# APPENDICES

## Draft Initial Study / Proposed Mitigated Negative Declaration

### Lynwood Pump Station Replacement

City of Novato, California

NORTH MARIN WATER DISTRICT

wra Environmental Consultants


**Prepared for:**

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February 2024

WRA#320289

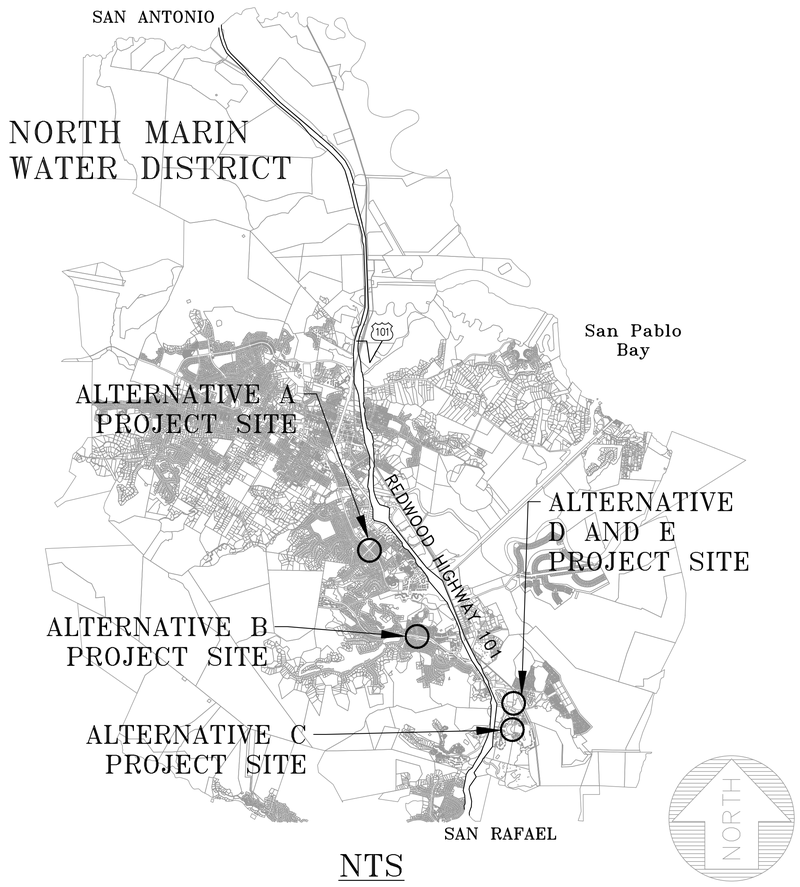
## List of Appendices

# APPENDIX A. PROJECT CONCEPTUAL PLANS

# NORTH MARIN WATER DISTRICT

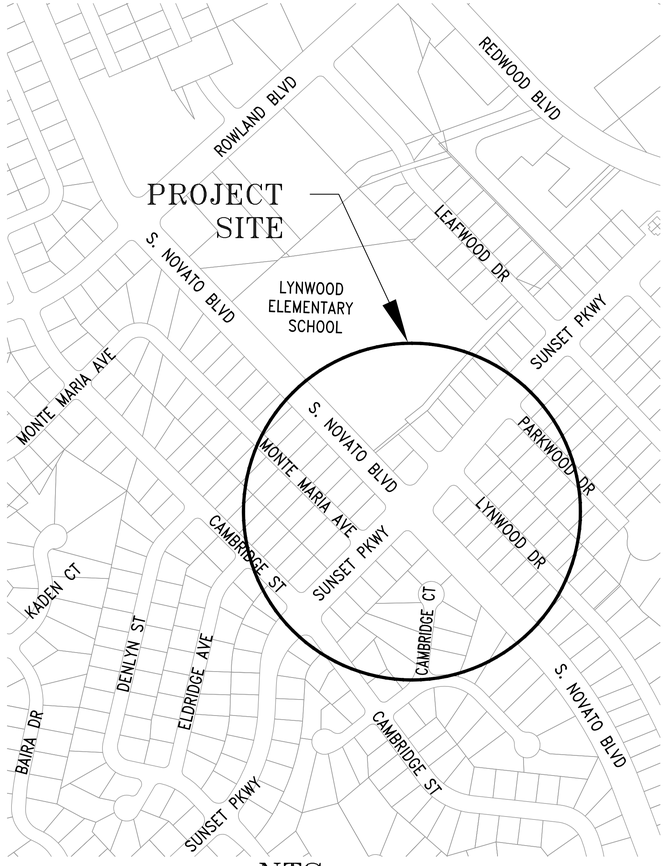
## LYNWOOD PUMP STATION REPLACEMENT PROJECT

### LOCATION MAP




NTS

### EXISTING PUMP STATION SITE LOCATION




NTS

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| NO. | DATE | REVISION | BY | APP. |
|---|---|---|---|---|
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

**TITLE SHEET**

| DES | DR | CH | SCALE : AS NOTED | |
|---|---|---|---|---|
| | | | DATE : 01/17/2024 | |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 1 OF 19 SHEETS | |
| R.E. C78430 | | | SERVICE AREA | JOB.NO. NO. G1 |

# SYMBOLS

| EXISTING | PROPOSED | |
|---|---|---|
| | | LIMIT OF WORK |
| | | PROPERTY LINE |
| SS | | SANITARY SEWER LINE |
| GAS | | GAS LINE |
| W | W | WATER LINE |
| E | E | ELECTRICAL LINE |
| SD | | STORM DRAIN |
| | | CHAIN LINK FENCE |
| | | EASEMENT |
| 111 | | ADDRESS NUMBER |
| | | WATER VALVE |
| 157.7 | | SPOT ELEVATION |
| FH | FH | FIRE HYDRANT |
| | | POST OR BOLLARD |
| | | POT HOLE |
| | | BUILDING |
| 102 | | MAJOR CONTOUR AND ELEVATION |
| 102 | | MINOR CONTOUR AND ELEVATION |
| | 1 / C4.5 | DETAIL & SHEET NOTATION |
| | | BACKFLOW PREVENTOR |
| | | FLEX-TEND FORCED BALANCED FLEXIBLE EXPANSION JOINTS |
| | | MANHOLE |
| | | ELECTRICAL POLE |
| SS | | SANITARY SEWER MANHOLE |

NOTES:

1. SYMBOLS ON THIS SHEET APPLY ONLY TO THE CIVIL DRAWINGS.
2. THIS IS A STANDARD SYMBOLS SHEET, THEREFORE, SOME SYMBOLS AND ABBREVIATIONS MAY APPEAR ON THIS SHEET AND MAY NOT BE UTILIZED ON THIS PROJECT.

