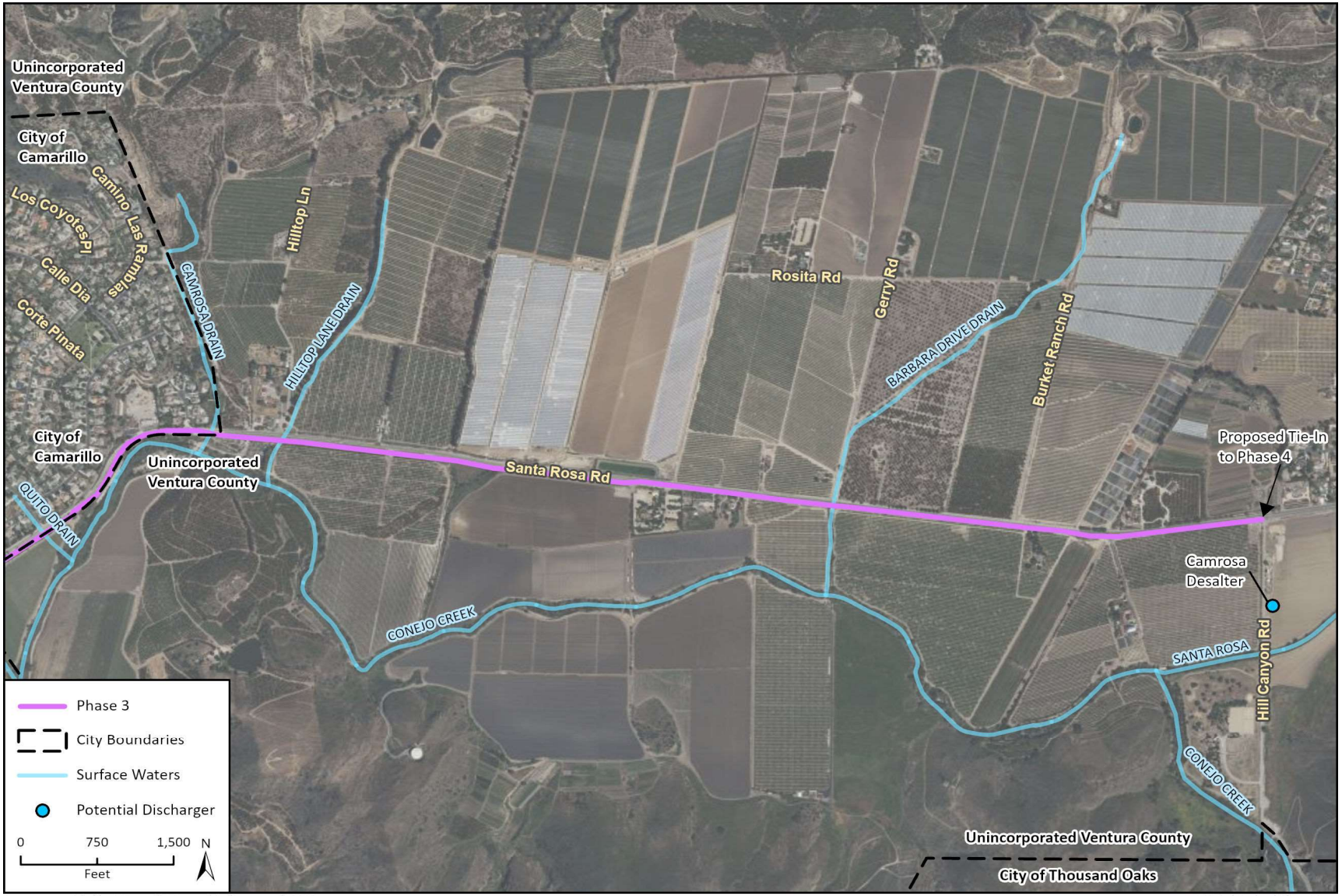
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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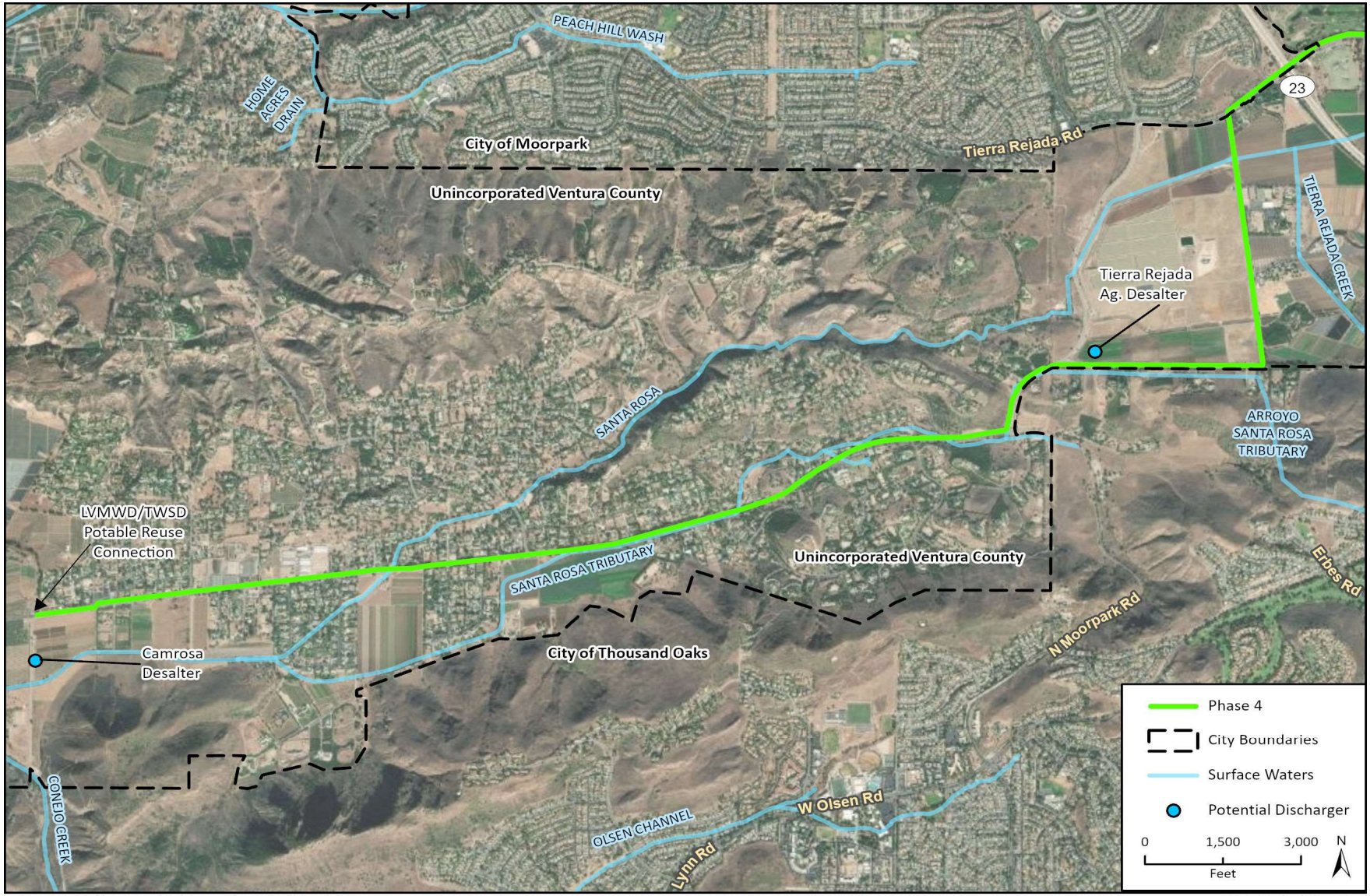
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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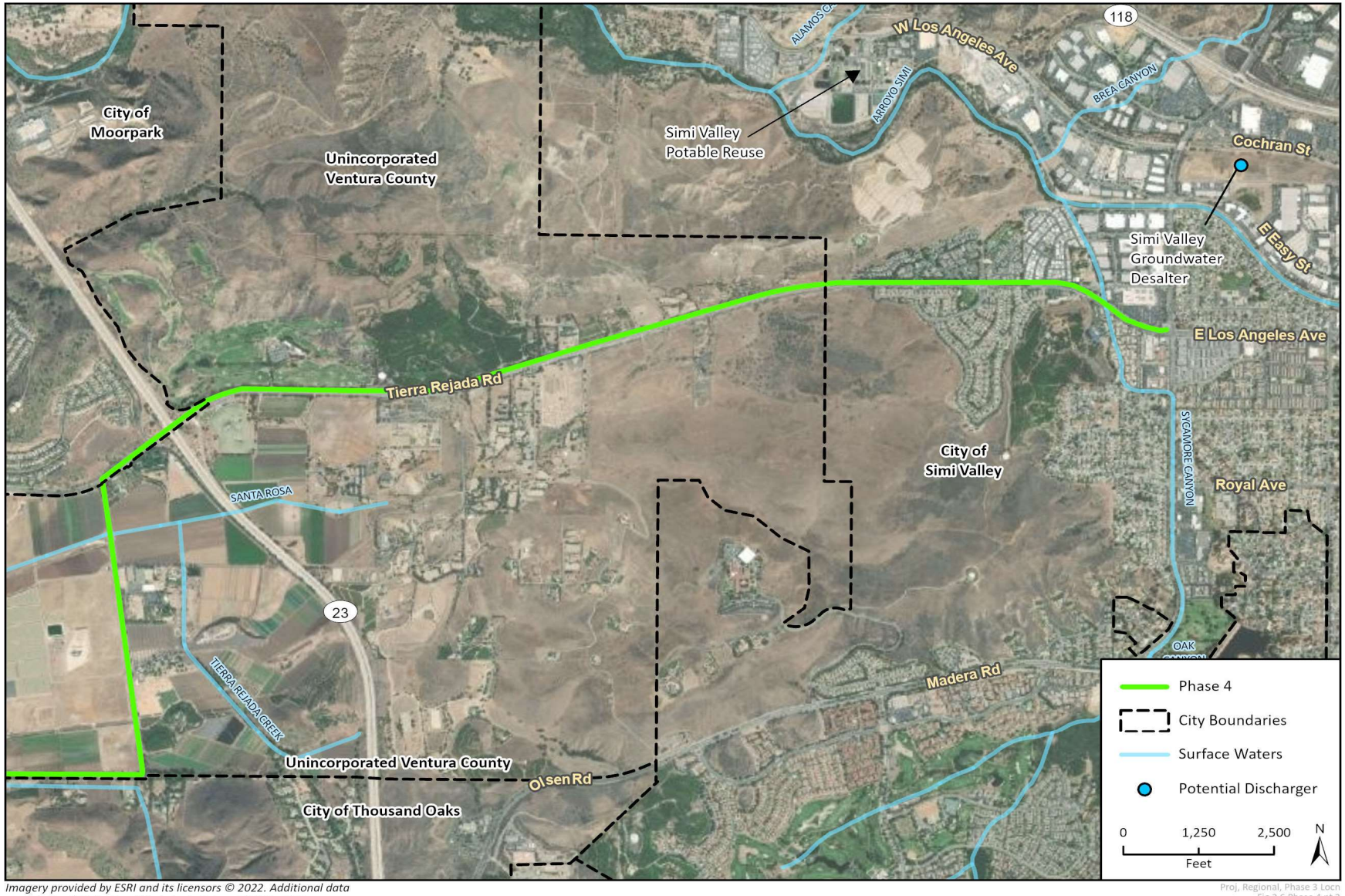
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

web site: www.calleguas.com

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December 8, 2022

Coastal Band of the Chumash Nation
Gabe Frausto, Vice Chair
P.O. Box 4464
Santa Barbara, CA, 93140
Via Email: cbcn22vicechair@gmail.com

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Vice Chair Frausto,

The Calleguas Municipal Water District proposes the Calleguas Regional Salinity Management Pipeline (CRSMP) Phases 3 and 4 (proposed project), located in Ventura County, California. The CRSMP consists of a pipeline system to transport excess recycled water and brine concentrate generated within the watershed to an ocean outfall. The CRSMP currently extends approximately 22 miles from its upstream end in the Somis area near Camarillo to its downstream terminus at the ocean outfall in Port Hueneme. The proposed project would extend the CRSMP approximately 14 miles inland from the existing terminus, enabling connections to additional dischargers. The proposed project is subject to the California Environmental Quality Act.

The proposed project would install an underground pipeline. The Phases 3 and 4 pipeline alignments would traverse portions of Camarillo, Moorpark, Thousand Oaks, and Simi Valley, as well as unincorporated Ventura County. Pipeline alignments would mostly be located within the public right-of-way within paved roads and dirt shoulders. A portion of the alignment would extend under private property at the northeast corner of the intersection of Las Posas Road and Upland Road, which is currently developed for agricultural production. Roadways along the project alignments include Upland Road, Santa Rosa Road, Moorpark Road, Read Road, Sunset Valley Road, and Tierra Rejada Road. See attached project location maps. The majority of the pipeline would be installed via conventional open-cut trench construction methods. Trenchless construction methods would be used to cross below existing drainage channels. Trenchless construction methods would also be used to cross Somis Road, Santa Rosa Road, and busy intersections to minimize traffic impacts.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

Your tribe's input is important to the Calleguas Municipal Water District planning process. Under AB 52, you have 30 days from receipt of this notification to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (805) 579-7194, or via e-mail at jlancaster@calleguas.com. Thank you for your assistance.

Sincerely,

Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

Enclosure: Project Location Maps

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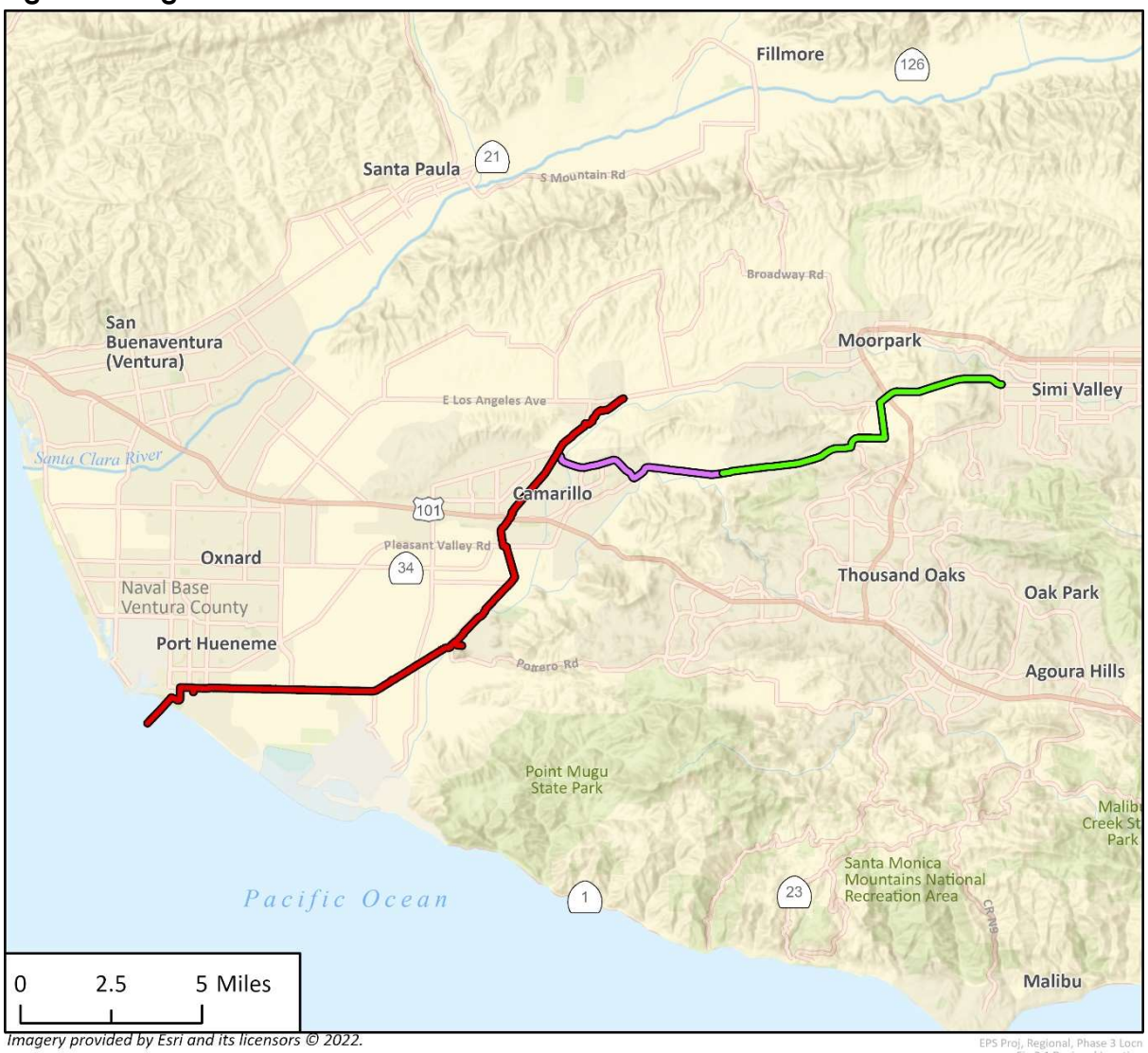


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EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N

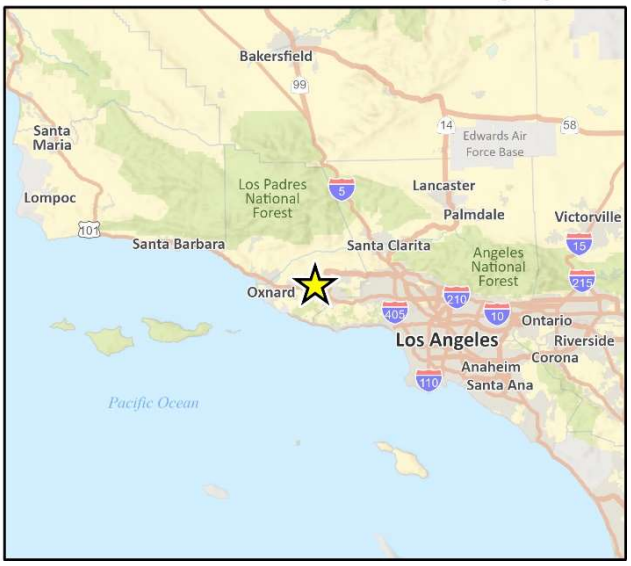
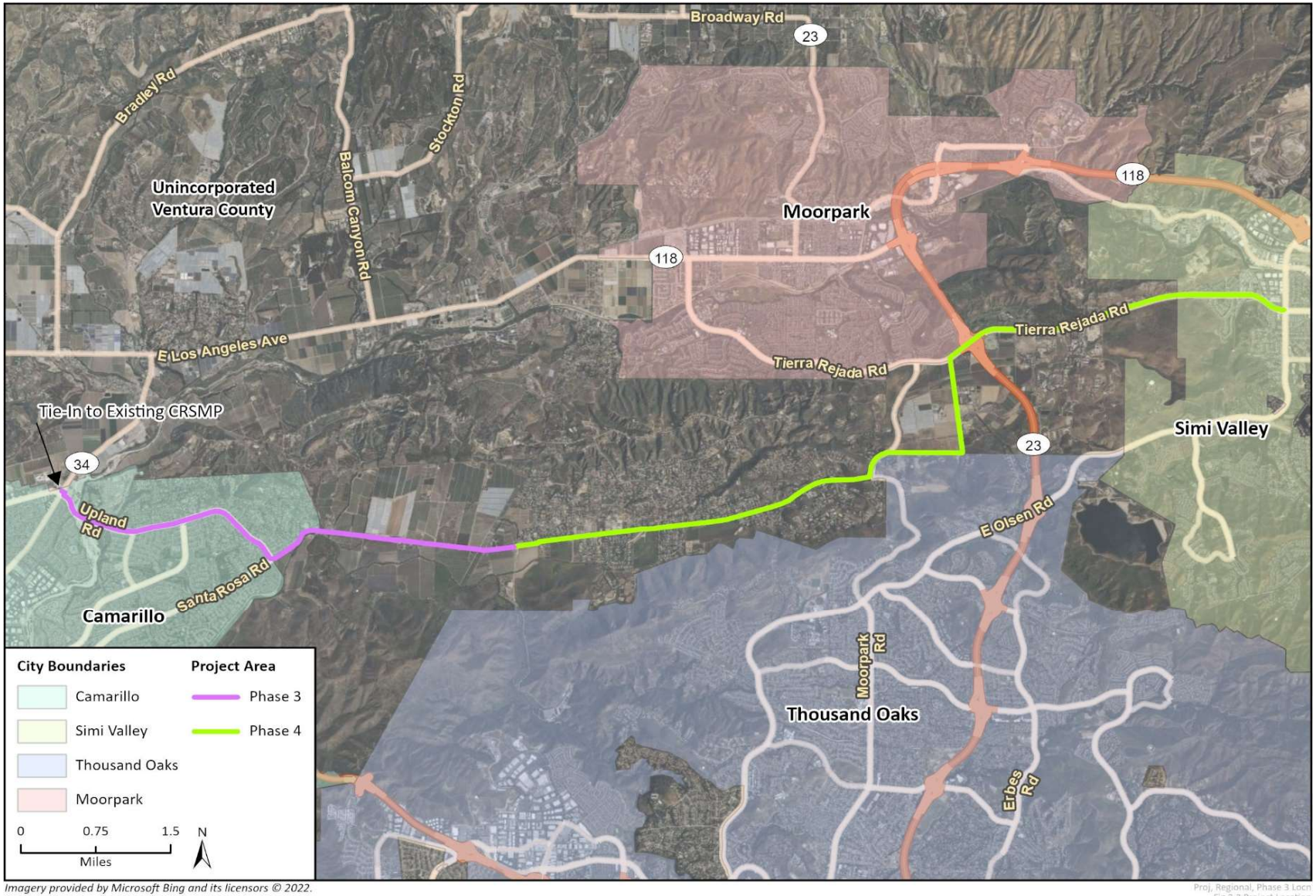


**Figure 2 Project Site Location**

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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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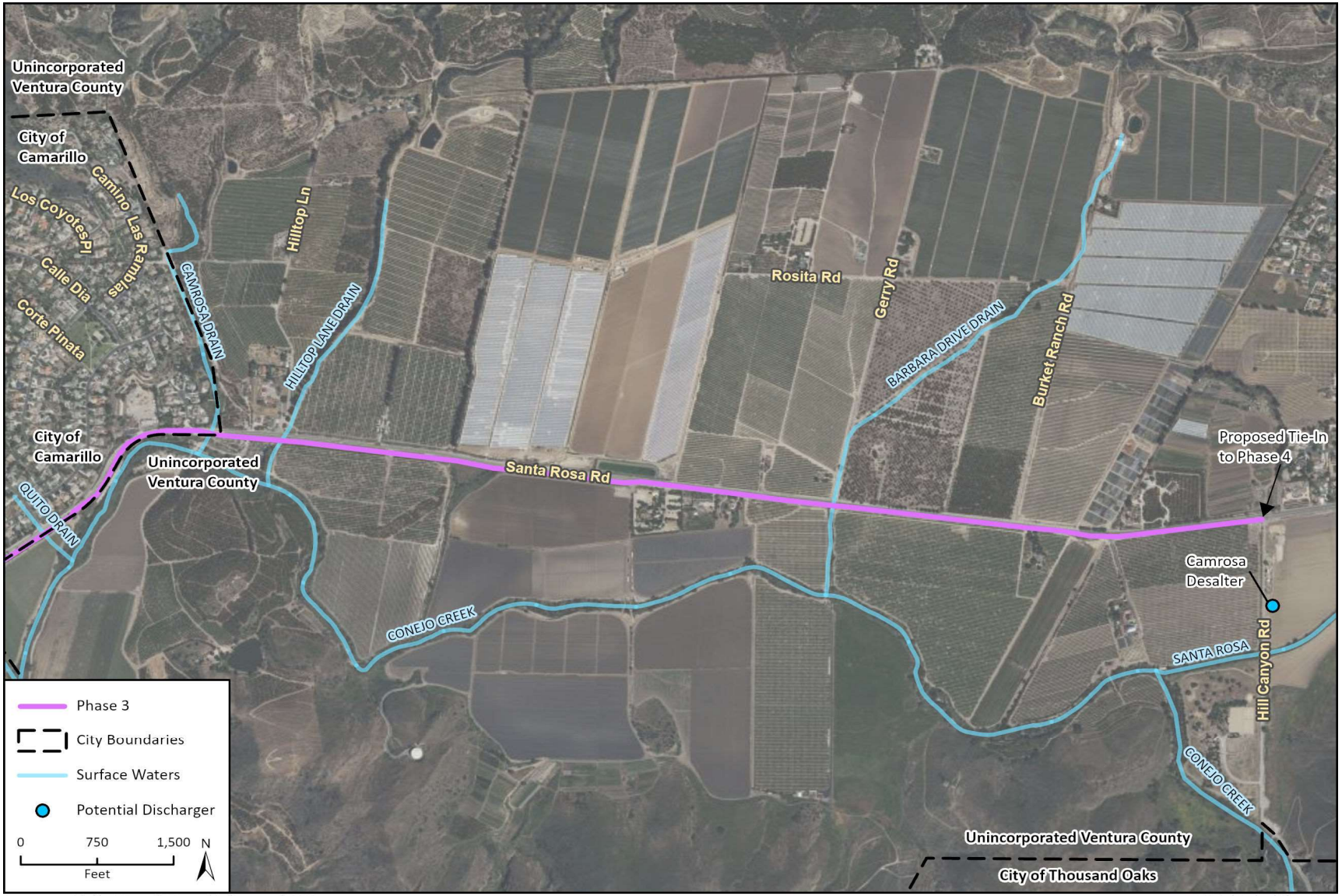
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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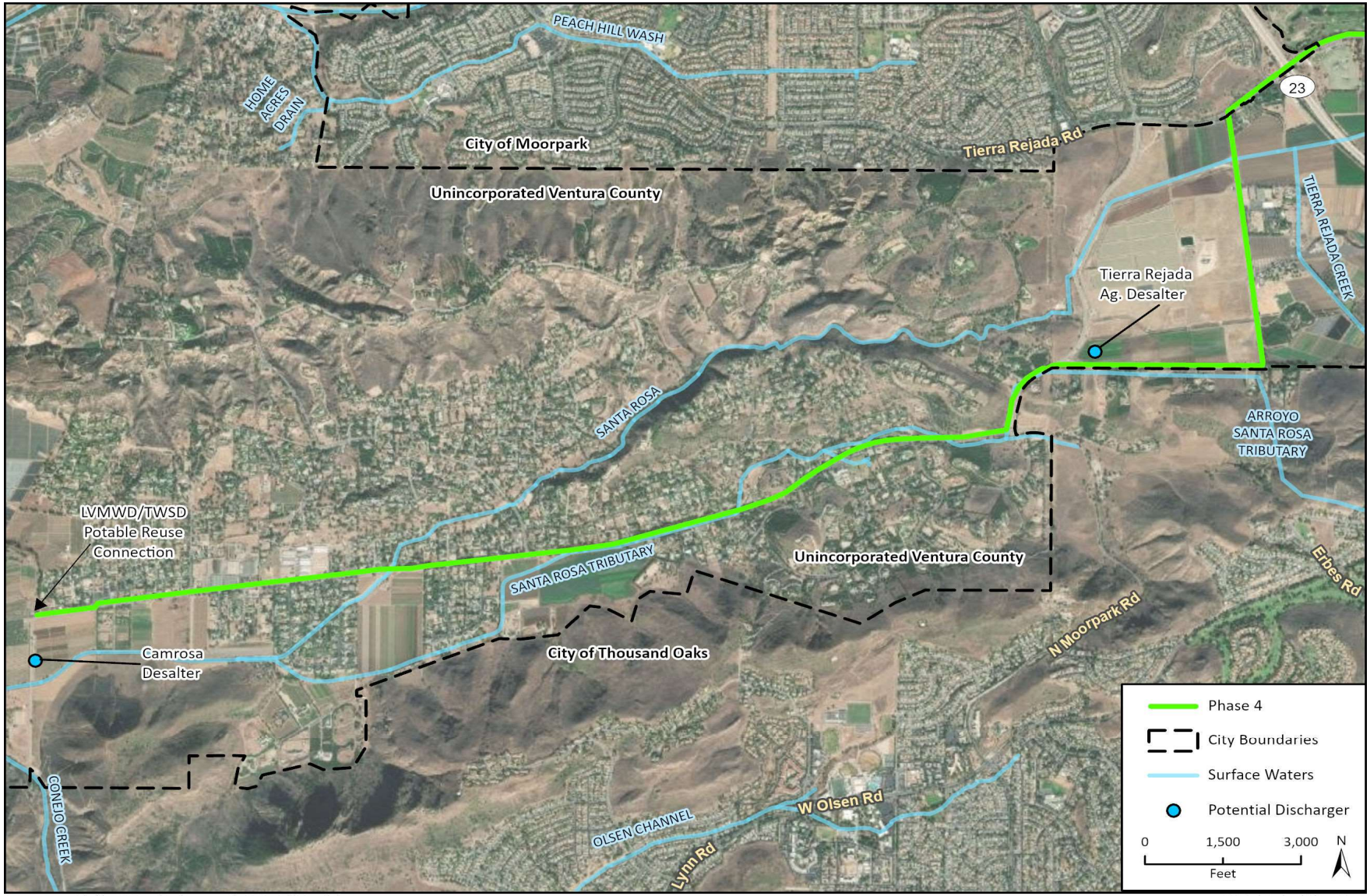
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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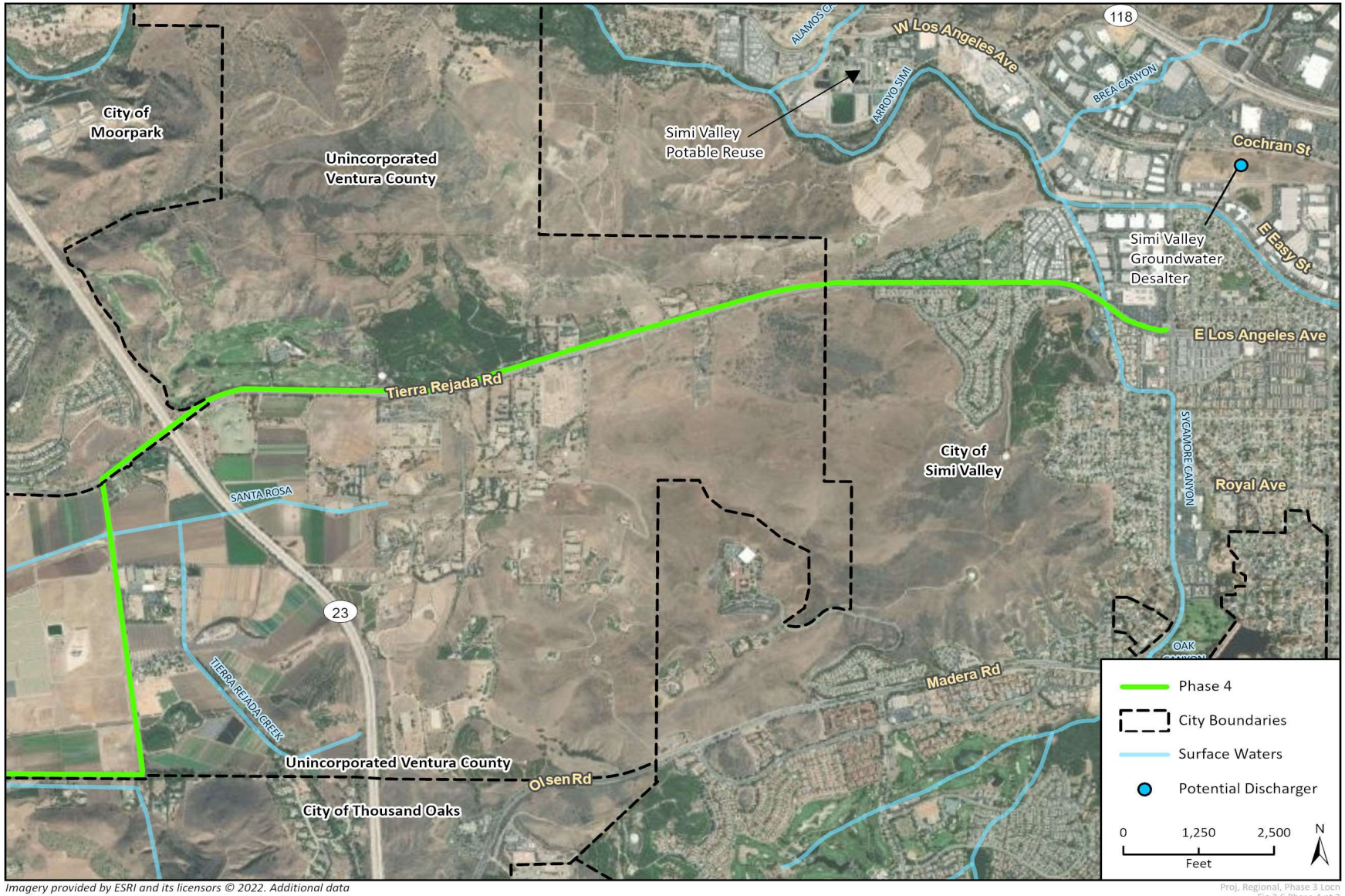
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

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December 8, 2022

Coastal Band of the Chumash Nation
Mia Lopez, Chairperson
P.O. Box 4464
Santa Barbara, CA 93140
Via Email: cbcntribalchair@gmail.com

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Chairperson Lopez,

The Calleguas Municipal Water District proposes the Calleguas Regional Salinity Management Pipeline (CRSMP) Phases 3 and 4 (proposed project), located in Ventura County, California. The CRSMP consists of a pipeline system to transport excess recycled water and brine concentrate generated within the watershed to an ocean outfall. The CRSMP currently extends approximately 22 miles from its upstream end in the Somis area near Camarillo to its downstream terminus at the ocean outfall in Port Hueneme. The proposed project would extend the CRSMP approximately 14 miles inland from the existing terminus, enabling connections to additional dischargers. The proposed project is subject to the California Environmental Quality Act.

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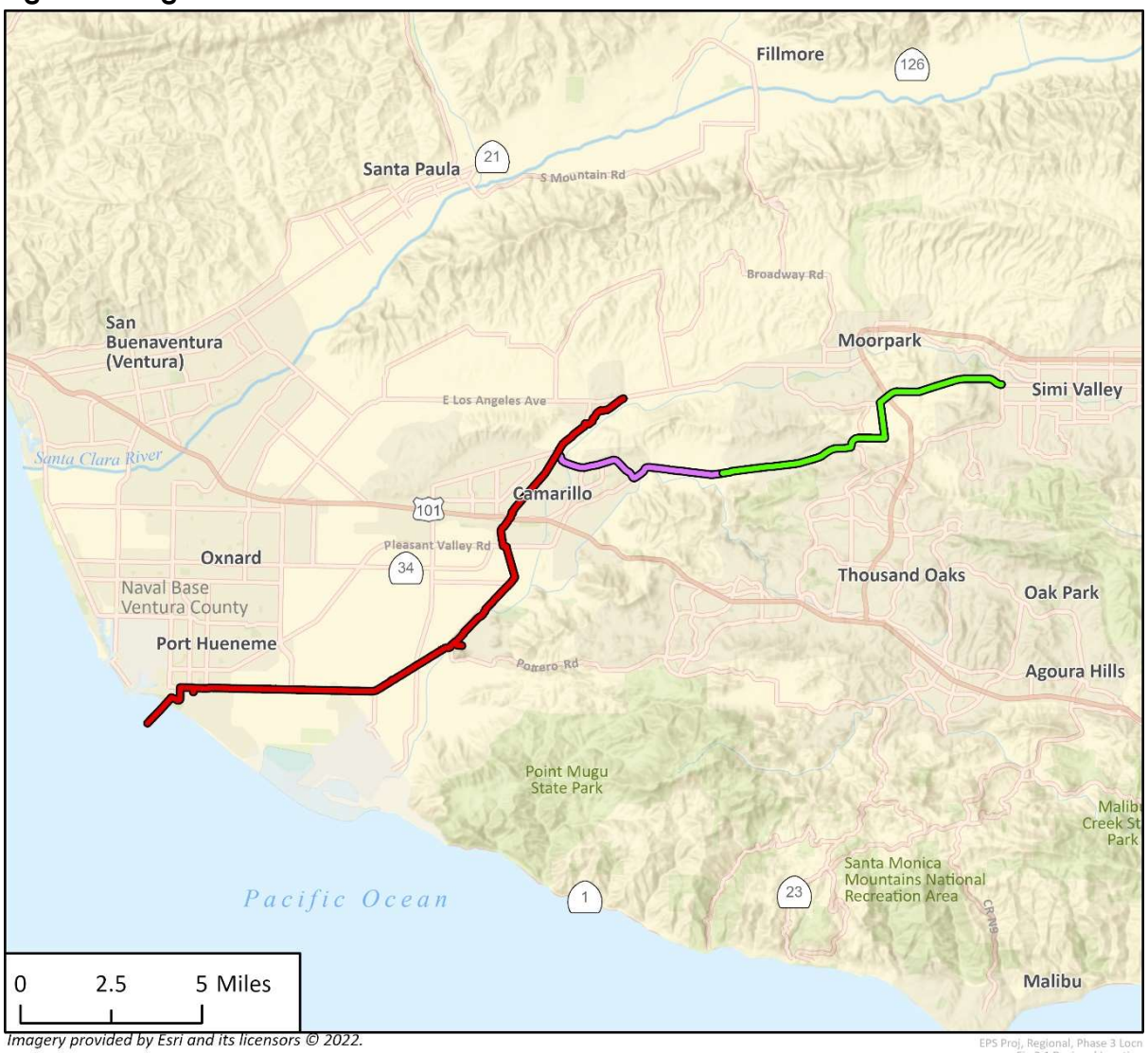
Sincerely,

Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

Enclosure: Project Location Maps

**Figure 1 Regional Location**

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EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N

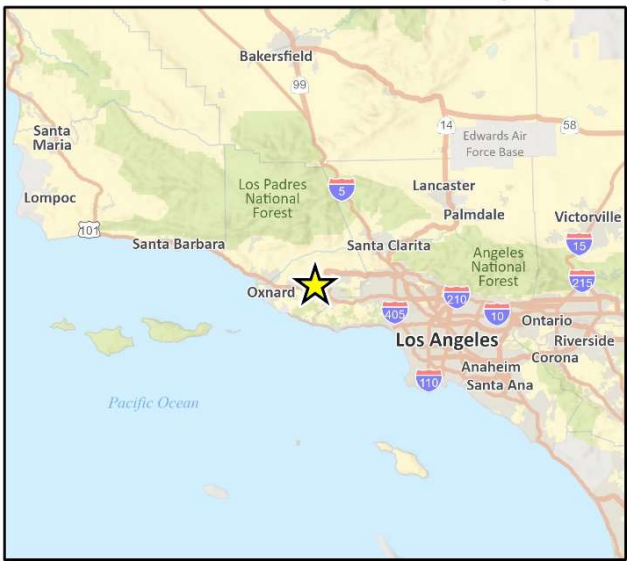
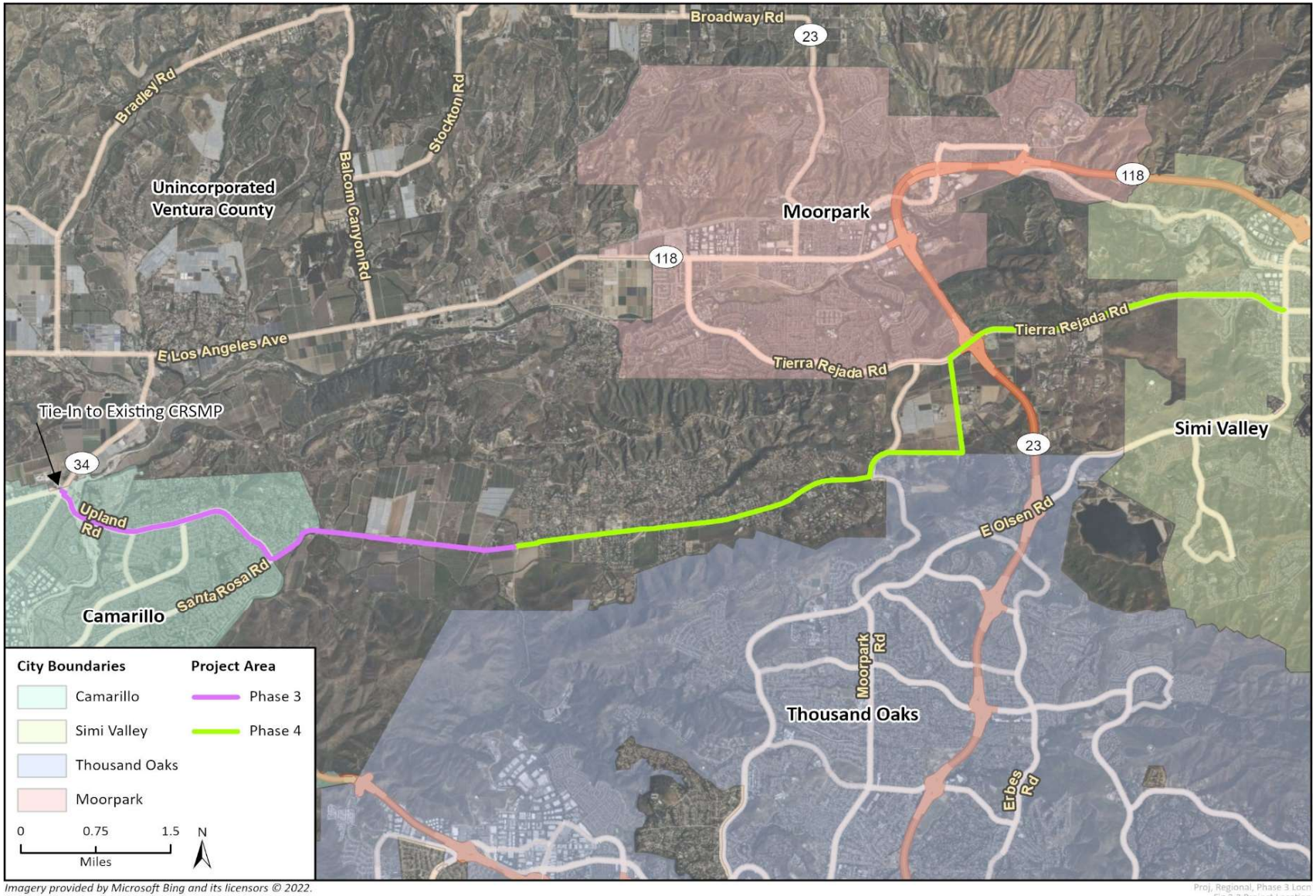


**Figure 2 Project Site Location**

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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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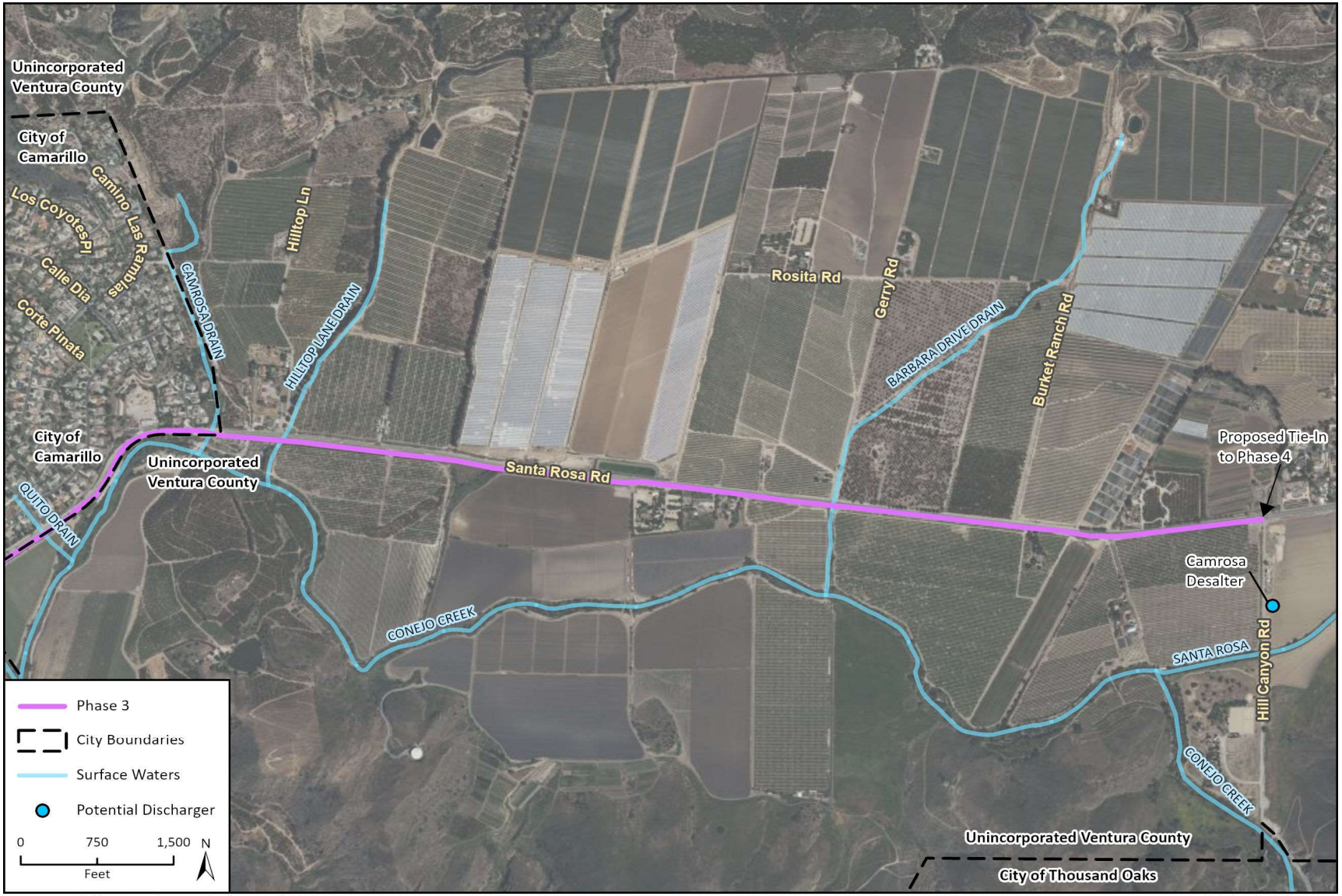
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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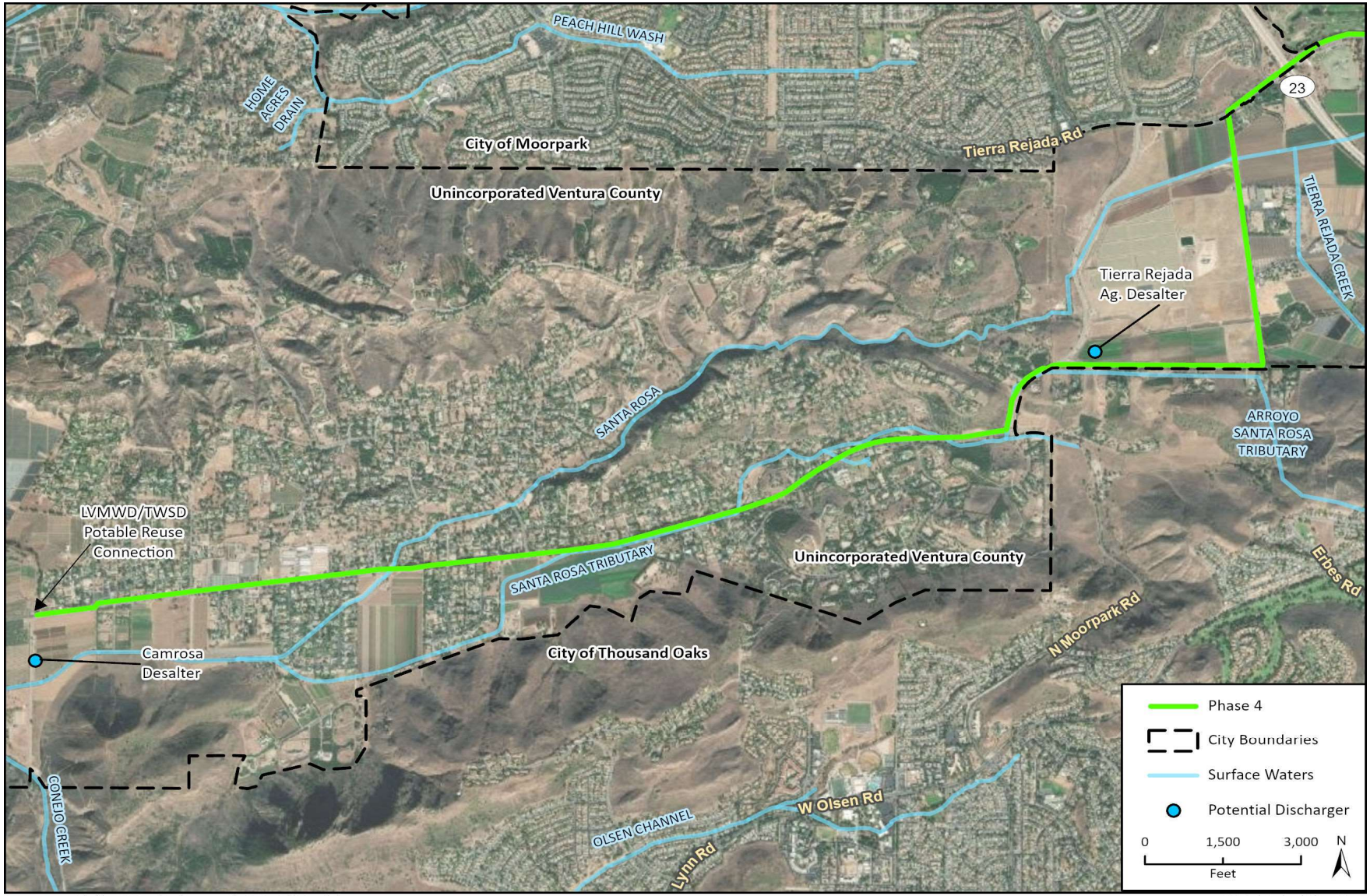
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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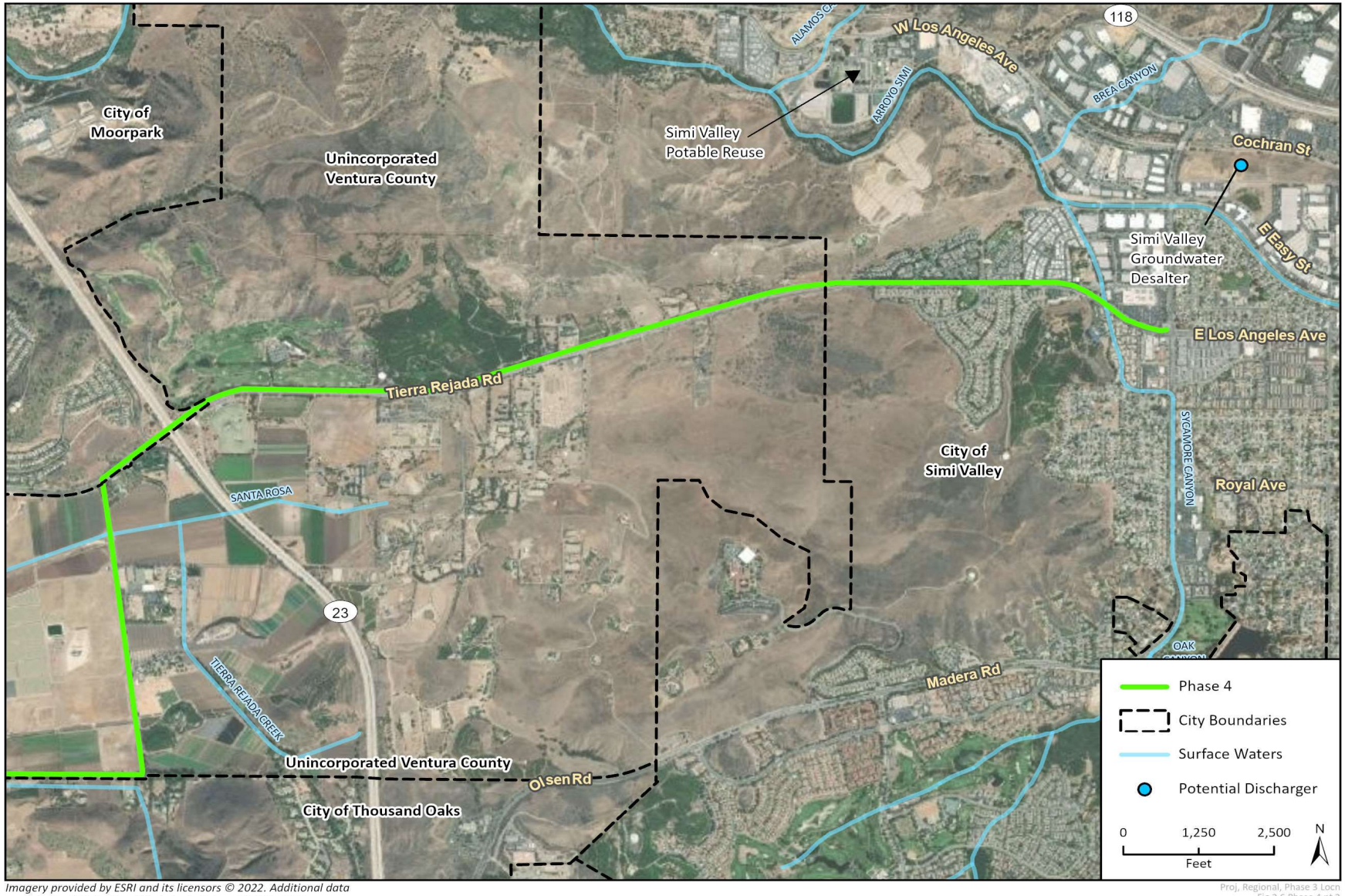
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

web site: www.calleguas.com

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December 8, 2022

Fernandeño Tataviam Band of Mission Indians
Rudy Ortega, Tribal President
1019 Second Street, Suite 1
San Fernando, CA, 91340
Via Email: thcp@tataviam-nsn.us

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Tribal President Ortega,

The Calleguas Municipal Water District proposes the Calleguas Regional Salinity Management Pipeline (CRSMP) Phases 3 and 4 (proposed project), located in Ventura County, California. The CRSMP consists of a pipeline system to transport excess recycled water and brine concentrate generated within the watershed to an ocean outfall. The CRSMP currently extends approximately 22 miles from its upstream end in the Somis area near Camarillo to its downstream terminus at the ocean outfall in Port Hueneme. The proposed project would extend the CRSMP approximately 14 miles inland from the existing terminus, enabling connections to additional dischargers. The proposed project is subject to the California Environmental Quality Act.

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Sincerely,

Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

Enclosure: Project Location Maps

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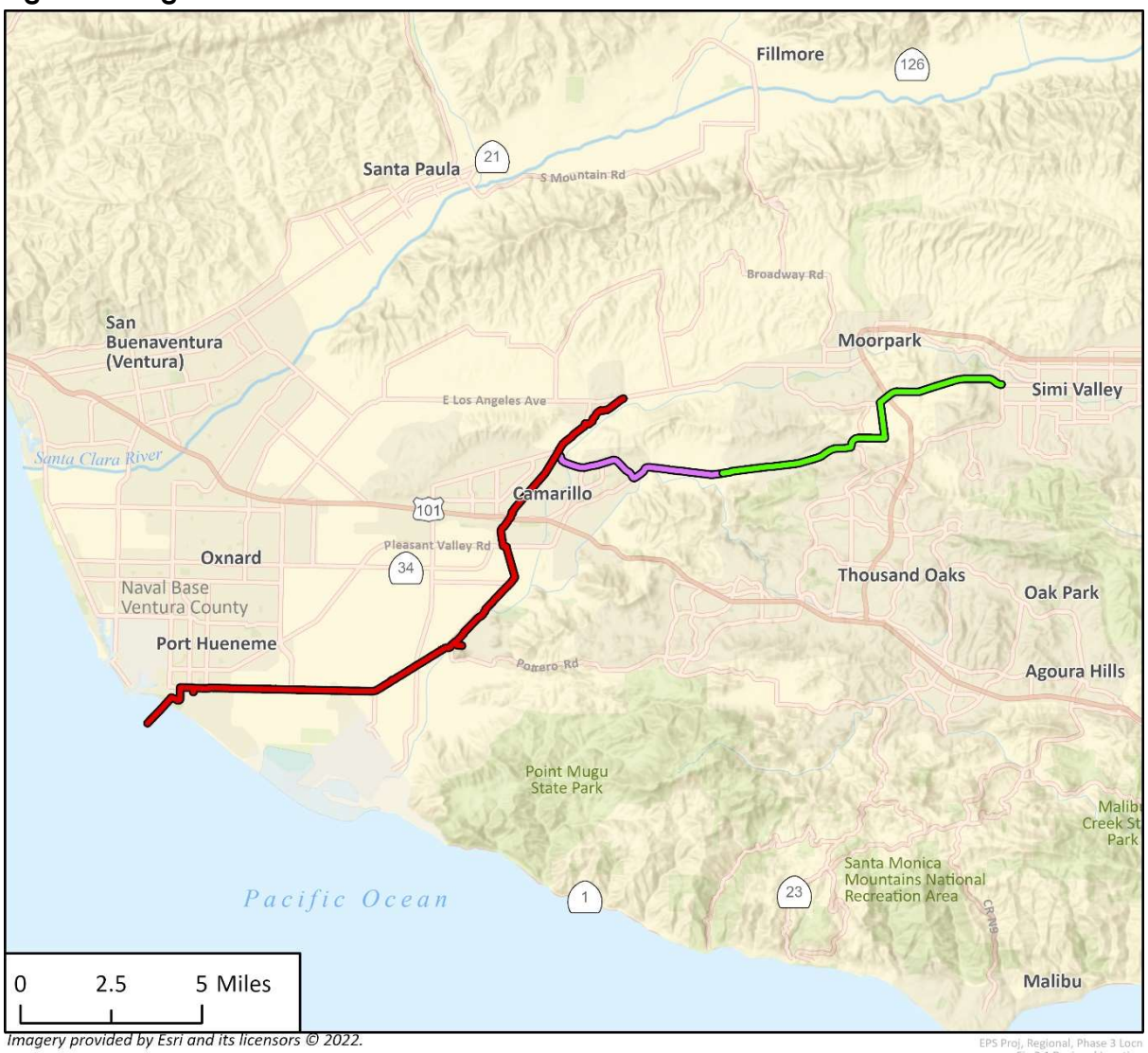


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EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N

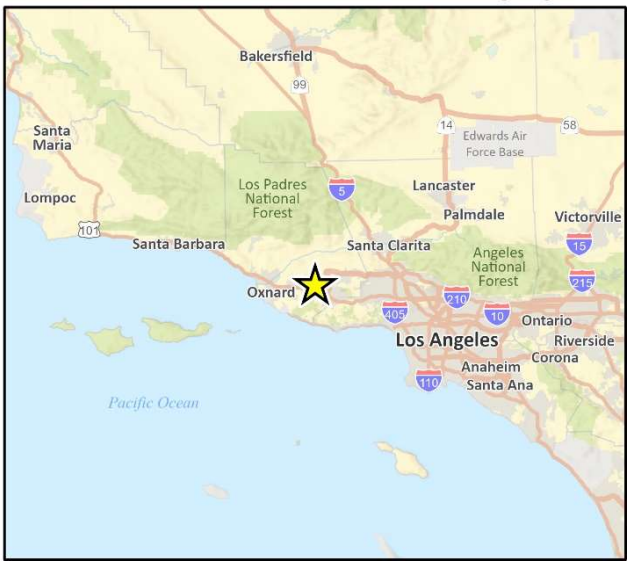
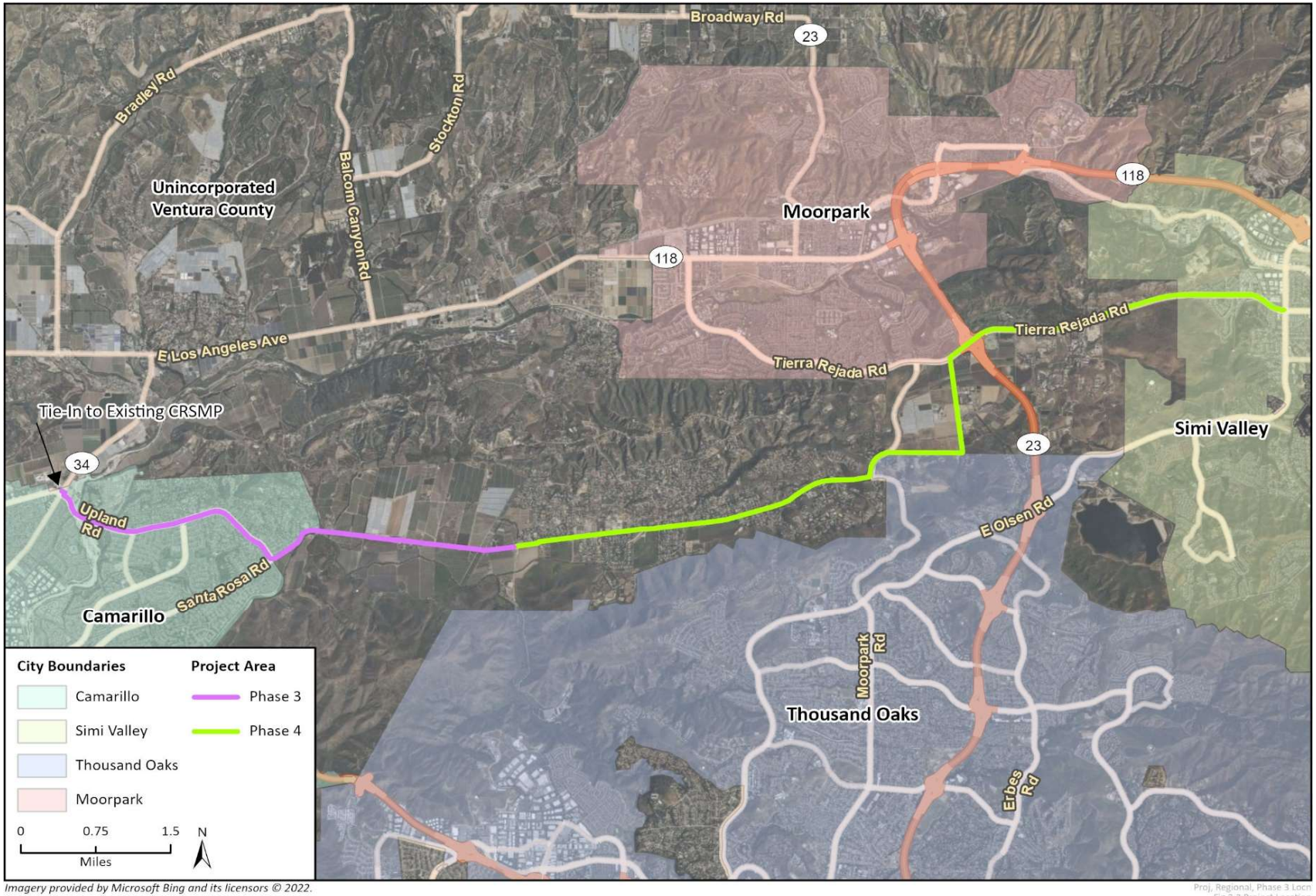


**Figure 2 Project Site Location**

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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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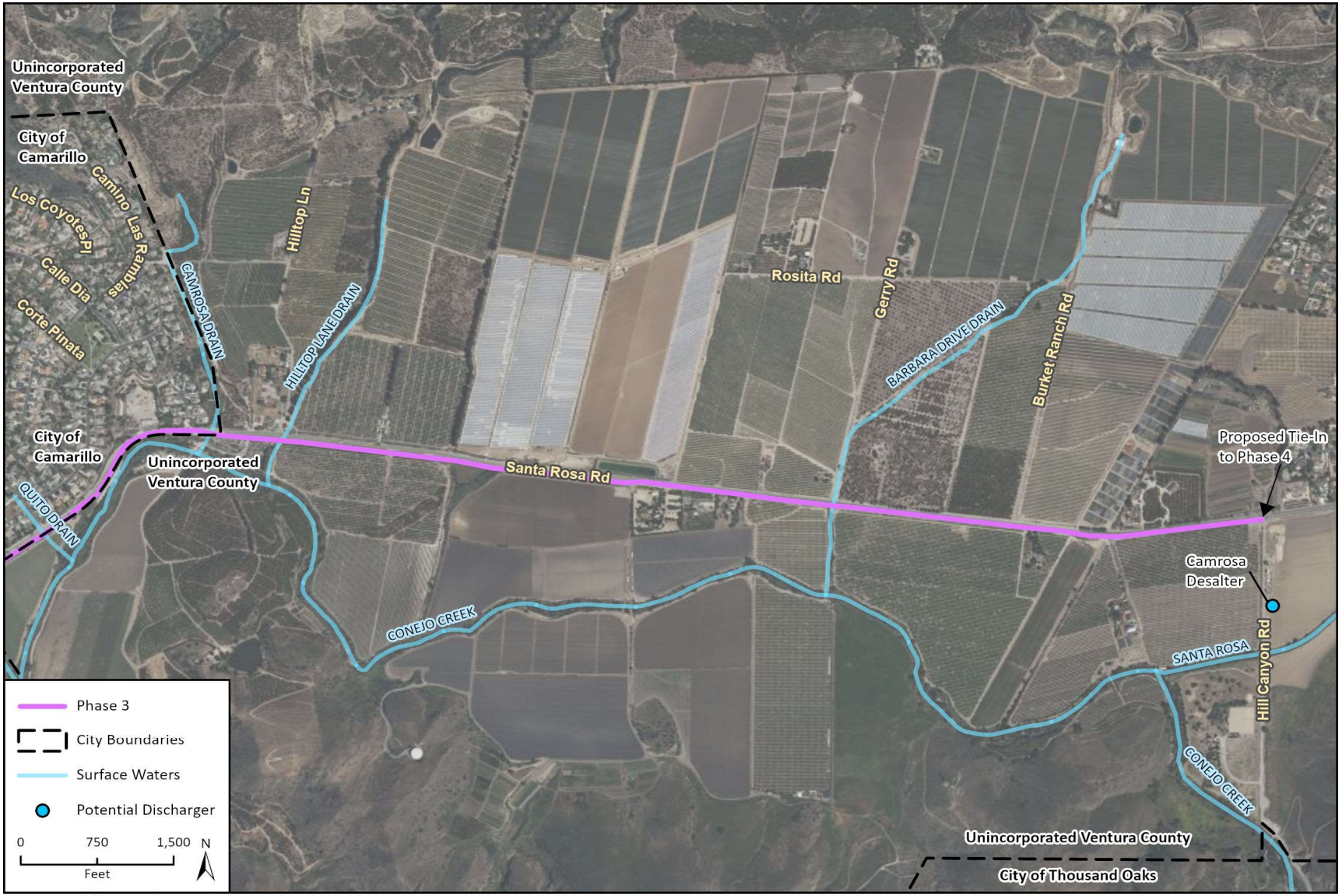
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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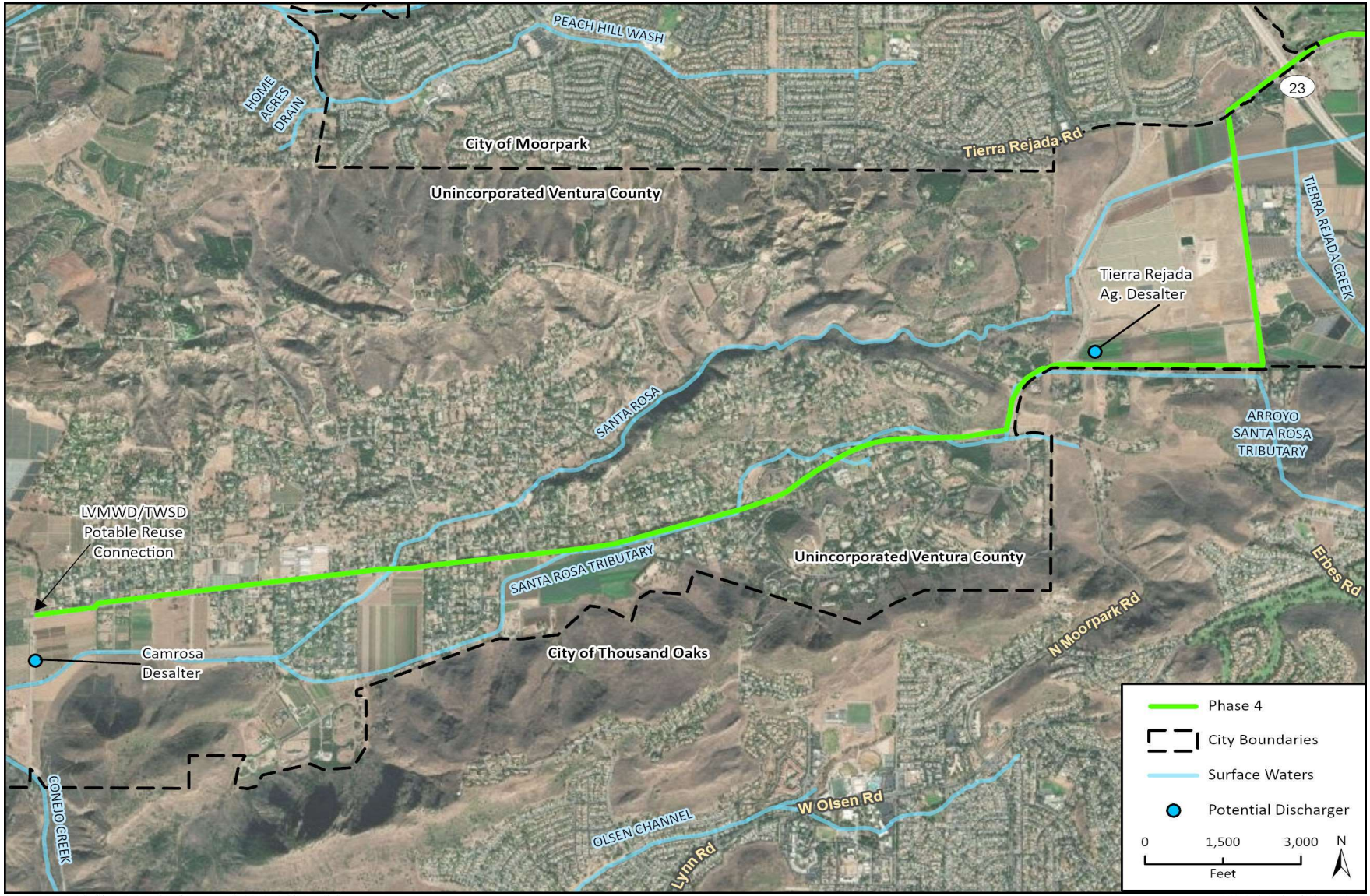
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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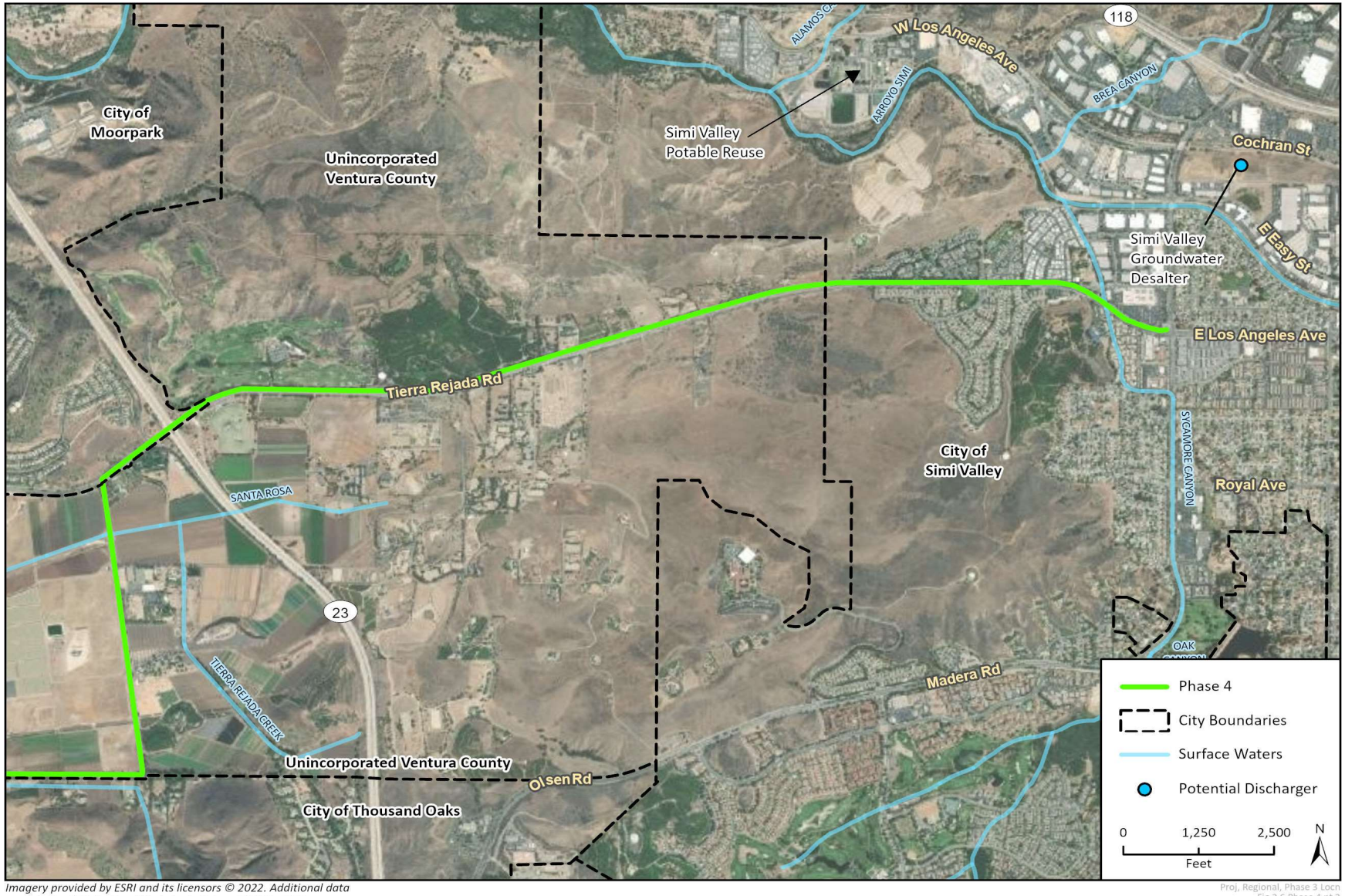
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

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December 8, 2022

Gabrieleño Band of Mission Indians – Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393
Covina, CA, 91723
Via Email: admin@gabrielenoindians.org

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Chairperson Salas,

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Sincerely,

Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

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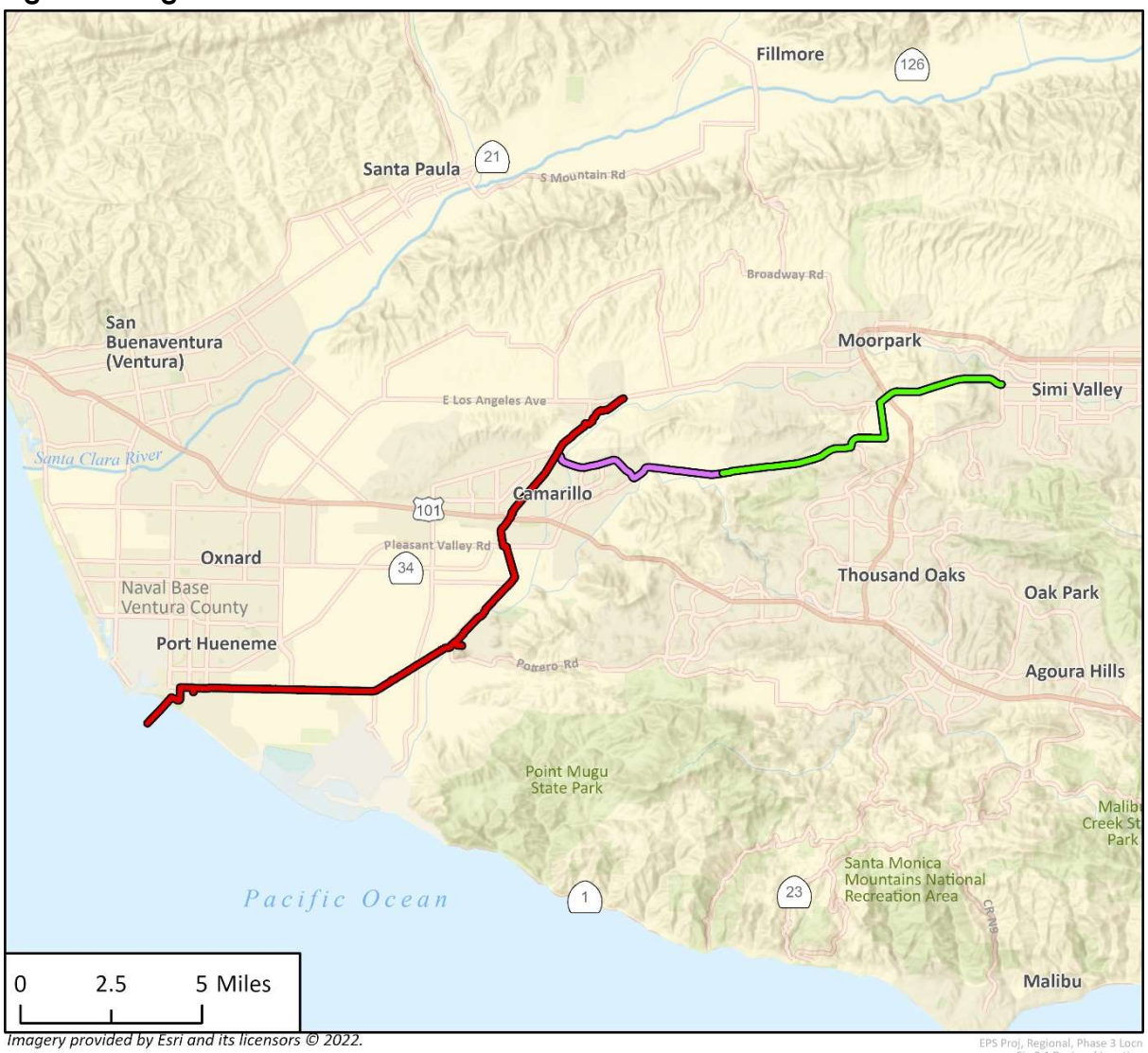


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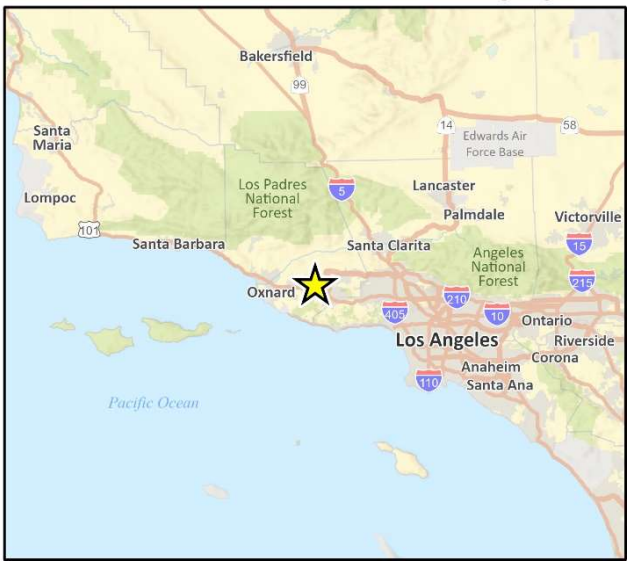
EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N



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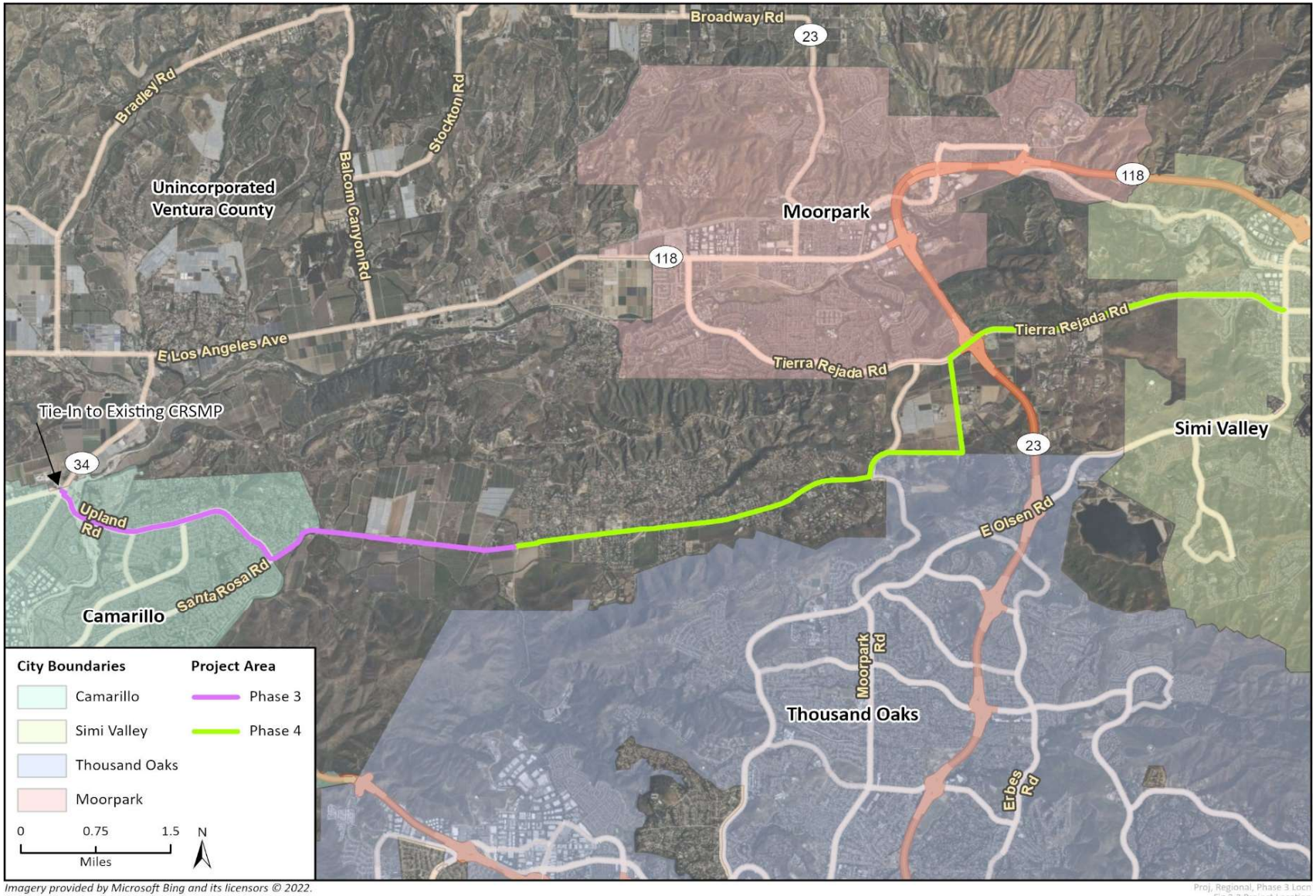


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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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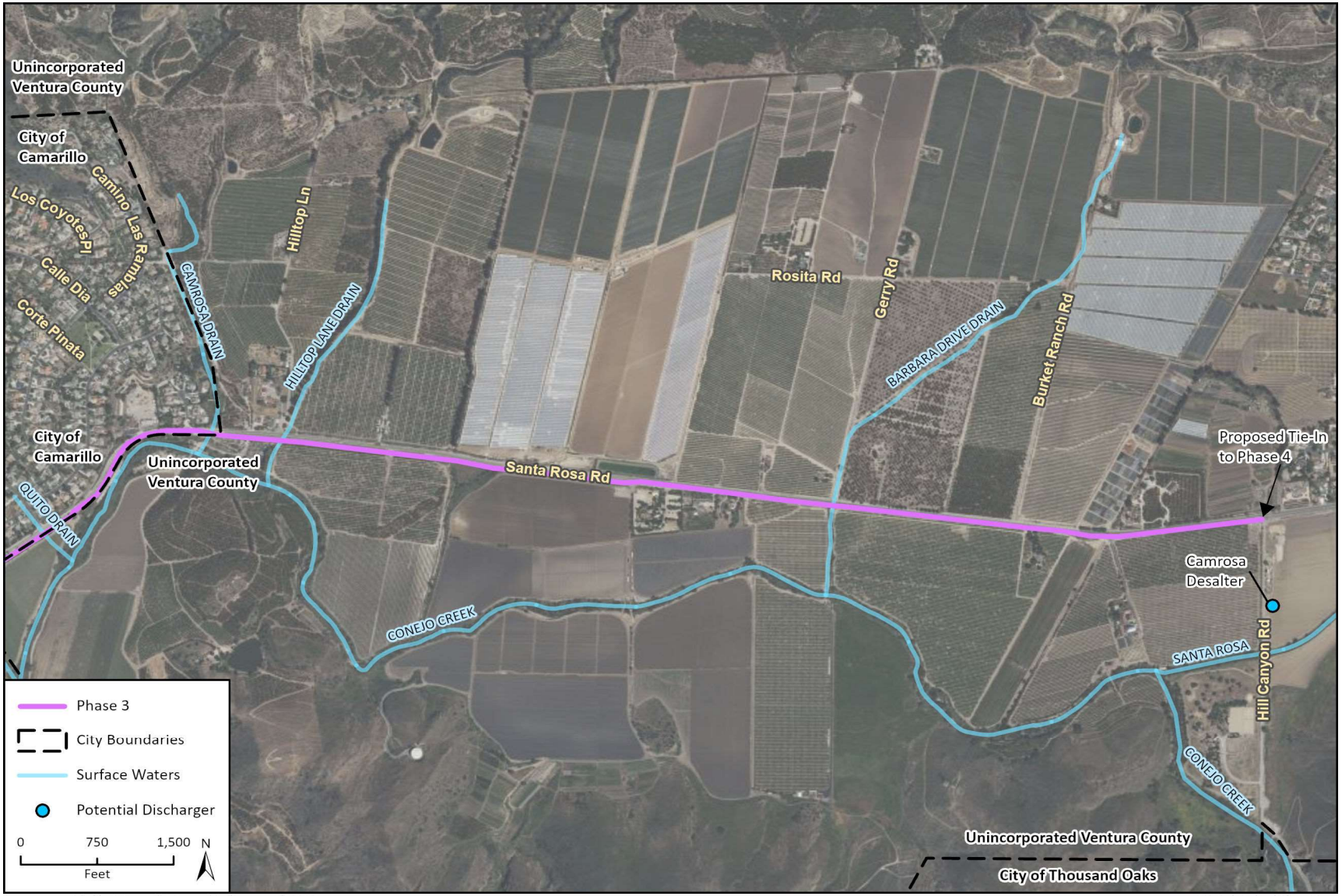
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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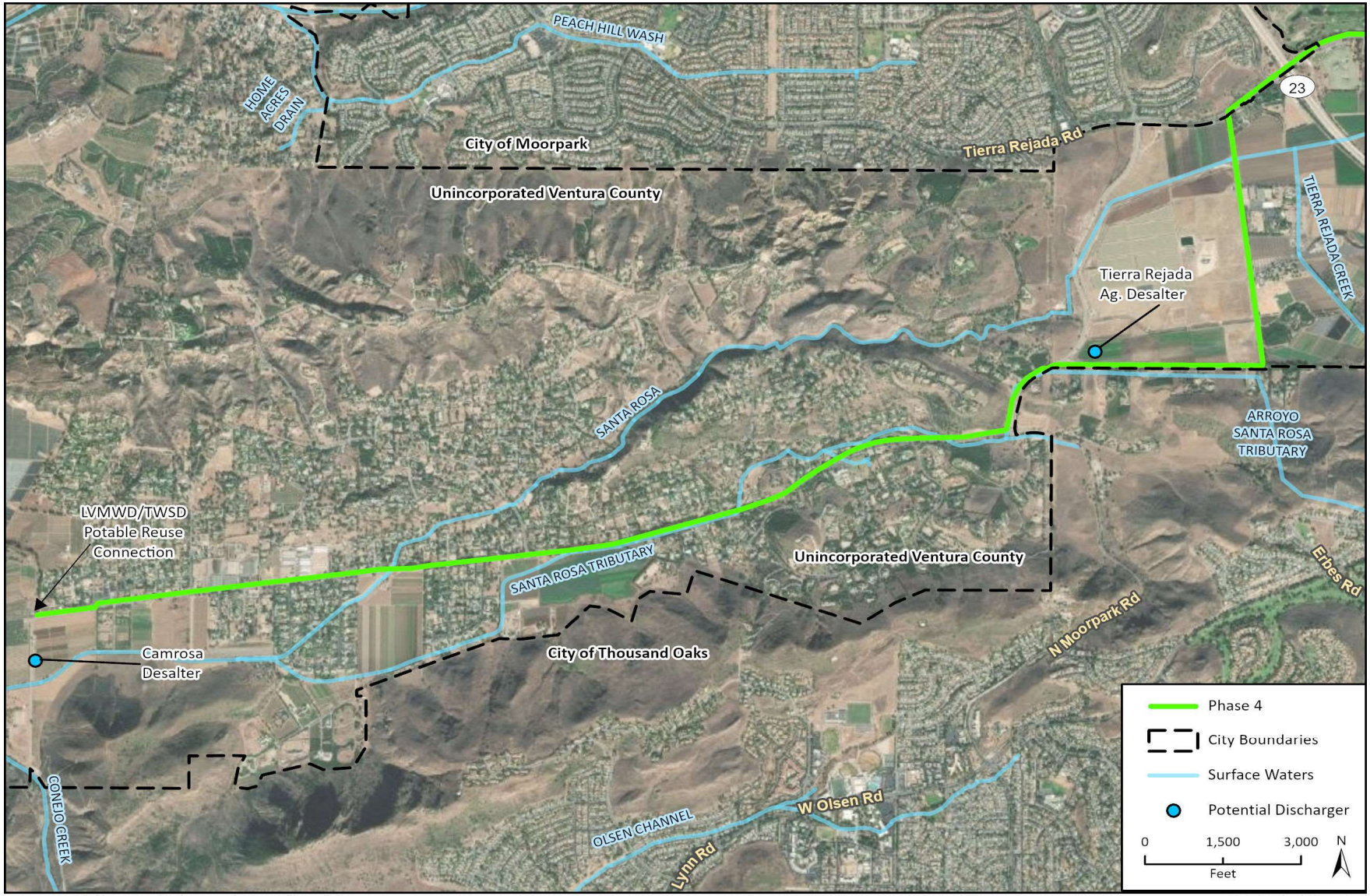
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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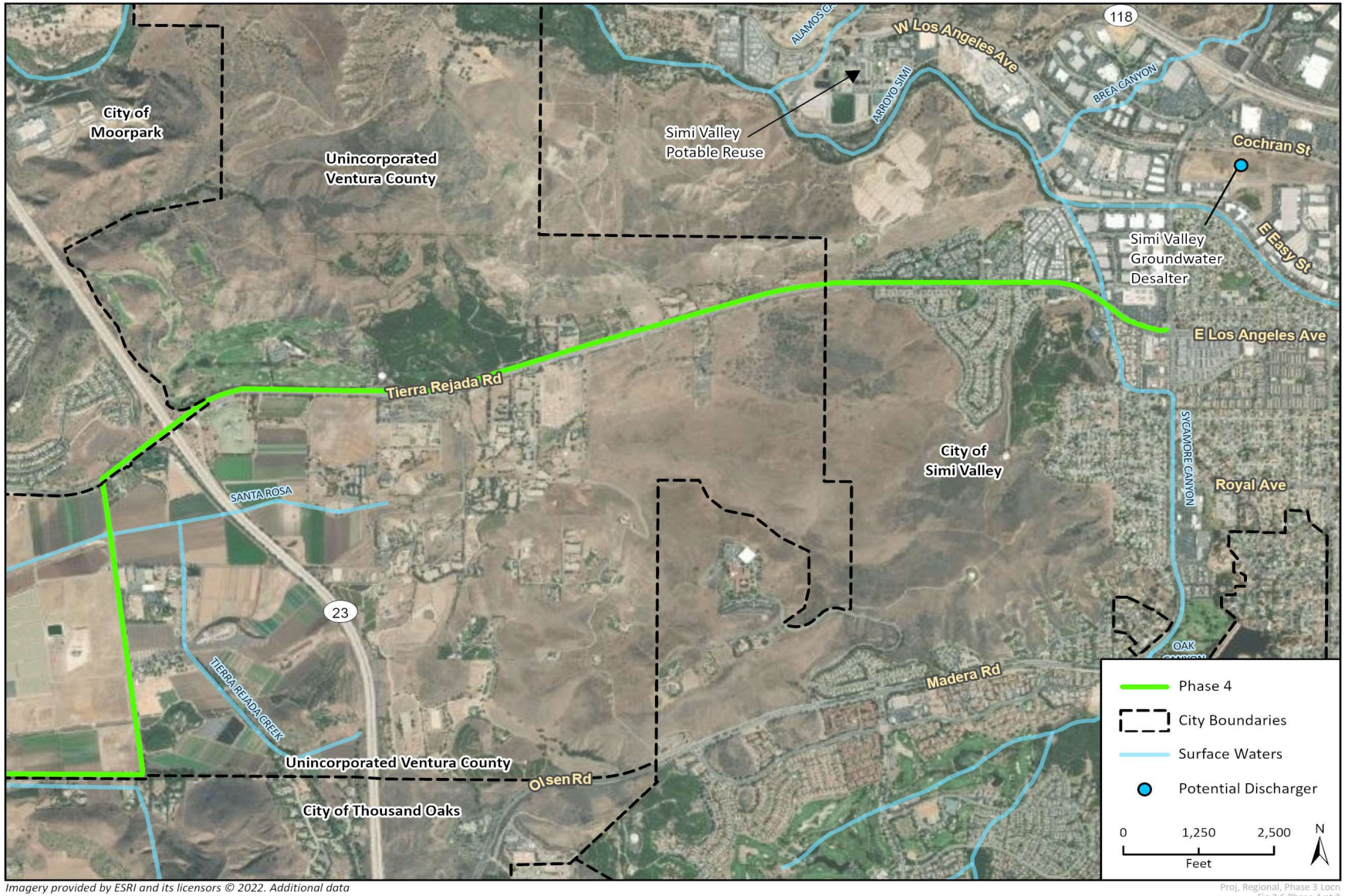
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

web site: www.calleguas.com

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December 8, 2022

Gabrielino-Tongva Tribe
Charles Alvarez, Chairman
23454 Vanowen Street
West Hills, CA, 91307
Via Email: roadkingcharles@aol.com

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Chairperson Alvarez,

The Calleguas Municipal Water District proposes the Calleguas Regional Salinity Management Pipeline (CRSMP) Phases 3 and 4 (proposed project), located in Ventura County, California. The CRSMP consists of a pipeline system to transport excess recycled water and brine concentrate generated within the watershed to an ocean outfall. The CRSMP currently extends approximately 22 miles from its upstream end in the Somis area near Camarillo to its downstream terminus at the ocean outfall in Port Hueneme. The proposed project would extend the CRSMP approximately 14 miles inland from the existing terminus, enabling connections to additional dischargers. The proposed project is subject to the California Environmental Quality Act.