# ABBREVIATIONS

| | |
|---|---|
| A | ASBESTOS CEMENT |
| ABND | ABANDON OR ABANDONED |
| @ | AT |
| AB | AGGREGATE BASE |
| AC | ASPHALT CONCRETE |
| APPROX | APPROXIMATE |
| AP | ANGLE POINT |
| APVD | APPROVED |
| ARCH | ARCHITECTURAL |
| ARV | AIR RELEASE VALVE |
| AUTO. | AUTOMATIC |
| AUX | AUXILIARY |
| AWWA | AMERICAN WATER WORKS ASSOCIATION |
| B | "BITUMASTIC"-ASPHALTIC, COAL TAR, ETC. AWWA C203 |
| BFV | BUTTERFLY VALVE |
| BV | BALL VALVE |
| BM | "B" WITH "M" OVER IT |
| C | CAST IRON |
| CARV | COMBINATION AIR RELEASE VALVE |
| CATV | CABLE TELEVISION |
| CB | CATCH BASIN |
| CI | CAST IRON |
| CIMJ | CAST IRON MECHANICAL JOINT |
| CIP | CAST IRON PIPE |
| CIRJ | CAST IRON RESTRAINED JOINT |
| CISP | CAST IRON SOIL PIPE |
| CL | CENTERLINE |
| CLDIP | CEMENT-LINED DUCTILE IRON PIPE |
| CLR | CLEAR, CLASS |
| CMP | CORRUGATED METAL PIPE |
| CO | CLEANOUT |
| CONC | CONCRETE |
| CONN | CONNECTION |
| CONT | CONTINUOUS, CONTINUATION |
| COORD | COORDINATE |
| COP. | COPPER |
| CPLG | COUPLING |
| CTE | CONNECT TO EXISTING |
| CV | CHECK VALVE |
| DI | DROP INLET |
| DIMJ | DUCTILE IRON MECHANICAL JOINT |
| DIP | DUCTILE IRON PIPE |
| DN | DOWN |
| DR | DRAIN |
| (E),EX,EXIST | EXISTING |
| E | EPOXY, LIQUID-AWWA C210 OR FUSION BONDED - AWWA C213 |
| EP | EDGE OF PAVEMENT |
| EQPT | EQUIPMENT |
| EX | EXISTING |
| EXP | EXPOSED, EXPANSION |
| F | FUSED PVC |
| FCO | FLOOR CLEAN OUT |
| FD | FLOOR DRAIN |
| FDA | FLOOR DRAIN W/INTEGRAL TRAP |
| FDN | FOUNDATION |
| FF | FINISH FLOOR |
| FG | FINISH GRADE |
| FH | FIRE HYDRANT |
| FIG. | FIGURE |
| FLG | FLANGE |
| FL | FLOW LINE |
| FNSH | FINISH |
| FO | FIBER OPTICS |
| FOC | FACE OF CONCRETE |
| FP | FINISH PAVEMENT |
| FT | FOOT OR FEET |
| FTG | FOOTING |
| FW | FIRE WATER |
| °F | DEGREE FAHRENHEIT |
| G | GAS |
| GAL | GALLON |
| GALV | GALVANIZED |
| GB | GRADE BREAK |
| GPM | GALLONS PER MINUTE |
| GR | GRATE, GROUND |
| GRTG | GRATING |
| GS | GALVANIZED STEEL |
| GV | GATE VALVE |
| H | HIGH DENSITY POLYETHYLENE |
| HGL | HYDRAULIC GRADE LINE |
| HORIZ | HORIZONTAL |
| HP | HIGH POINT, HINGE POINT |
| HPG | HIGH PRESSURE GAS |
| HPW | HIGH PRESSURE WATER |
| ID | INSIDE DIAMETER |
| IF. | INSIDE FACE |
| IN. | INCH |
| INV | INVERT |
| L, R, T OR P | RENFORCED CONCRETE |
| LF | LINEAR FEET |
| L.O.W. | LIMIT OF WORK |
| M | MORAR OR CEMENT AWWA C205 |
| MB | "M" WITH "B" OVER IT |
| N | PLASTIC |
| (N) | NEW |
| NIC | NOT IN CONTRACT |
| NTS | NOT TO SCALE |
| (OH) | OVERHEAD |
| OC | ON CENTER |
| OD | OUTSIDE DIAMETER, OVERFLOW DRAIN |
| OG | ORIGINAL GROUND |
| PAE | PUBLIC ACCESS EASEMENT |
| P | PLASTIC TAPE WRAP, AWWA C214, OR EXTRUDED - AWWA C215 OR C216 |
| PL | PROPERTY LINE |
| POC | POINT OF CONNECTION |
| PREFAB | PREFABRICATED |
| PROP | PROPOSED |
| PSI | POUNDS PER SQUARE INCH |
| PSF | POUNDS PER SQUARE FOOT |
| PSIG | POUNDS PER SQUARE INCH, GAUGE |
| PSI | POUNDS PER SQUARE INCH |
| PSF | POUNDS PER SQUARE FOOT |
| PSIG | POUNDS PER SQUARE INCH, GAUGE |
| PUE | PUBLIC UTILITY EASEMENT |
| PVC | POLYVINYL CHLORIDE |
| PVMT | PAVEMENT |
| PVT | PRIVATE |
| R, RAD | RADIUS |
| RC | REINFORCED CONCRETE |
| RCP | REINFORCED CONCRETE PIPE |
| RCW | RECLAIMED WATER |
| RD | ROAD, ROOF DRAIN |
| RDCR | REDUCER |
| REINF | REINFORCED, REINFORCING, REINFORCE |
| REQD | REQUIRED |
| RJ | RESTRAINED JOINT |
| RMV | REMOVE |
| ROW | RIGHT-OF-WAY |
| RST | REINFORCING STEEL |
| RWL | RECLAIMED WATER LINE |
| S | STEEL |
| SD | STORM DRAIN |
| SDI | STORM DRAIN INLET |
| SEC | SECTION |
| SPEC | SPECIFICATIONS |
| SQ | SQUARE |
| SQ FT | SQUARE FOOT |
| SQ IN | SQUARE INCH |
| SS | SANITARY SEWER |
| SSMH | SANITARY SEWER MANHOLE |
| SST | STAINLESS STEEL |
| ST | STREET |
| STA | STATION |
| STD | STANDARD |
| S/W, SW | SIDEWALK |
| U | UNLINED |
| UON | UNLESS OTHERWISE NOTED |
| VIF | VERIFY IN FIELD |
| W/ | WITH |
| W | WATER, WEST |
| WM | WATER METER |
| WS | WATER SURFACE, WATER STOP |
| WSP | WELDED STEEL PIPE |

# GENERAL NOTES

**GR GENERAL REQUIREMENTS**

GR-1) AS USED IN THESE GENERAL NOTES:
"DRAWINGS" MEANS THE LATEST DRAWINGS, UON.
"SPECIFICATIONS" MEANS THE LATEST PROJECT SPECIFICATIONS, UON.
"CONTRACT DOCUMENTS" IS DEFINED AS THE ENGINEER OF RECORD FOR THE FINAL CONDITION.
"DESIGN PROFESSIONALS" IS DEFINED AS THE OWNER'S CIVIL ENGINEER AND SER.
"MEP" INCLUDES, BUT IS NOT LIMITED TO MECHNIAL, ELECTRICAL, PLUMBING.

"CONTRACTOR" IS DEFINED TO INCLUDE ANY OF THE FOLLOWING: GENERAL CONTRACTOR AND THEIR SUBCONTRACTORS, CONSTRUCTION MANAGER AND THEIR SUBCONTRACTORS.

GR-2) THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE PROJECT WORK WITH THE CIVIL, MEP CONTRACT DOCUMENTS, AS WELL AS ANY OTHER APPLICABLE TRADES.

GR-3) THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE CONSTRUCTION OF THE STRUCTURE REACHES ITS FINAL CONDITION.

GR-4) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE INSTALLATION, AND REMOVAL OF TEMPORARY BRACING AND OTHER REQUIRED CONSTRUCTION SUPPORTS, FOR NEW AND EXISTING STRUCTURES, AS NECESSARY TO COMPLETE THE PROJECT. NO PORTION OF THE PROJECT WHILE UNDER CONSTRUCTION IS INTENDED TO BE STABLE IN THE ABSENCE OF THE TEMPORARY SUPPORTS AND BRACES. CONTRACTOR SHALL RETAIN A STRUCTURAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED TO ASSIST TEMPORARY BRACING INSTALLATION AND REMOVAL AND OTHER CONSTRUCTION SUPPORTS.

GR-5) THE SPECIFICATIONS ARE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS AND SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS.

GR-6) IN CASES OF CONFLICT BETWEEN DRAWINGS AND/OR SPECIFICATIONS AND OTHER DISCIPLINES OR EXISTING CONDITIONS, CONTRACTOR SHALL NOTIFY THE DESIGN PROFESSIONALS AND OBTAIN CLARIFICATION PRIOR TO BIDDING AND PROCEEDING WITH WORK.

GR-7) APPLY DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY DETAIL, DETAIL TITLE OR NOTE.

GR-8) ONLY USE DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE DRAWINGS.