The proposed project would install an underground pipeline. The Phases 3 and 4 pipeline alignments would traverse portions of Camarillo, Moorpark, Thousand Oaks, and Simi Valley, as well as unincorporated Ventura County. Pipeline alignments would mostly be located within the public right-of-way within paved roads and dirt shoulders. A portion of the alignment would extend under private property at the northeast corner of the intersection of Las Posas Road and Upland Road, which is currently developed for agricultural production. Roadways along the project alignments include Upland Road, Santa Rosa Road, Moorpark Road, Read Road, Sunset Valley Road, and Tierra Rejada Road. See attached project location maps. The majority of the pipeline would be installed via conventional open-cut trench construction methods. Trenchless construction methods would be used to cross below existing drainage channels. Trenchless construction methods would also be used to cross Somis Road, Santa Rosa Road, and busy intersections to minimize traffic impacts.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

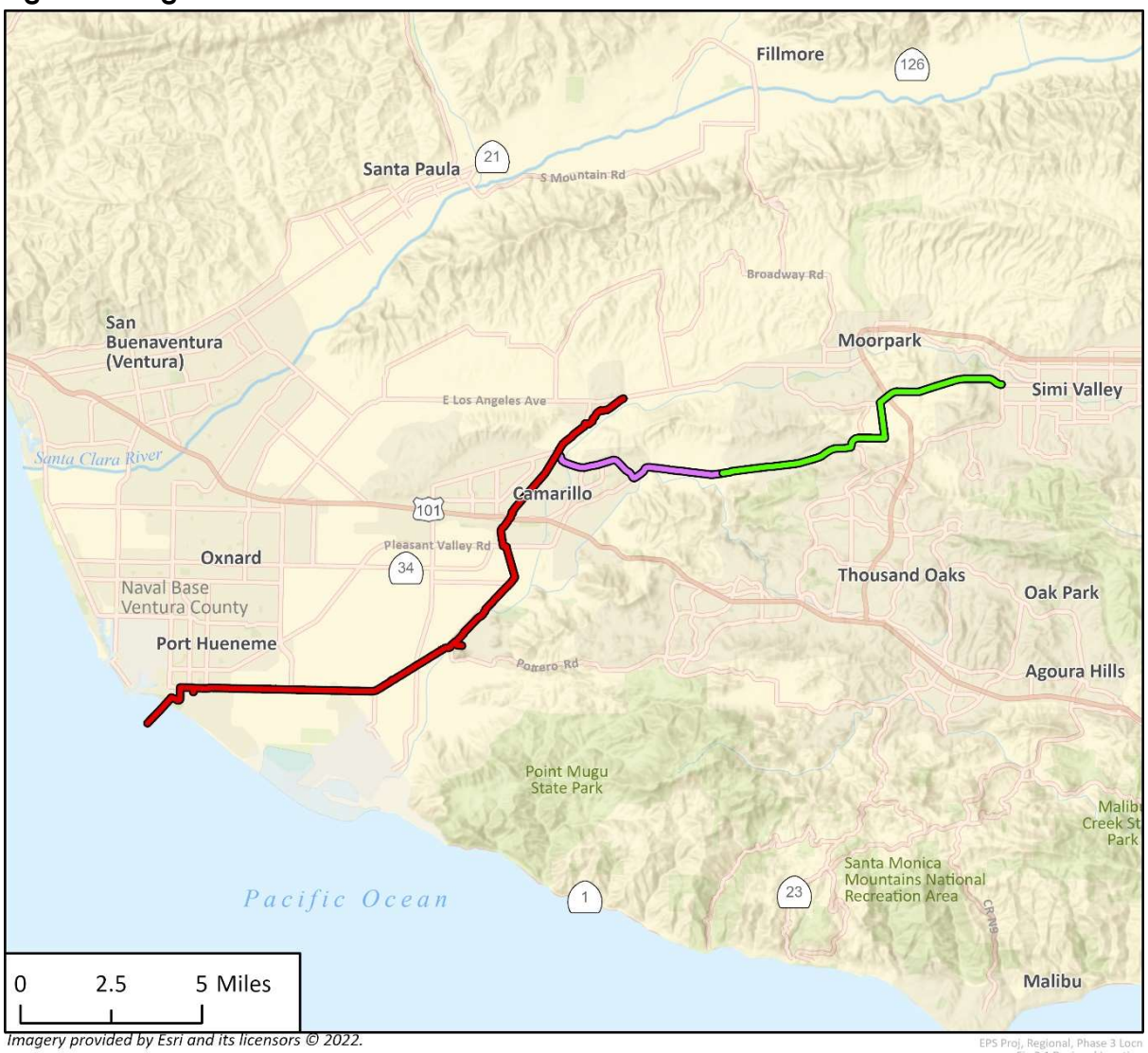
Your tribe's input is important to the Calleguas Municipal Water District planning process. Under AB 52, you have 30 days from receipt of this notification to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (805) 579-7194, or via e-mail at jlancaster@calleguas.com. Thank you for your assistance.

Sincerely,

Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

Enclosure: Project Location Maps

**Figure 1 Regional Location**

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EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N

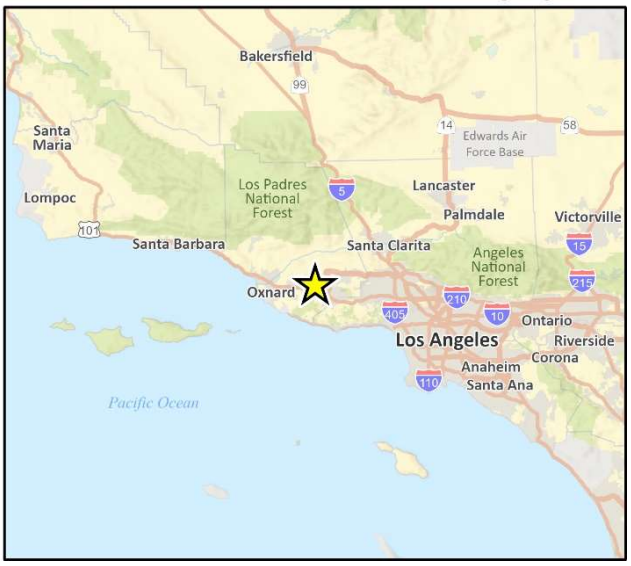
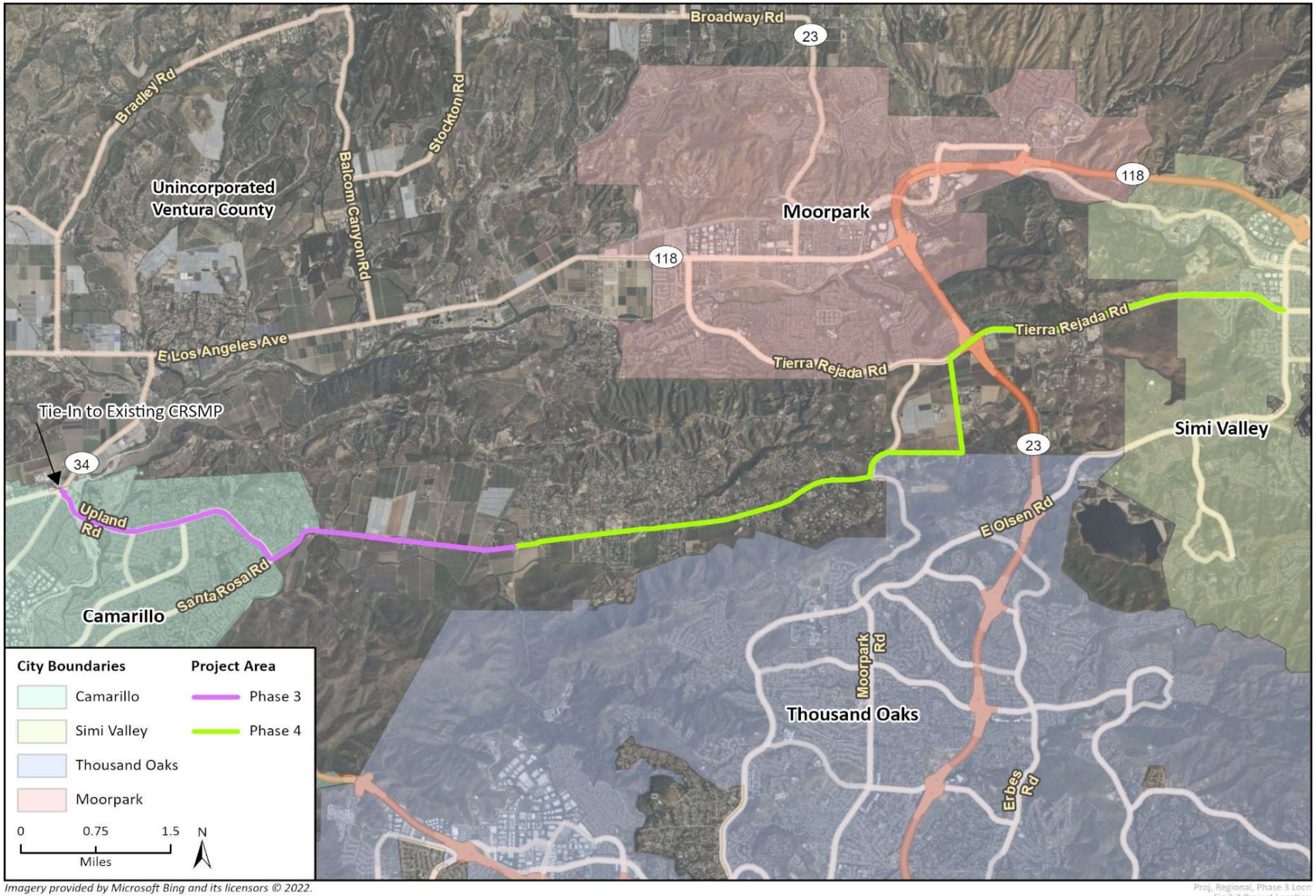


**Figure 2 Project Site Location**

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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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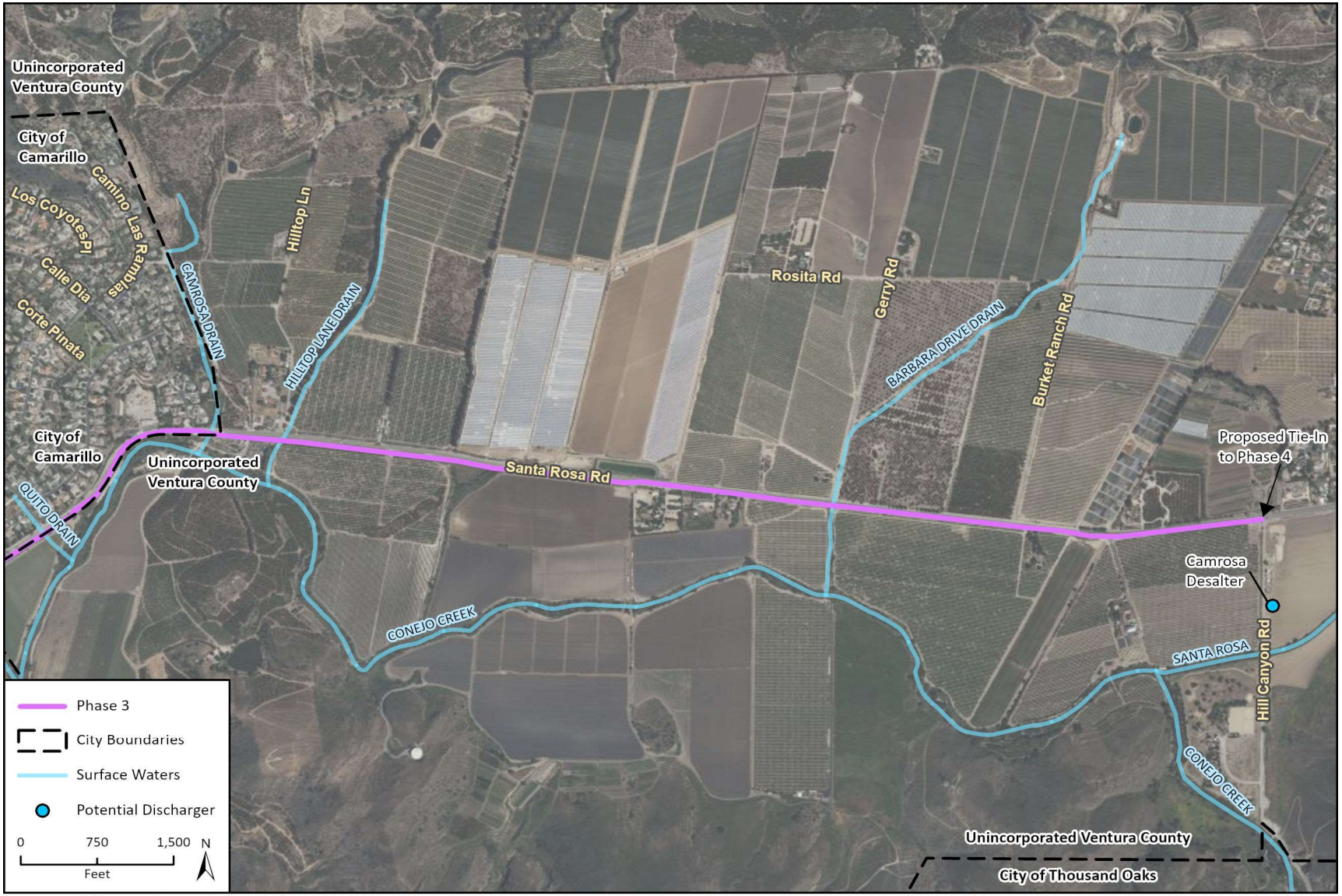
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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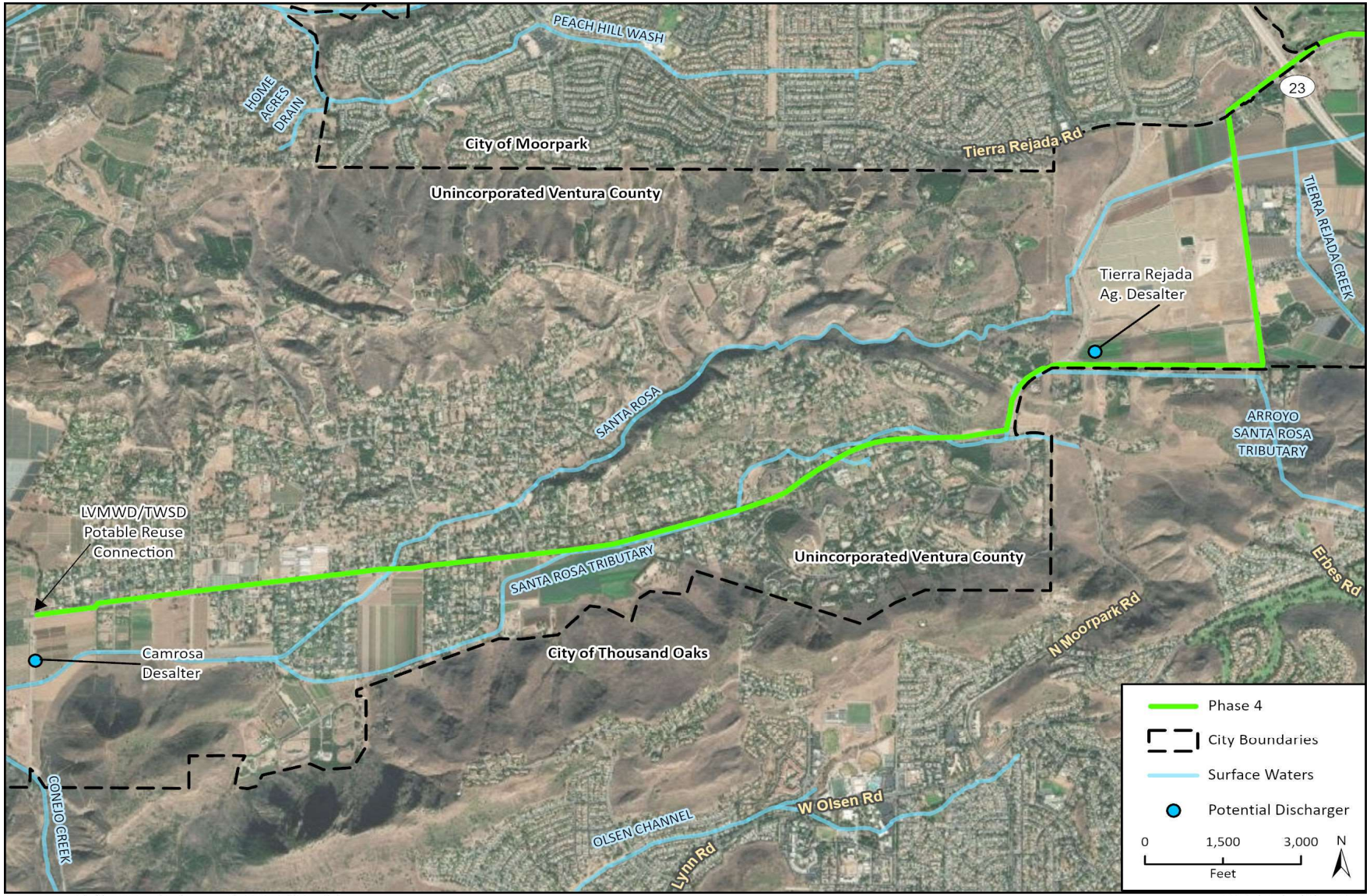
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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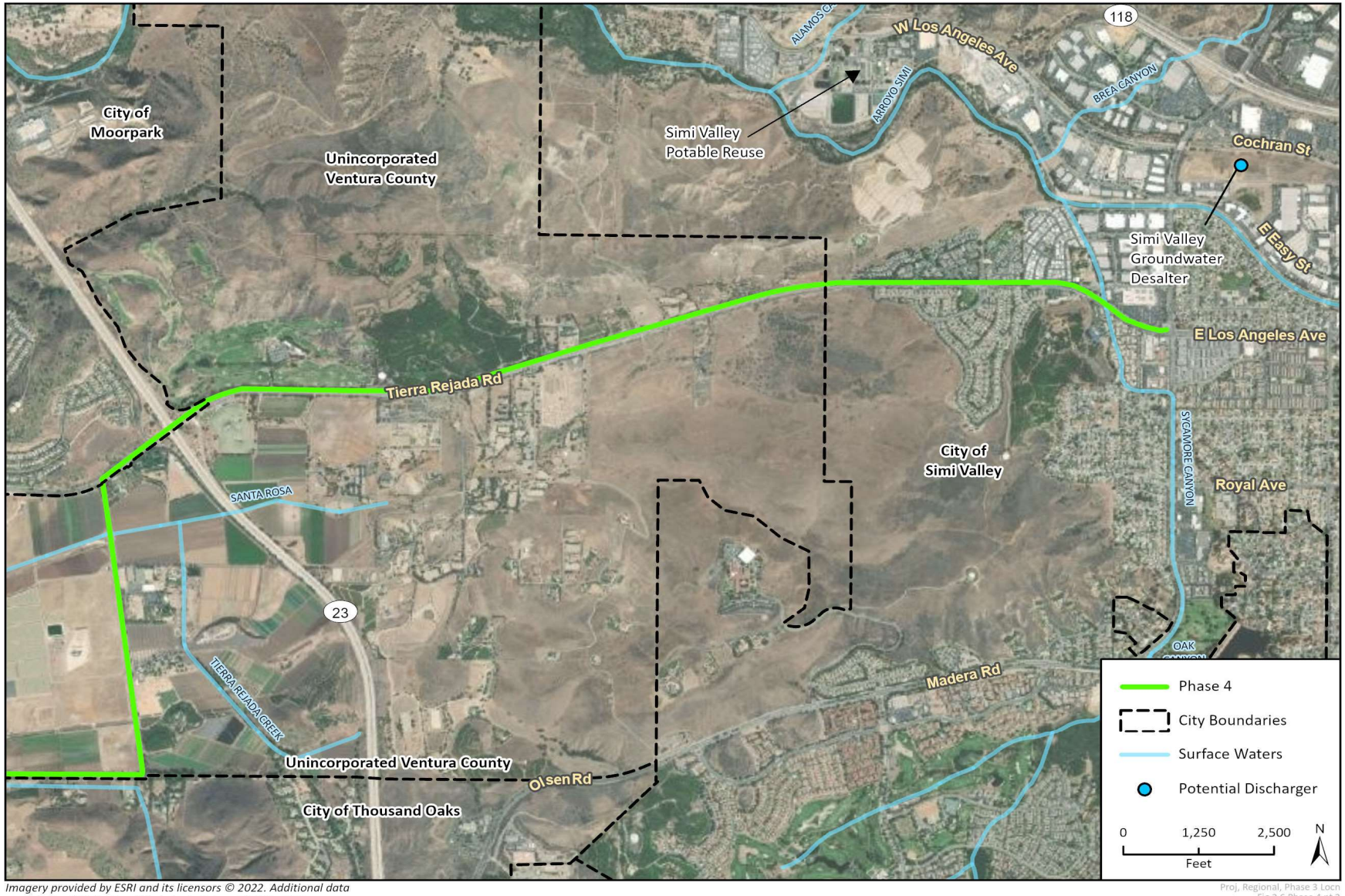
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2


web site: www.calleguas.com

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December 8, 2022

Gabrielino Tongva Indians of California Tribal Council
Christina Conley, Tribal Consultant and Administrator
P.O. Box 941078
Simi Valley, CA 93094
Via Email: christina.marsden@alumni.usc.edu

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Tribal Consultant and Administrator Conley,

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Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

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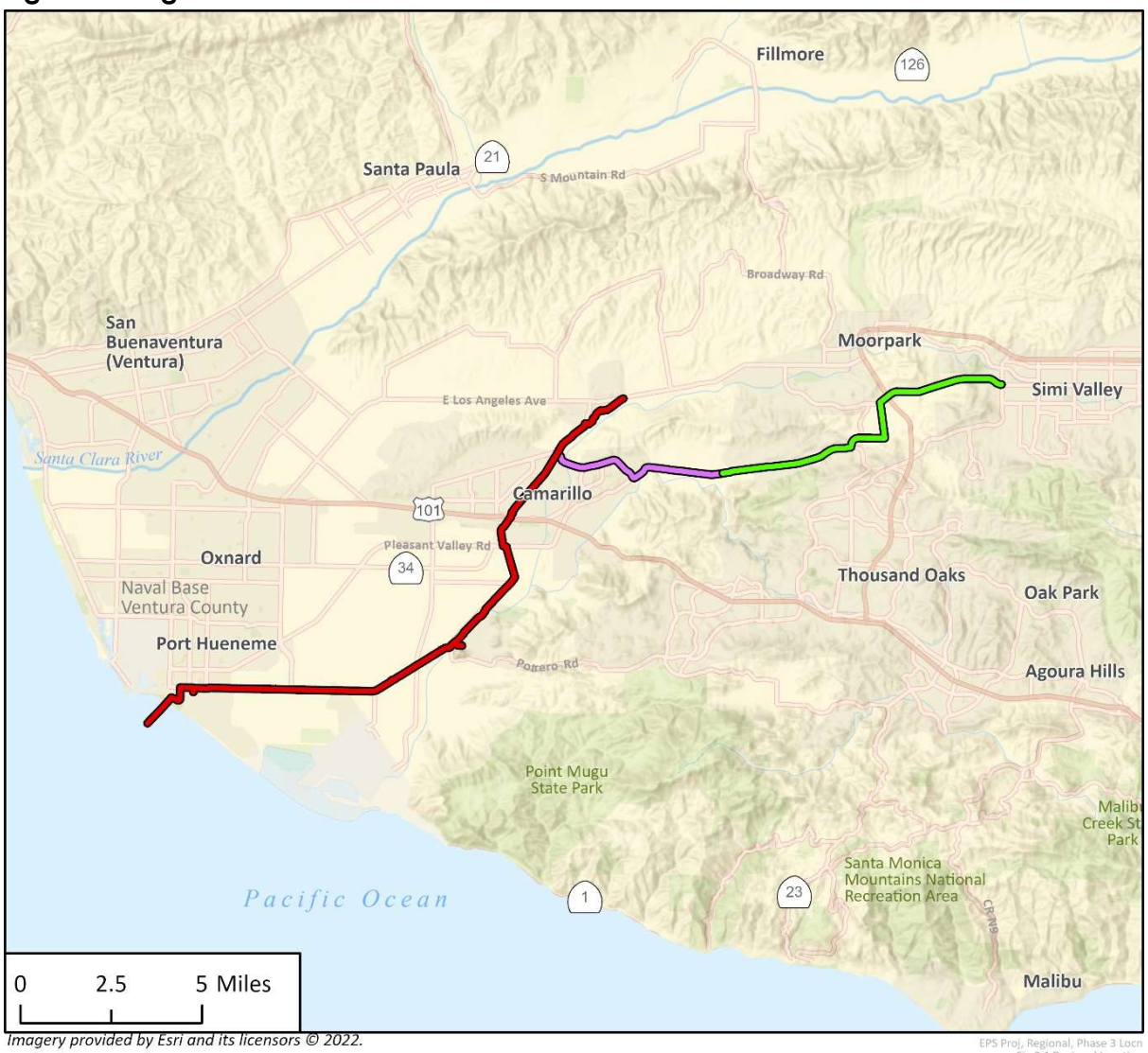
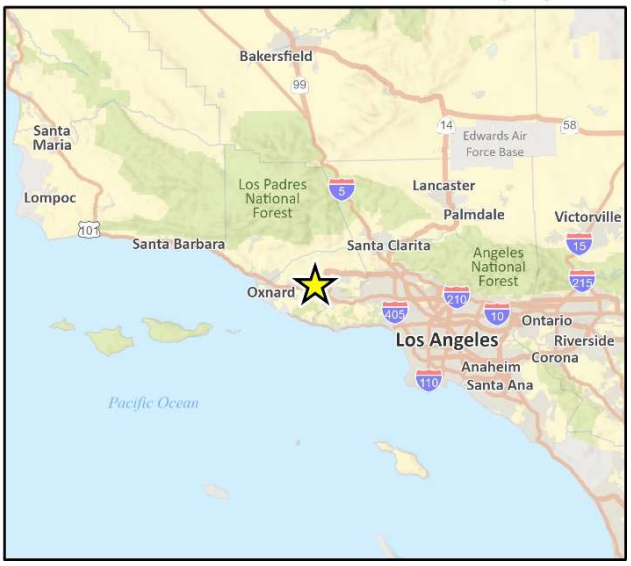



*Imagery provided by Esri and its licensors © 2022.*

EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N



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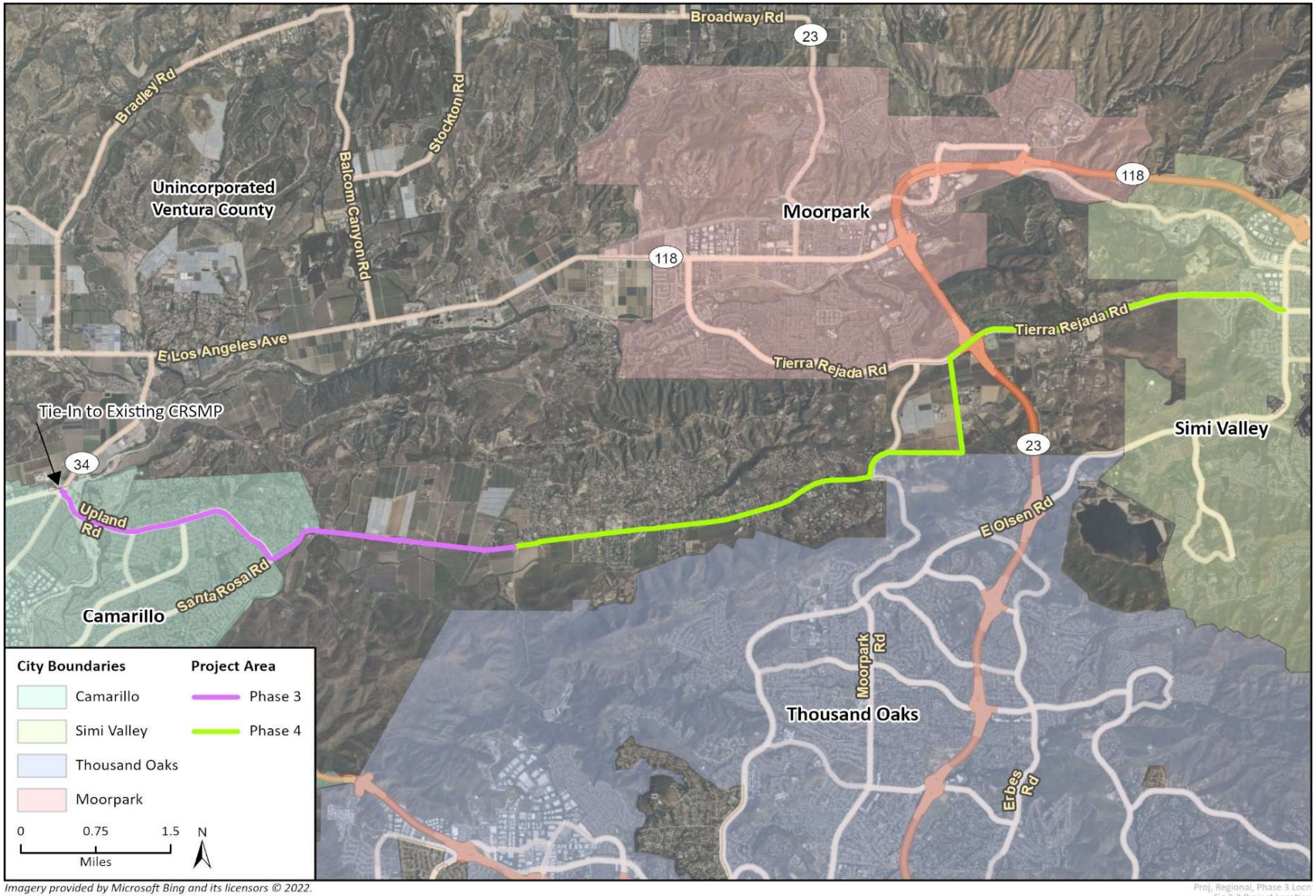


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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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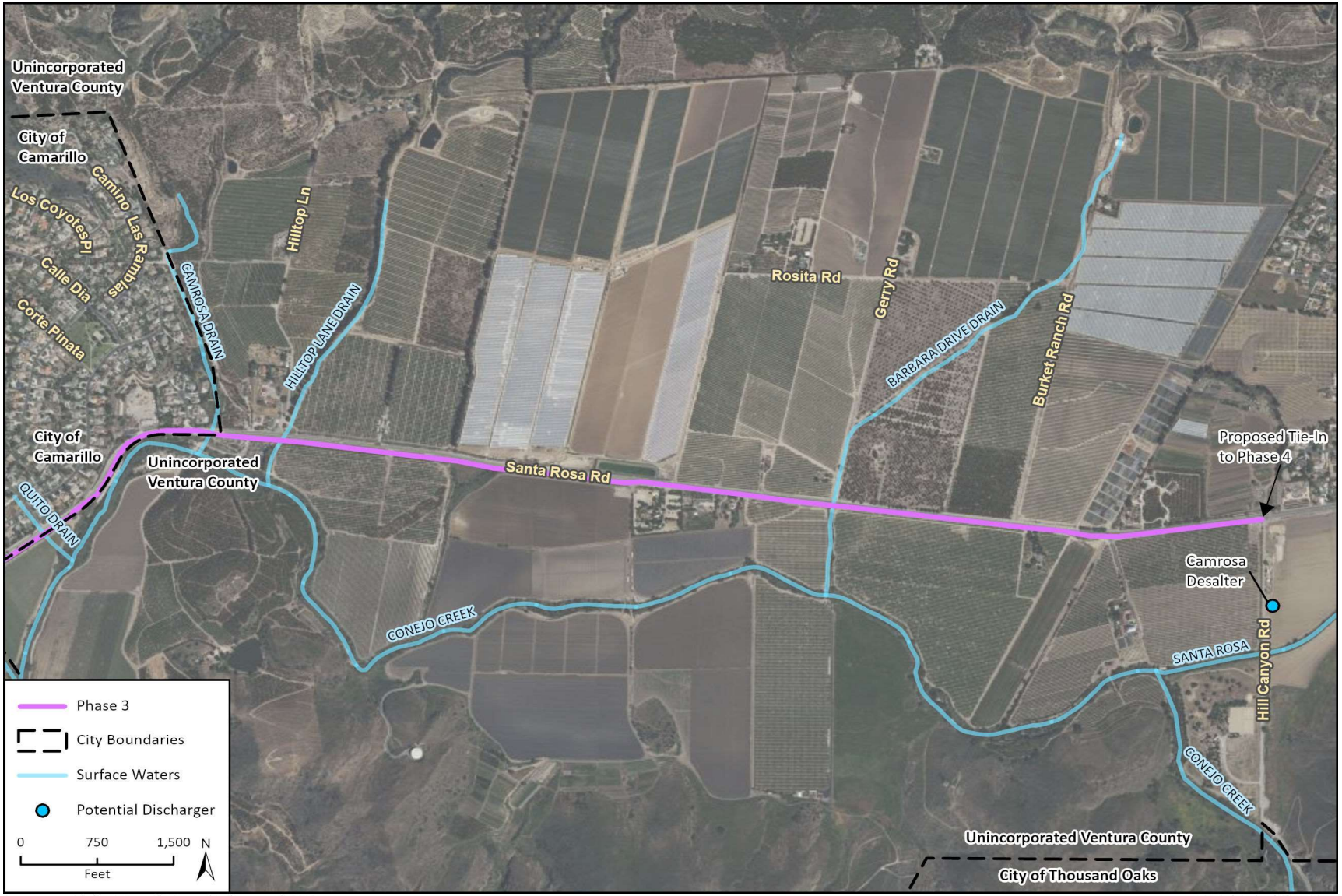
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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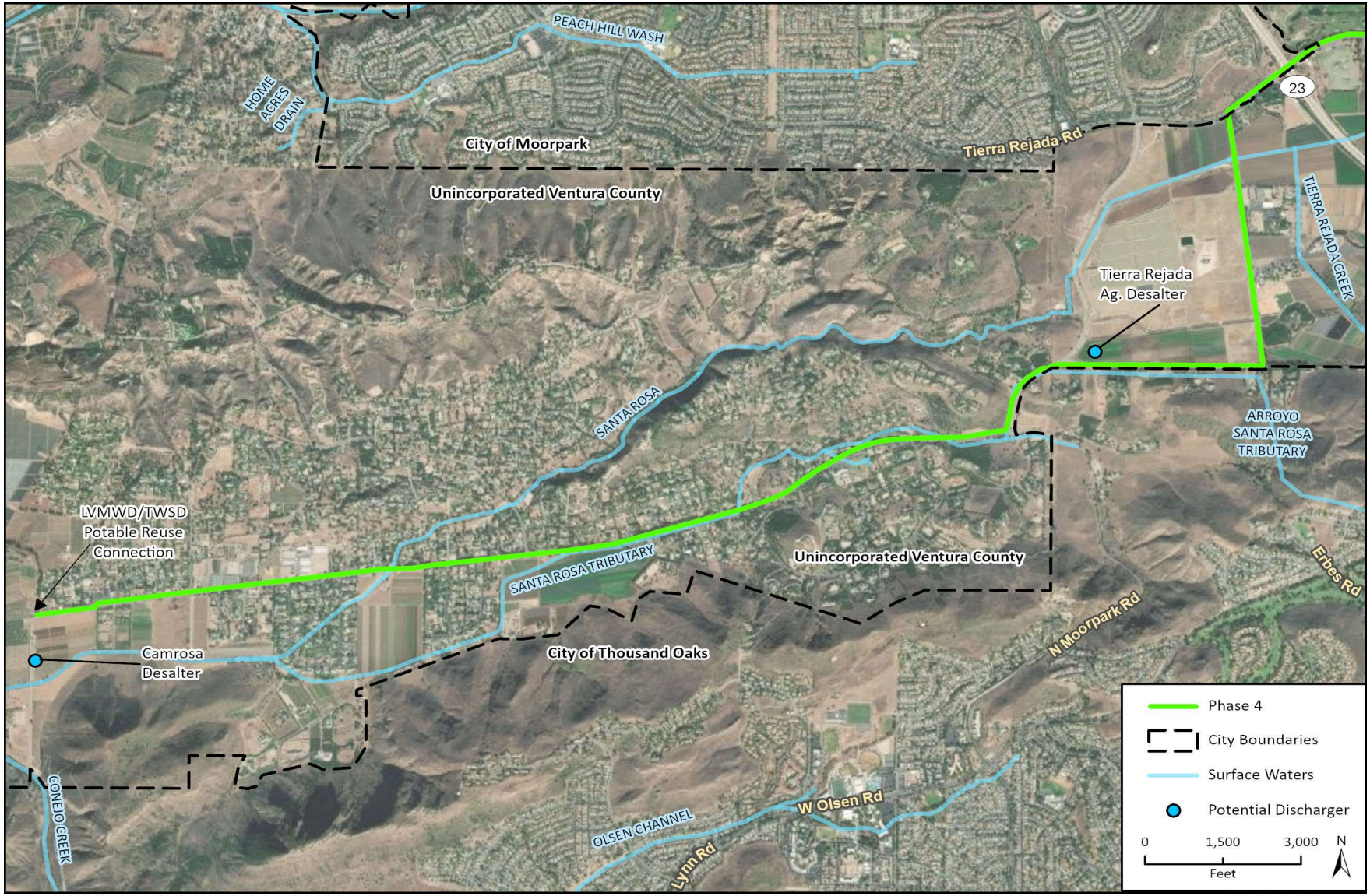
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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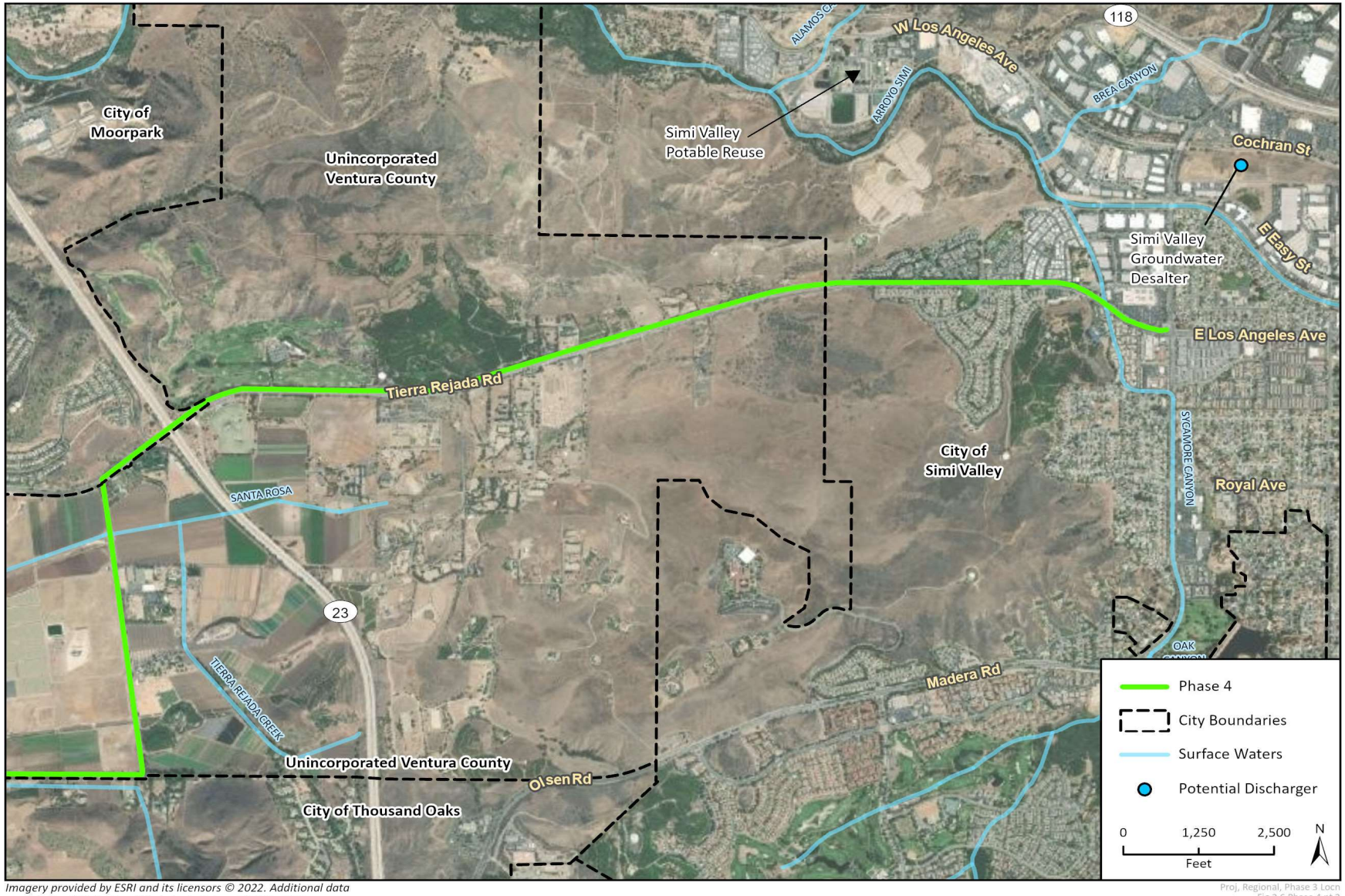
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

web site: www.calleguas.com

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December 8, 2022

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490
Bellflower, CA 90707
Via Email: gtongva@gmail.com

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Chairperson Dorame,

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Sincerely,

Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

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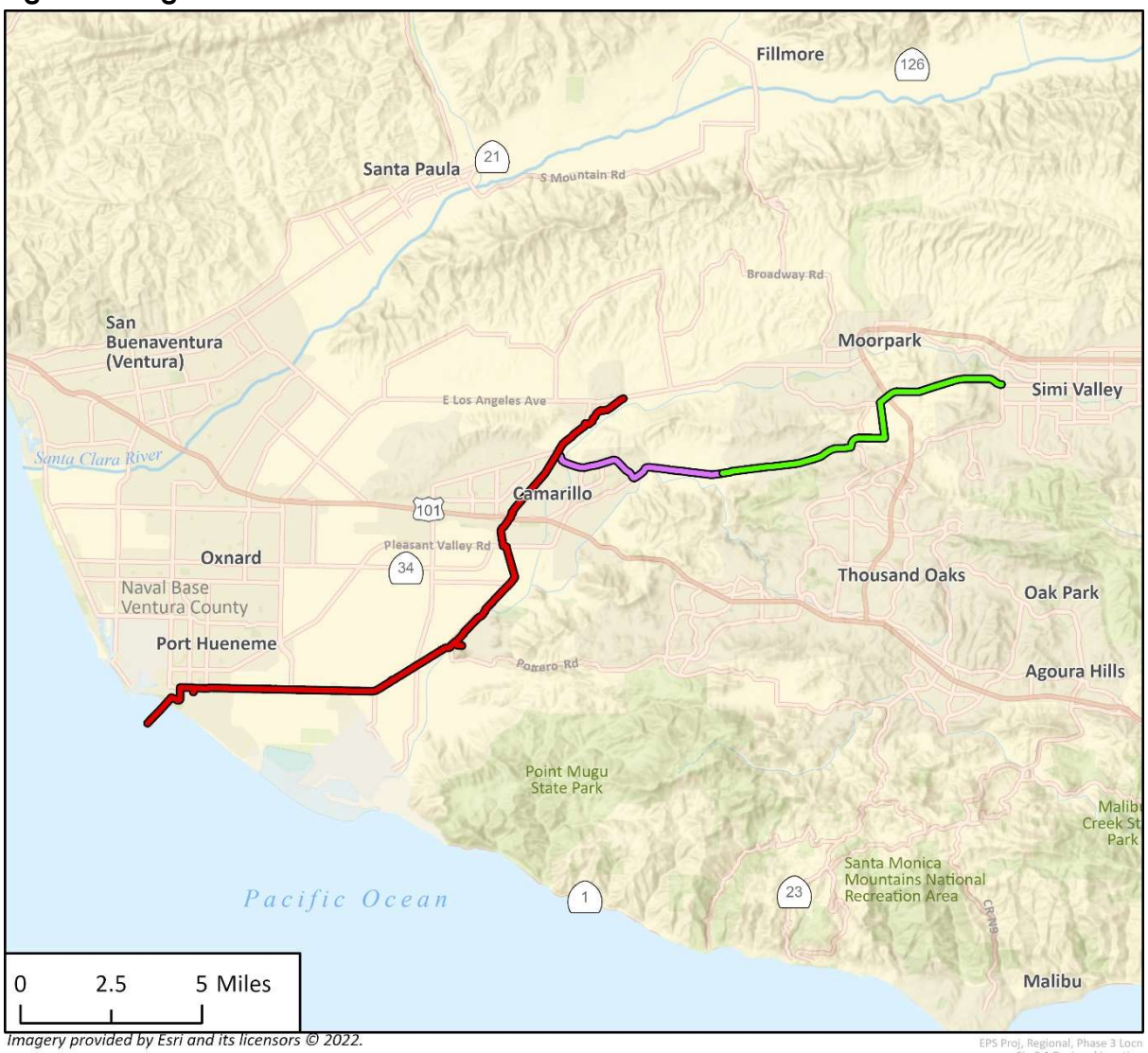



*Imagery provided by Esri and its licensors © 2022.*

EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N

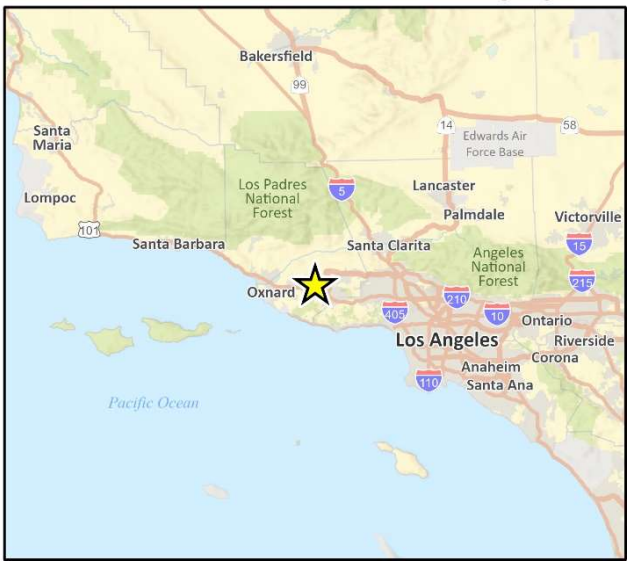
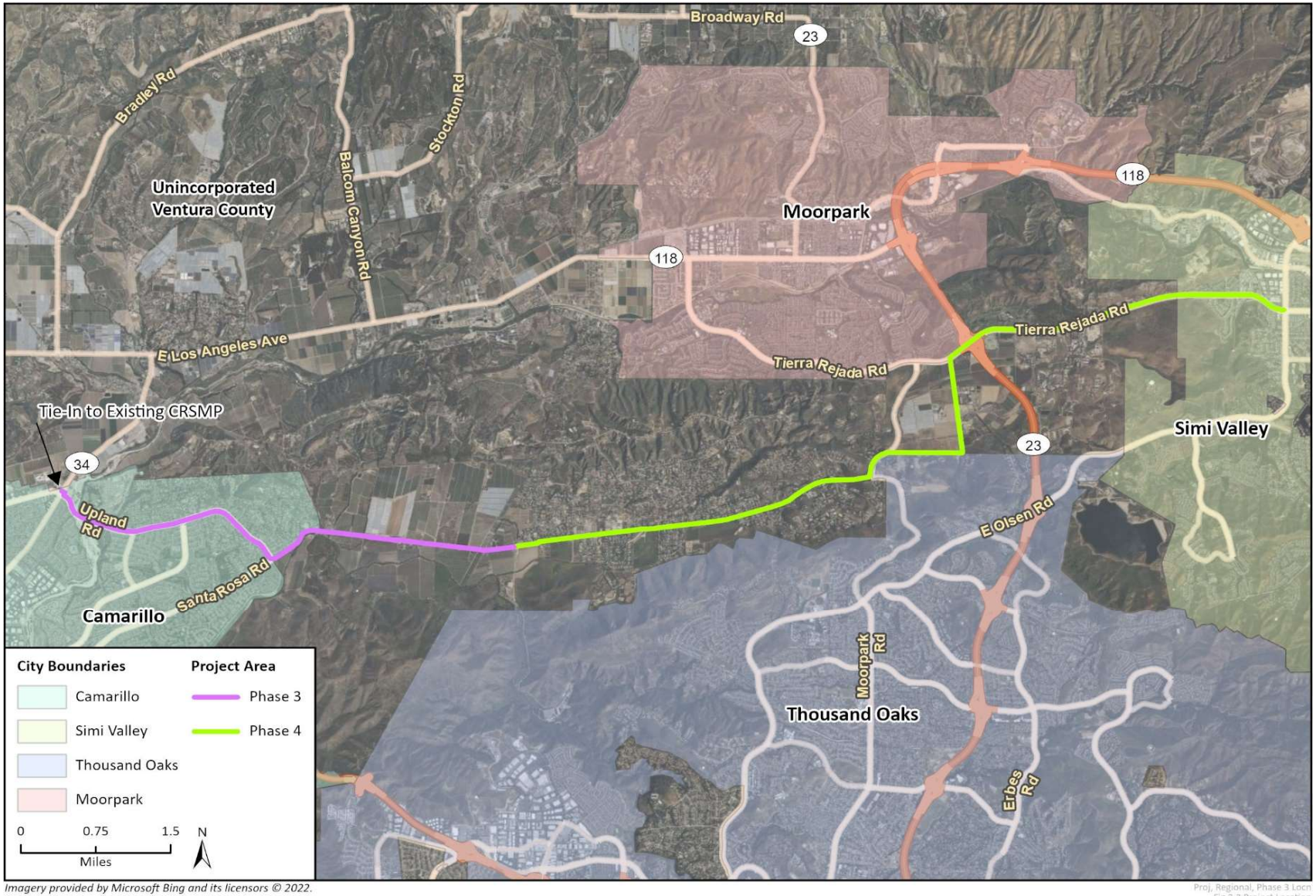


**Figure 2 Project Site Location**

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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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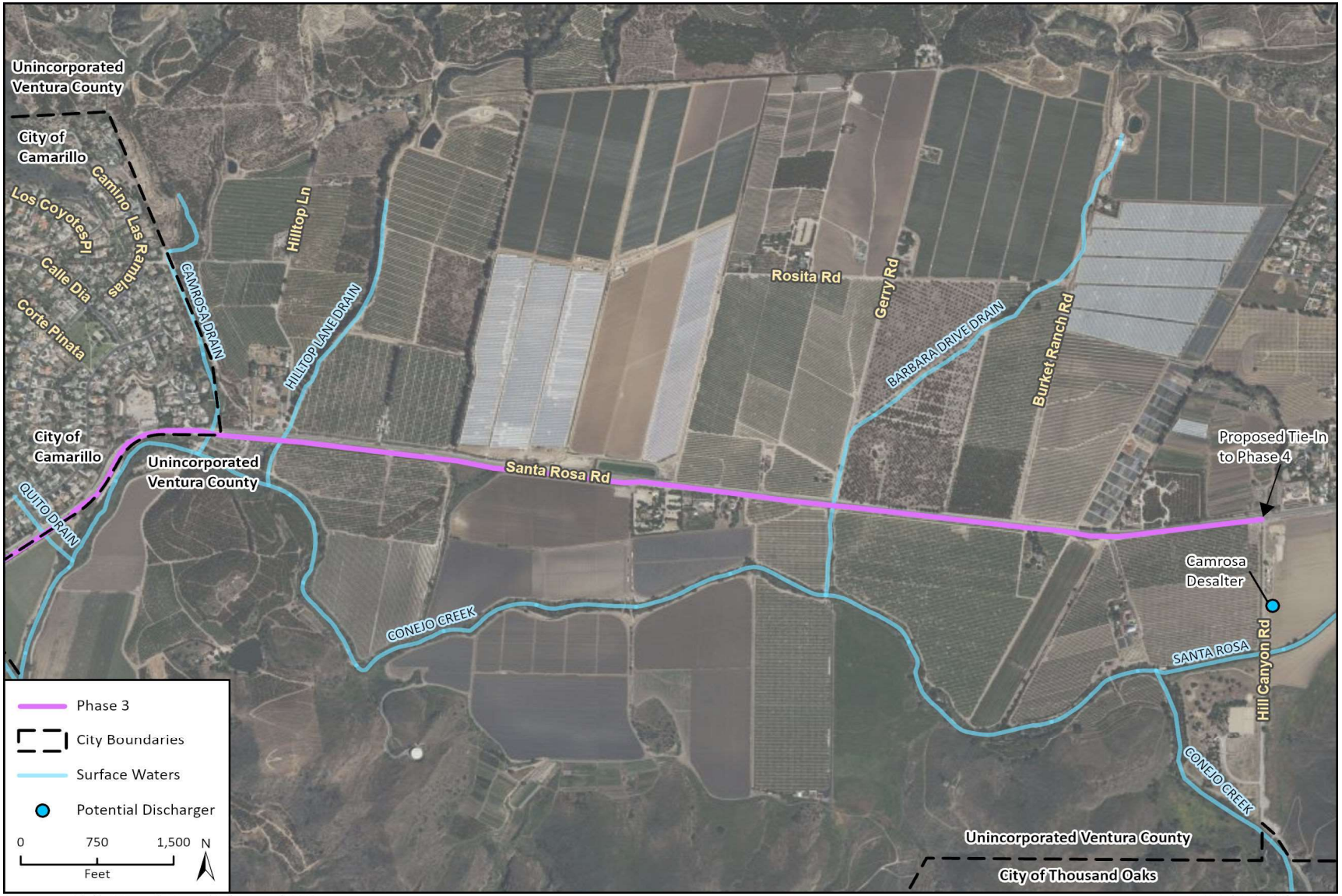
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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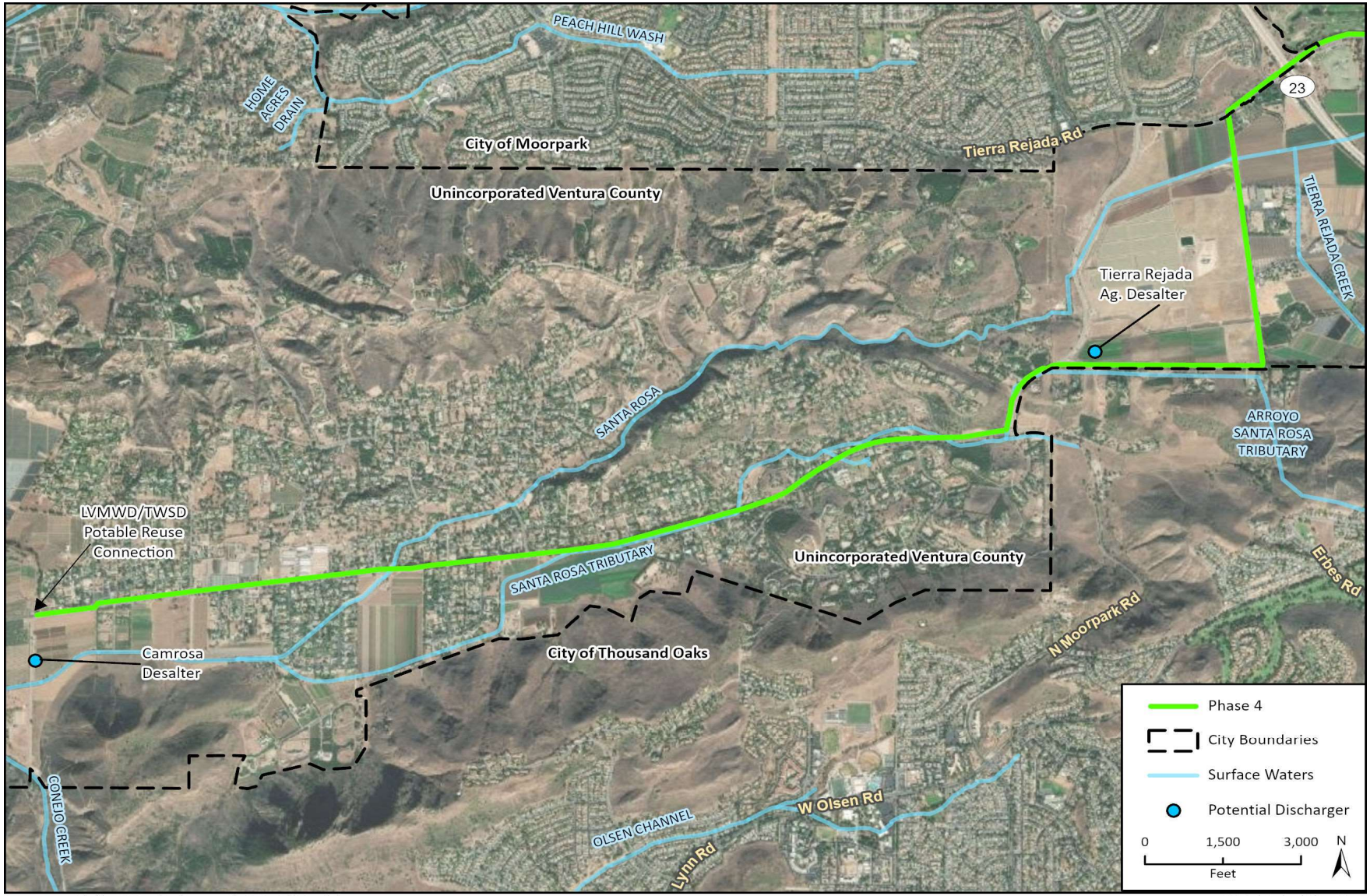
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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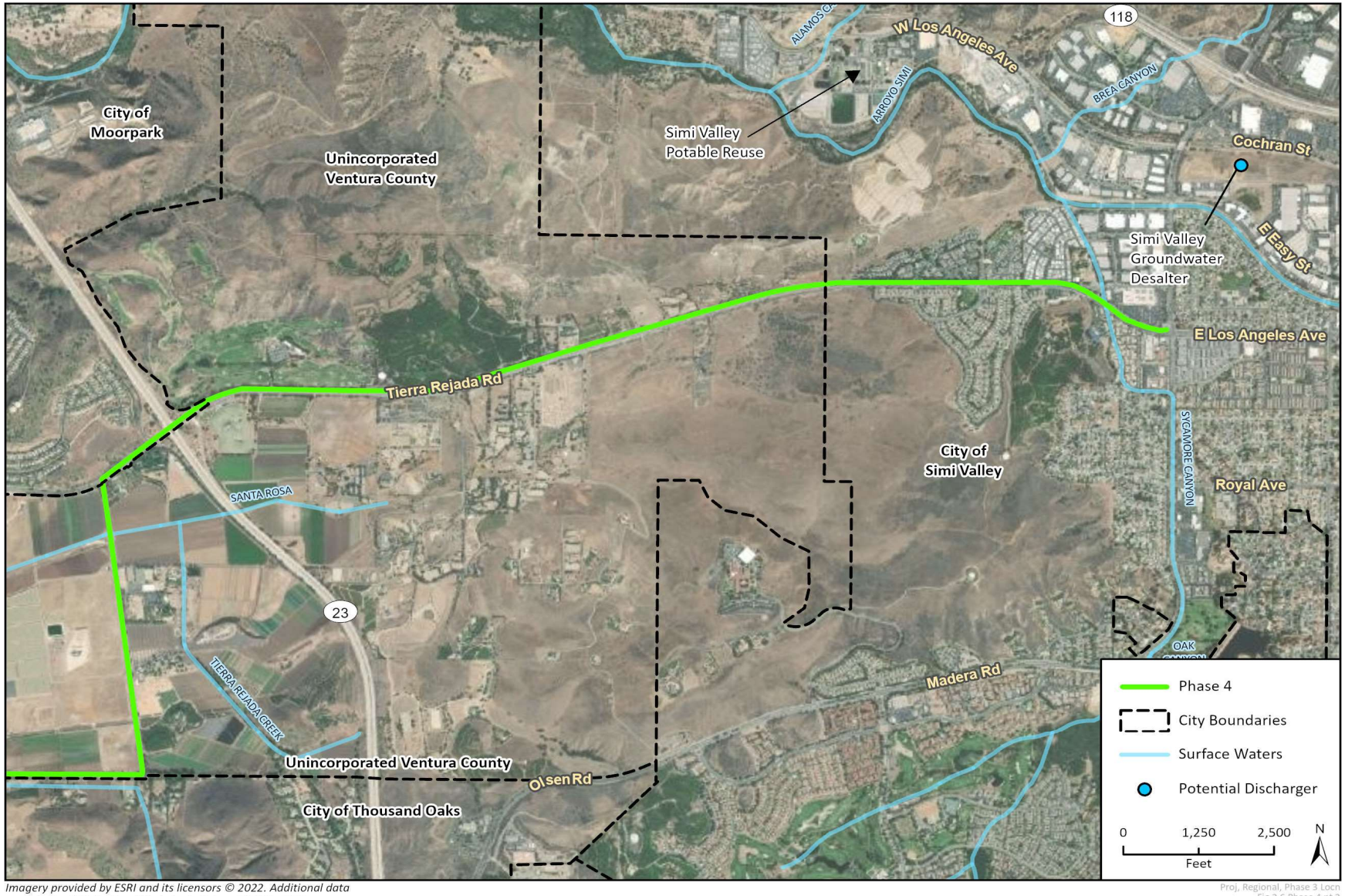
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

web site: www.calleguas.com

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December 8, 2022

Gabrielino/Tongva Nation
Sandonne Goad, Chairperson
106 ½ Judge John Aiso, St., #231
Los Angeles, CA, 90012
Via Email: sgoad@gabrielino-tongva.com

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Chairperson Goad,

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Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

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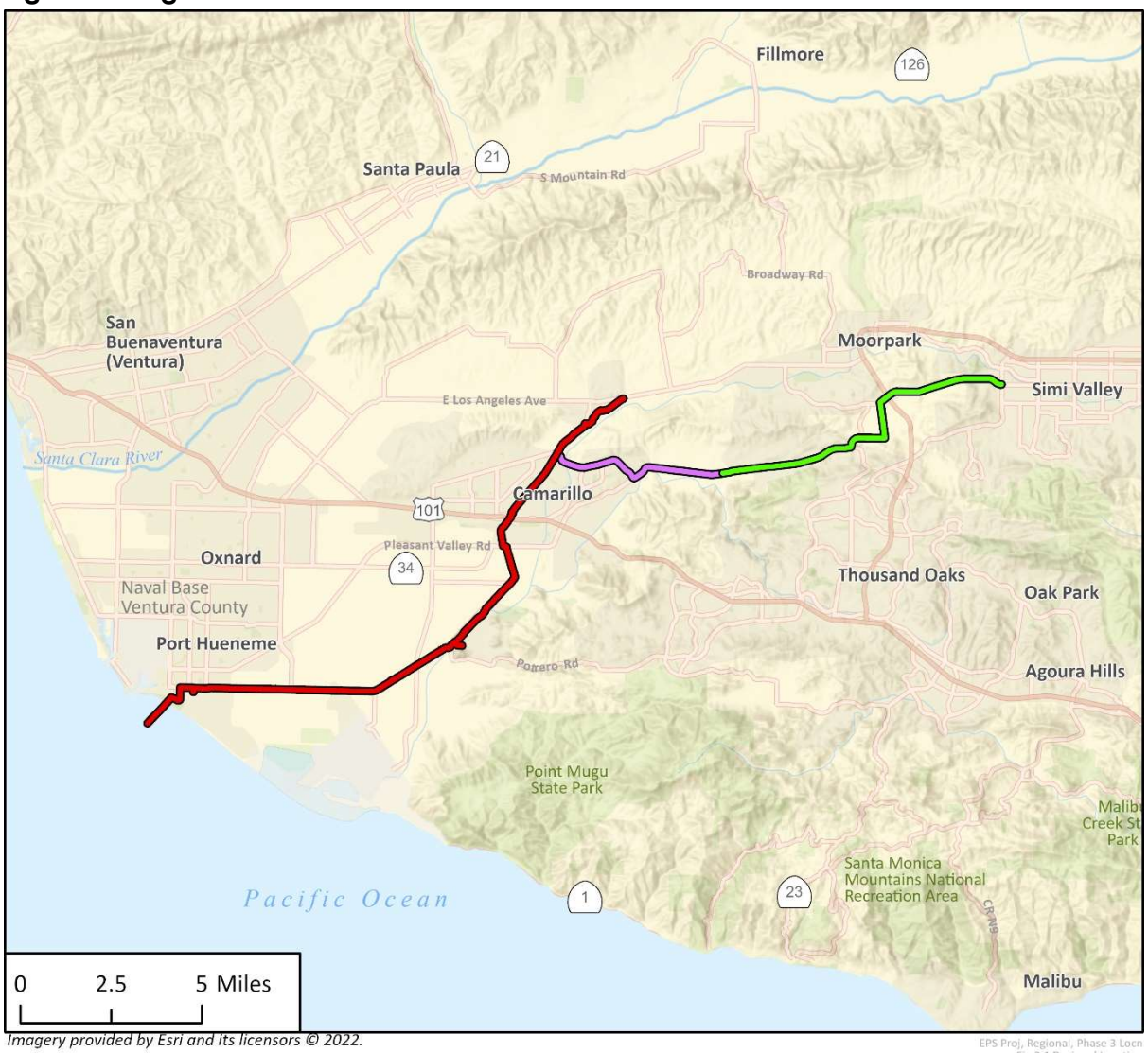


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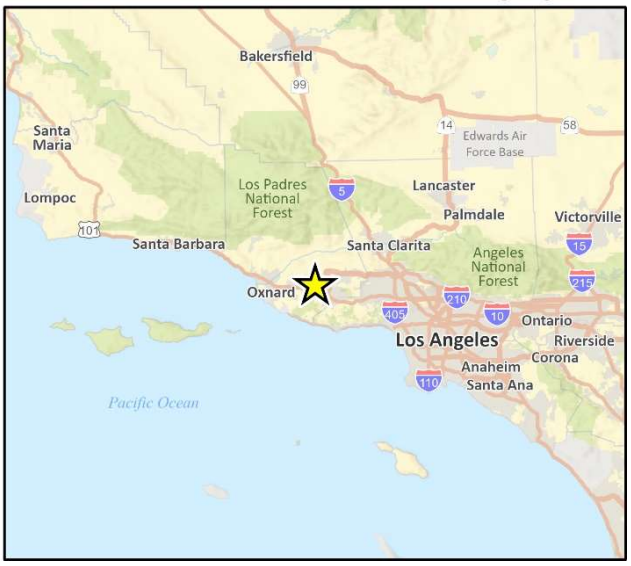
EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N



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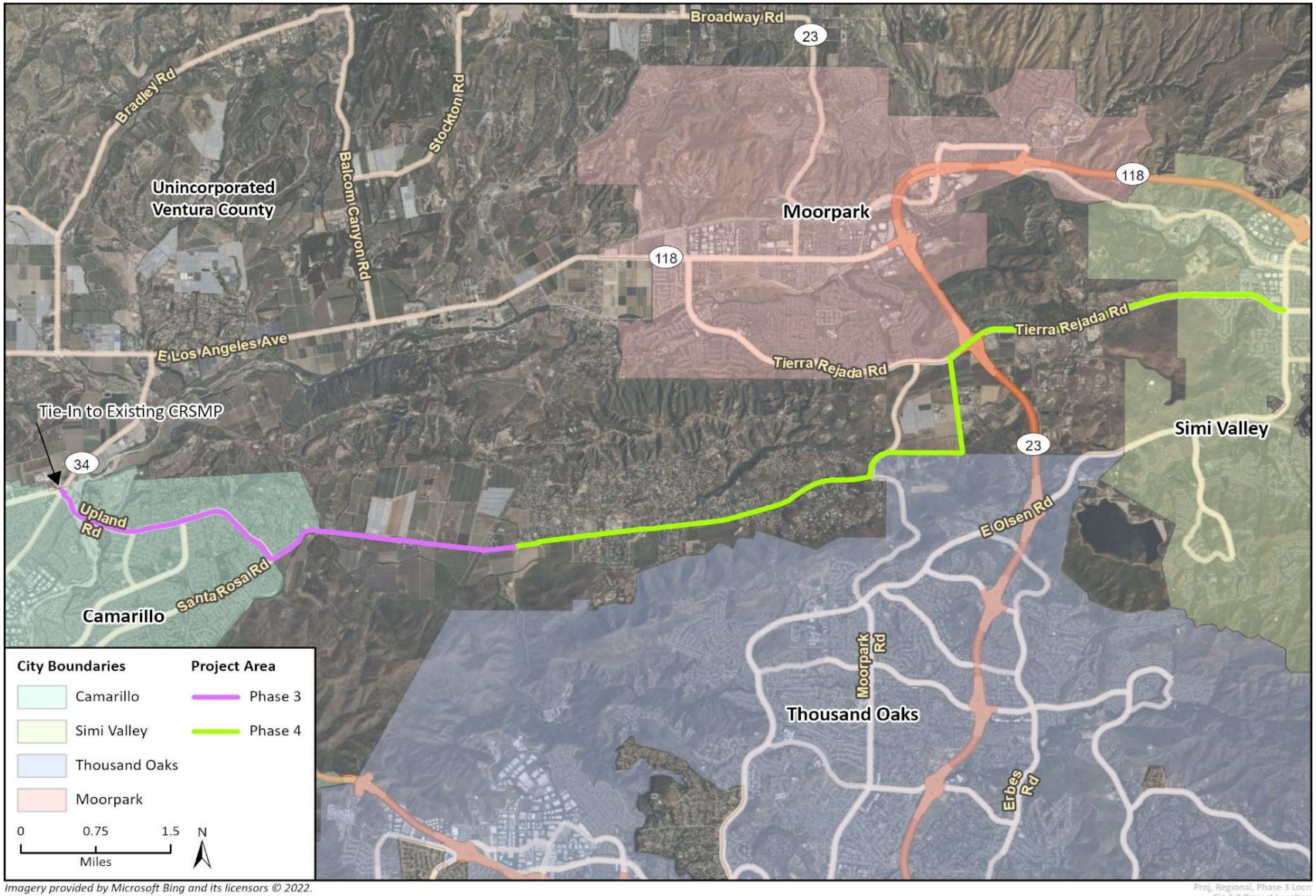


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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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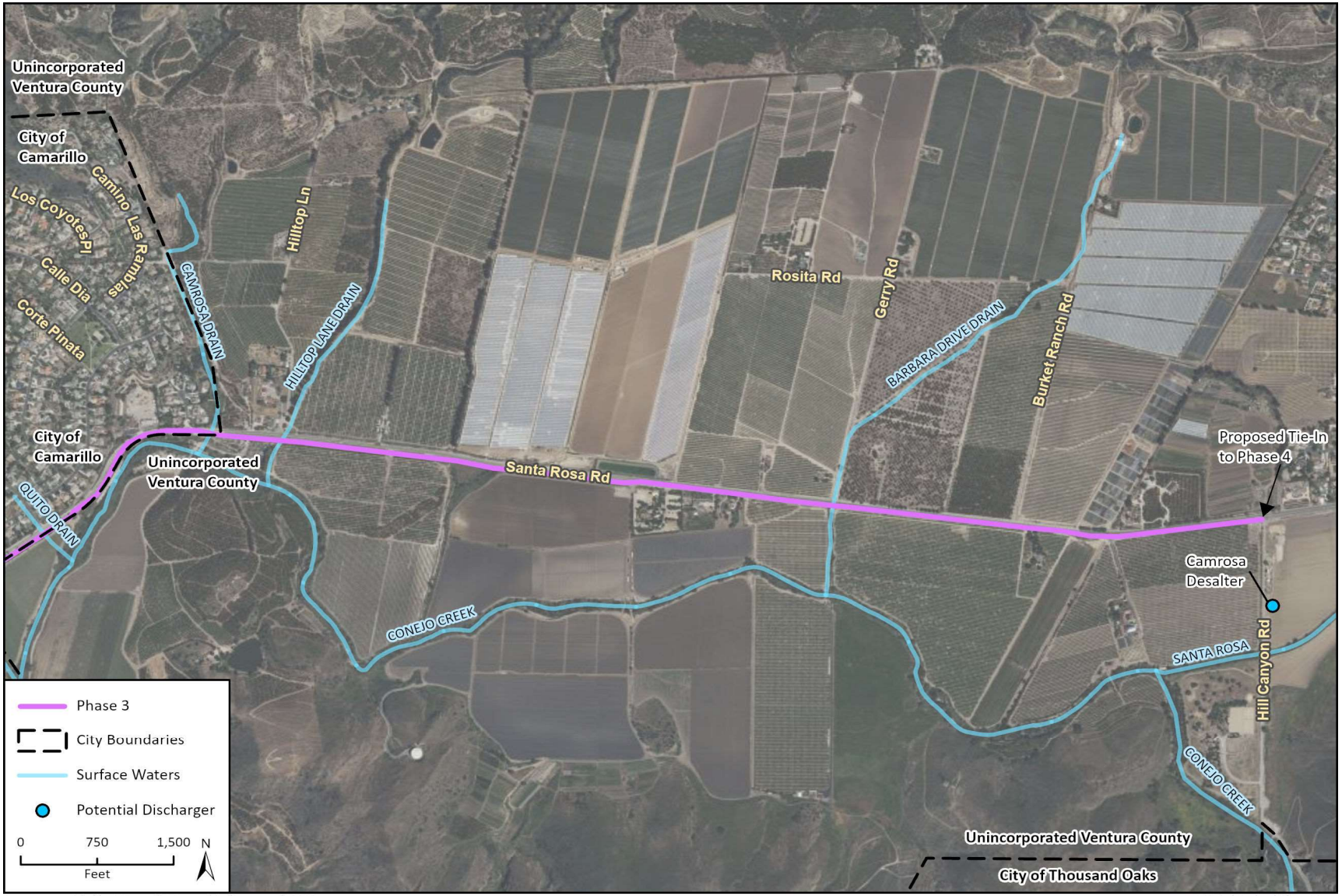
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

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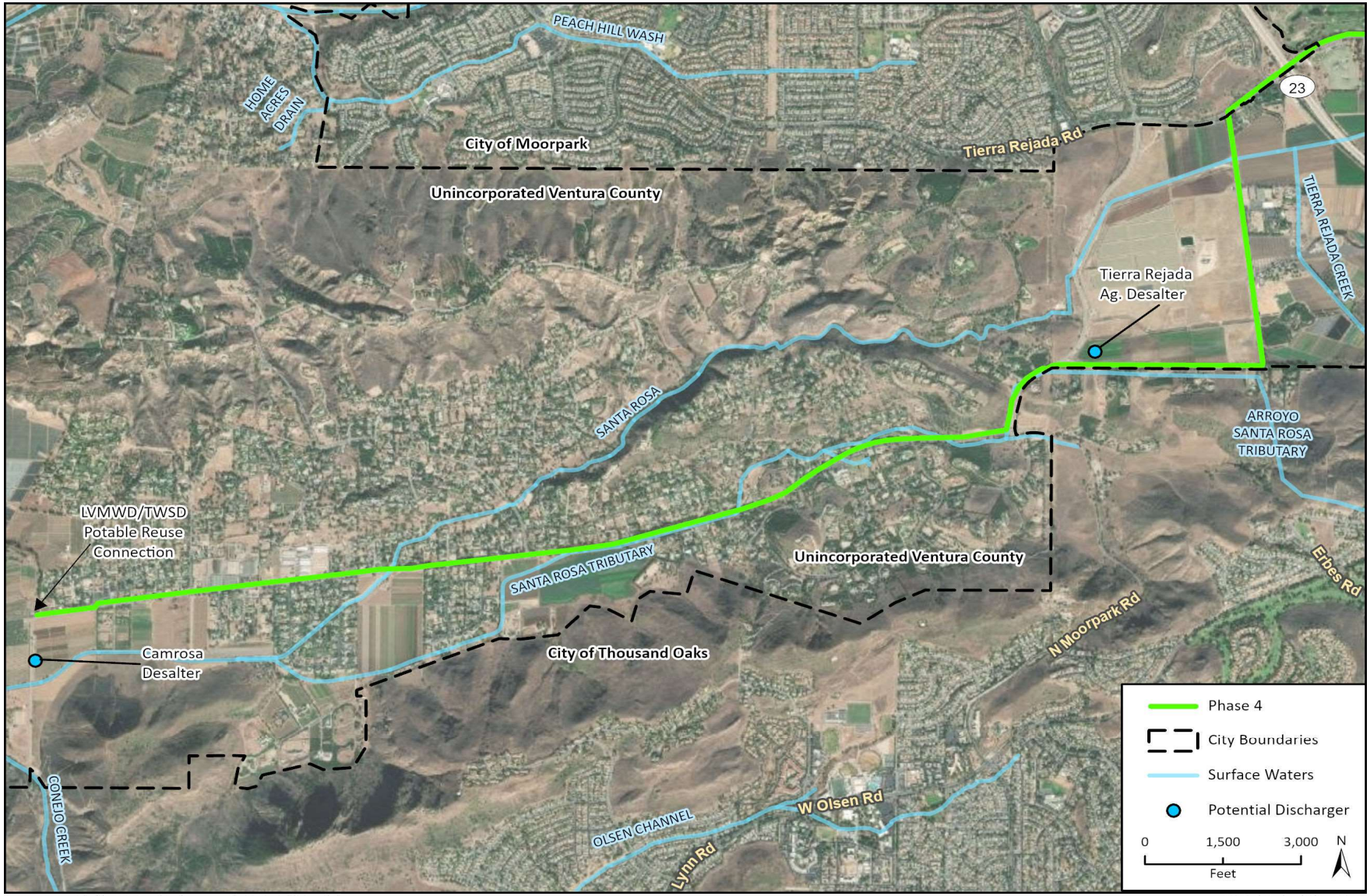


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EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

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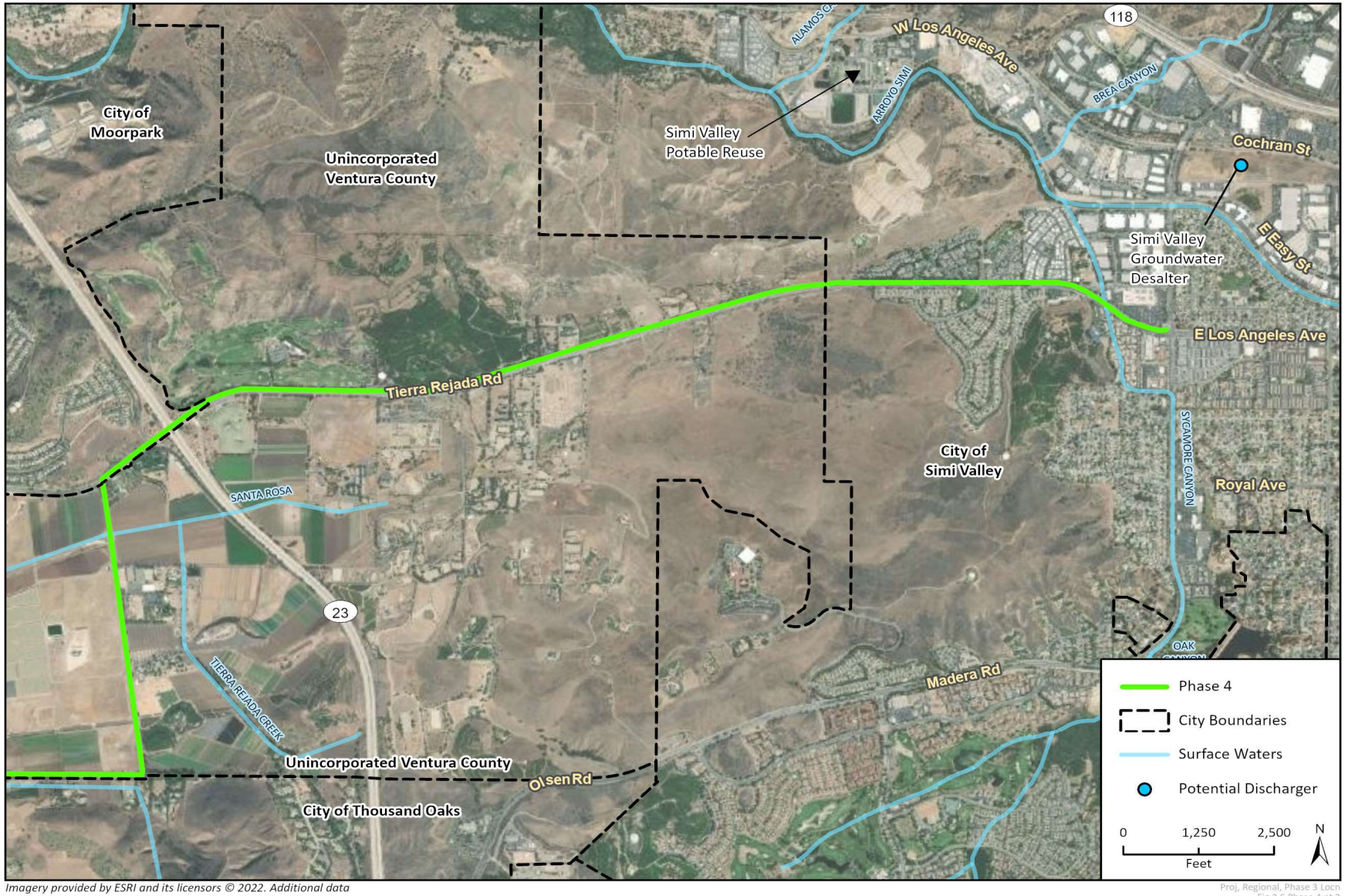


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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

web site: www.calleguas.com

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December 8, 2022

Gabrieleño/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693
San Gabriel, CA, 91778
Via Email: GTTribalcouncil@aol.com

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Chairperson Morales,

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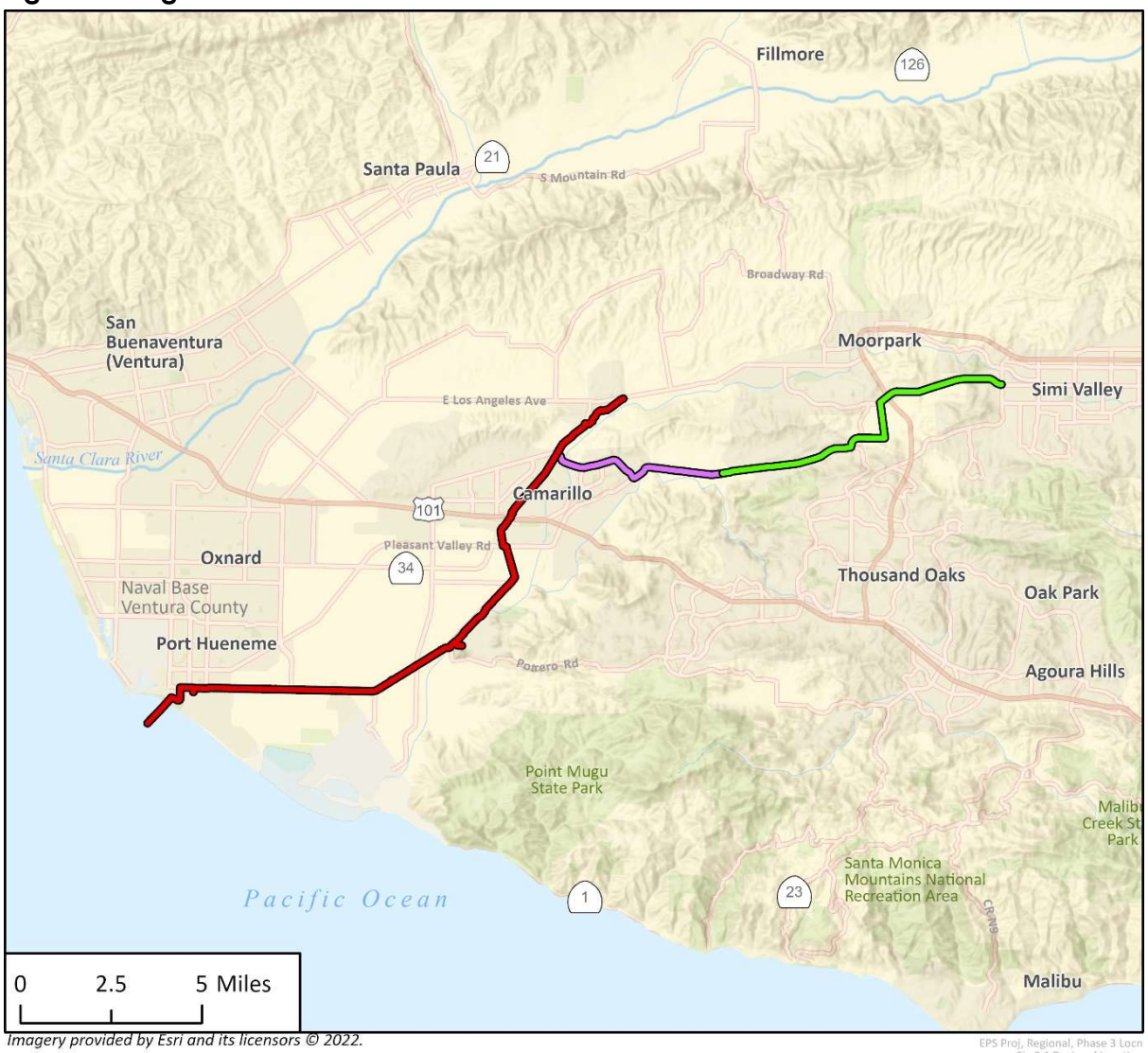
Sincerely,

Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

Enclosure: Project Location Maps

**Figure 1 Regional Location**

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EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N