GR-9) ASSUME EQUAL SPACING BETWEEN ESTABLISHED DIMENSIONS, IF NOT INDICATED ON DRAWINGS.

GR-10) THE CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITIES FROM DAMAGE, UON.

GR-11) THE CONTRACTOR SHALL VERIFY THAT CONSTRUCTION LOADS DO NOT EXCEED THE CAPACITY OF THE STRUCTURE AT THE TIME THE LOAD IS APPLIED.

GR-12) ELEVATIONS INDICATED ON DRAWINGS ARE BASED ON A PROJECT DATUM INDICATED ON THE CIVIL DRAWINGS.

**CM CONCRETE MATERIALS**

CM-1) CONCRETE STRENGTHS AND WEIGHT (SEE SPECIFICATION SECTION FOR ADDITIONAL CONCRETE PROPERTIES):

| LOCATION | MIN COMPRESSIVE STRENGTH (PSI) | MAX WEIGHT (PCF) |
|---|---|---|
| ALL OTHER CONC NOT SPECIFICALLY SPECIFIED | 4000 PSI @ 28 DAYS | 145 |

CM-2) ALL CONCRETE SHALL BE THOROUGHLY CONSOLIDATED.

CM-3) THE USE OF CALCIUM CHLORIDE AND OTHER CHLORIDE CONTAINING AGENTS IS PROHIBITED. THE USE OF RECYCLED CONCRETE IS PROHIBITED. PLACEMENT WITHIN AND CONTACT BETWEEN ALUMINUM ITEMS, INCLUDING ALUMINUM CONDUIT, AND CONCRETE IS PROHIBITED.

**RE CONCRETE REINFORCEMENT**

RE-1) ALL CONCRETE SHALL INCLUDE REINFORCEMENT. IF REINFORCEMENT IS NOT SPECIFICALLY INDICATED ON THE DRAWINGS, VERIFY WITH THE ENGINEER BEFORE PROCEEDING WITH WORK.

RE-2) REINFORCEMENT SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES:

| | |
|---|---|
| DEFORMED BARS: | ASTM A615, GRADE 60, UON |
| WELDABLE DEFORMED BARS: | ASTM A706, GRADE 60, UON |
| WELDED BAR ANCHORS: | NELSON D2L DEFORMED BAR ANCHORS (ICC-ES REPORT ER-5217) |

**RE CONCRETE REINFORCEMENT (CONT)**

RE-3) DETAIL REINFORCEMENT BASED ON THE PROJECT REQUIREMENTS, ACI-318 AND ACI-315, UON.

RE-4) WHERE A 90-DEG, 135 -DEG OR 180-DEG HOOK IS GRAPHICALLY INDICATED, PROVIDE CORRESPONDING ACI STANDARD HOOKS, UON.

RE-5) DOWELS SHALL MATCH SIZE AND SPACING OF MAIN REINFORCEMENT, UON.

RE-6) REINFORCEMENT SHALL HAVE CONCRETE PROTECTION (CLEAR COVER) PER ACI 318 UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

RE-7) LAP REINFORCEMENT AS SPECIFICALLY DETAILED ON THE DRAWINGS.

RE-8) UNLESS OTHERWISE NOTED ALL LAP SPLICES ARE TO BE CLASS "B" SPLICES.

RE-9) PROVIDE MECHANICAL SPLICES FOR BARS LARGER THAN #11 OR WHERE INDICATED. PROVIDE TENSILE, PRE-QUALIFIED, WELDED OR THREADED MECHANICAL SPLICES UON.

RE-10) TERMINATION OF REINFORCEMENT, UON:

A. TERMINATE ALL BARS IN LAPS, 90 DEGREE BENDS, OR WITH DOWELS INTO EXISTING CONCRETE.
B. BEND TOP MAT OR FOOTING BARS DOWN TO BOTTOM BARS AT ENDS.
C. BEND BOTTOM MAT OR FOOTING BARS UP WITH STANDARD 90 DEGREE BENDS.
D. PROVIDE DOWELS FROM FOOTINGS AND SLABS INTO WALLS AND COLUMNS TO MATCH SIZE AND SPACING OF VERTICAL REINFORCEMENT.

**SP STRUCTURAL PRECAST CONCRETE**

SP-1) TYPICAL DETAILS INDICATE GENERAL CRITERIA FOR DESIGN AND DETAILING OF PRECAST CONCRETE. PROVIDE DESIGNS THAT MEET INDICATED CRITERIA BELOW AND LISTED CODES AND STANDARDS AND ICC-ES EVALUATION REPORT ESR-2660.

SP-2) PROVIDE CAMBER TO LIMIT DEFLECTION SUCH THAT NO POINT OF THE DEFLECTED STRUCTURE EXCEEDS" BELOW THE STATED ELEVATION. CAMBER DESIGN SHALL INCLUDE EFFECTS OF LONG-TERM DEFLECTION, SHRINKAGE, CREEP, AND MAXIMUM ALLOWABLE CONSTRUCTION TOLERANCES.

SP-3) DO NOT USE POWER-DRIVEN ANCHORS OR ANCHORS WHICH REQUIRE DRILLING AT PRESTRESSED UNITS. SUBMIT PROPOSED ANCHOR PROCEDURES FOR PRECAST UNITS TO THE DESIGN PROFESSIONALS AND PRECAST SUPPLIER FOR REVIEW.

**PA POST-INSTALLED ANCHORS**

PA-1) POST-INSTALLED ANCHORS INCLUDE EXPANSION ANCHORS, EPOXY ANCHORS/DOWELS, AND POWDER-ACTUATED FASTENERS.

PA-2) INSTALL POST-INSTALLED ANCHORS IN ACCORDANCE WITH THE APPLICABLE ICC-ES REPORT AND THE MANUFACTURER'S RECOMMENDATIONS.

PA-3) USE SCANNING EQUIPMENT OR OTHER MEANS TO LOCATE AND AVOID CUTTING OR DAMAGING REINFORCING BARS. EOR APPROVAL IS REQUIRED PRIOR TO CUTTING OR DAMAGING REINFORCING.

PA-4) SPECIAL INSPECTION IS REQUIRED FOR ALL POST-INSTALLED ANCHOR INSTALLATIONS, UON.

PA-5) FIELD TESTING OF POST-INSTALLED ANCHORS IS REQUIRED, UON. TEST INSTALLED ANCHORS IN ACCORDANCE WITH THE FOLLOWING:

A. TEST 100% OF ANCHORS AT ALL STRUCTURAL APPLICATIONS, UON.
B. TEST 50% OF ANCHORS AT ALL NON-STRUCTURAL APPLICATIONS (SUCH AS EQUIPMENT ANCHORAGE), UON.
C. TEST 10% OF ANCHORS AT SILL PLATE BOLTING APPLICATIONS, UON.
D. IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME TYPE NOT PREVIOUSLY TESTED UNTIL 20 CONSECUTIVE ANCHORS PASS.
E. FIELD TESTS SHALL BE EITHER TENSION TESTS OR TORQUE TESTS, AS REQUIRED FOR THE SPECIFIC ANCHOR TYPE.

| NO. | DATE | REVISION | BY | APP. |
|---|---|---|---|---|
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

# SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES

| DES | DR | CH | SCALE : AS NOTED | |
|---|---|---|---|---|
| | | | DATE : 01/17/2024 | |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 2 OF 19 SHEETS | |
| R.E. C78430 | | | SERVICE AREA | JOB.NO. NO. G2 |

# GENERAL NOTES (CONT.)

**PA POST-INSTALLED ANCHORS (CONT)**

F. TENSION TESTS: APPLY TEST LOADS TO ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT, REMOVE NUT AND INSTALL A THREADED COUPLER TO THE SAME TIGHTNESS AS THE ORIGINAL NUT USING A TORQUE WRENCH. REACTION LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY THE FIXTURES. TO BE ACCEPTABLE, ANCHORS SHALL HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD (OBSERVABLE MOVEMENT IS DEFINED AS THE WASHER UNDER THE NUT BECOMING LOOSE).