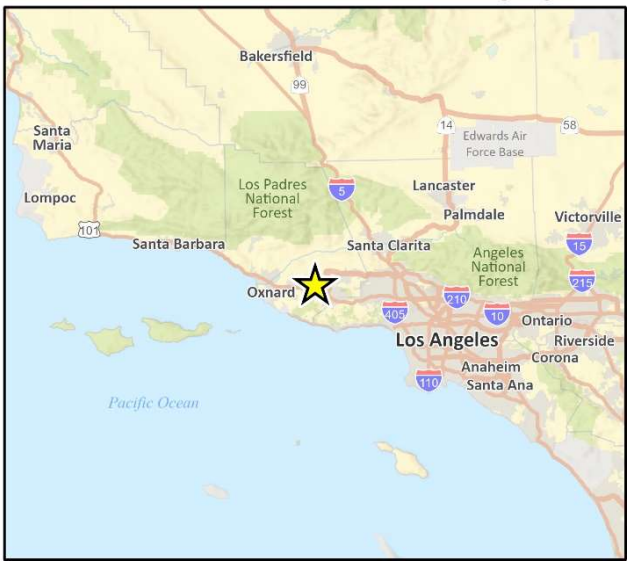
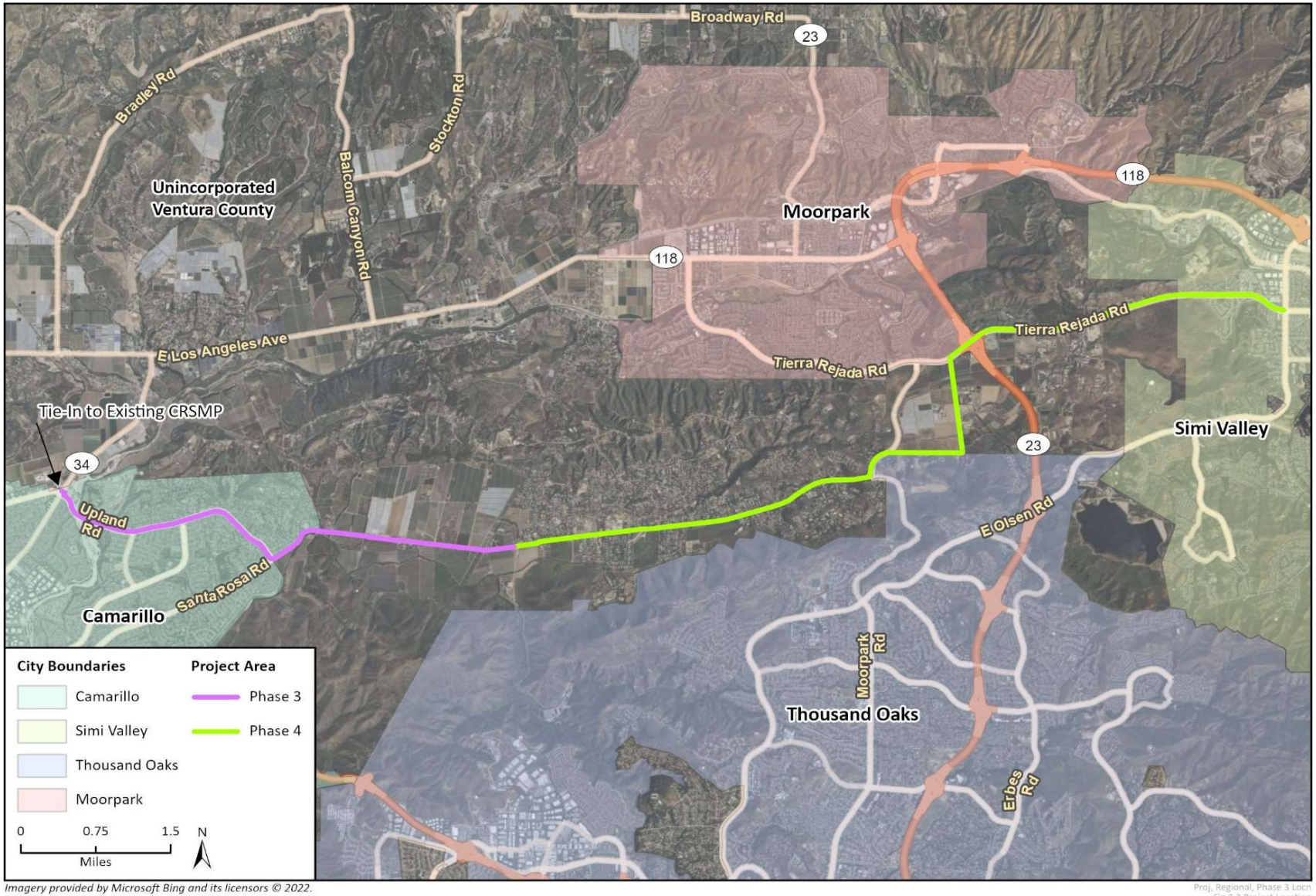


**Figure 2 Project Site Location**

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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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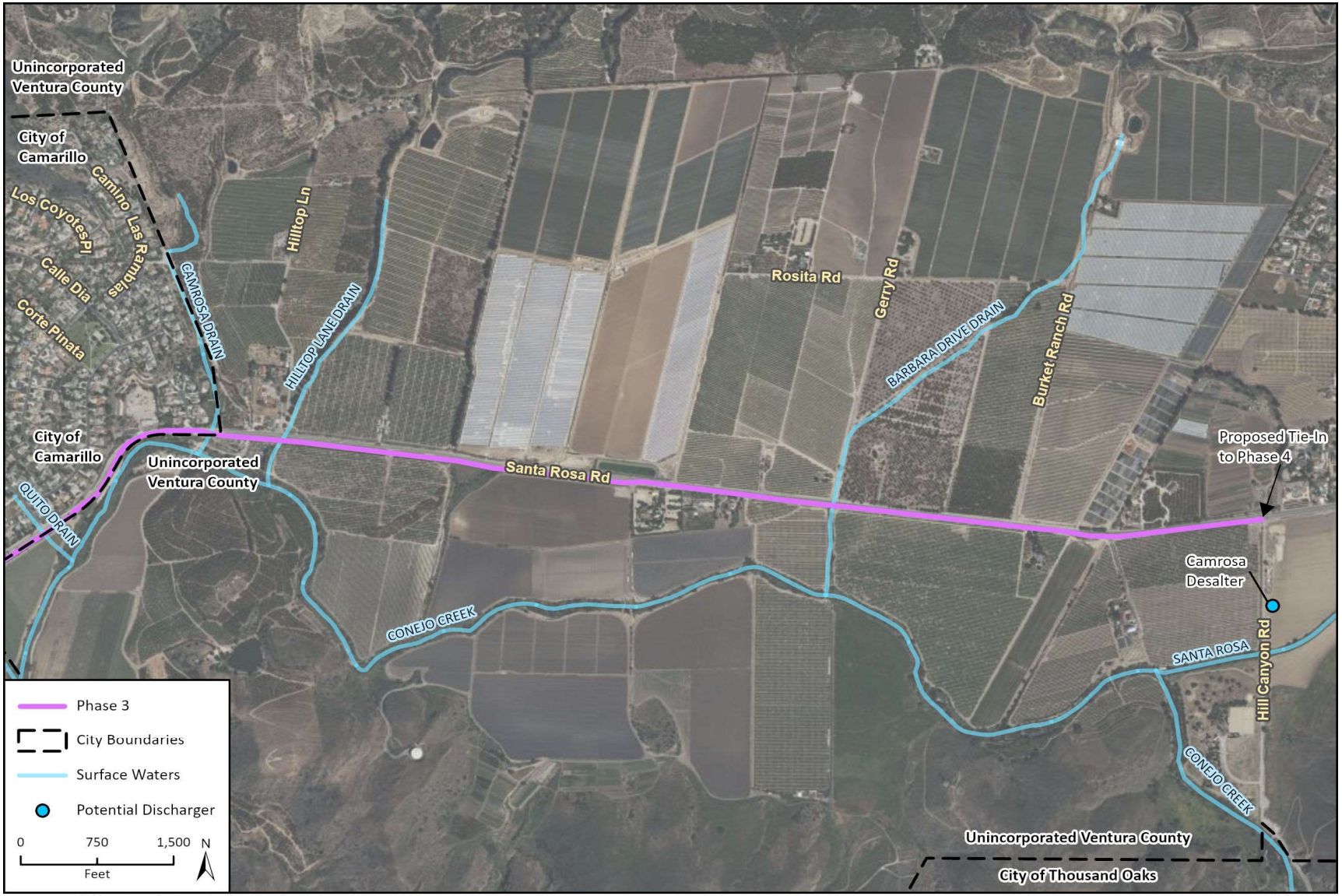
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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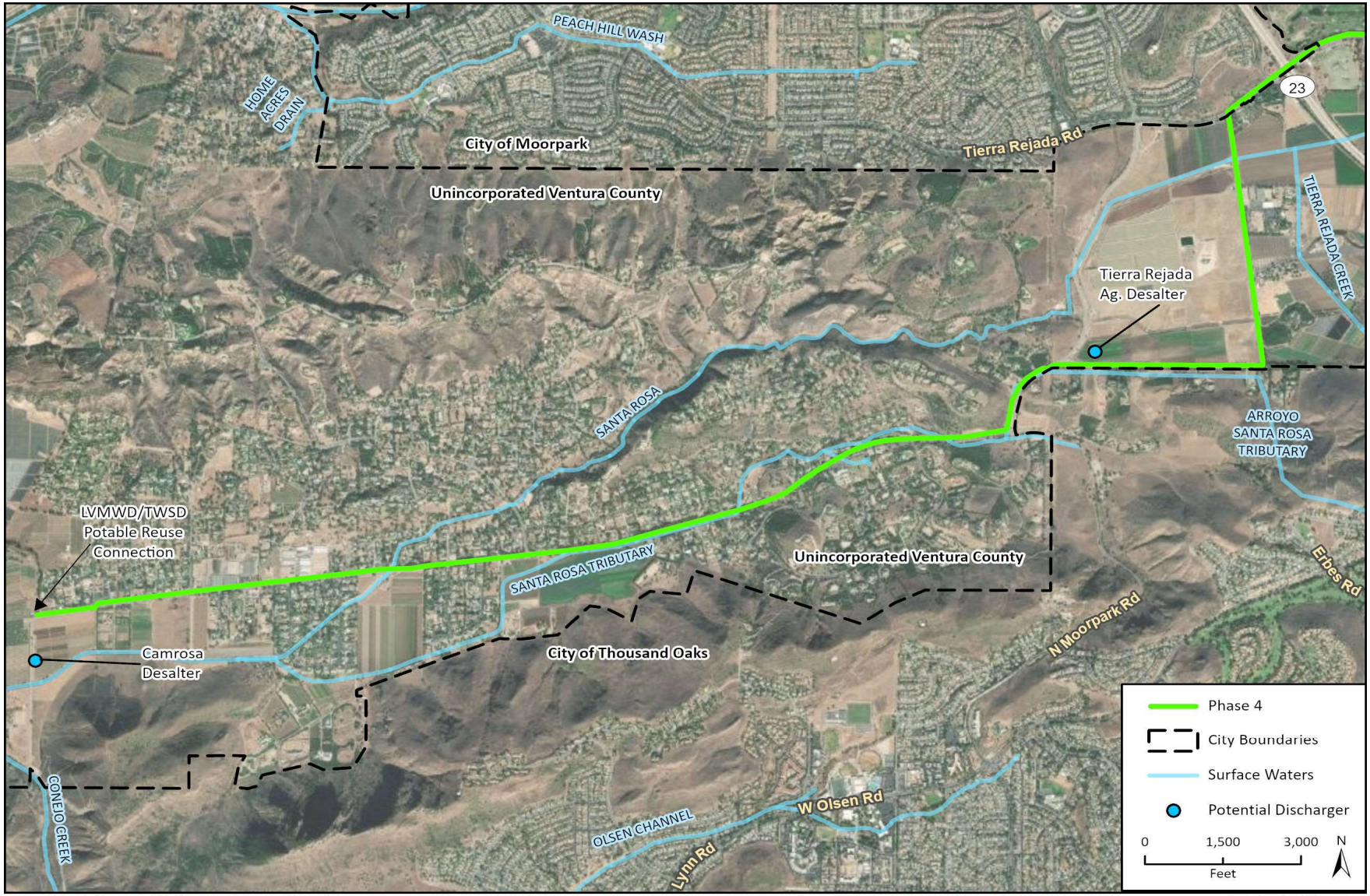
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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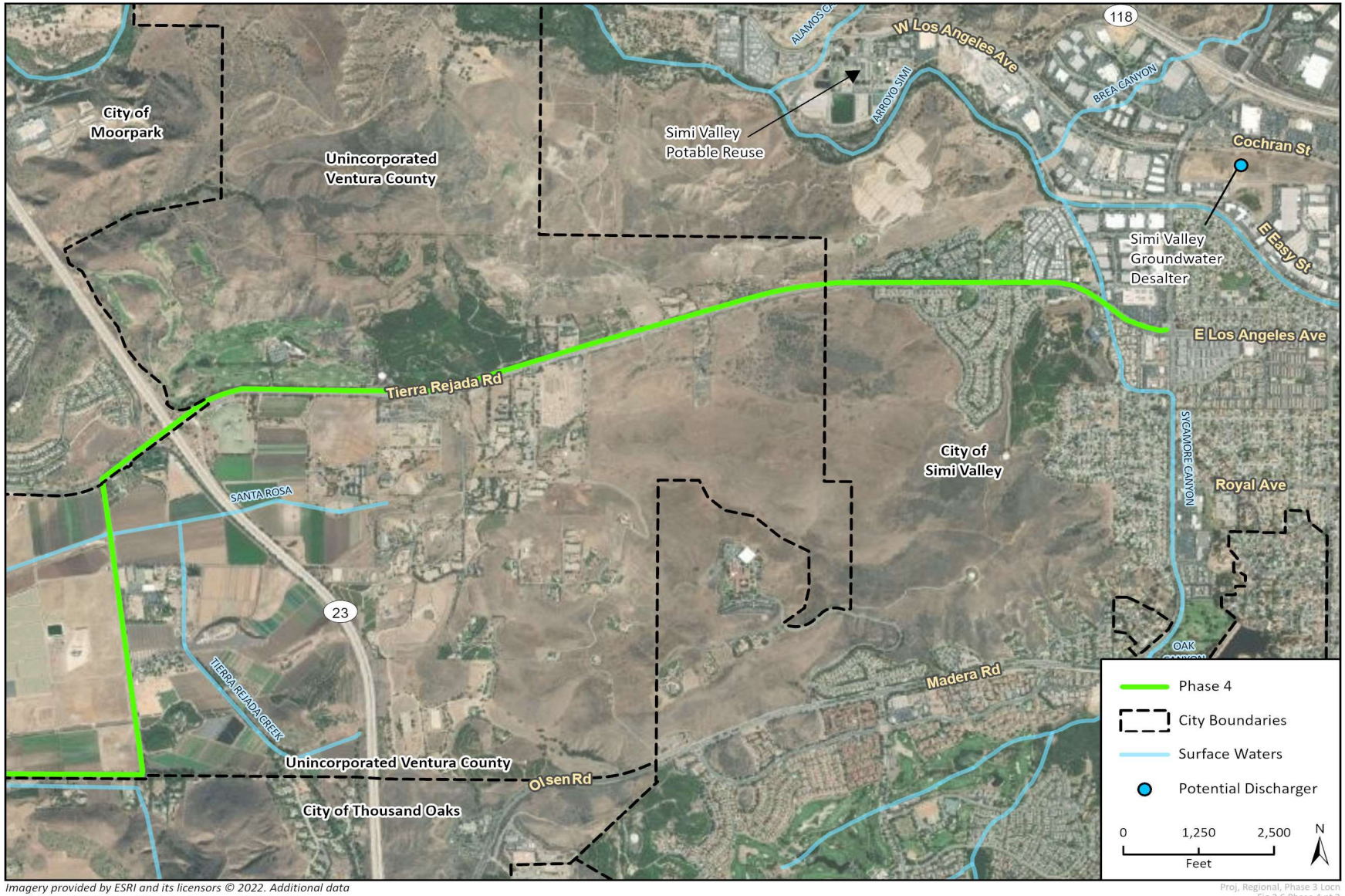
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

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December 8, 2022

Northern Chumash Tribal Council
Violet Walker, Chairperson
P.O. Box 6533
Los Osos, CA, 93412
Via Email: violetsagewalker@gmail.com

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Chairperson Walker,

The Calleguas Municipal Water District proposes the Calleguas Regional Salinity Management Pipeline (CRSMP) Phases 3 and 4 (proposed project), located in Ventura County, California. The CRSMP consists of a pipeline system to transport excess recycled water and brine concentrate generated within the watershed to an ocean outfall. The CRSMP currently extends approximately 22 miles from its upstream end in the Somis area near Camarillo to its downstream terminus at the ocean outfall in Port Hueneme. The proposed project would extend the CRSMP approximately 14 miles inland from the existing terminus, enabling connections to additional dischargers. The proposed project is subject to the California Environmental Quality Act.

The proposed project would install an underground pipeline. The Phases 3 and 4 pipeline alignments would traverse portions of Camarillo, Moorpark, Thousand Oaks, and Simi Valley, as well as unincorporated Ventura County. Pipeline alignments would mostly be located within the public right-of-way within paved roads and dirt shoulders. A portion of the alignment would extend under private property at the northeast corner of the intersection of Las Posas Road and Upland Road, which is currently developed for agricultural production. Roadways along the project alignments include Upland Road, Santa Rosa Road, Moorpark Road, Read Road, Sunset Valley Road, and Tierra Rejada Road. See attached project location maps. The majority of the pipeline would be installed via conventional open-cut trench construction methods. Trenchless construction methods would be used to cross below existing drainage channels. Trenchless construction methods would also be used to cross Somis Road, Santa Rosa Road, and busy intersections to minimize traffic impacts.

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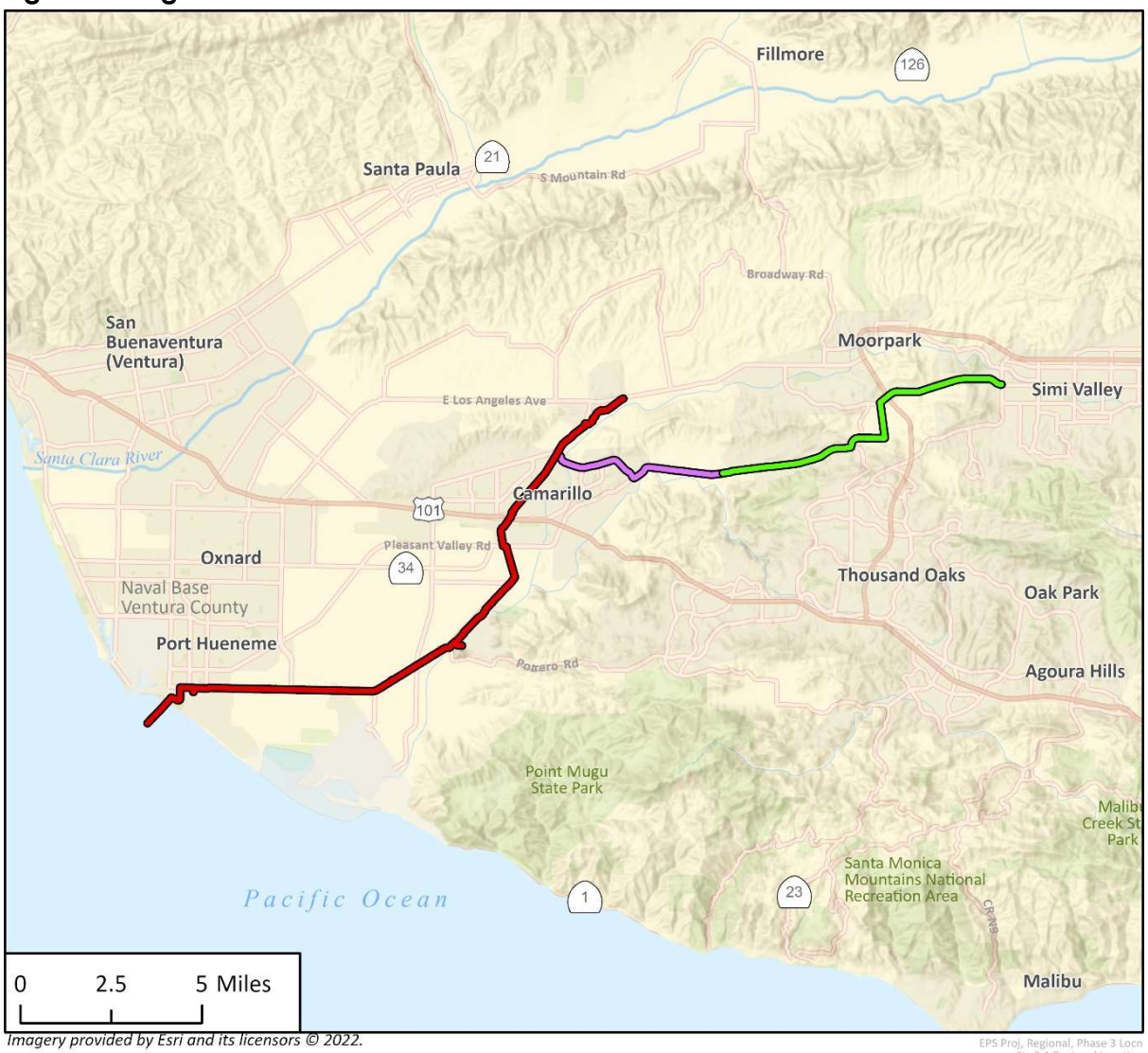



*Imagery provided by Esri and its licensors © 2022.*

EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N

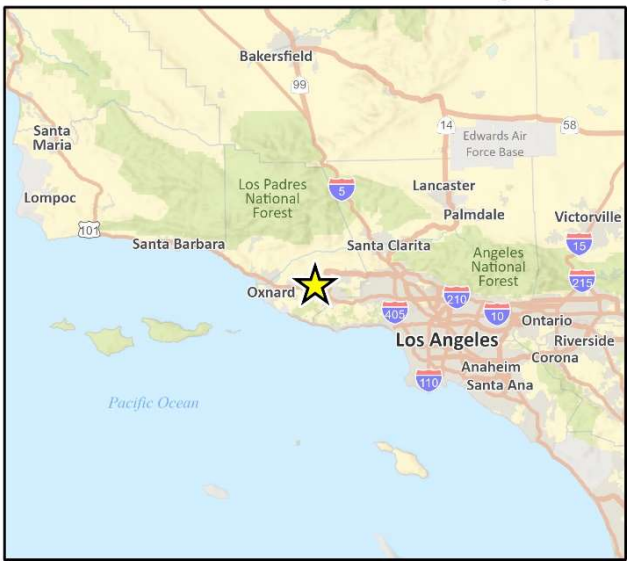
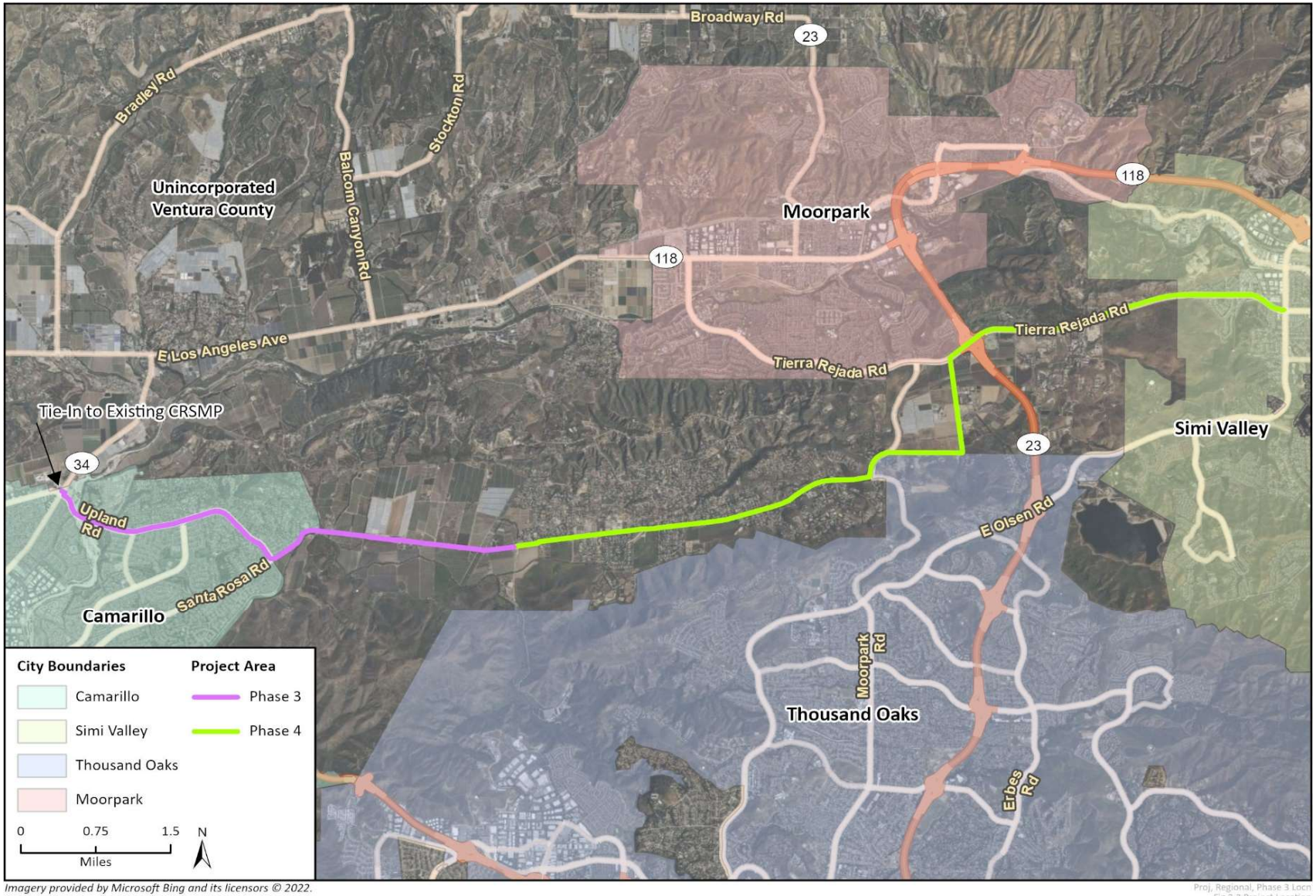


**Figure 2 Project Site Location**

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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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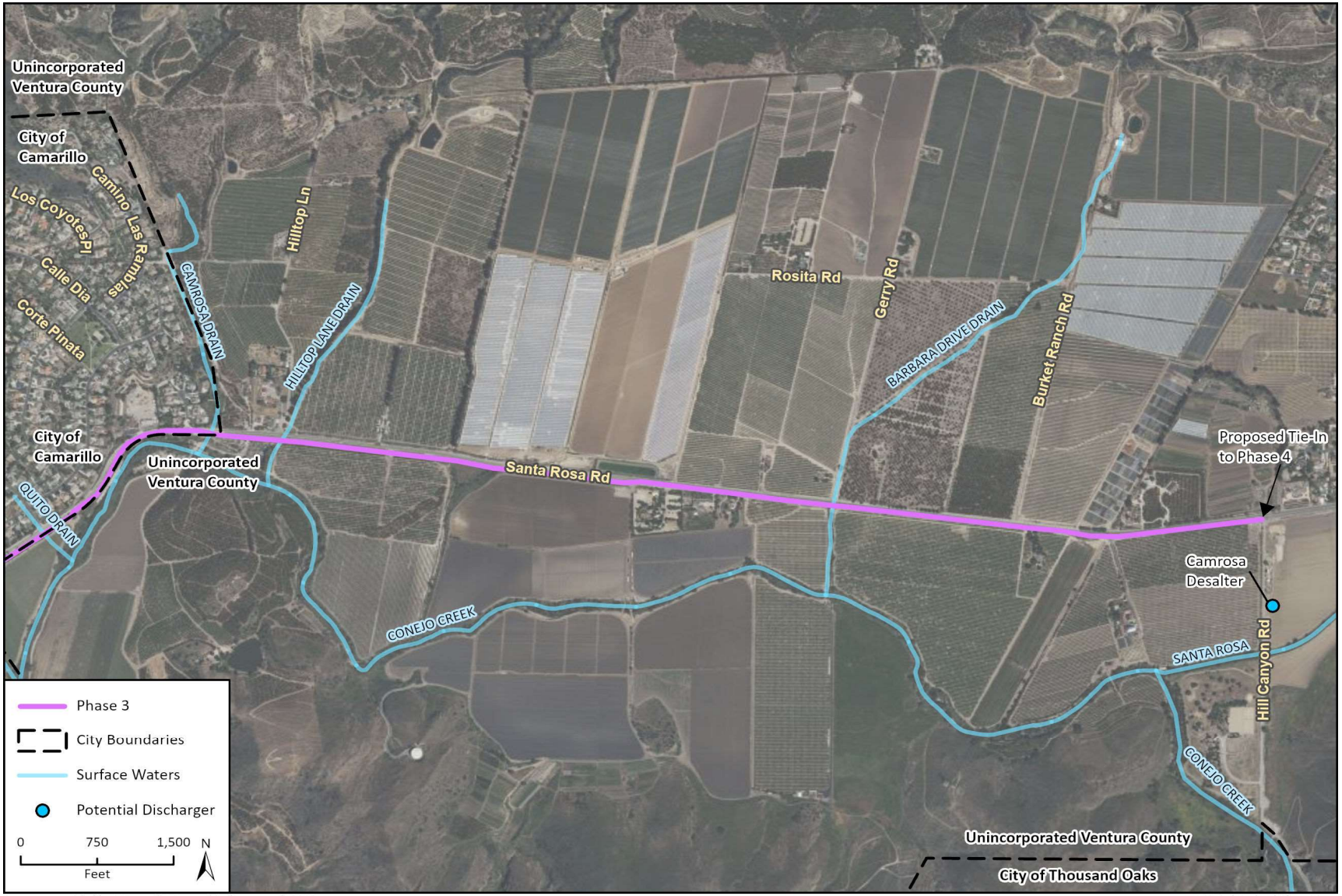
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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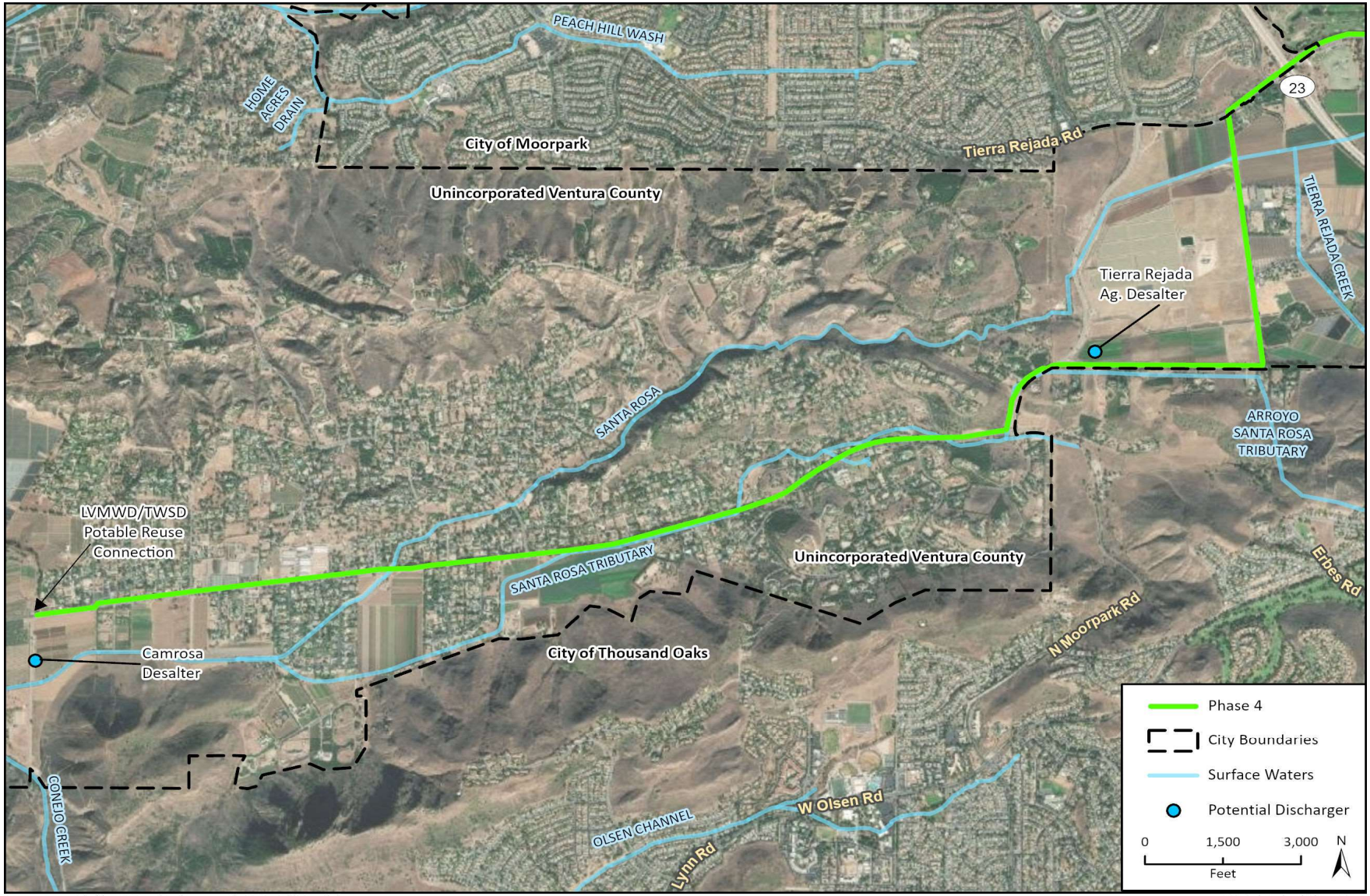
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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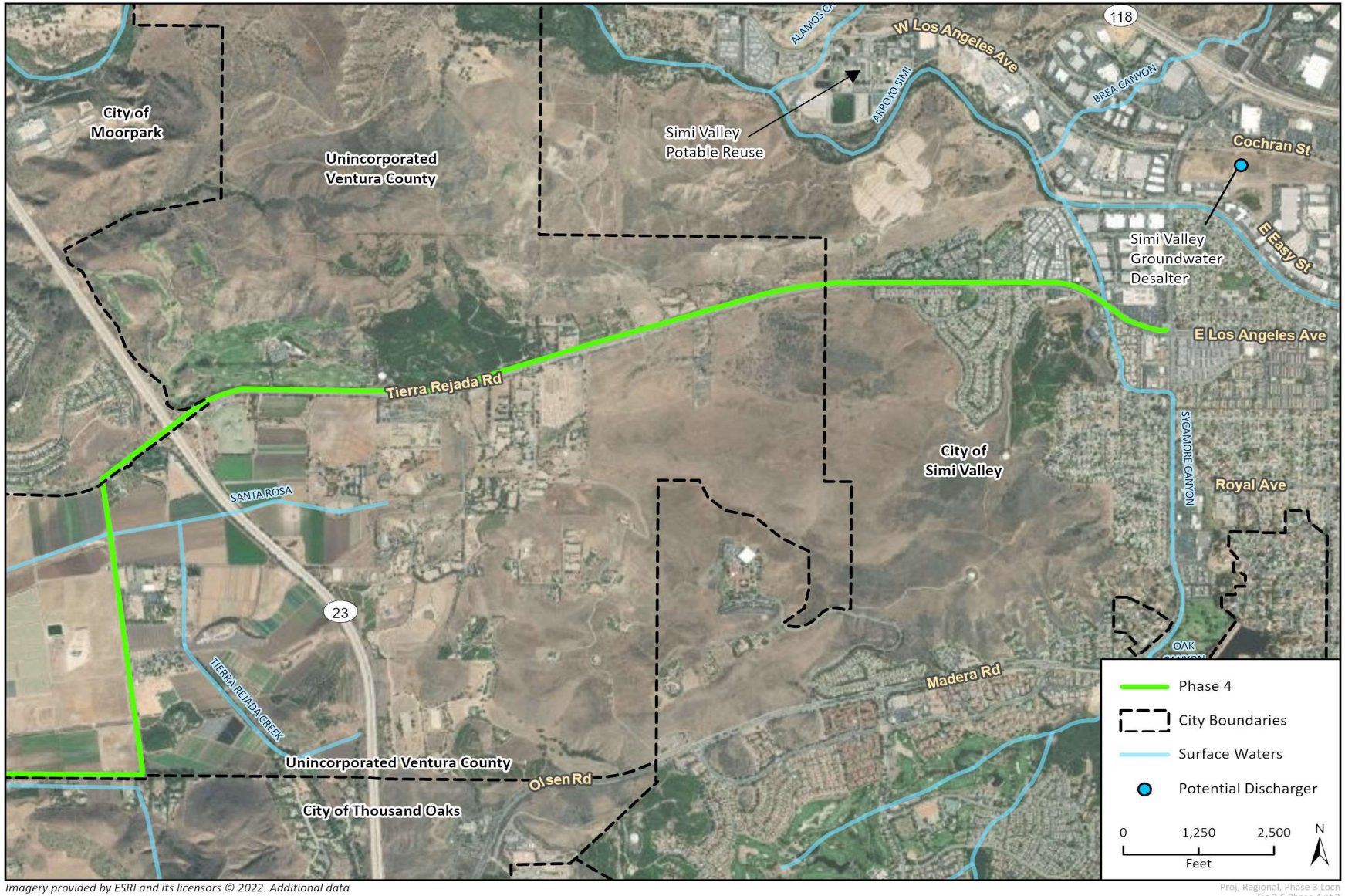
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

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December 8, 2022

Pechanga Band of Indians
Mark Macarro, Chairperson
P.O. Box 1477
Temecula, CA 92593
Via Email: epreston@pechanga.nsn.gov

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Chairperson Macarro,

The Calleguas Municipal Water District proposes the Calleguas Regional Salinity Management Pipeline (CRSMP) Phases 3 and 4 (proposed project), located in Ventura County, California. The CRSMP consists of a pipeline system to transport excess recycled water and brine concentrate generated within the watershed to an ocean outfall. The CRSMP currently extends approximately 22 miles from its upstream end in the Somis area near Camarillo to its downstream terminus at the ocean outfall in Port Hueneme. The proposed project would extend the CRSMP approximately 14 miles inland from the existing terminus, enabling connections to additional dischargers. The proposed project is subject to the California Environmental Quality Act.

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Principal Resource Specialist
Calleguas Municipal Water District

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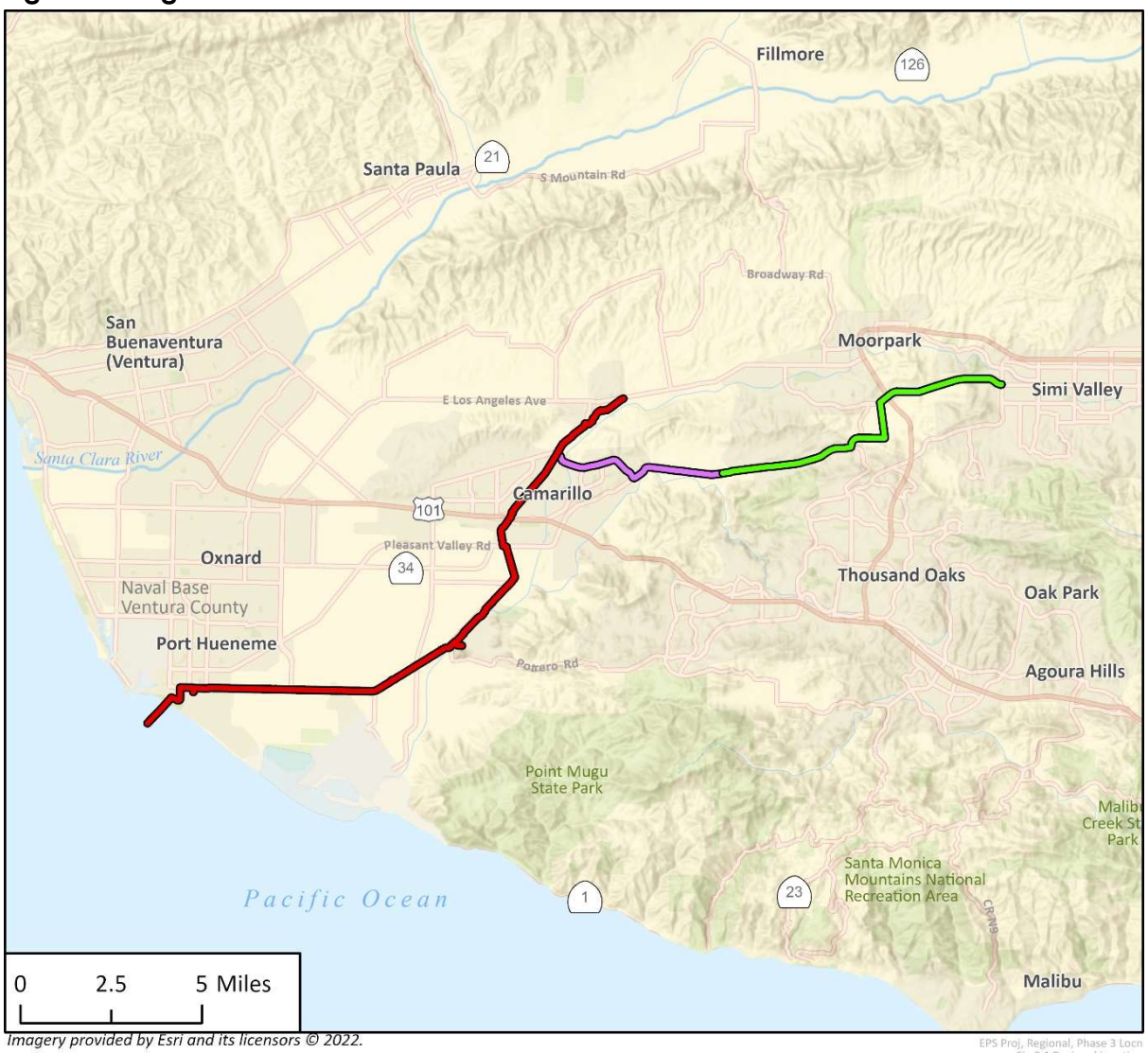


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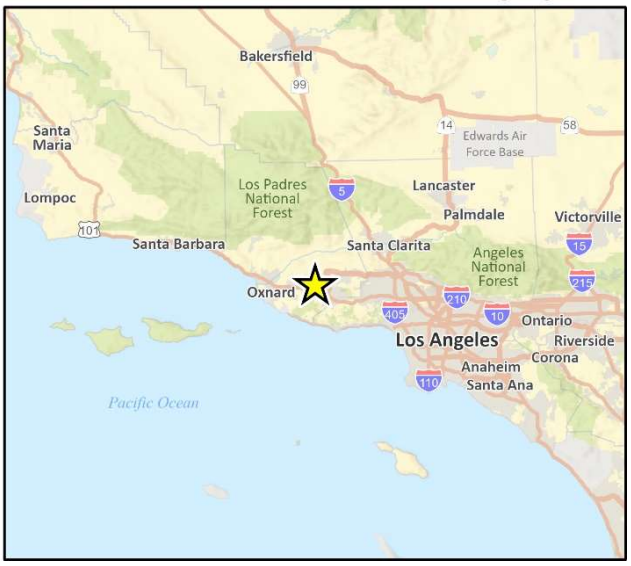
EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N



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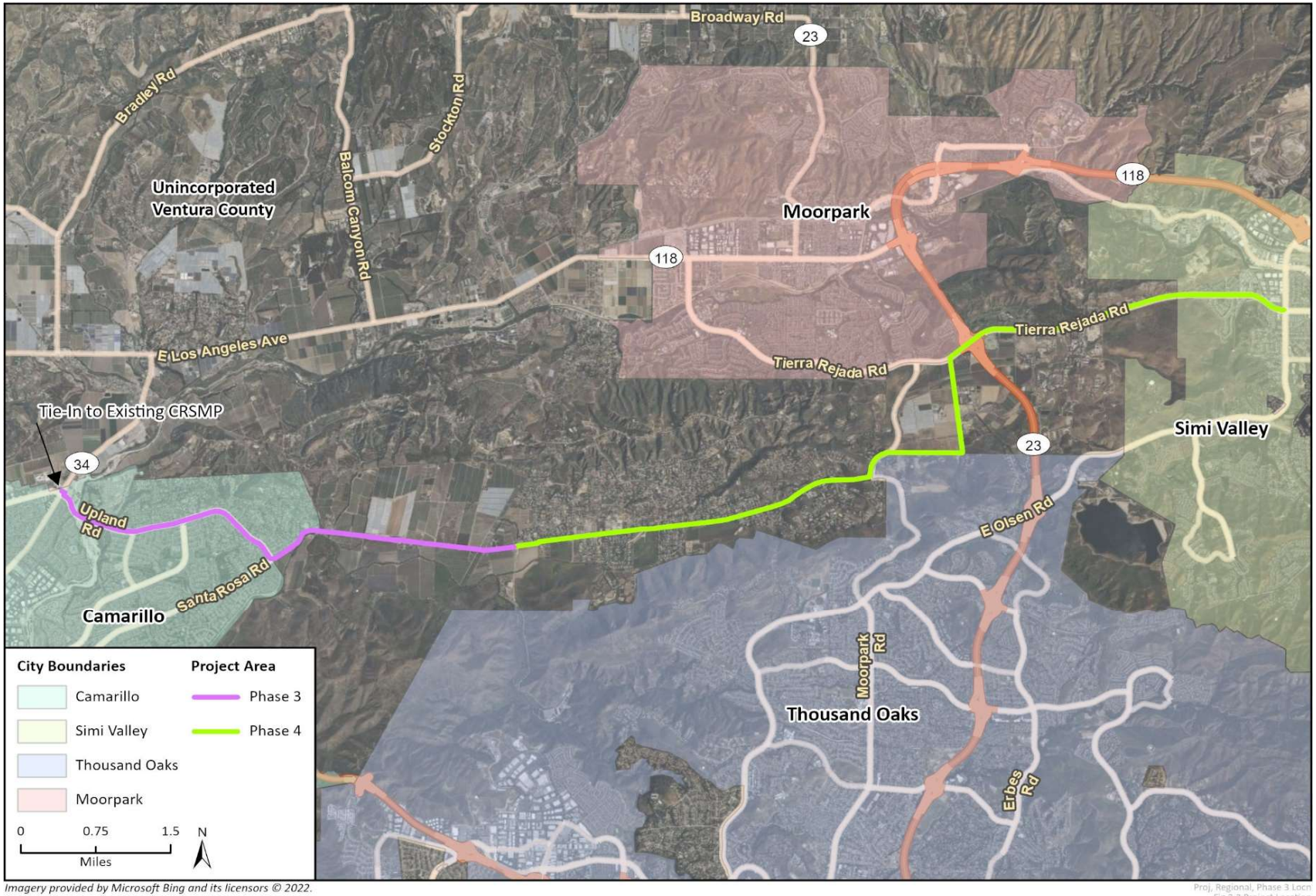


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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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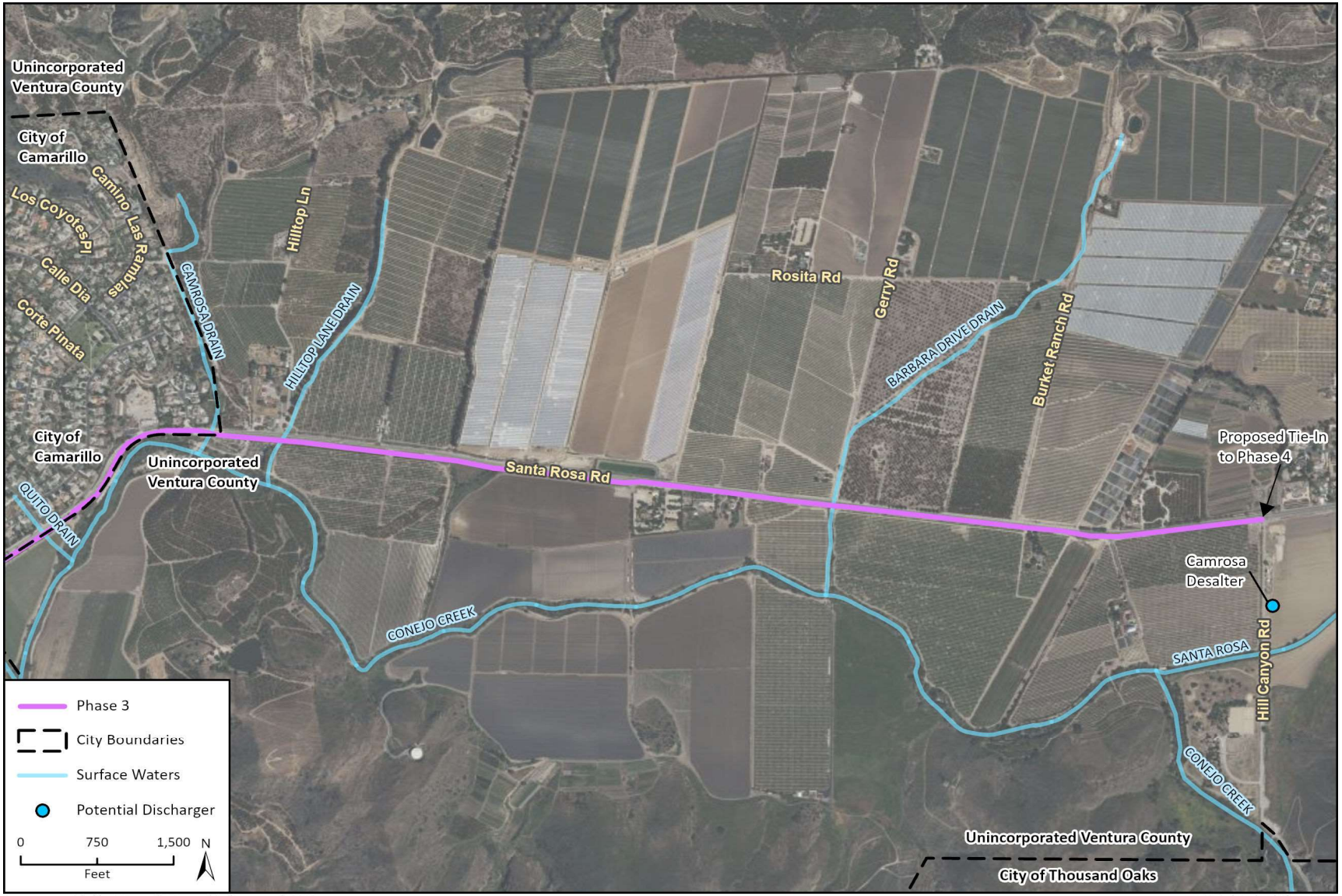
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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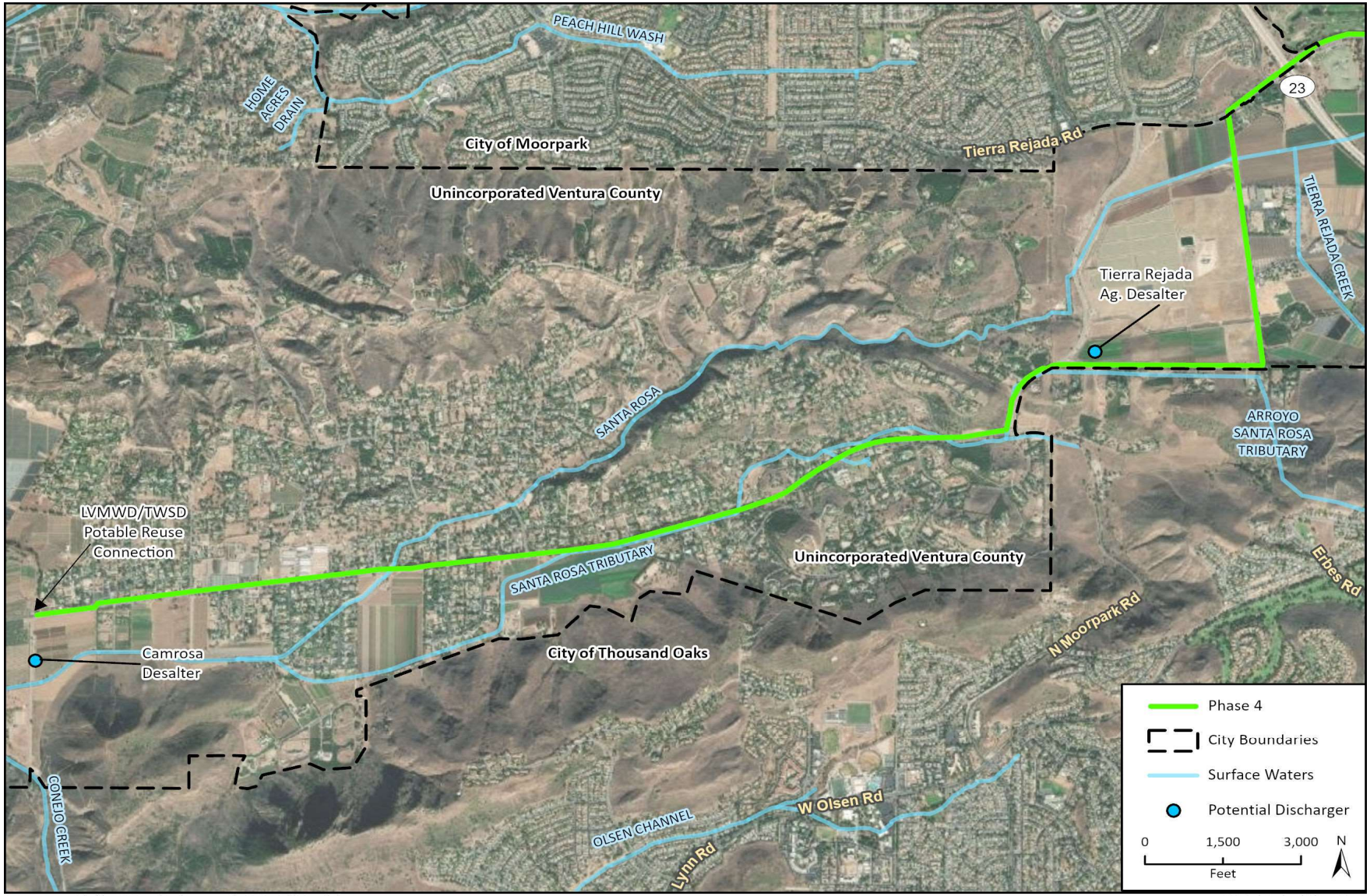
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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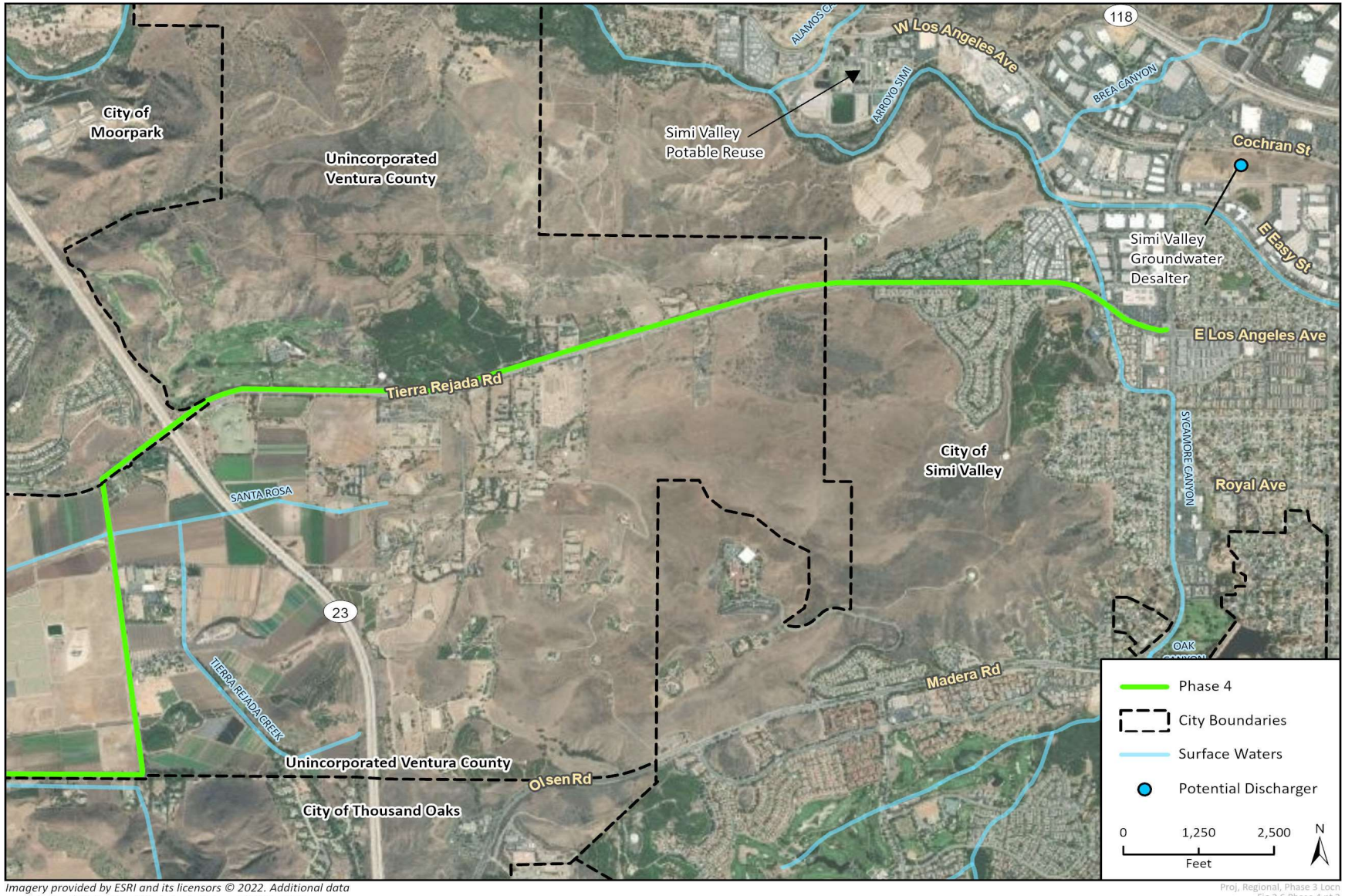
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

web site: www.calleguas.com

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December 8, 2022

Pechanga Band of Indians
Paul Macarro, Cultural Resources Coordinator
P.O. Box 1477
Temecula, CA 92593
Via Email: pmacarro@pechanga-nsn.gov

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Cultural Resources Coordinator Macarro,

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Sincerely,

Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

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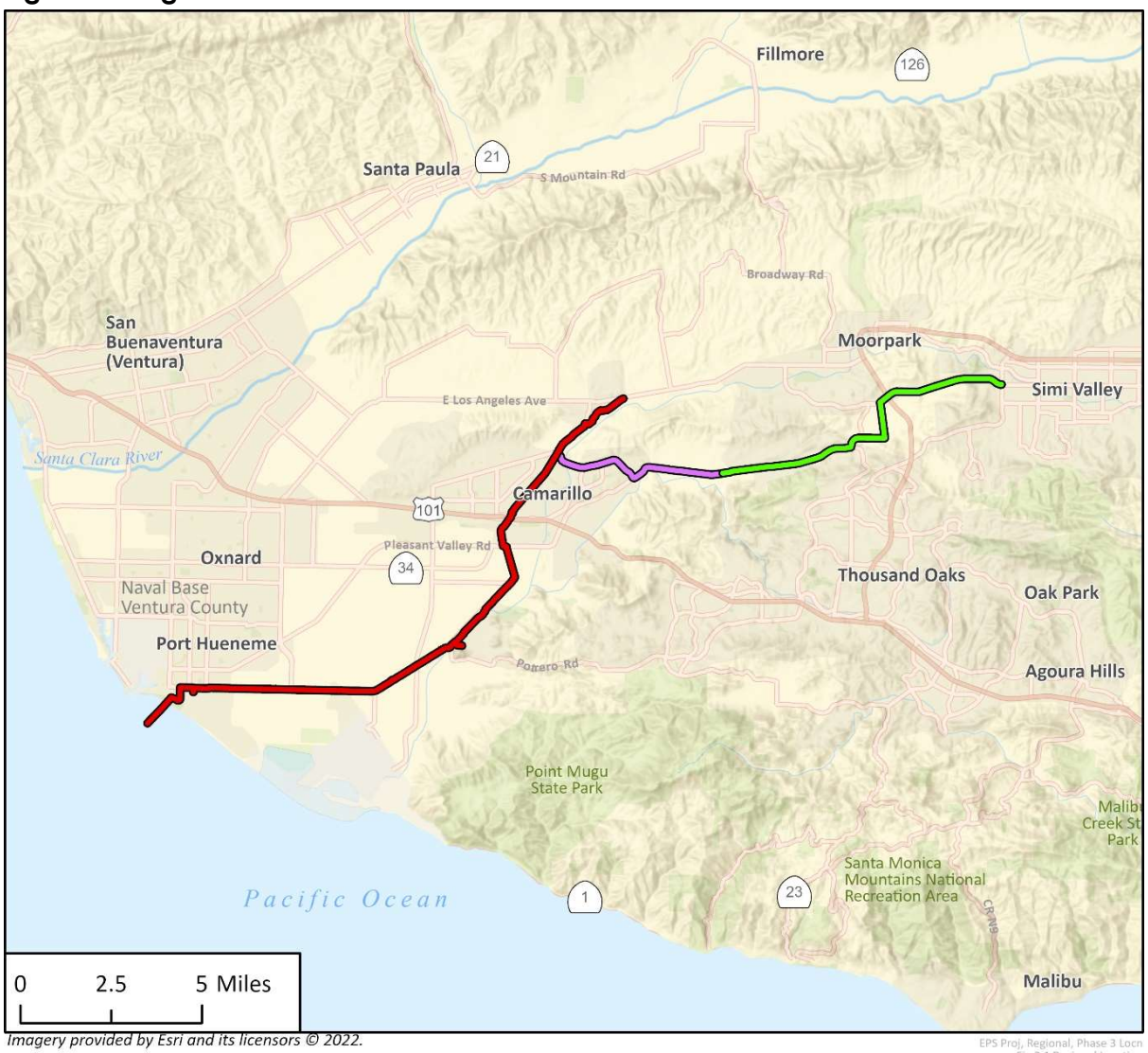


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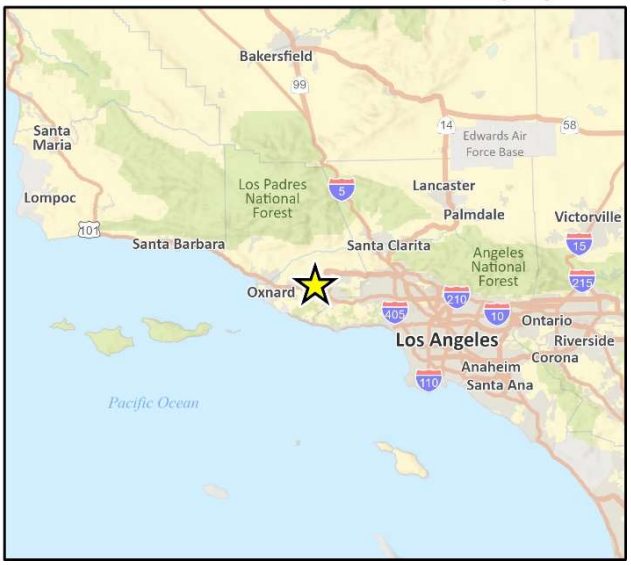
EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N



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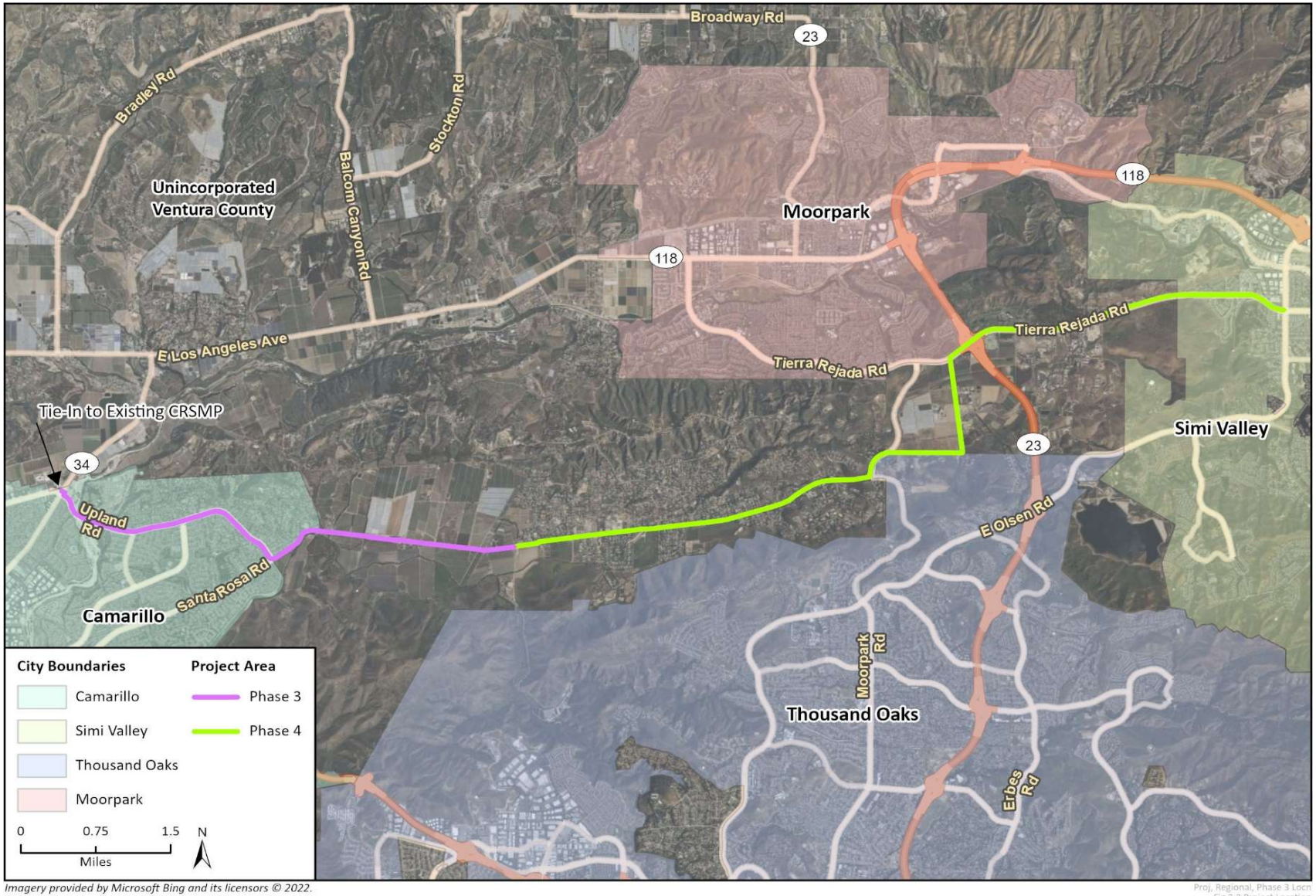


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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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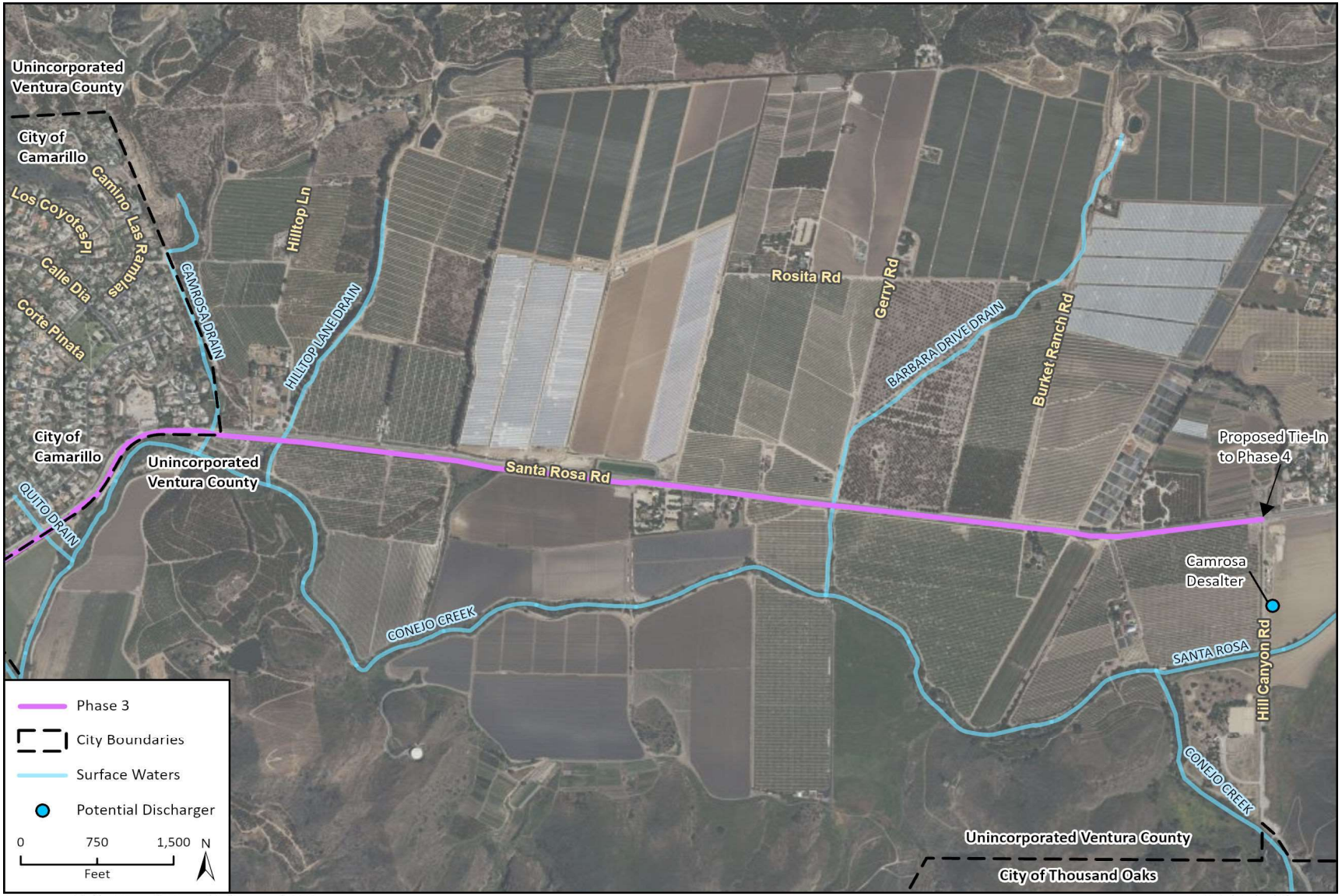
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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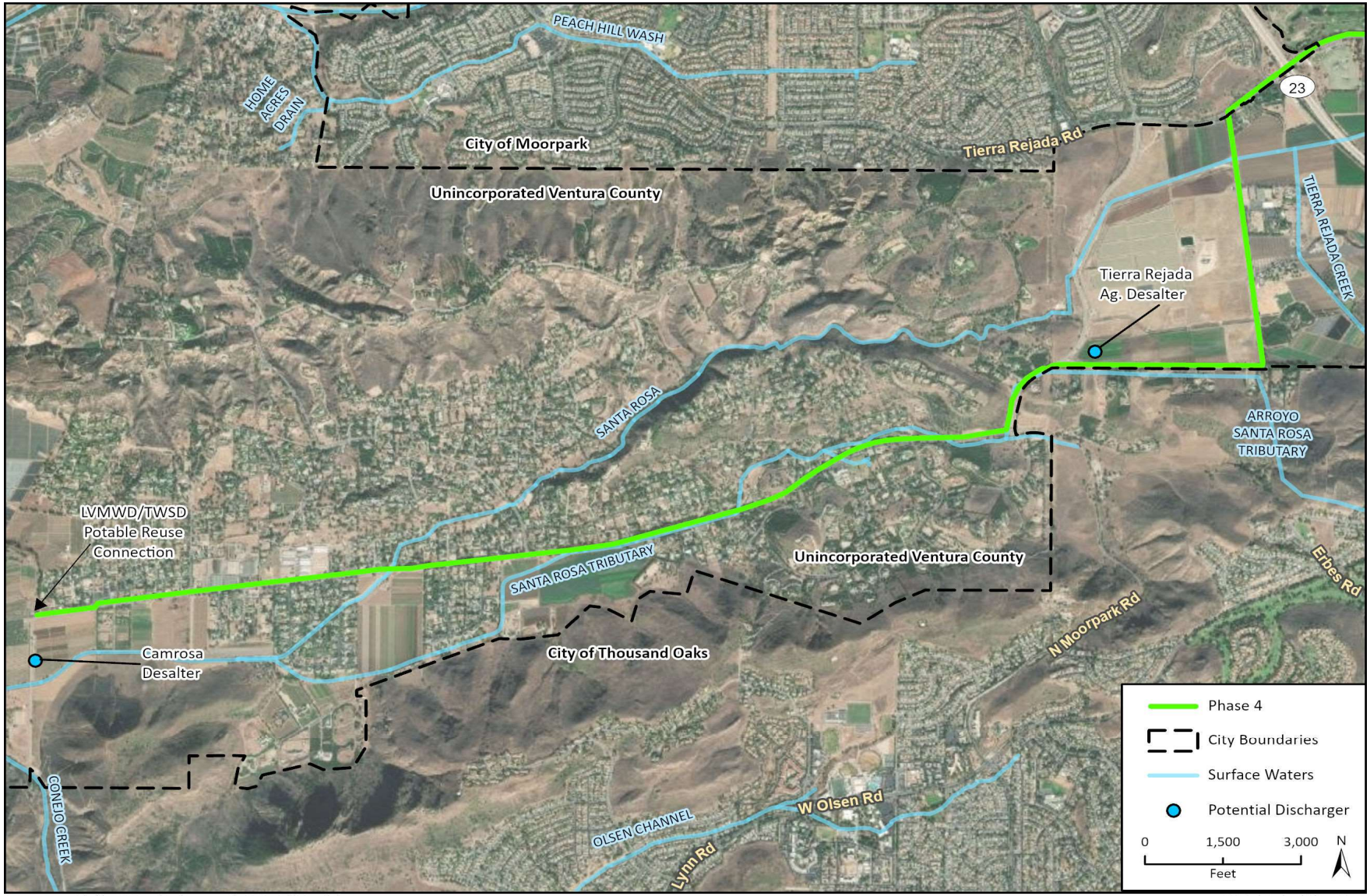
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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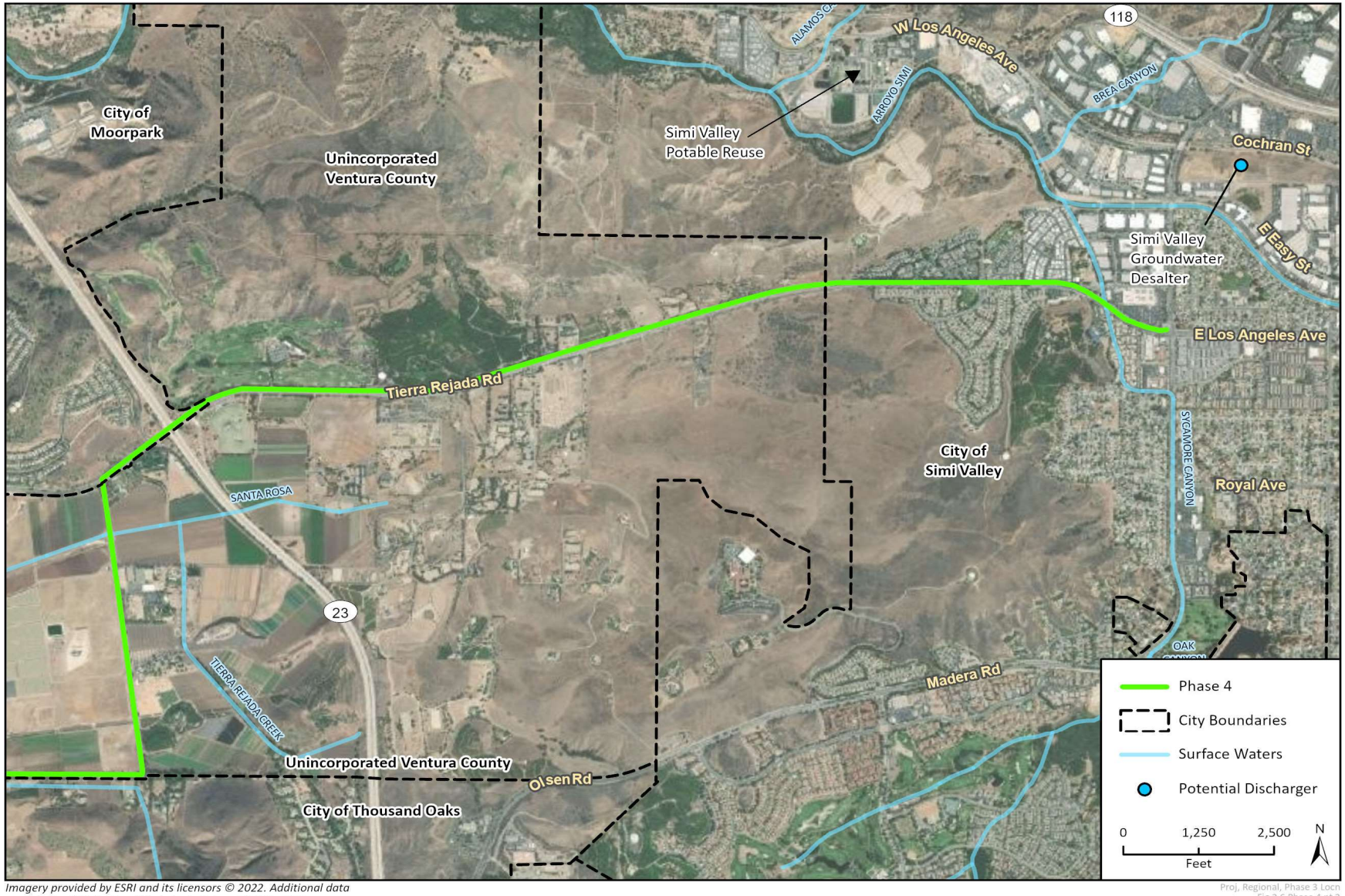
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

web site: www.calleguas.com

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December 8, 2022

Rincon Band of Luiseño Indians
Cheryl Madrigal, Tribal Historic Preservation Officer
One Government Center Lane
Valley Center, CA, 92082
Via Email: crd@rincon-nsn.gov

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Tribal Historic Preservation Officer Madrigal,

The Calleguas Municipal Water District proposes the Calleguas Regional Salinity Management Pipeline (CRSMP) Phases 3 and 4 (proposed project), located in Ventura County, California. The CRSMP consists of a pipeline system to transport excess recycled water and brine concentrate generated within the watershed to an ocean outfall. The CRSMP currently extends approximately 22 miles from its upstream end in the Somis area near Camarillo to its downstream terminus at the ocean outfall in Port Hueneme. The proposed project would extend the CRSMP approximately 14 miles inland from the existing terminus, enabling connections to additional dischargers. The proposed project is subject to the California Environmental Quality Act.

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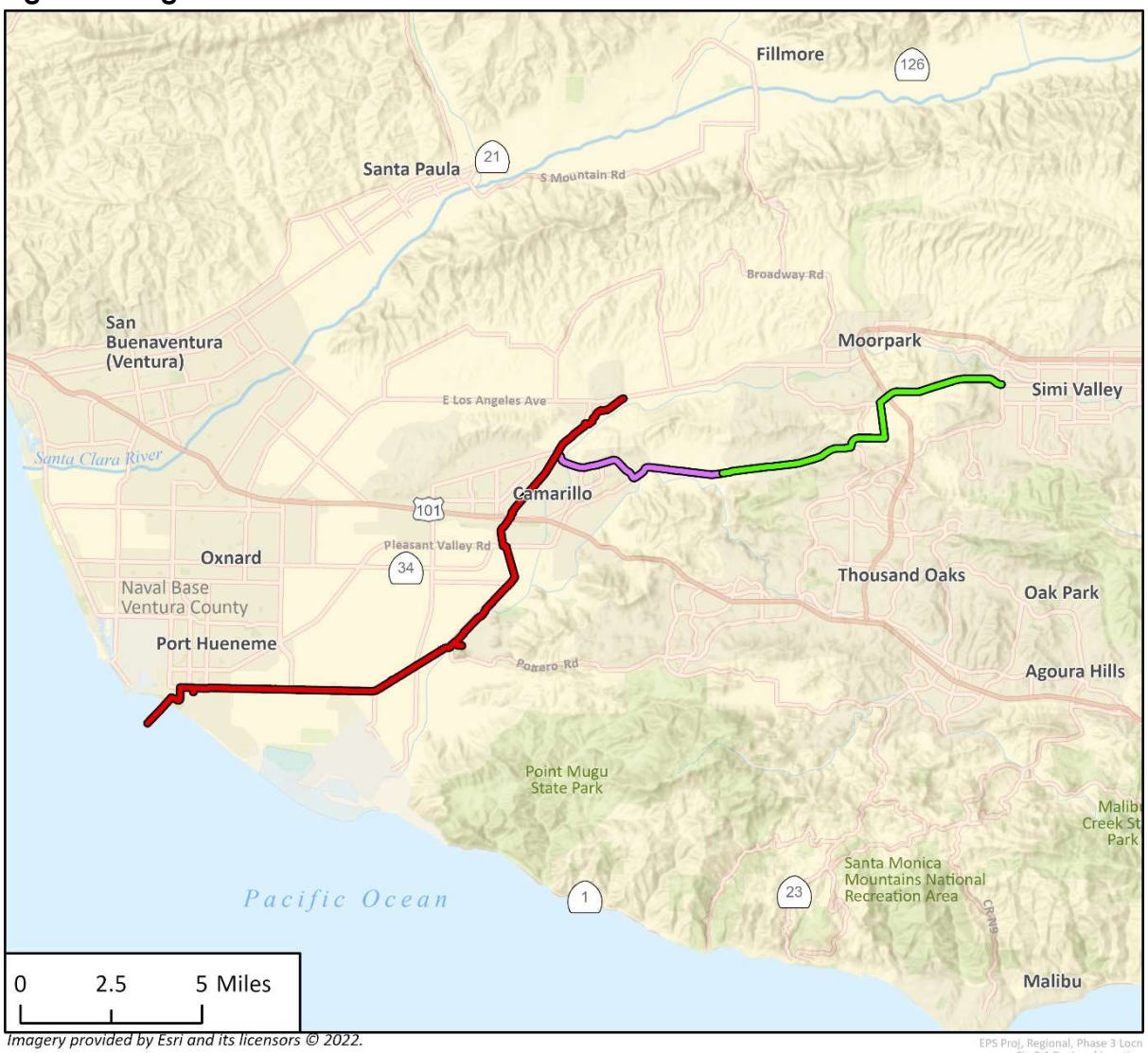
**Figure 1 Regional Location**

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EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N

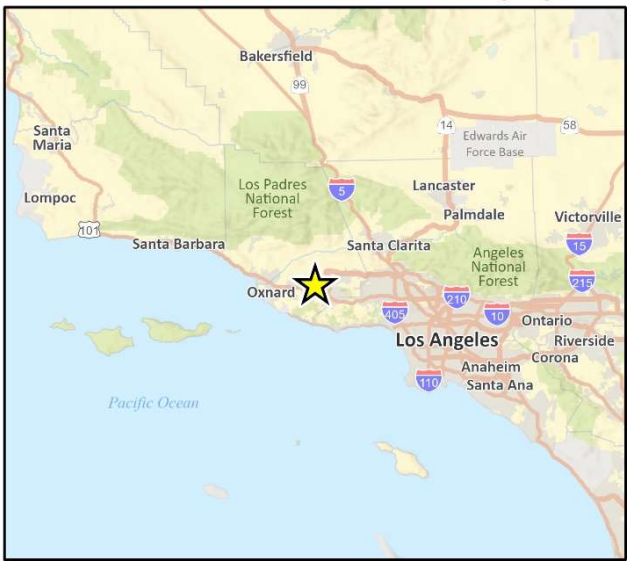
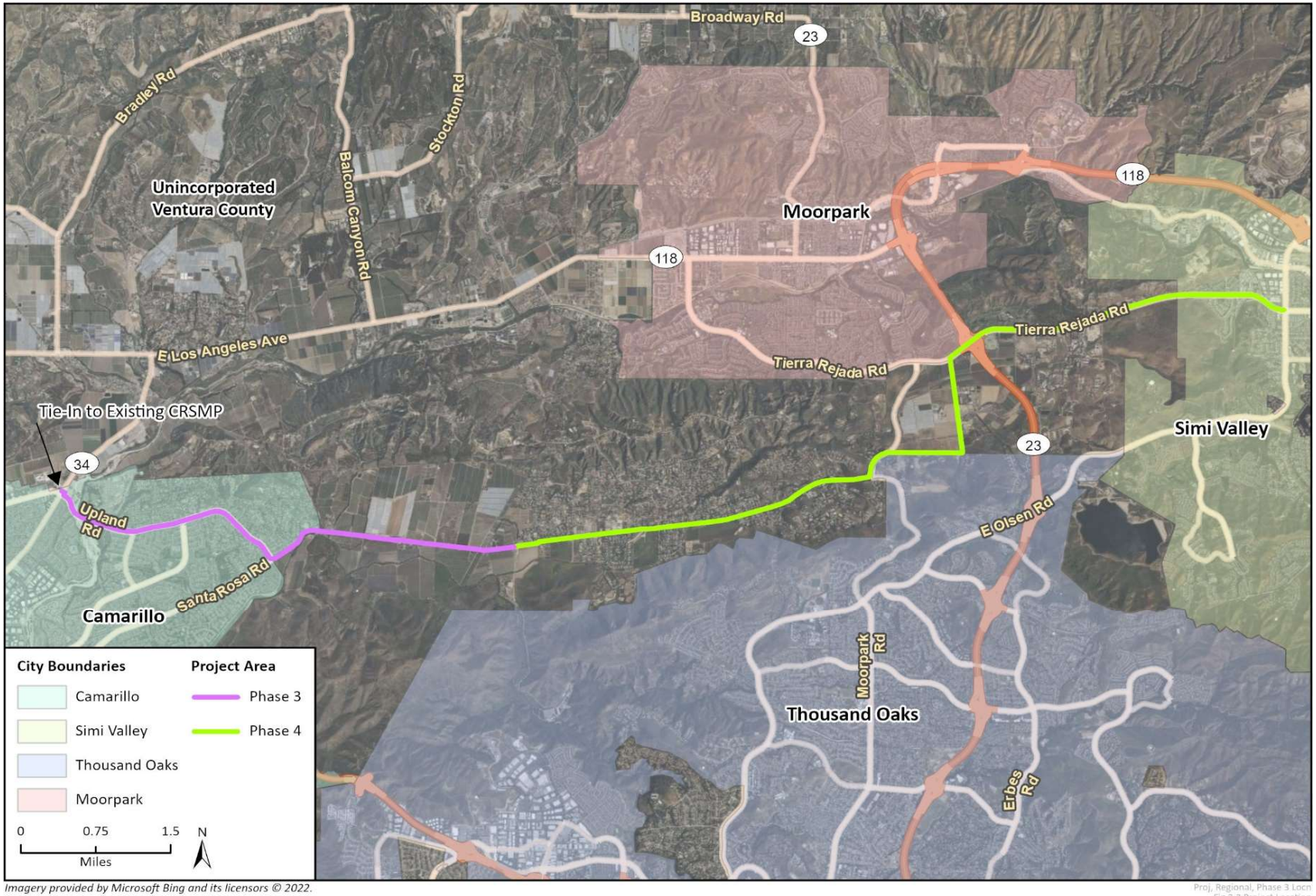


**Figure 2 Project Site Location**




*Imagery provided by Microsoft Bing and its licensors © 2022.*
*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**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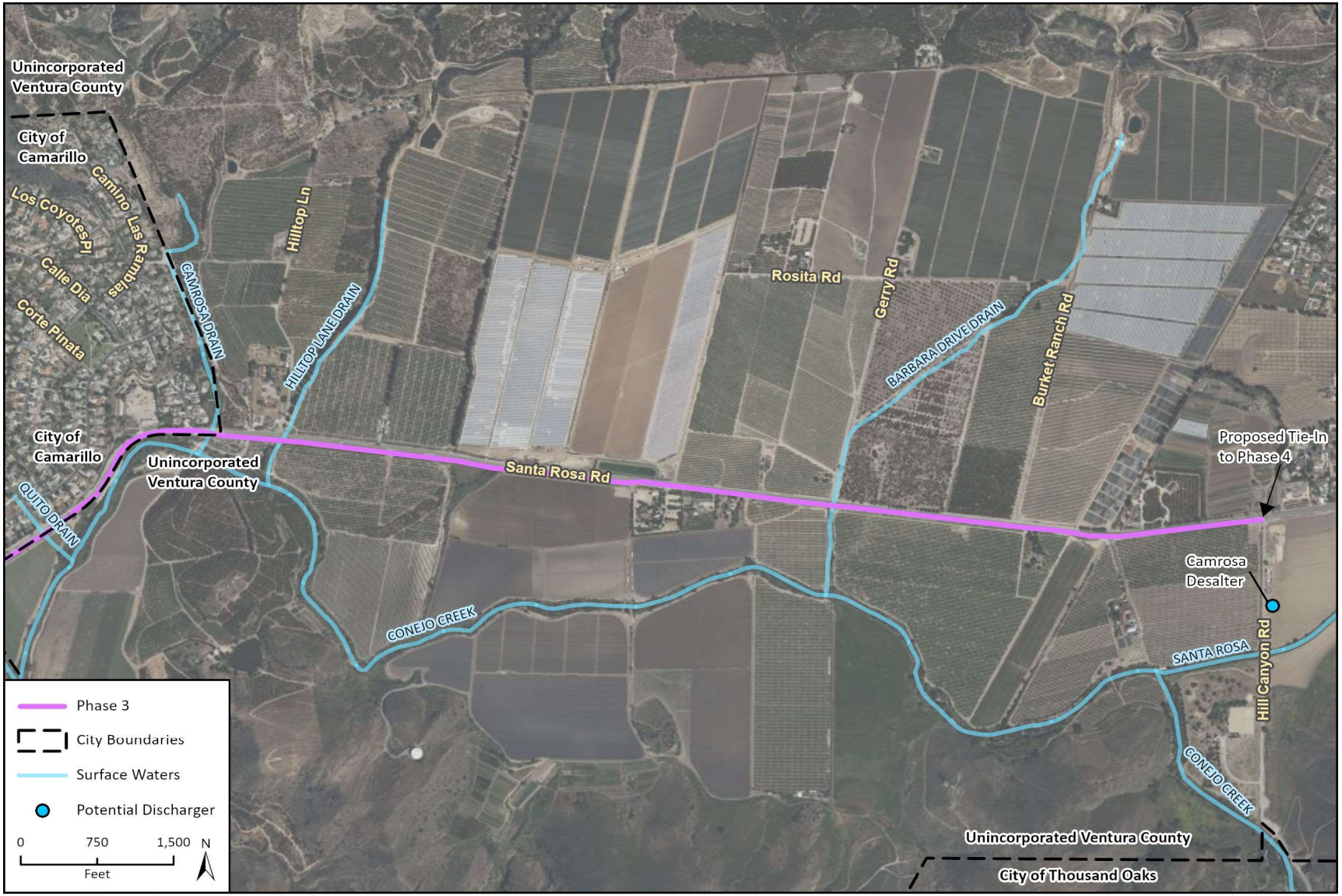
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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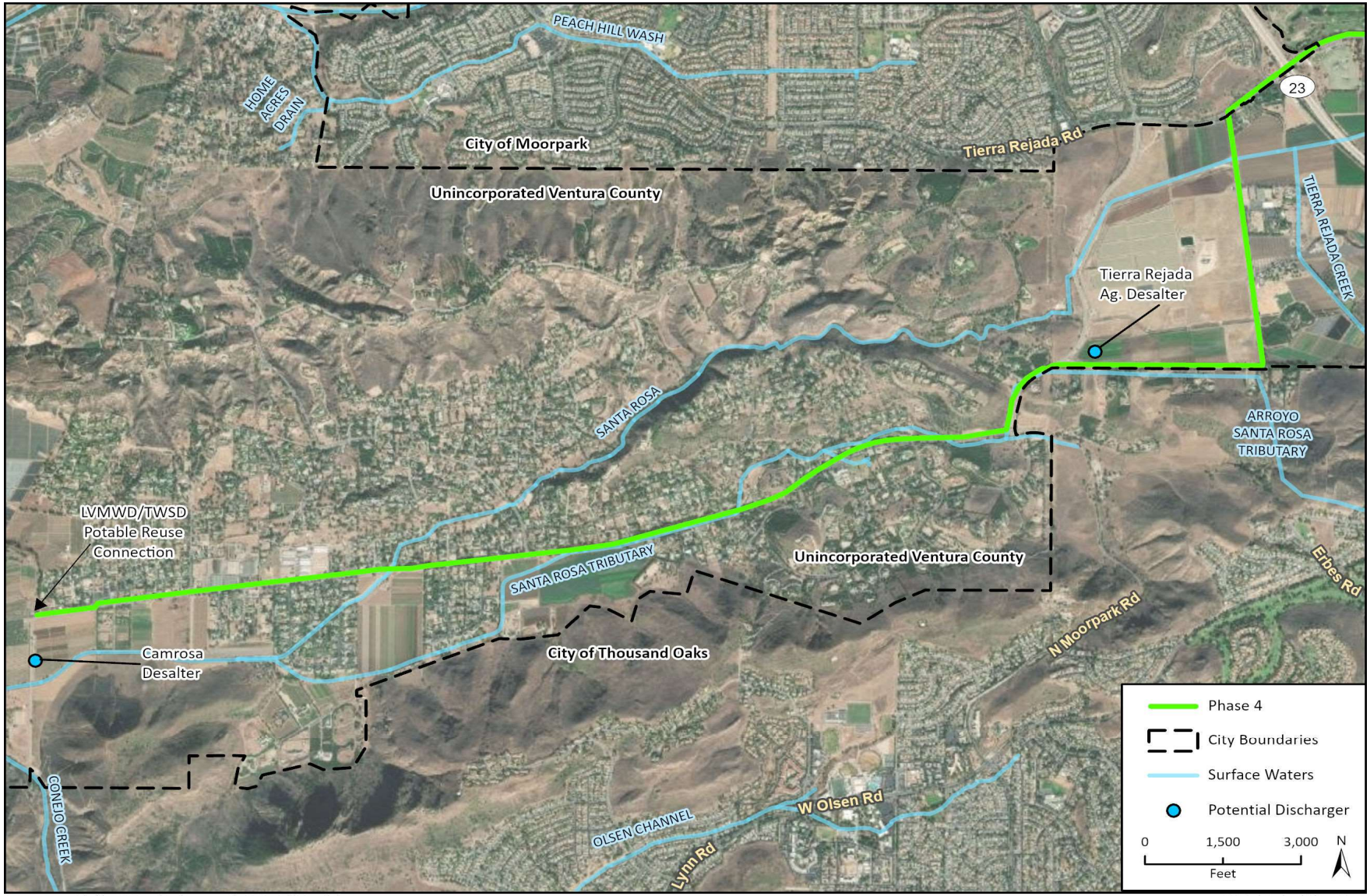
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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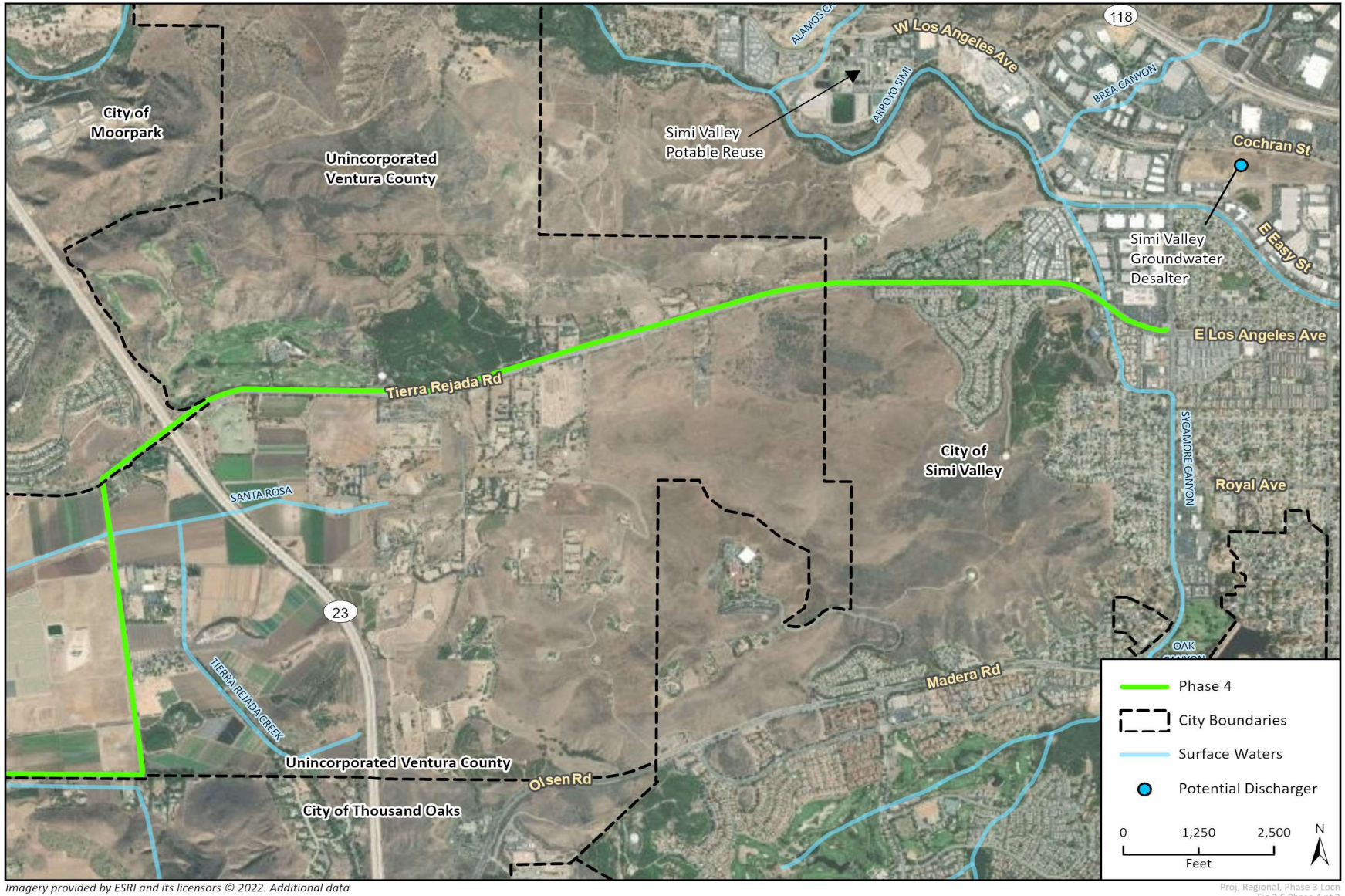
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

web site: www.calleguas.com

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December 8, 2022

Rincon Band of Luiseño Indians
Bo Mazzetti, Chairperson
One Government Center Lane
Valley Center, CA 92082
Via Email: bomazzetti@aol.com

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Chairperson Mazzetti,

The Calleguas Municipal Water District proposes the Calleguas Regional Salinity Management Pipeline (CRSMP) Phases 3 and 4 (proposed project), located in Ventura County, California. The CRSMP consists of a pipeline system to transport excess recycled water and brine concentrate generated within the watershed to an ocean outfall. The CRSMP currently extends approximately 22 miles from its upstream end in the Somis area near Camarillo to its downstream terminus at the ocean outfall in Port Hueneme. The proposed project would extend the CRSMP approximately 14 miles inland from the existing terminus, enabling connections to additional dischargers. The proposed project is subject to the California Environmental Quality Act.