G. TORQUE TESTS: TO BE ACCEPTABLE, THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN ONE-HALF TURN OF THE NUT.

H. TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.

I. FIELD TESTING SHALL BE DONE IN THE PRESENCE OF THE PROJECT INSPECTOR.

J. TESTING SHOULD OCCUR A MINIMUM OF 24 HOURS AFTER INSTALLATION OF THE SUBJECT ANCHOR.

PA-6) EXPANSION ANCHORS

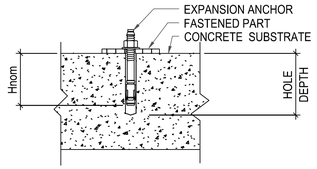
A. EXPANSION ANCHORS SHALL BE EITHER ONE OF THE FOLLOWING, UON:

HILTI KWIK BOLT TZ
(ICC-ES REPORT ESR-1917)

SIMPSON STRONG-BOLT 2
(ICC-ES REPORT ESR-3037)

USE OF CARBON STEEL EXPANSION ANCHORS IS LIMITED TO DRY, INTERIOR LOCATIONS. USE STAINLESS STEEL EXPANSION ANCHORS AT EXTERIOR, WEATHER-EXPOSED, OR DAMP LOCATIONS. USE OF EXPANSION ANCHOR INSIDE OF THE BASIN IS NOT ALLOWED.

B. ANCHOR EMBEDMENTS BELOW ARE TO BE USED WHEN EXPLICITLY SPECIFIED IN THE STRUCTURAL DRAWINGS. FOR LOCATIONS WHERE TENSION TEST VALUES ARE NOT SPECIFIED IN THE DRAWINGS, CONSULT WITH THE EOR.



CONCRETE SLAB

| HILTI KWIK BOLT TZ IN NORMAL-WEIGHT CONCRETE | | | |
|---|---|---|---|
| ANCHOR DIAMETER | Hnom | MINIMUM HOLE DEPTH | TORQUE TEST VALUE (FT-LBS) |
| 3/8" | 2 5/16" | 2 5/8" | 25 |
| 1/2" | 2 3/8" | 2 5/8" | 40 |
| 5/8" | 4 7/16" | 4 3/4" | 60 |
| 3/4" | 5 9/16" | 5 3/4" | 110 |

| SIMPSON STRONG-BOLT 2 IN NORMAL-WEIGHT CONCRETE | | | |
|---|---|---|---|
| ANCHOR DIAMETER | Hnom | MINIMUM HOLE DEPTH | TORQUE TEST VALUE (FT-LBS) |
| 3/8" | 1 7/8" | 2" | 30 |
| 1/2" | 2 3/4" | 3" | 60 |
| 5/8" | 5 1/8" | 6" | 90 |
| 3/4" | 5 3/4" | 5 3/8" | 150 |

C. Hnom IS MEASURED FROM FACE OF CONCRETE SUBSTRATE TO THE END OF THE BOLT.

D. CONTRACTOR SHALL PROVIDE ANCHORS WITH SUFFICIENT TOTAL LENGTH FOR THE SPECIFIED EMBEDMENT LENGTH, THICKNESS OF FASTENED PART, WASHER AND NUT.

PA-7) EPOXY ANCHORS AND DOWELS

A. EPOXY SHALL BE EITHER ONE OF THE FOLLOWING, UON:

HILTI HIT-HY 200 (ICC-ES REPORT ESR-3187)

HILTI HIT-RE 500-SD (ICC-ES REPORT ESR-2322)

SIMPSON SET-XP (ICC-ES REPORT ESR-2508)

**PA POST-INSTALLED ANCHORS (CONT.)**

B. RODS EMBEDDED IN EPOXY SHALL BE STAINLESS (ASTM 593,A316) STEEL THREADED RODS PER MANUFACTURER'S ICC-ES REPORT.

C. REINFORCING STEEL BARS EMBEDDED IN EPOXY SHALL BE ASTM A615, GRADE 60, UON.

D. ANCHOR EMBEDMENT AND TENSION TEST VALUES BELOW ARE TO BE USED WHEN EXPLICITLY SPECIFIED IN THE DRAWINGS. FOR LOCATIONS WHERE TENSION TEST VALUES ARE NOT SPECIFIED IN THE DRAWINGS, CONSULT WITH THE SER.

| EPOXY ANCHORS IN NORMAL-WEIGHT CONCRETE (3000 PSI MIN) | | | | |
|---|---|---|---|---|
| REBAR SIZE | EMBEDMENT (IN) | TENSION TEST VALUE (LBS) | | |
| | | HILTI HIT-HY 200 | HILTI HIT-RE 500-SD | SIMPSON SET-XP |
| #3 | 3 | 2900 | 940 | 1040 |
| #4 | 4 | 5180 | 1670 | 3740 |
| #5 | 5 | 8130 | 2600 | 5260 |
| #6 | 6 | 11120 | 3750 | 6740 |
| #7 | 7 | 12260 | 4320 | 8020 |
| * LISTED EPOXY ADHESIVE MAY NOT BE USED WITH NOTED REBAR SIZES | | | | |

| EPOXY ANCHORS IN NORMAL-WEIGHT CONCRETE (3000 PSI MIN) | | | | |
|---|---|---|---|---|
| THREADED ROD DIAMETER (IN) | EMBEDMENT (IN) | TENSION TEST VALUE (LBS) | | |
| | | HILTI HIT-HY 200 | HILTI HIT-RE 500-SD | SIMPSON SET-XP |
| 3/8 | 3 | 2500 | 1230 | 1700 |
| 1/2 | 4 | 4480 | 2110 | 2600 |
| 5/8 | 5 | 7030 | 3170 | 3450 |
| 3/4 | 6 | 10180 | 4450 | 4440 |
| 7/8 | 7 | 11710 | 4720 | 5540 |

E. TESTING OF EPOXY DOWELS AT JOINTS BETWEEN NEW AND EXISTING SLABS-ON-GRADE IS NOT REQUIRED.

F. TESTING SHALL OCCUR AFTER EPOXY HAS CURED, AS PER MANUFACTURER'S RECOMMENDATIONS.

G. OVERHEAD AND/OR CONSTANT TENSION EPOXY ANCHOR INSTALLATIONS NOT SHOWN ON THE DRAWINGS SHALL NOT BE PERMITTED UNLESS EACH CONDITION IS REVIEWED AND APPROVED IN WRITTING BY SER.

H. EPOXY ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION.

I. INSTALLATION AND INSPECTION OF EPOXY ANCHORS SHALL COMPLY WITH ACI 318-11 APPENDIX D SECTIONS D.9.2.2 AND D.9.2.4.

J. FOR USES OF EPOXY DOWELS NOT EXPLICITLY SPECIFIED IN THE STRUCTURAL DRAWINGS, CONTACT THE SER.

**SU SUBMITTALS**

SU-1) THE CONTRACTOR IS TO REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO CIVIL ENGINEER. THE CONTRACTOR IS TO STAMP EACH SUBMITTAL VERIFYING THAT THE FOLLOWING IS ADDRESSED:

1. THE SHOP DRAWING IS REQUESTED.
2. THE SHOP DRAWING IS BASED ON THE LATEST DESIGN.
3. THE CIVIL ENGINEER'S COMMENTS FROM ANY PREVIOUS SUBMITTALS ARE ADDRESSED.
4. THE WORK IS COORDINATED AMONG ALL CONSTRUCTION TRADES.
5. REVISIONS FROM PREVIOUS SUBMITTALS ARE CLEARLY MARKED BY CIRCLING OR CLOUDS.
6. SUBMITTAL IS COMPLETE.
7. SUBMITTAL DOES NOT INCLUDE SUBSTITUTION REQUEST
8. SUBMITTAL SHALL INCLUDE A STAMP INDICATING PROJECT NAME AND LOCATION, SUBMITTAL NUMBER, SPECIFICATION SECTION NUMBER.