The proposed project would install an underground pipeline. The Phases 3 and 4 pipeline alignments would traverse portions of Camarillo, Moorpark, Thousand Oaks, and Simi Valley, as well as unincorporated Ventura County. Pipeline alignments would mostly be located within the public right-of-way within paved roads and dirt shoulders. A portion of the alignment would extend under private property at the northeast corner of the intersection of Las Posas Road and Upland Road, which is currently developed for agricultural production. Roadways along the project alignments include Upland Road, Santa Rosa Road, Moorpark Road, Read Road, Sunset Valley Road, and Tierra Rejada Road. See attached project location maps. The majority of the pipeline would be installed via conventional open-cut trench construction methods. Trenchless construction methods would be used to cross below existing drainage channels. Trenchless construction methods would also be used to cross Somis Road, Santa Rosa Road, and busy intersections to minimize traffic impacts.

The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

Your tribe's input is important to the Calleguas Municipal Water District planning process. Under AB 52, you have 30 days from receipt of this notification to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (805) 579-7194, or via e-mail at jlancaster@calleguas.com. Thank you for your assistance.

Sincerely,

Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

Enclosure: Project Location Maps

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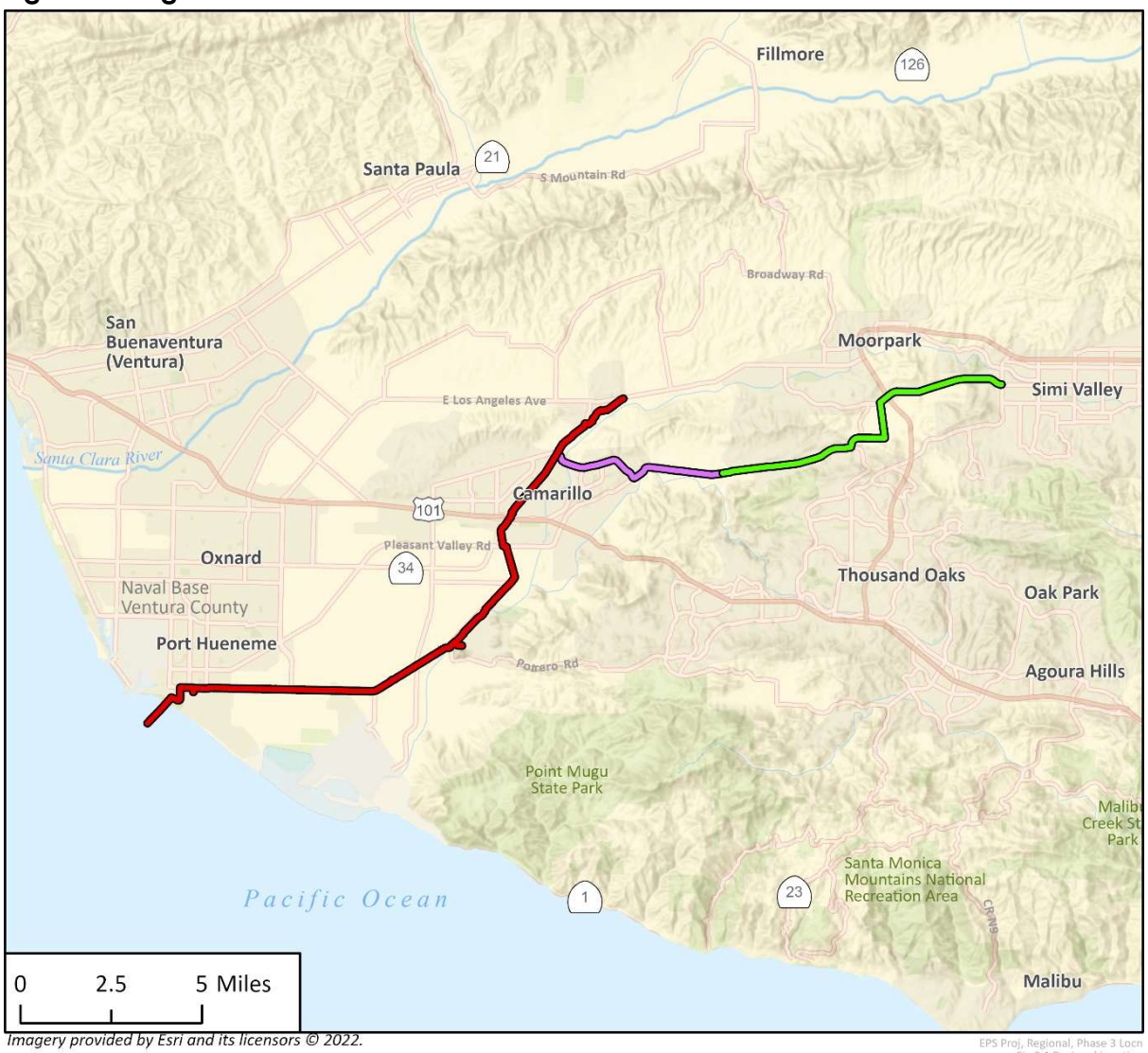



*Imagery provided by Esri and its licensors © 2022.*

EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N

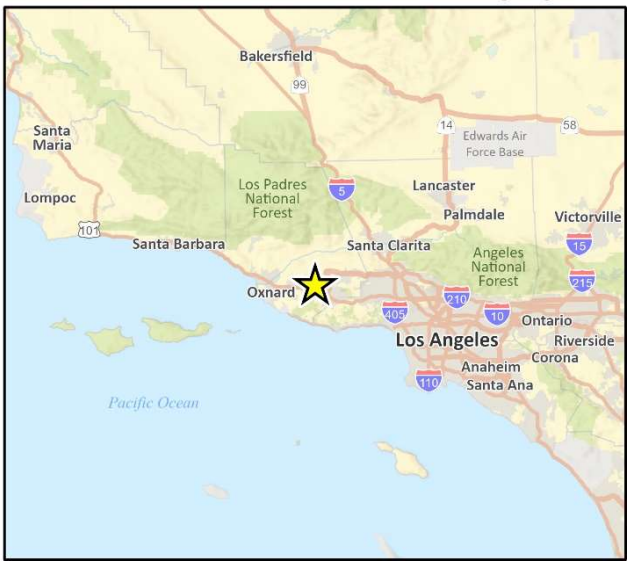
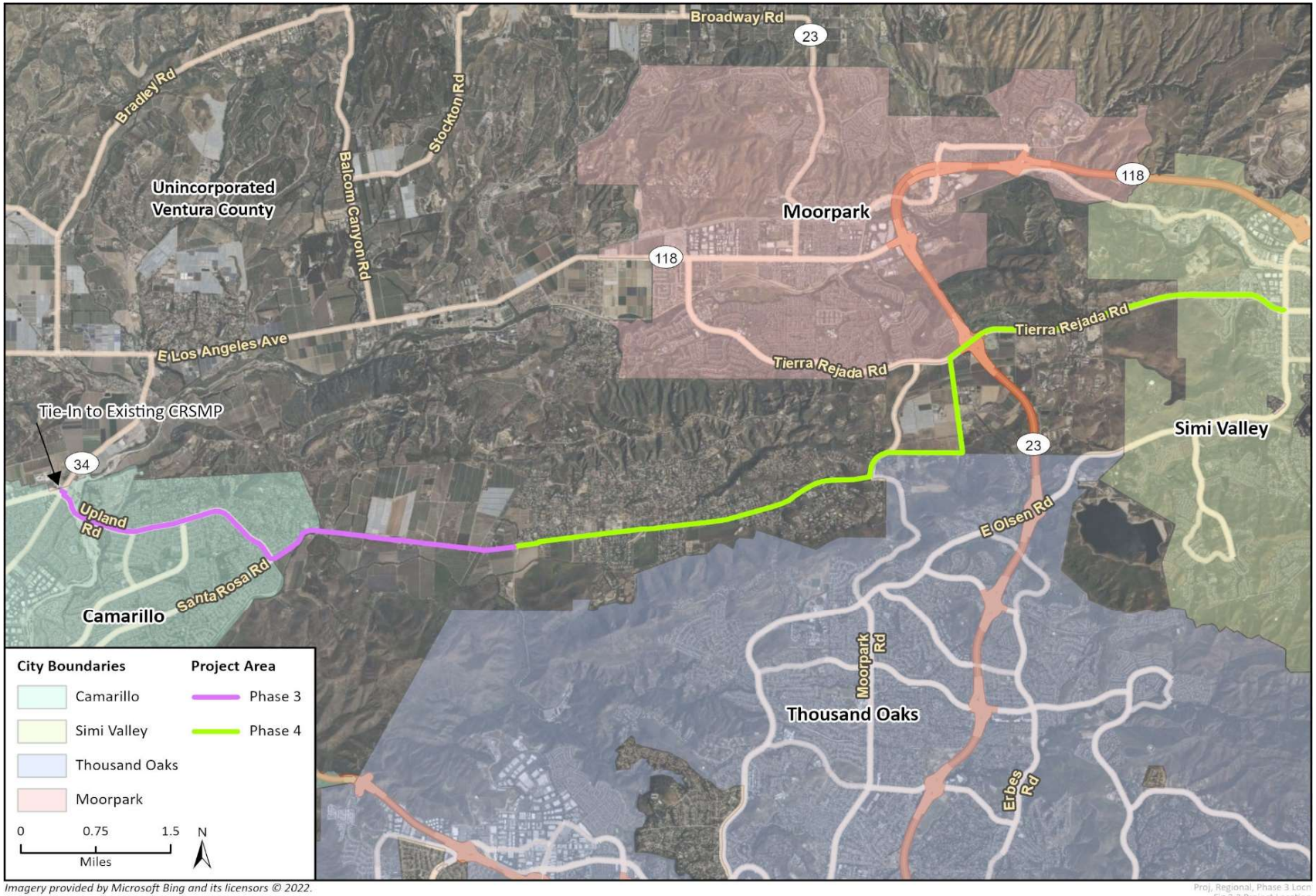


**Figure 2 Project Site Location**




*Imagery provided by Microsoft Bing and its licensors © 2022.*
*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**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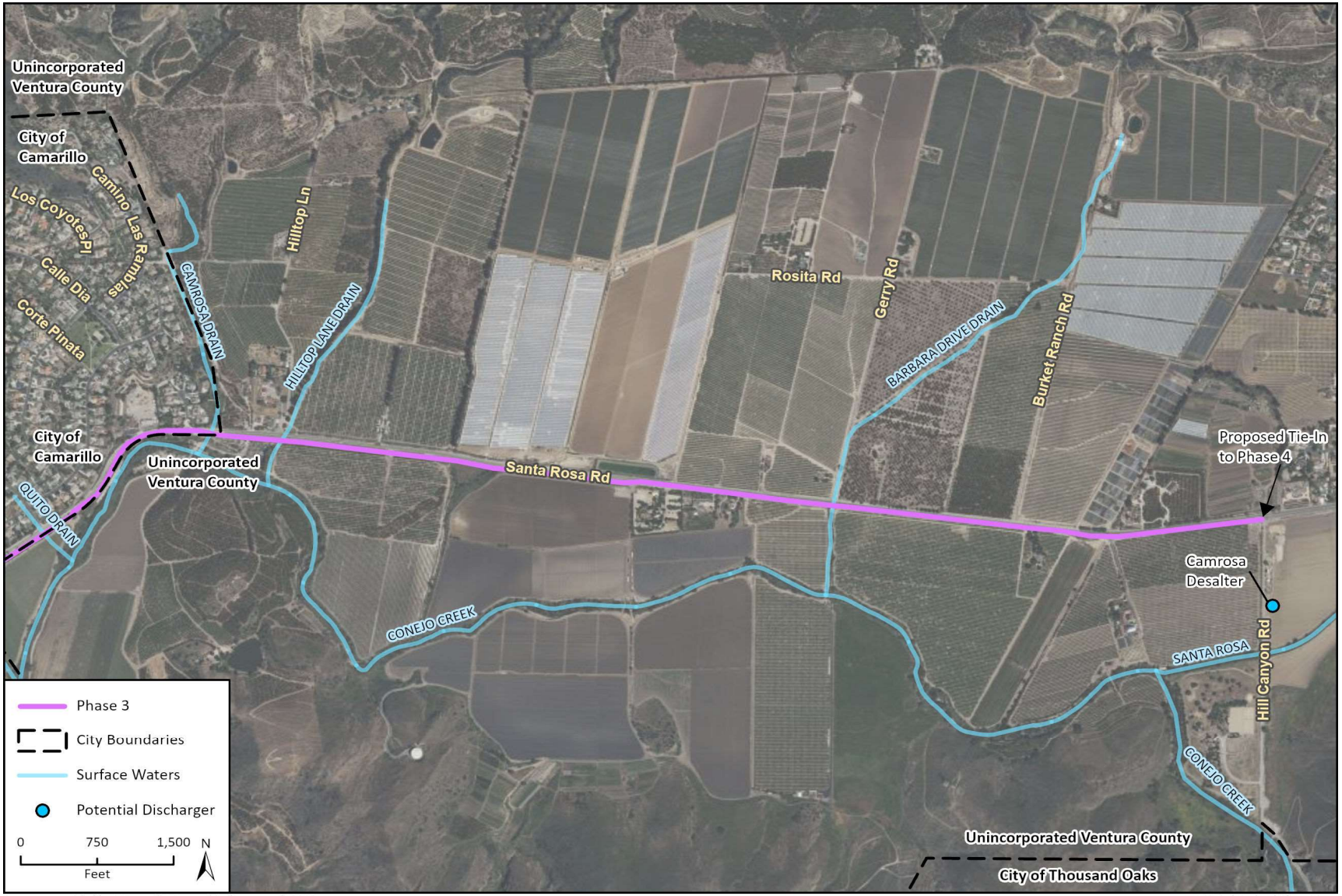
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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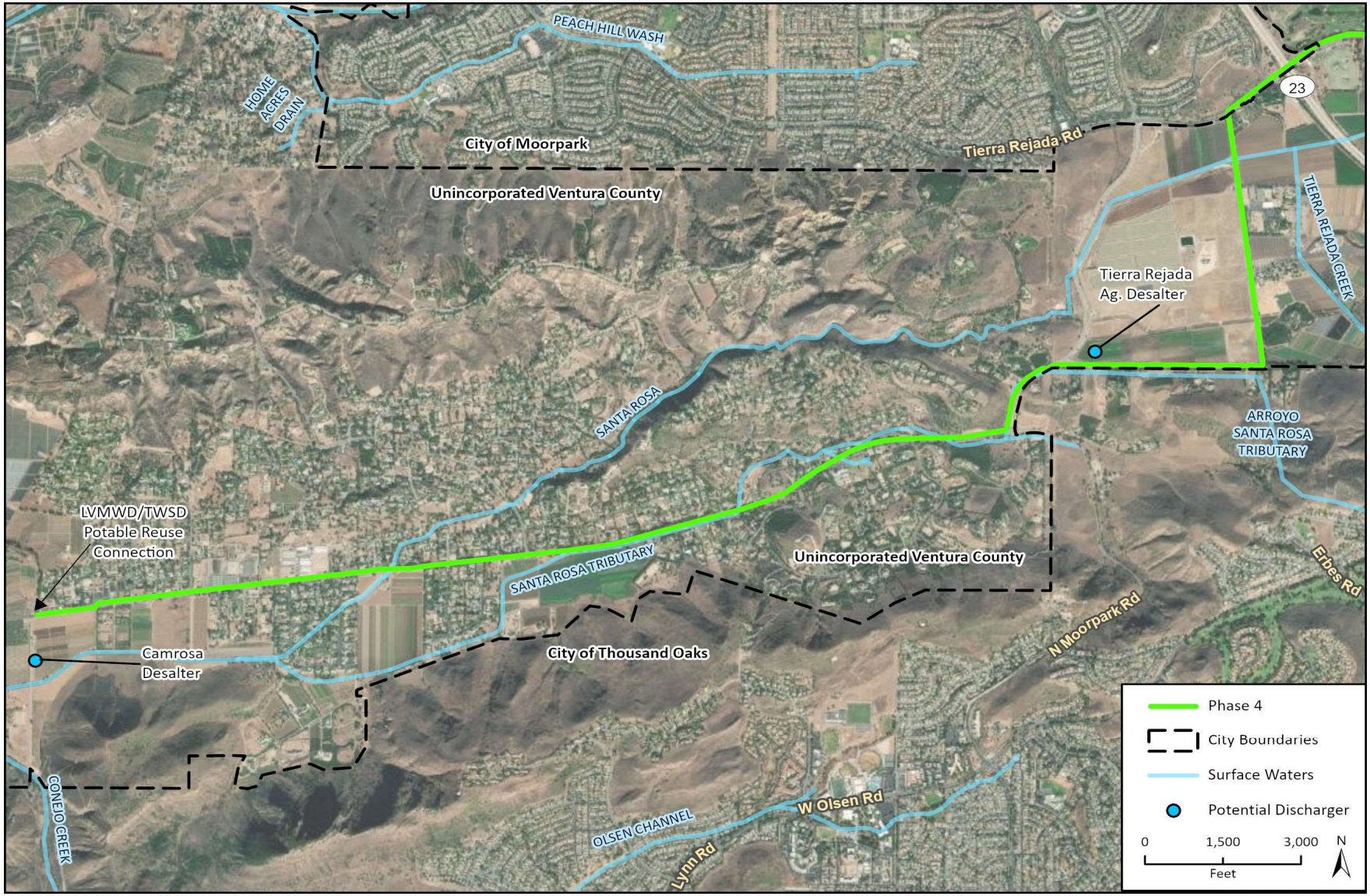
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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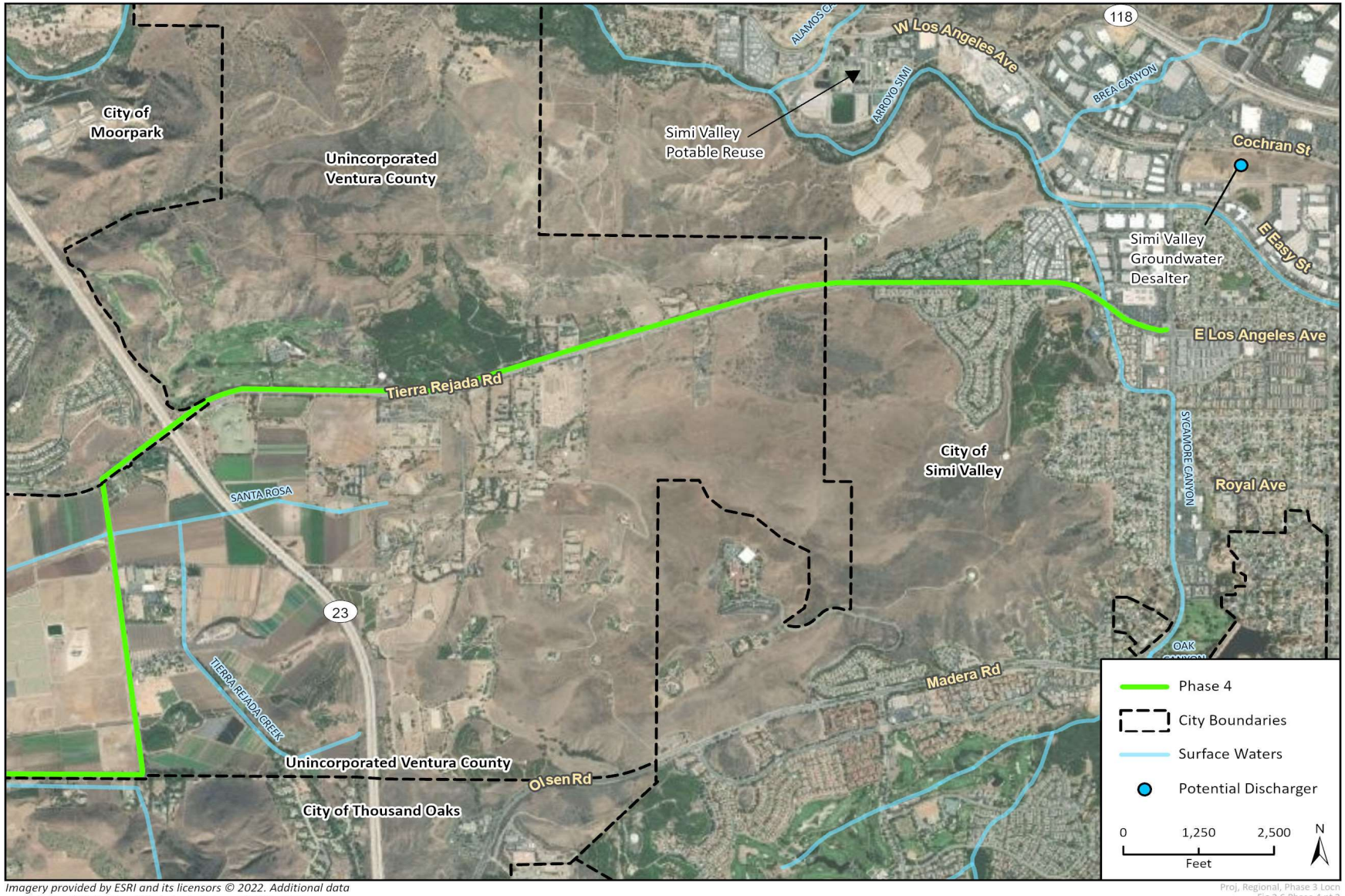
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

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December 8, 2022

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838
Newhall, CA 91322
Via Email: ddyocum@comcast.net

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Chairperson Yocum,

The Calleguas Municipal Water District proposes the Calleguas Regional Salinity Management Pipeline (CRSMP) Phases 3 and 4 (proposed project), located in Ventura County, California. The CRSMP consists of a pipeline system to transport excess recycled water and brine concentrate generated within the watershed to an ocean outfall. The CRSMP currently extends approximately 22 miles from its upstream end in the Somis area near Camarillo to its downstream terminus at the ocean outfall in Port Hueneme. The proposed project would extend the CRSMP approximately 14 miles inland from the existing terminus, enabling connections to additional dischargers. The proposed project is subject to the California Environmental Quality Act.

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The proposed project must comply with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014), which requires local governments to conduct meaningful consultation with California Native American tribes that have requested to be notified by lead agencies of proposed projects in the geographic area with which the tribe is traditionally and culturally affiliated.

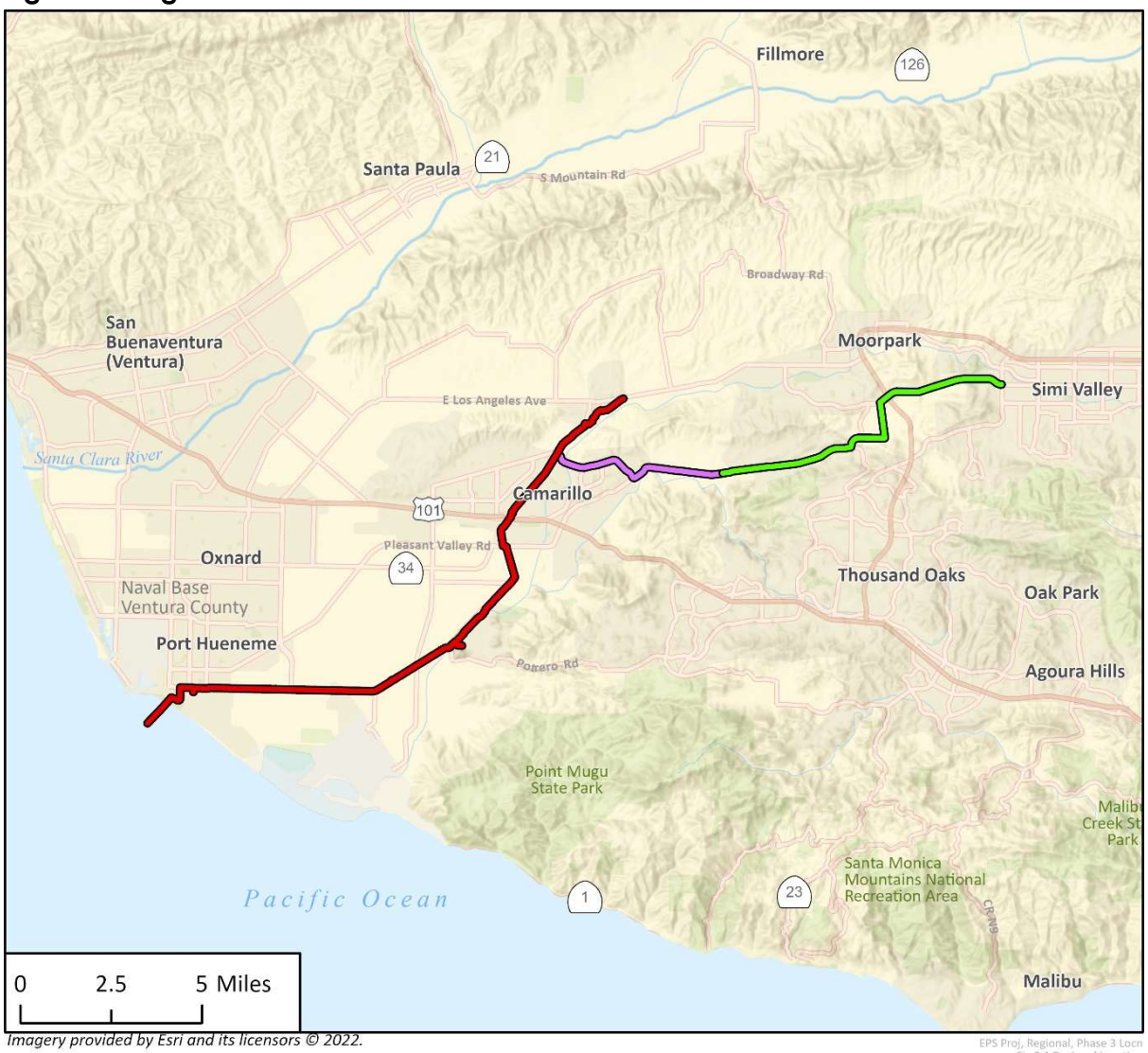
Your tribe's input is important to the Calleguas Municipal Water District planning process. Under AB 52, you have 30 days from receipt of this notification to respond in writing if you wish to consult on the proposed project. If you require any additional information or have any questions, please contact me at (805) 579-7194, or via e-mail at jlancaster@calleguas.com. Thank you for your assistance.

Sincerely,

Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

Enclosure: Project Location Maps

**Figure 1 Regional Location**

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EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N

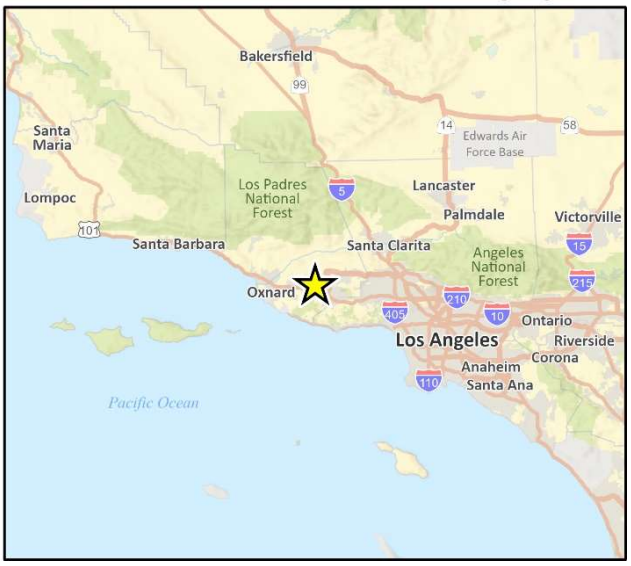
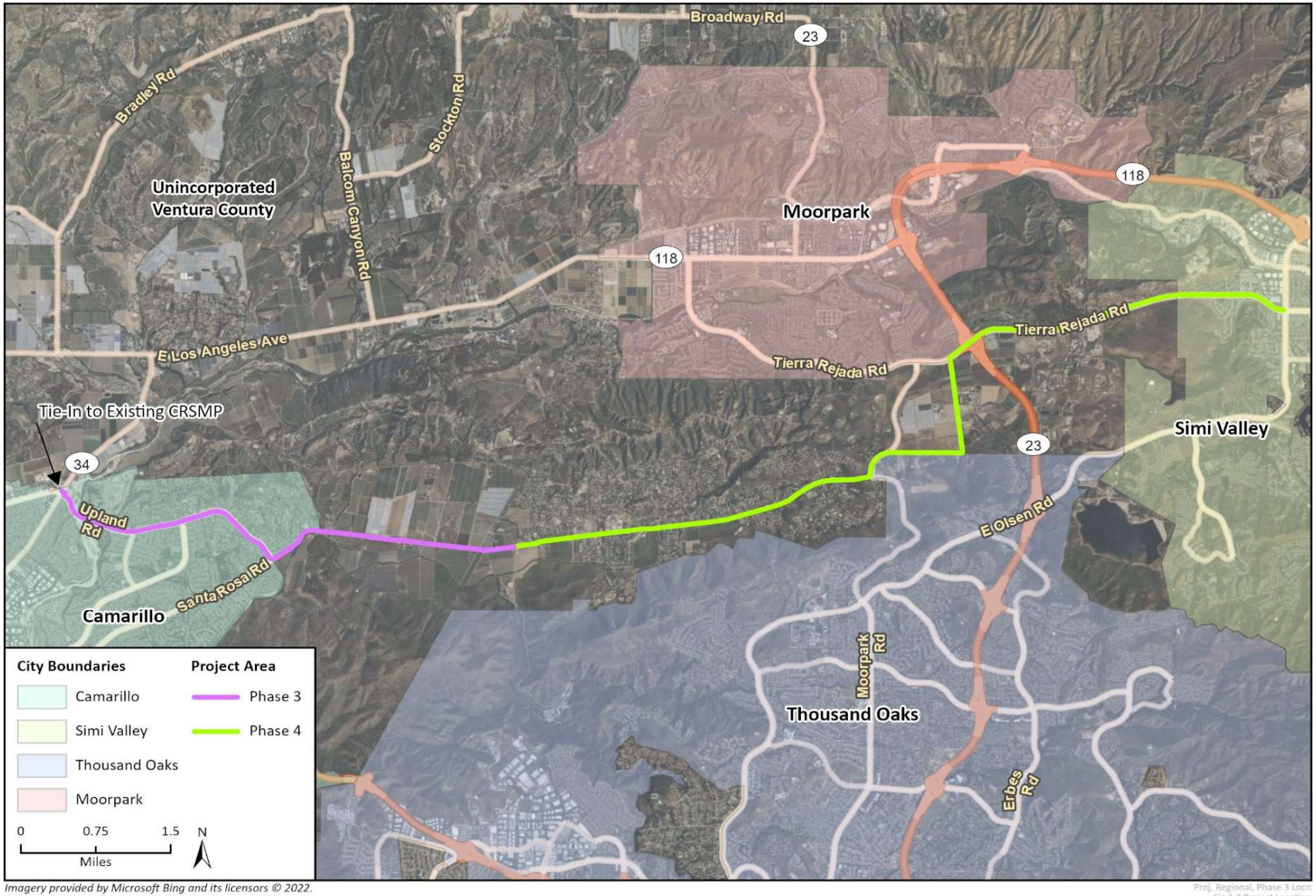


**Figure 2 Project Site Location**

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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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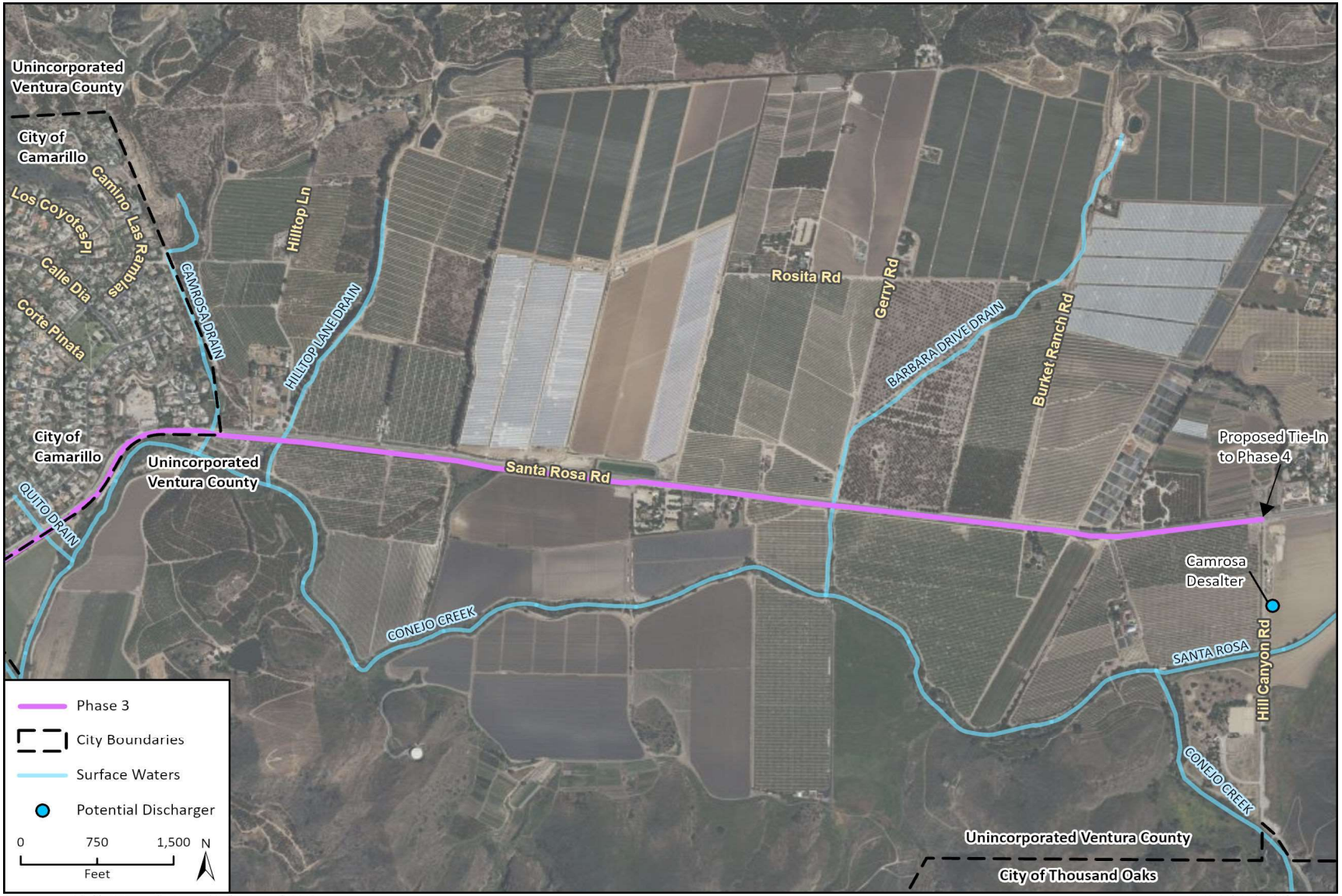
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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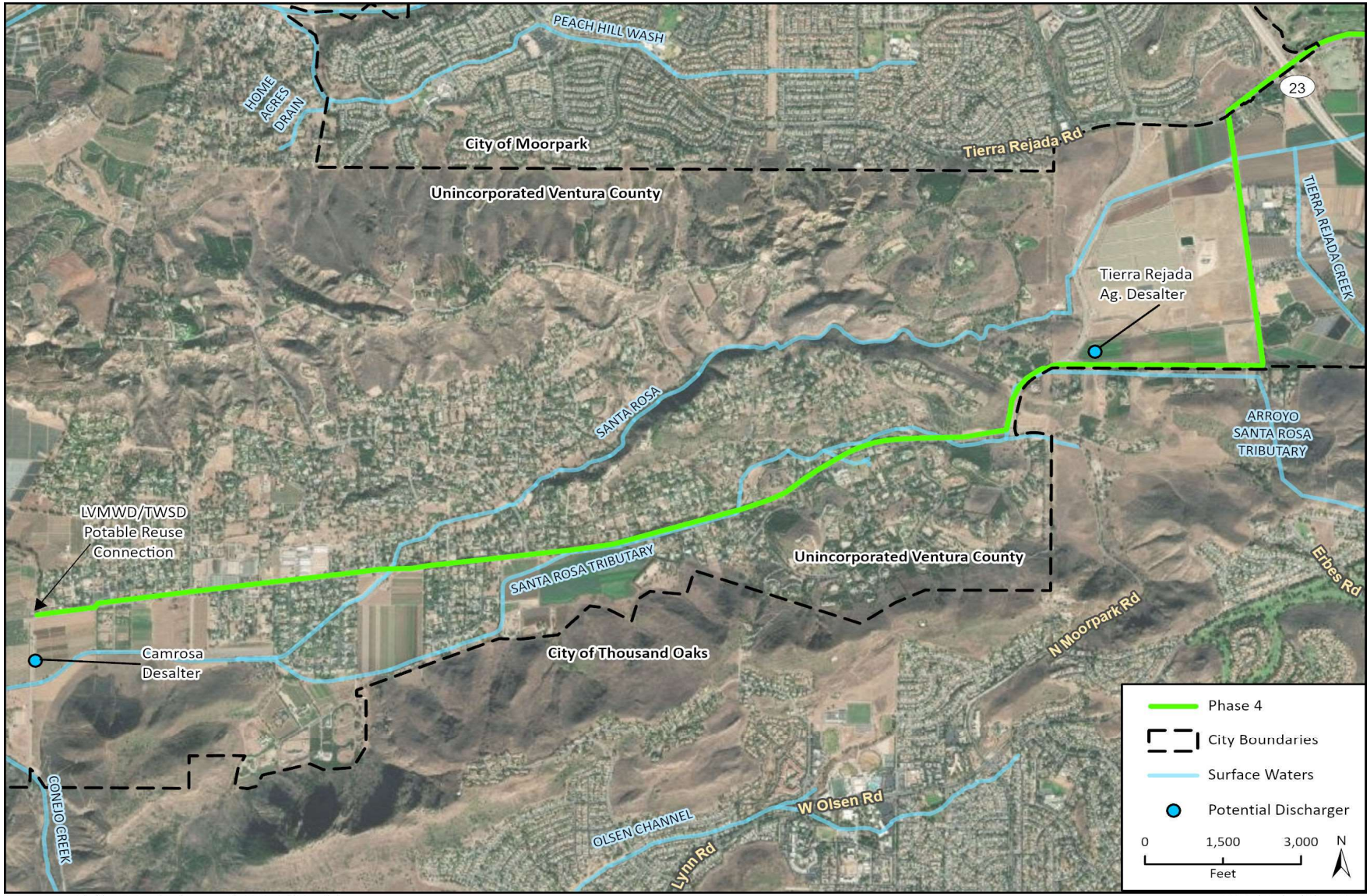
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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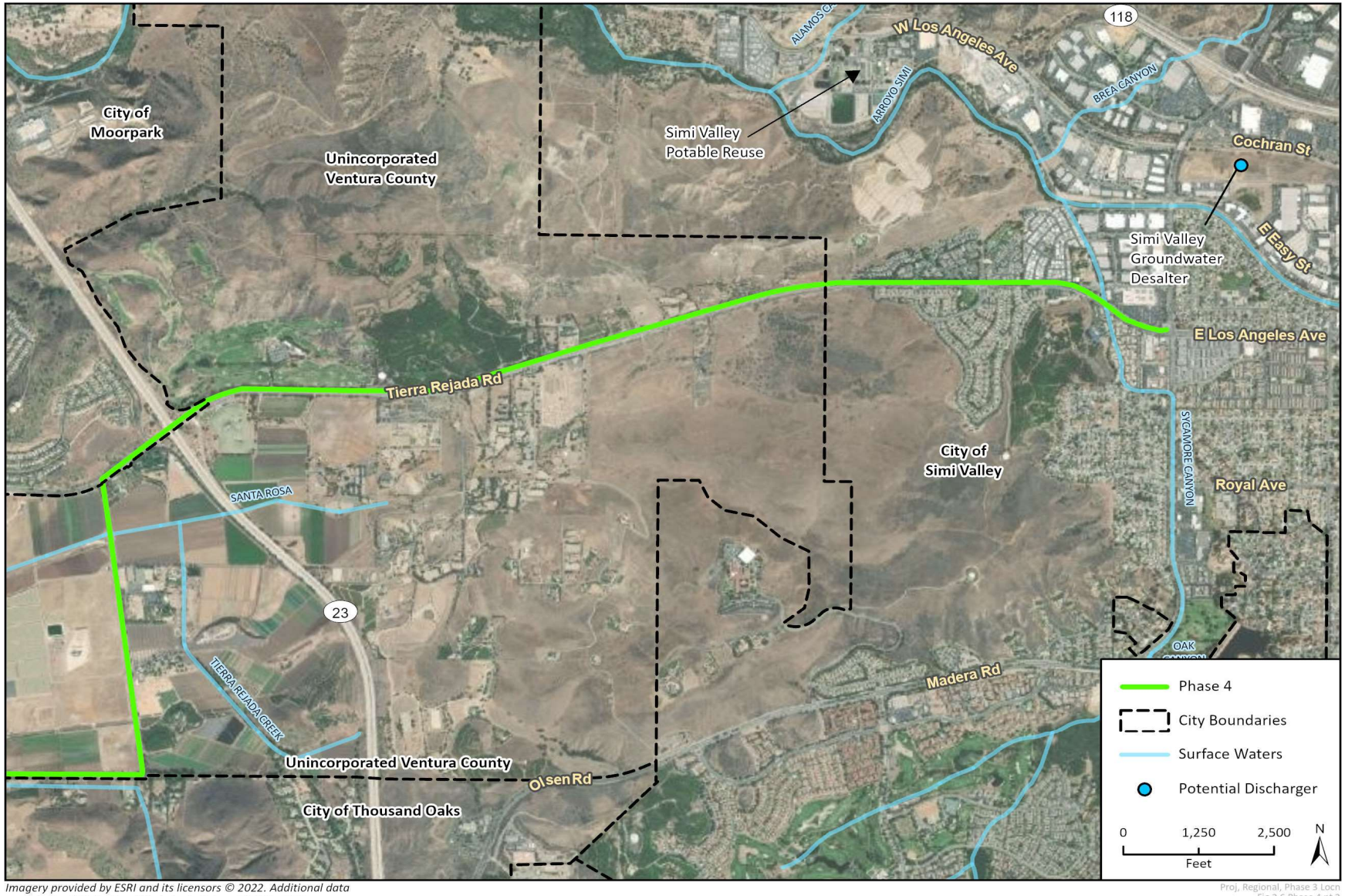
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

web site: www.calleguas.com

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December 8, 2022

Santa Ynez Band of Chumash Indians
Kenneth Kahn, Chairperson
P.O. Box 517
Santa Ynez, CA, 93460
Via Email: kkahn@santaynezchumash-nsn.gov

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear Chairperson Kahn,

The Calleguas Municipal Water District proposes the Calleguas Regional Salinity Management Pipeline (CRSMP) Phases 3 and 4 (proposed project), located in Ventura County, California. The CRSMP consists of a pipeline system to transport excess recycled water and brine concentrate generated within the watershed to an ocean outfall. The CRSMP currently extends approximately 22 miles from its upstream end in the Somis area near Camarillo to its downstream terminus at the ocean outfall in Port Hueneme. The proposed project would extend the CRSMP approximately 14 miles inland from the existing terminus, enabling connections to additional dischargers. The proposed project is subject to the California Environmental Quality Act.