THE CIVIL ENGINEER SHALL RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE ABOVE REQUIREMENTS. THE CIVIL ENGINEER'S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT. NO WORK SHALL BE STARTED WITHOUT SUCH REVIEW.

SU-2) FOR COMPONENTS THAT REQUIRE ENGINEERING BY THE CONTRACTOR, PROVIDE A NOTE ON EACH SHOP DRAWING, WRITTEN AND SIGNED BY THE SUPPLIER' S ENGINEER, INDICATING THAT THE SHOP DRAWING IS IN CONFORMANCE WITH THE CALCULATIONS OF THE CONTRACTOR'S ENGINEER.

SU-3) THE FOLLOWING ITEMS REQUIRE SUBMITTALS FOR REVIEW AS OUTLINED IN THE SPECIFICATIONS:

S = SHOP DRAWINGS AND/OR PRODUCT DATA REQUIRED

CALC = SUPPORTING CALCULATIONS REQUIRED, SIGNED AND SEALED BY A LICENSED [PROFESSIONAL] ENGINEER IN THE STATE IN WHICH THE PROJECT IS LOCATED.

THE ITEMS IN THIS SECTION REQUIRE SHOP DRAWINGS, SUBMITTED FOR REVIEW OF INTERACTION WITH THE BASE BUILDING STRUCTURE.

**SU SUBMITTAL (CONT.)**

SU-4) DEFERRED SUBMITTALS SHALL FIRST BE SUBMITTED TO THE PROJECT CIVIL ENGINEER AND/OR THE ENGINEER OF RECORD FOR REVIEW AND COORDINATION. FOLLOWING THE COMPLETION OF THE CIVIL ENGINEER OR ENGINEER'S REVIEW, A SUBMITTAL TO THE PLAN CHECK AUTHORITY SHALL BE MADE FOR REVIEW AND APPROVAL. THIS SUBMITTAL SHALL BE PROCESSED IN ACCORDANCE WITH CBC APPENDIX CHAPTER 1, SECTION 106.3.4.2. FOR A LIST OF DEFERRED ITEMS, SEE CIVIL ENGINEER DRAWINGS.

**PI PERFORMANCE ITEMS**

PI-1) THE CONTRACTOR SHALL EMPLOY OR RETAIN A LICENSED STRUCTURAL ENGINEER IN THE STATE IN WHICH THIS PROJECT IS LOCATED TO DESIGN AND DETAIL PERFORMANCE ITEMS AS PART OF THE BASE BUILDING STRUCTURE INDICATED IN THE CONTRACT DOCUMENTS INCLUDING BUT NOT LIMITED TO:

1. TO BE DETERMINED IN DETAIL DESIGN PHASE.

**SI SPECIAL INSPECTIONS AND STRUCTURAL TESTING**

S1-1) SPECIAL INSPECTIONS SHALL BE PERFORMED BY A SPECIAL INSPECTOR PER CBC SECTIONS 1704 AND 1705. THE SPECIAL INSPECTOR SHALL BE EMPLOYED BY THE OWNER AND NOT BY THE CONTRACTOR OR ANY OTHER PERSON RESPONSIBLE FOR THE THE CONTRACTOR SHALL COMPLETE AND SUBMIT THE CITY OF PACIFICA'S SPECIAL INSPECTION AND TESTING AGREEMENT WORK. FORM. THE FORM MUST BE SUBMITTED PRIOR TO PERMIT ISSUANCE. ENSURE THAT ALL REQUIRED SIGNATURES ARE PROVIDED AND THE AREA OF SPECIAL INSPECTION IS CLEARLY INDICATED ON THE FORM AND ON THE COVDER SHEET OF THE PLANS.

S1-2) THE SPECIAL INSPECTOR SHALL BE A QUALIFIED (LICENSED) PERSON WHO SHALL PROVIDE WRITTEN DOCUMENTATION TO THE BUILDING OFFICIAL DEMONSTRATING HIS OR HER COMPETENCE AND RELEVANT TRAINING OR EXPERIENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL. EXPERIENCE SHALL BE FOR SPECIAL INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.

SI-3) THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY PER CBC SECTION 1704.4 TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK WHEN RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND FORCE OR SEISMIC FORCE RESISTING SYSTEM. THE STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTION.

SI-4) THE FOLLOWING WORK REQUIRES STRUCTURAL TESTS. FOR SPECIFIC REQUIREMENTS OF STRUCTURAL TESTS, SEE THE SPECIFICATIONS AND GENERAL NOTES.

1. CONCRETE REINFORCEMENT
2. CAST-IN-PLACE CONCRETE
3. POST-INSTALLED ANCHORS
4. GROUTED DOWELS
5. WELDING: STRUCTURAL STEEL AND REINFORCING STEEL

SI-5) THE FOLLOWING ITEMS SHALL RECEIVE SPECIAL INSPECTION BY A CERTIFIED SPECIAL INSPECTOR IN ACCORDANCE WITH CBC 1704 AND 1705:

1. TBD

SPECIAL INSPECTIONS LIST
(TO BE DETERMINED IN DETAIL DESIGN PHASE)

| | | VERIFICATION AND INSPECTION TASK | CONTINUOUS | PERIODIC | REFERENCED STANDARD |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
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| NO. | DATE | REVISION | BY | APP. |
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| | | | | |
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

GENERAL NOTES (CONT.)

| DES | DR | CH | SCALE : AS NOTED | |
|---|---|---|---|---|
| | | | DATE : 01/17/2024 | |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 3 OF 19 | SHEETS |
| R.E. C78430 | | | SERVICE AREA | JOB.NO. NO. G3 |

1. ALL EXISTING UTILITIES ARE NOTED ONLY AS APPROXIMATE. POTHOLING IS REQUIRED TO VERIFY LOCATION OF ALL EXISTING UTILITIES. NOT ALL EXISTING UTILITIES ARE NOTED. IT IS RESPONSIBILITY OF THE CONTRACTOR TO VERIFY.
2. THE EXACT POINT OF CONNECTION IS NOTED ONLY AS APPROXIMATE.
3. EXISTING UTILITY INFORMATION SHOWN WHERE CONFLICTS OCCUR. ALL OTHER EXISTING UTILITIES OMITTED FOR CLARITY.

LYNWOOD ELEMENTARY SCHOOL

S. NOVATO BLVD

SUNSET PKWY

PARKWOOD DR

LEAFWOOD HEIGHTS

LYNWOOD DR

MONTE MARIA AVE

S. NOVATO BLVD

EXISTING LYNWOOD PUMP STATION

NEW 16" ZONE 2

EX 12" ZONE 2

EX 6" ZONE 1

EX 12" ZONE 1

EX 24" ZONE 2

EX 16" ZONE 2

EX 8" ZONE 1

SD 36"

SD 24"

SD 18"

SD 15"

SD 27"

2X SD 48"

2X SD 36"

1 2 4

NORTH

GRAPHIC SCALE

40 0 20 40 80 160

( IN FEET )
1 inch = 40 ft.

| NO. | DATE | REVISION | BY | APP. |
|---|---|---|---|---|
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

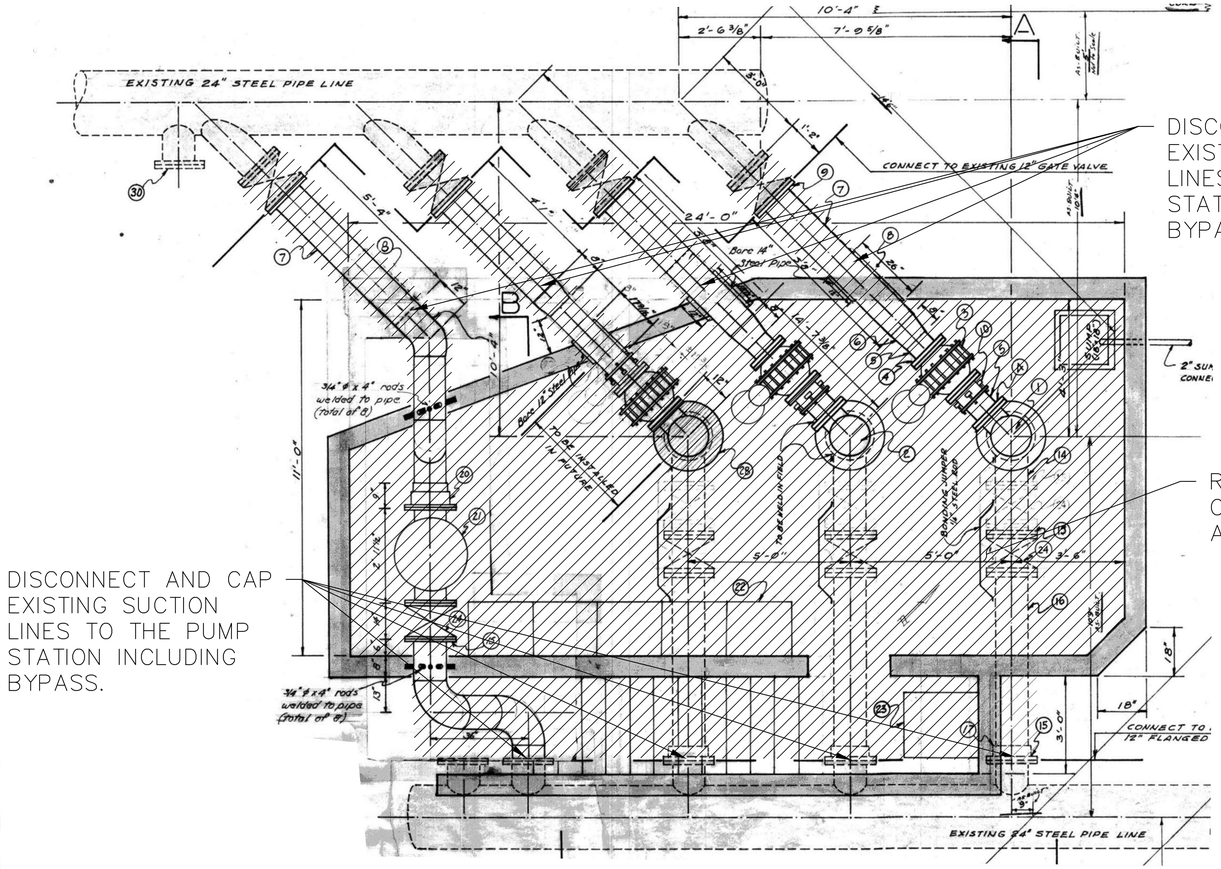
NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

# EXISTING CONDITIONS

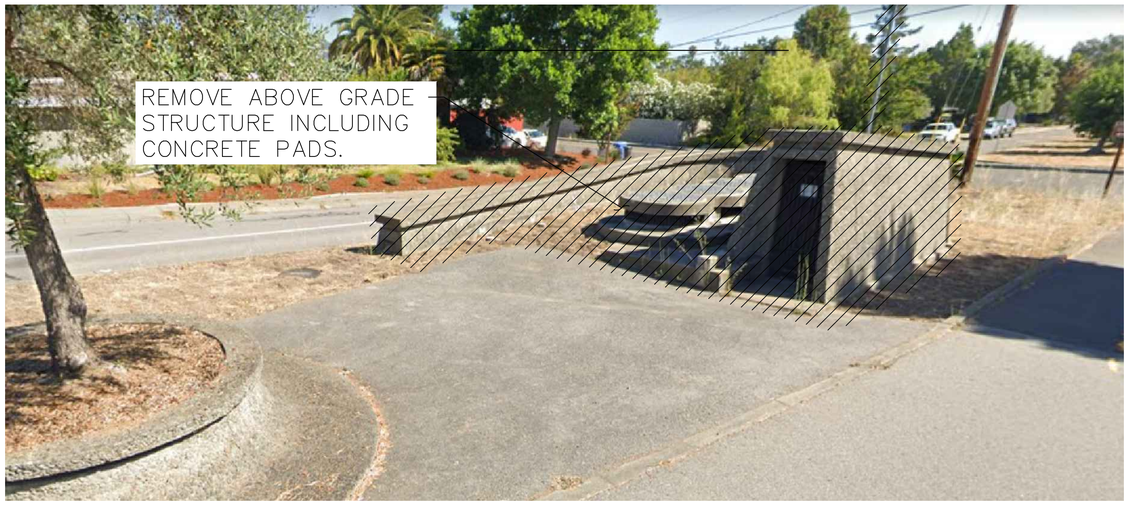
| DES | DR | CH | SCALE : AS NOTED | |
|---|---|---|---|---|
| | | | DATE : 01/17/2024 | |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 4 OF 19 | SHEETS |
| R.E. C78430 | | | SERVICE AREA | JOB.NO. NO. C1 |


1 – EXISTING LYNWOOD PUMP STATION EXTERNAL BUILDING
SCALE : NO SCALE




3 – EXISTING LYNWOOD PUMP STATION PLAN VIEW
SCALE : NO SCALE


2 – EXISTING LYNWOOD PUMP STATION EXTERNAL POWER
SCALE : NO SCALE




4 – EXISTING LYNWOOD PUMP STATION LOCATION
SCALE : NO SCALE

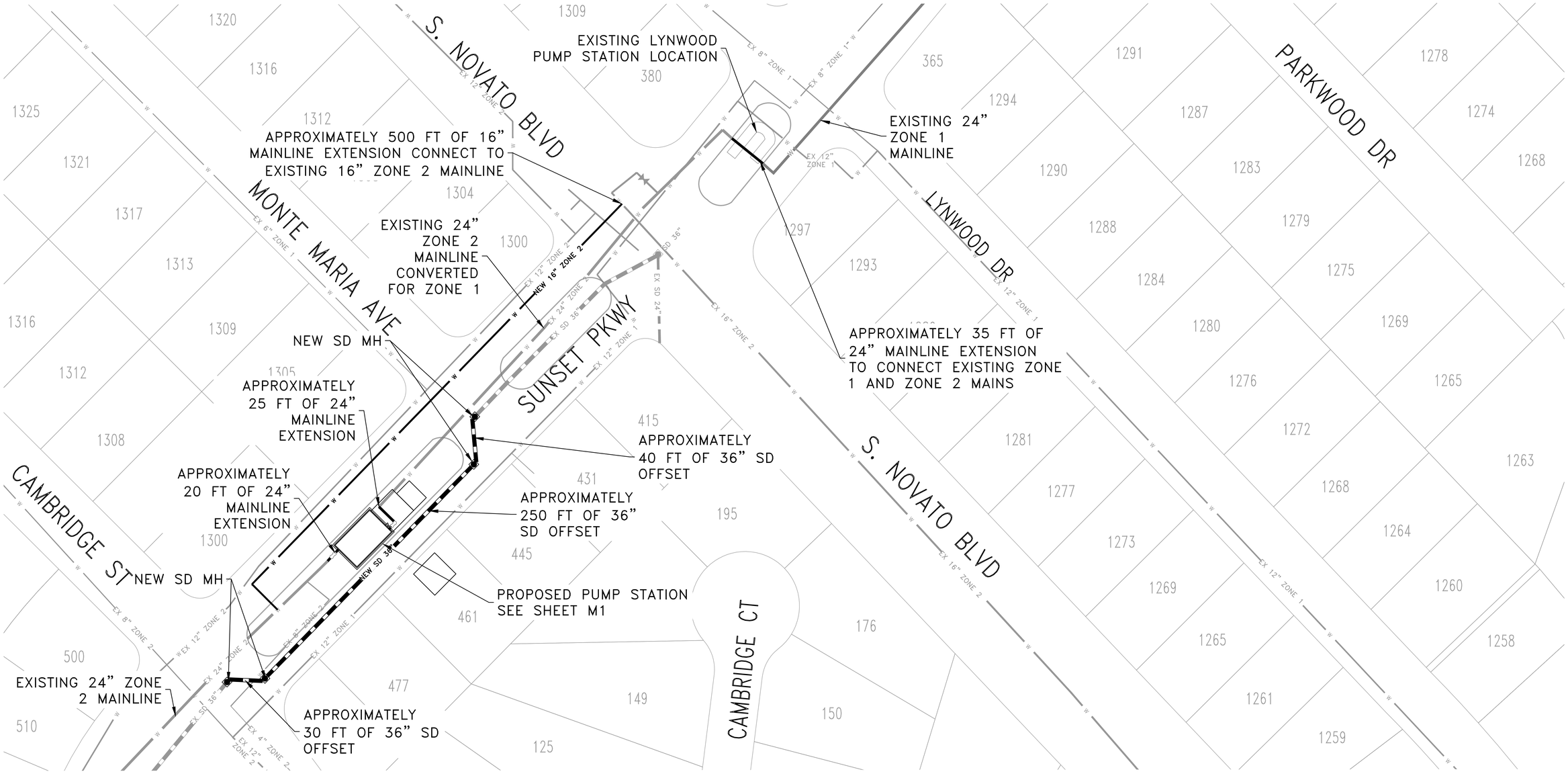
| NO. | DATE | REVISION | BY | APP. |
|---|---|---|---|---|
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