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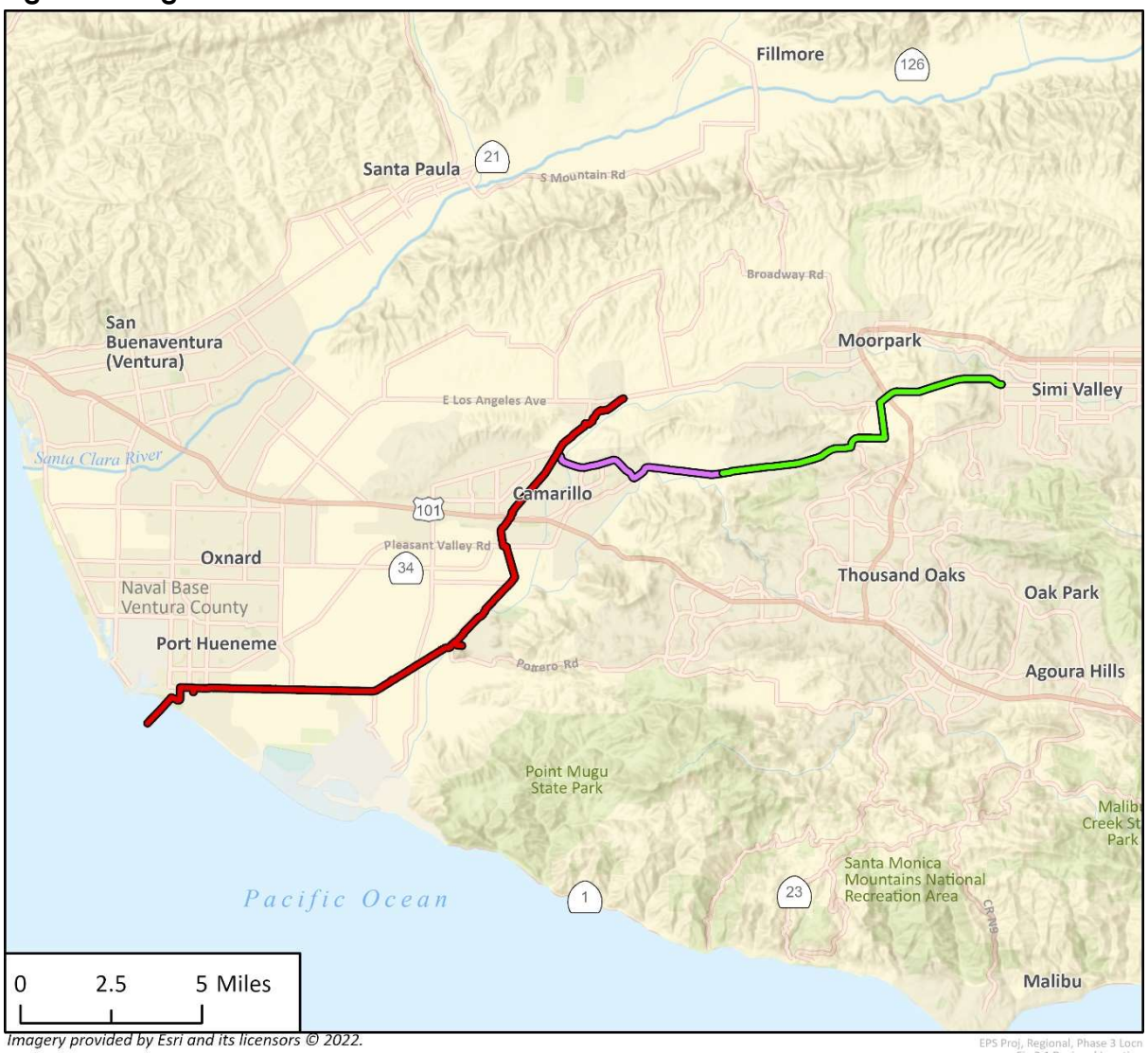
Sincerely,

Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

Enclosure: Project Location Maps

**Figure 1 Regional Location**

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EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N

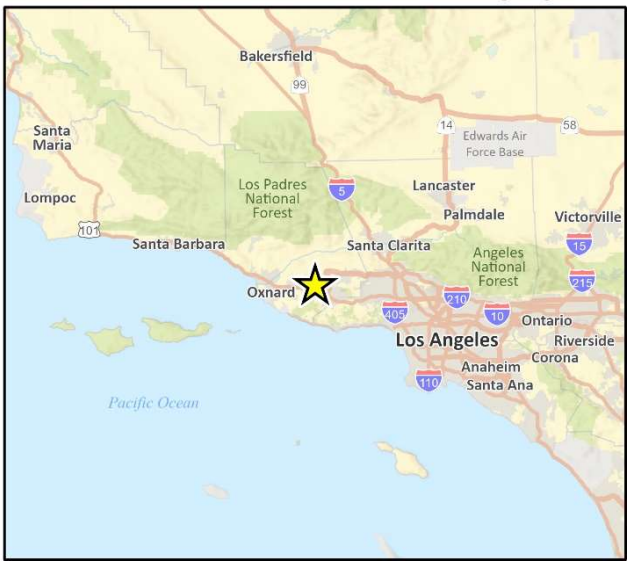
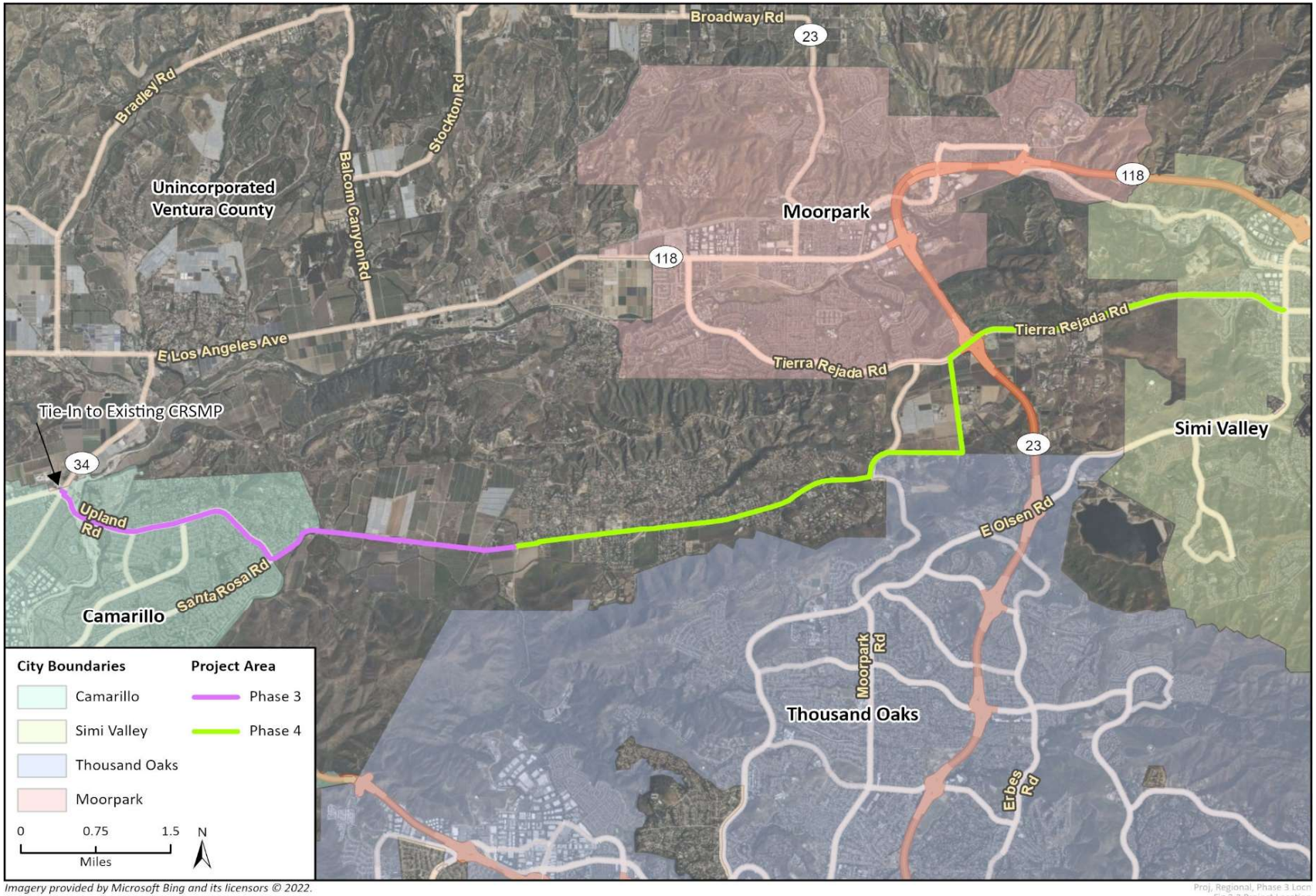


**Figure 2 Project Site Location**

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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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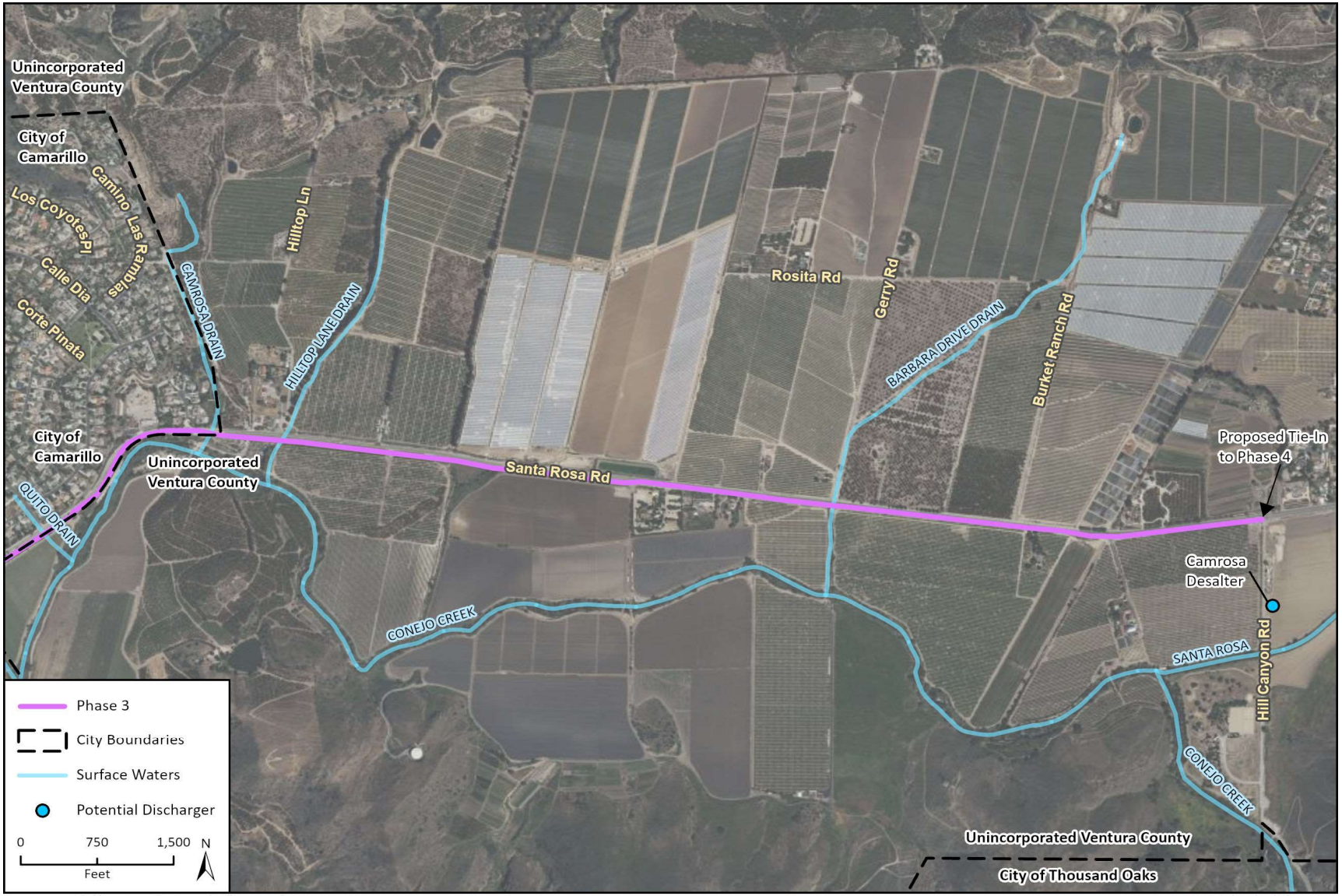
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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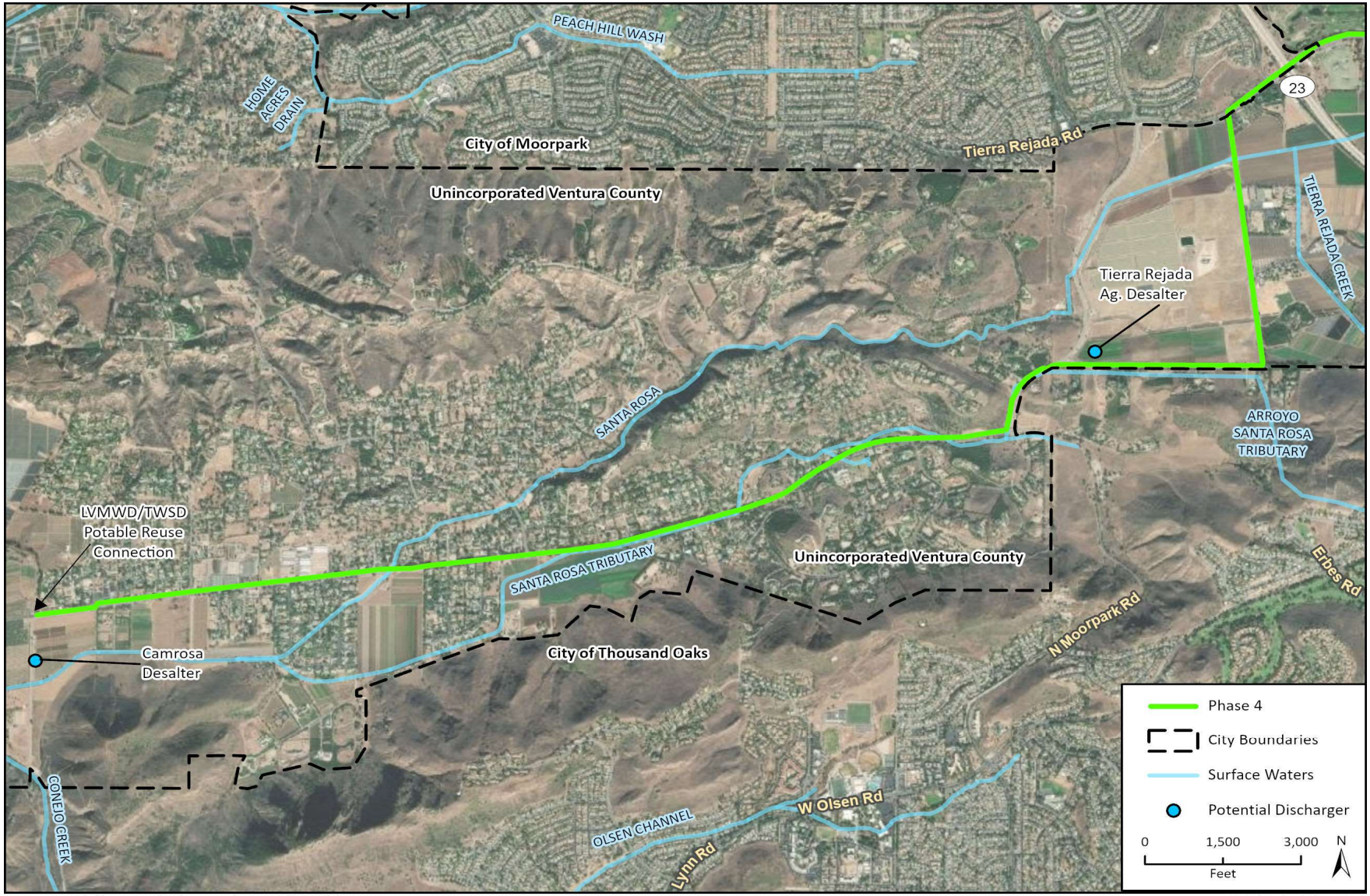
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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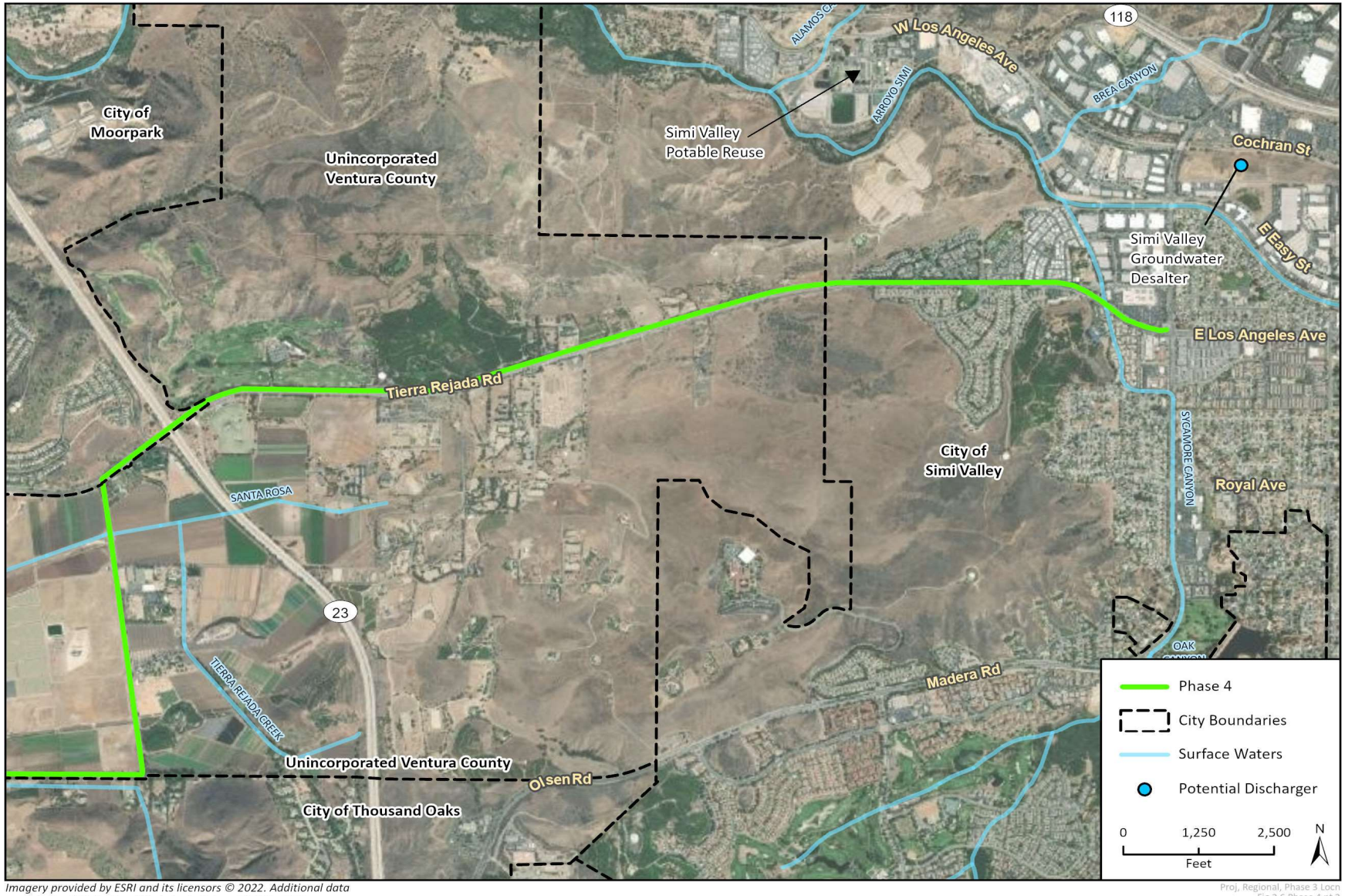
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2

web site: www.calleguas.com

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December 8, 2022

San Luis Obispo County Chumash Council
1030 Ritchie Road
Grover Beach, CA, 93433

RE: Assembly Bill 52 Consultation Notification for the Calleguas Regional Salinity Management Pipeline Phases 3 and 4, Ventura County, California

Dear San Luis Obispo County Chumash Council,

The Calleguas Municipal Water District proposes the Calleguas Regional Salinity Management Pipeline (CRSMP) Phases 3 and 4 (proposed project), located in Ventura County, California. The CRSMP consists of a pipeline system to transport excess recycled water and brine concentrate generated within the watershed to an ocean outfall. The CRSMP currently extends approximately 22 miles from its upstream end in the Somis area near Camarillo to its downstream terminus at the ocean outfall in Port Hueneme. The proposed project would extend the CRSMP approximately 14 miles inland from the existing terminus, enabling connections to additional dischargers. The proposed project is subject to the California Environmental Quality Act.

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Sincerely,

Jennifer Lancaster
Principal Resource Specialist
Calleguas Municipal Water District

Enclosure: Project Location Maps

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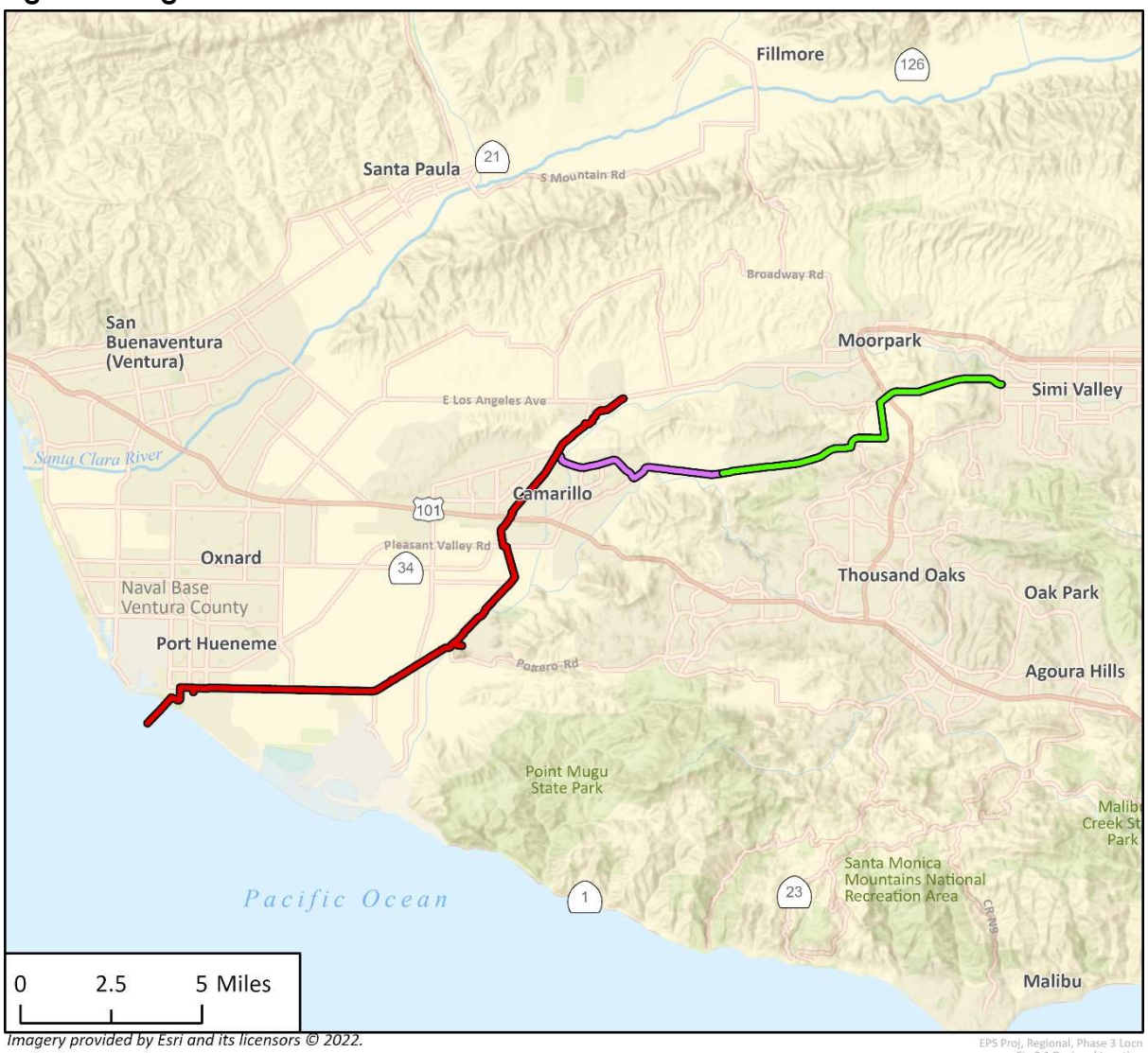


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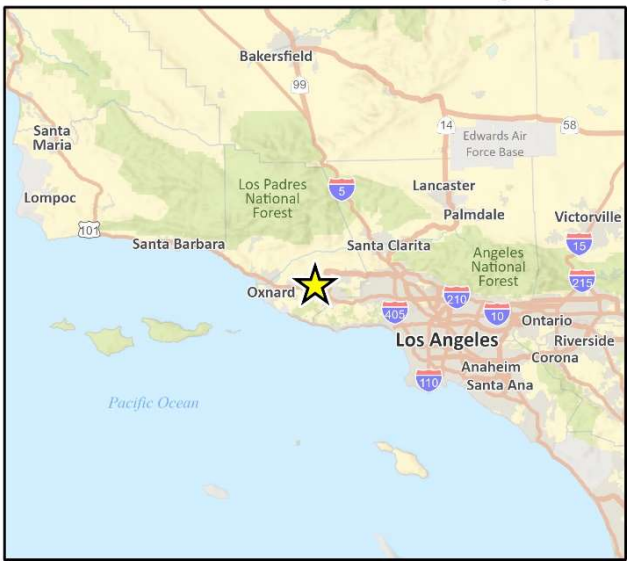
EPS Proj, Regional, Phase 3 Locn
Fig 2.1 Regional Location

Phase 3 Pipeline
Phase 4 Pipeline
Existing Salinity Management Pipeline

N



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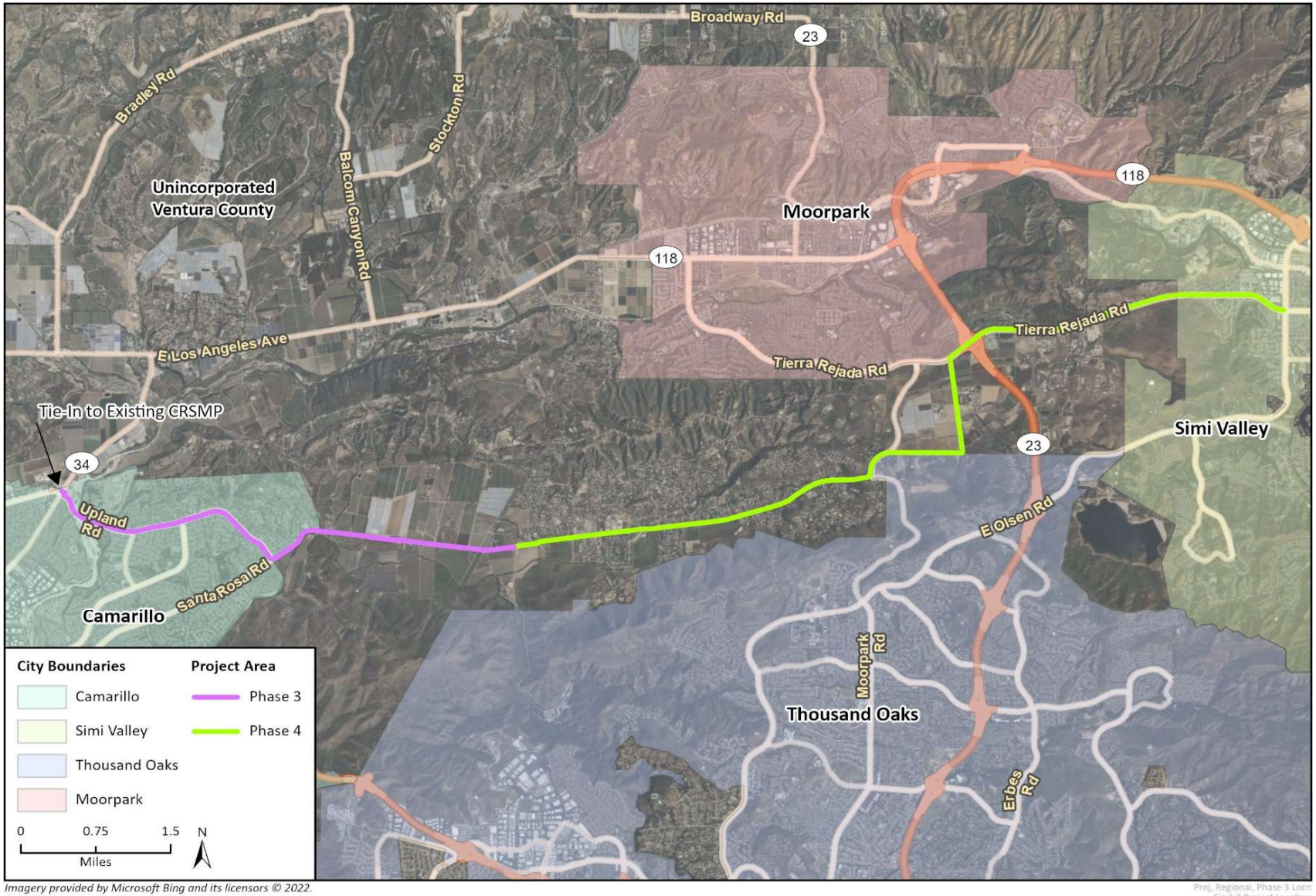


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*Additional data provided by the County of Ventura.*

Proj, Regional, Phase 3 Locn
Fig 2.2 Project Location

**Figure 3 Phase 3 Pipeline Location, Western Portion**


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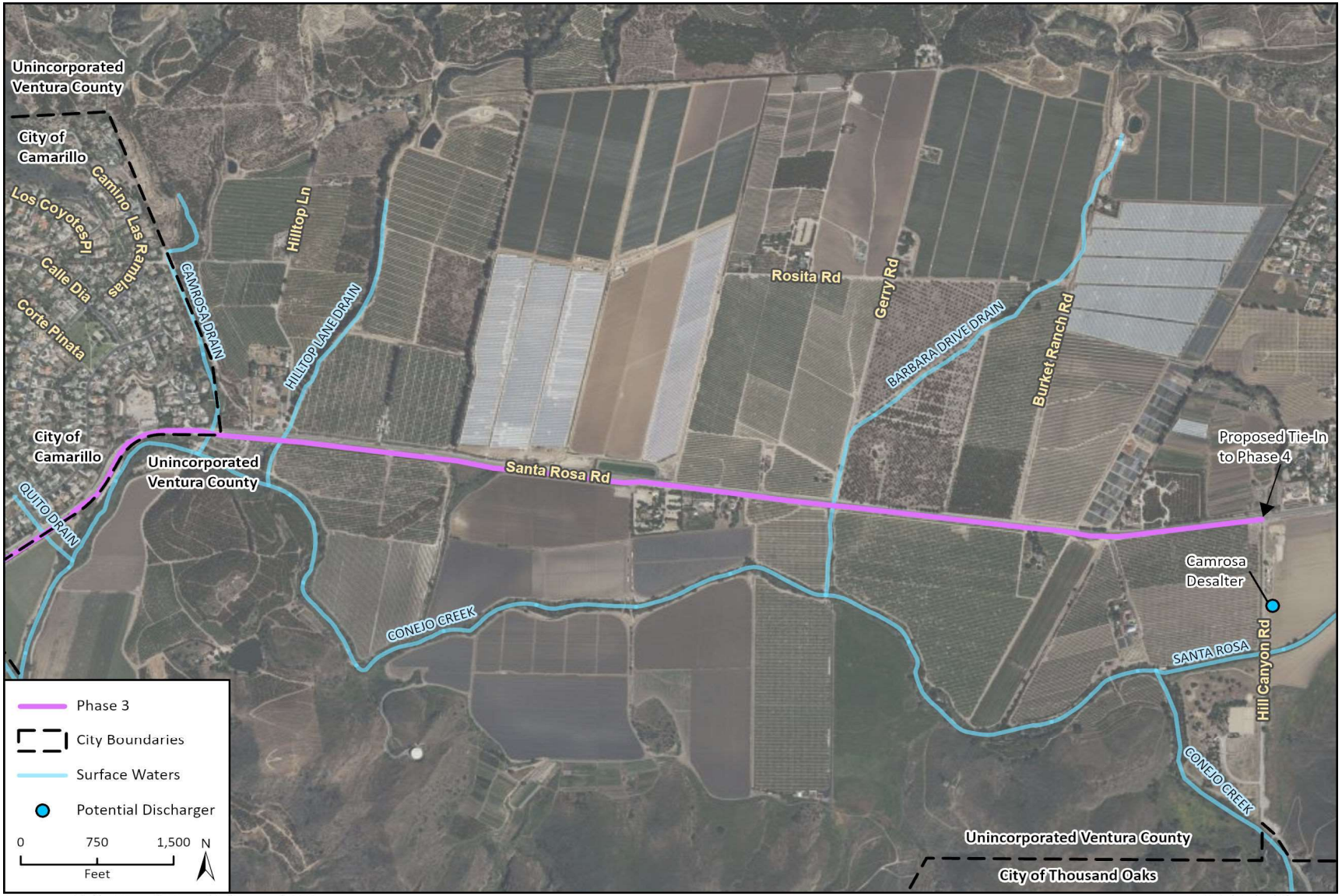
EPS Proj, Regional, Phase 3 Locn
Fig 2.3 Phase 3 Pt 1

**Figure 4 Phase 3 Pipeline Location, Eastern Portion**

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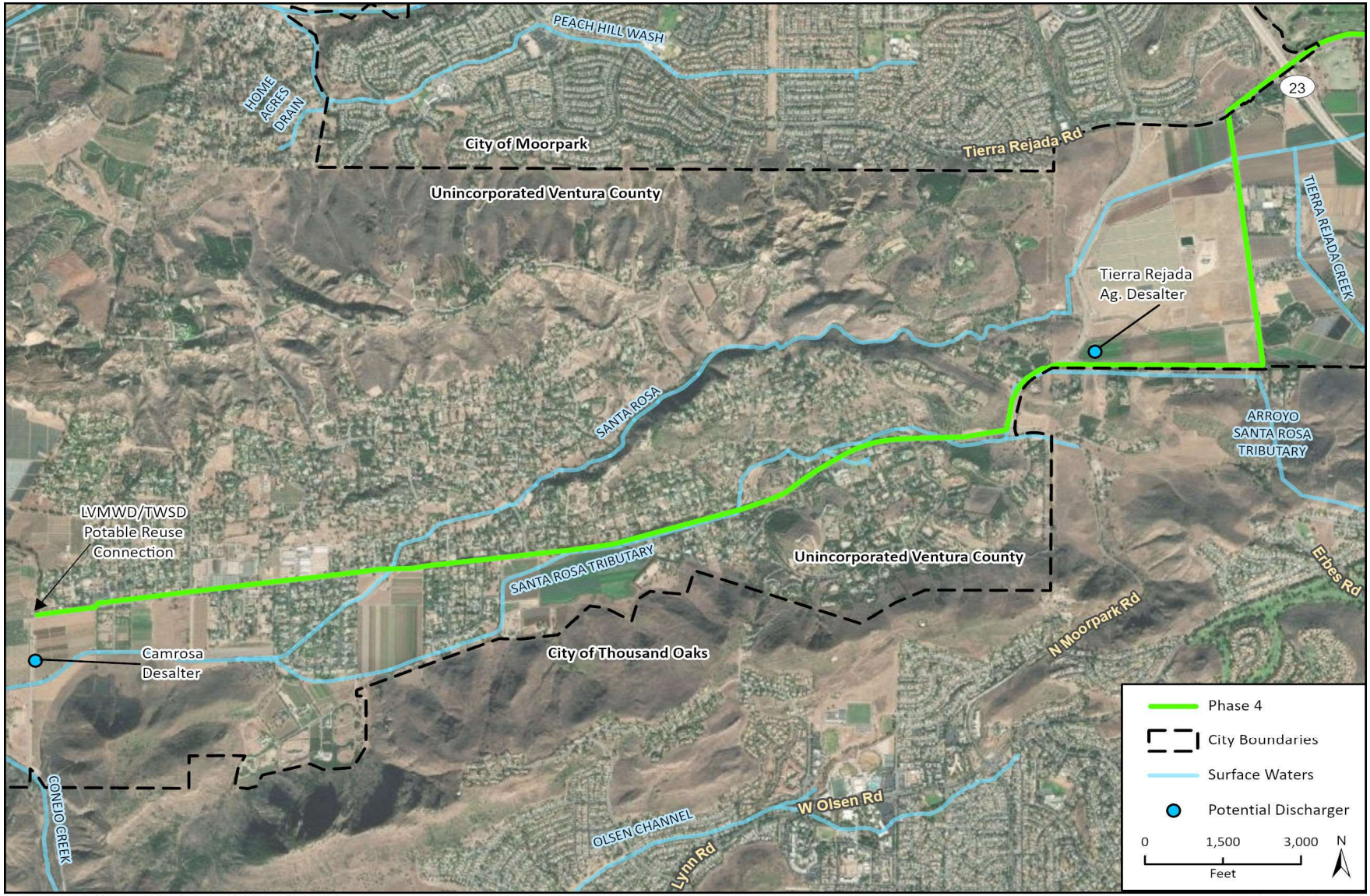
EPS Proj, Regional, Phase 3 Locn
Fig 2.4 Phase 3 Pt 2

**Figure 5 Phase 4 Pipeline Location, Western Portion**

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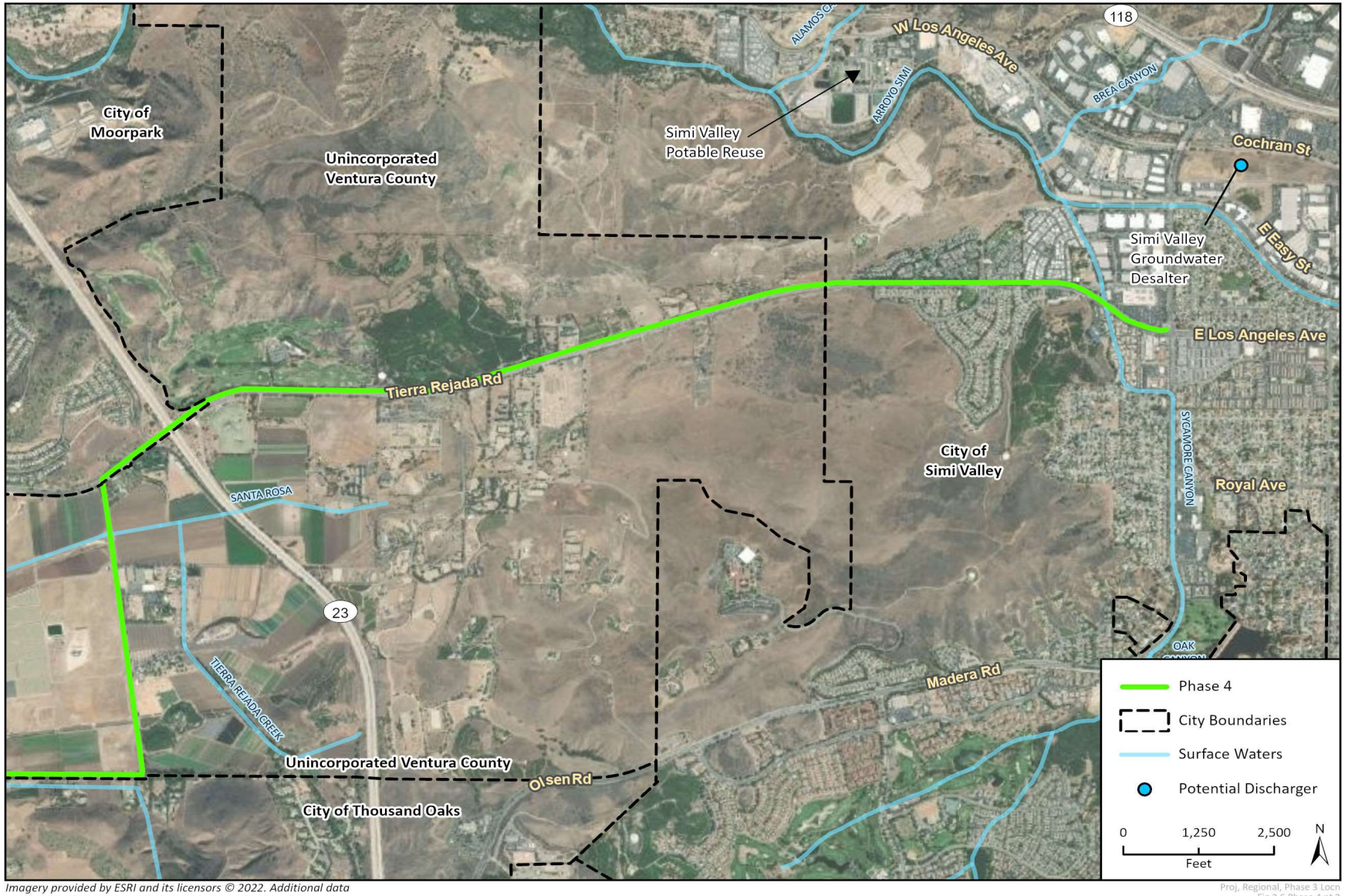
EPS Proj, Regional, Phase 3 Locn
Fig 2.5 Phase 4 pt 1

**Figure 6 Phase 4 Pipeline Location, Eastern Portion**

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Proj, Regional, Phase 3 Locn
Fig 2.6 Phase 4 pt 2