# DEMOLITION PLAN

| DES | DR | CH | SCALE : AS NOTED | |
|---|---|---|---|---|
| | | | DATE : 01/17/2024 | |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 5 OF 19 | SHEETS |
| R.E. C78430 | | | SERVICE AREA | JOB.NO. NO. C2 |




NOTES:

1. ALL EXISTING UTILITIES ARE NOTED ONLY AS APPROXIMATE. POTHOLING IS REQUIRED TO VERIFY LOCATION OF ALL EXISTING UTILITIES. NOT ALL EXISTING UTILITIES ARE NOTED. IT IS RESPONSIBILITY OF THE CONTRACTOR TO VERIFY.
2. THE EXACT POINT OF CONNECTION IS NOTED ONLY AS APPROXIMATE.
3. EXISTING UTILITY INFORMATION SHOWN WHERE CONFLICTS OCCUR. ALL OTHER EXISTING UTILITIES OMITTED FOR CLARITY.
4. THIS SITE PLAN DEPICTS THE PUMP STATION SITE PLAN FOR ALTERNATIVE 1

NORTH

GRAPHIC SCALE

40 0 20 40 80 160

( IN FEET )
1 inch = 40 ft.

| NO. | DATE | REVISION | BY | APP. |
|---|---|---|---|---|
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

# SITE 1
# ALTERNATIVE A

| DES | DR | CH | SCALE : AS NOTED | |
|---|---|---|---|---|
| | | | DATE : 01/17/2024 | |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 6 OF 19 SHEETS | |
| R.E. C78430 | | | SERVICE AREA | JOB.NO. NO. C3 |


*NOTES:*

1. *ALL EXISTING UTILITIES ARE NOTED ONLY AS APPROXIMATE. POTHOLING IS REQUIRED TO VERIFY LOCATION OF ALL EXISTING UTILITIES. NOT ALL EXISTING UTILITIES ARE NOTED. IT IS RESPONSIBILITY OF THE CONTRACTOR TO VERIFY.*
2. *THE EXACT POINT OF CONNECTION IS NOTED ONLY AS APPROXIMATE.*
3. *EXISTING UTILITY INFORMATION SHOWN WHERE CONFLICTS OCCUR. ALL OTHER EXISTING UTILITIES OMITTED FOR CLARITY.*
4. *THIS SITE PLAN DEPICTS THE PUMP STATION SITE PLAN FOR ALTERNATIVE 2, AND ONE PUMP STATION SITE FOR ALTERNATIVES 3, 4, AND 5.*

NORTH

GRAPHIC SCALE

40 0 20 40 80 160

( IN FEET )

1 inch = 40 ft.

| NO. | DATE | REVISION | BY | APP. |
|---|---|---|---|---|
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

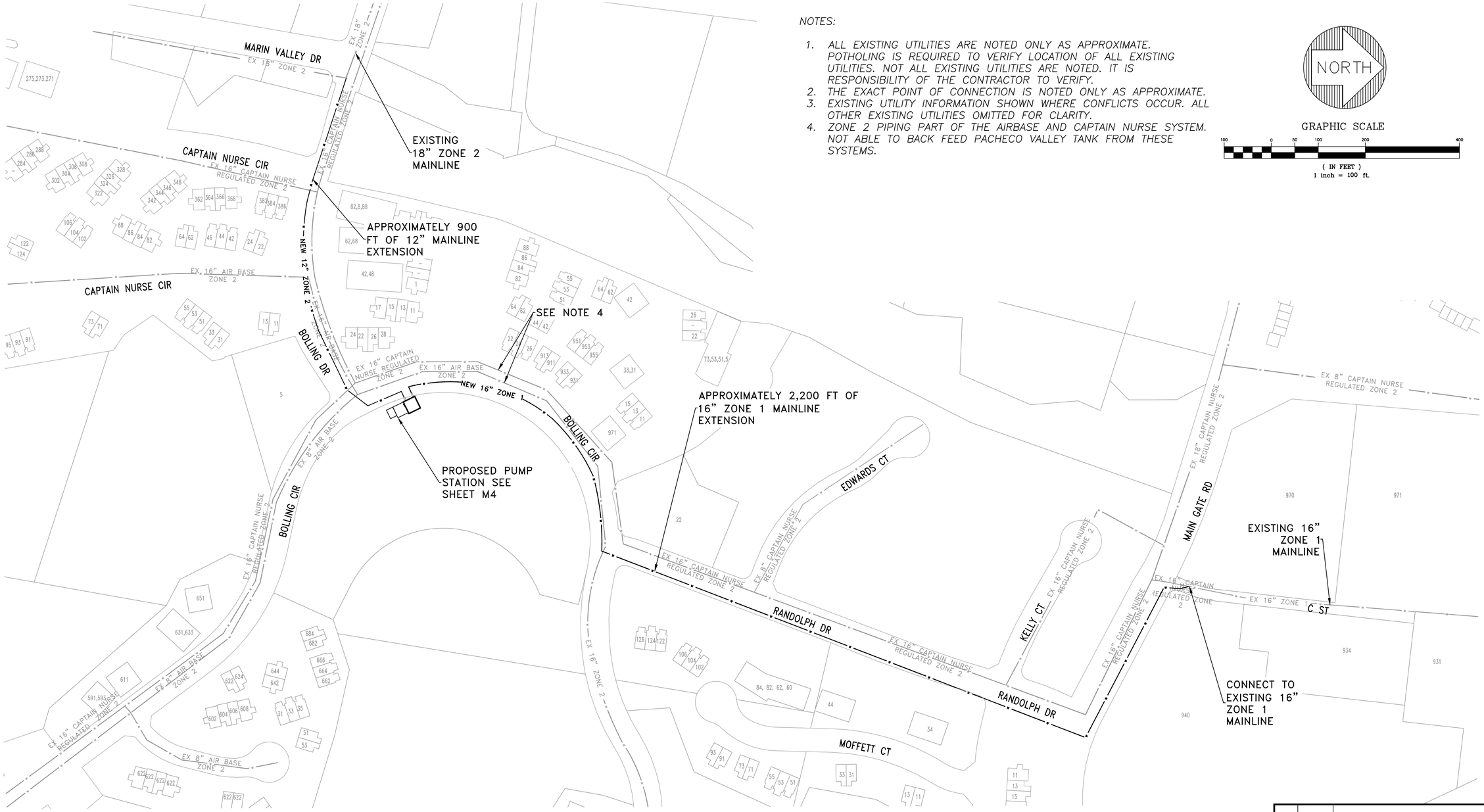
NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

# SITE 2

# ALTERNATIVE B, C, D, AND E

| DES | DR | CH | SCALE : AS NOTED | |
|---|---|---|---|---|
| | | | DATE : 01/17/2024 | |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 7 OF 19 SHEETS | |
| R.E. C78430 | | | SERVICE AREA | JOB.NO. NO. C4 |




*NOTES:*

1. *ALL EXISTING UTILITIES ARE NOTED ONLY AS APPROXIMATE. POTHOLING IS REQUIRED TO VERIFY LOCATION OF ALL EXISTING UTILITIES. NOT ALL EXISTING UTILITIES ARE NOTED. IT IS RESPONSIBILITY OF THE CONTRACTOR TO VERIFY.*
2. *THE EXACT POINT OF CONNECTION IS NOTED ONLY AS APPROXIMATE.*
3. *EXISTING UTILITY INFORMATION SHOWN WHERE CONFLICTS OCCUR. ALL OTHER EXISTING UTILITIES OMITTED FOR CLARITY.*
4. *ZONE 2 PIPING PART OF THE AIRBASE AND CAPTAIN NURSE SYSTEM. NOT ABLE TO BACK FEED PACHECO VALLEY TANK FROM THESE SYSTEMS.*

NORTH

GRAPHIC SCALE

100 0 50 100 200 400

( IN FEET )
1 inch = 100 ft.

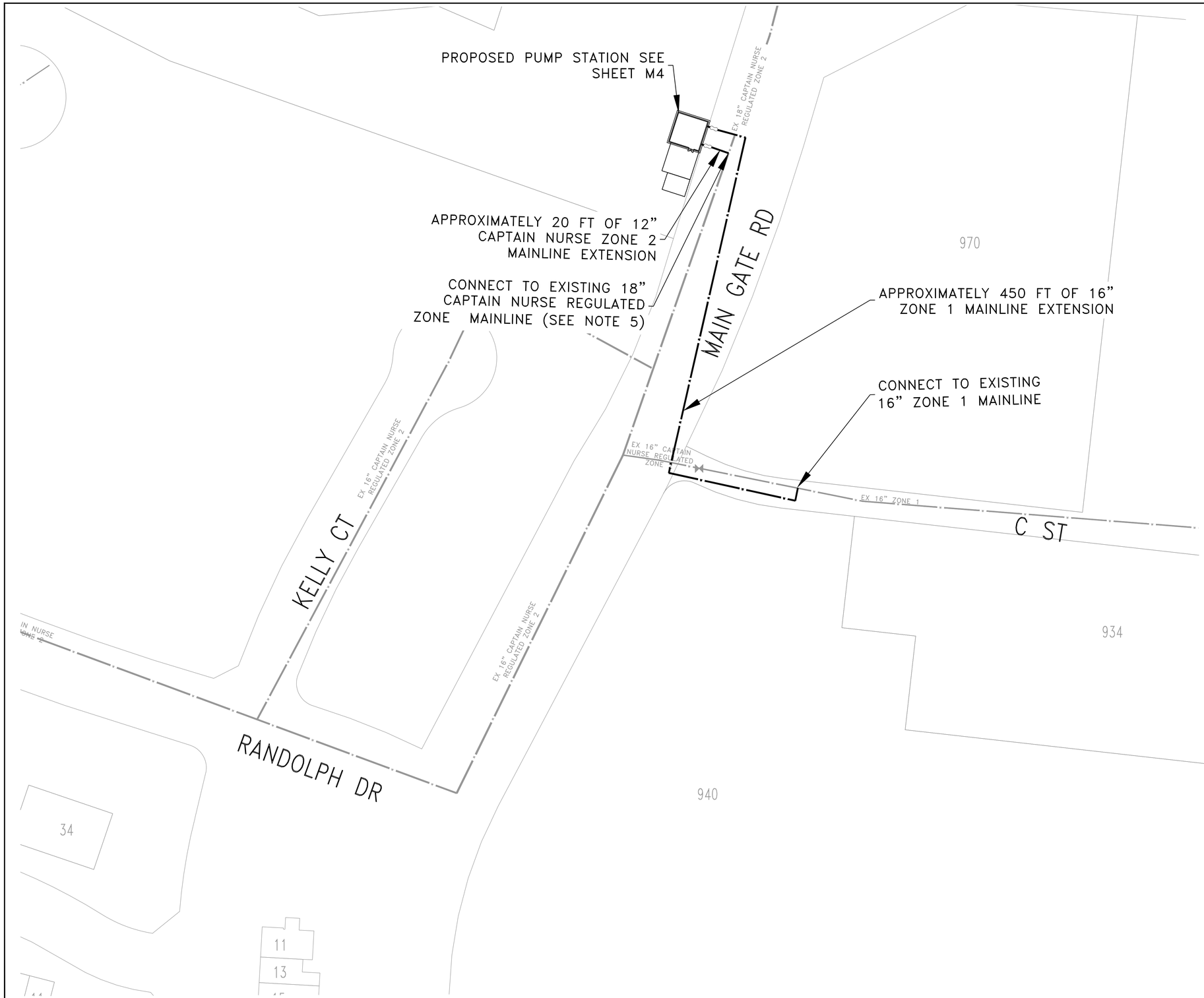
| NO. | DATE | REVISION | BY | APP. |
|---|---|---|---|---|
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

# SITE 3
# ALTERNATIVE C

| DES | DR | CH | SCALE : AS NOTED |
|---|---|---|---|
| | | | DATE : 01/17/2024 |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 8 OF 19 SHEETS |
| R.E. C78430 | | | SERVICE AREA / JOB.NO. / NO. C5 |




NORTH

GRAPHIC SCALE

40 0 20 40 80 160

( IN FEET )
1 inch = 40 ft.

*NOTES:*

1. *ALL EXISTING UTILITIES ARE NOTED ONLY AS APPROXIMATE. POTHOLING IS REQUIRED TO VERIFY LOCATION OF ALL EXISTING UTILITIES. NOT ALL EXISTING UTILITIES ARE NOTED. IT IS RESPONSIBILITY OF THE CONTRACTOR TO VERIFY.*
2. *THE EXACT POINT OF CONNECTION IS NOTED ONLY AS APPROXIMATE.*
3. *EXISTING UTILITY INFORMATION SHOWN WHERE CONFLICTS OCCUR. ALL OTHER EXISTING UTILITIES OMITTED FOR CLARITY.*
4. *THE AIRBASE AND CAPTAIN NURSE ZONE 2 SYSTEMS ARE NOT ABLE TO BACK FEED THROUGH AIR BASE TANK TO PACHECO VALLEY TANK. PROPOSED PIPE MODIFICATIONS ISOLATE AN EXISTING CAPTIAN NURSE REGULATED ZONE 2 PIPING AND CONVERTS IT TO PRIMARY ZONE 2 TO FILL PACHECO VALLEY TANK.*
5. *THIS SITE LOCATION REQUIRES THE INSTALLATION OF PRESSURE REDUCING VALVES ALONG THE CAPTAIN NURSE REGULATED ZONE 2 ALONG MAIN GATE AND NAVE DRIVE. PLEASE SEE TABLE BELOW.*

| *PRESSURE REDUCING VALVES* | | |
|---|---|---|
| *NUMBER* | *APPROXIMATE LOCATION* | *PRESSURE ZONE* |
| *1* | *ON MARTIN DR. NORTH OF MARTIN DR. AND MAIN GATE RD. INTERSECTION BEFORE LIVINGSTON CT.* | *CAPTAIN NURSE REGULATED ZONE 2* |
| *2* | *ON MAIN GATE RD. WEST OF MARTIN DR. AND MAIN GATE RD. INTERSECTION BEFORE NAVE DR.* | *CAPTAIN NURSE REGULATED ZONE 2* |
| *3* | *ON MAIN GATE RD. WEST OF MARTIN DR. AND MAIN GATE RD. INTERSECTION BEFORE NAVE DR.* | *CAPTAIN NURSE REGULATED ZONE 2* |
| *4* | *AT THE PARKING LOT OF 5530 NAVE DR. NOVATO, CA, 94949* | *CAPTAIN NURSE REGULATED ZONE 2* |
| *5* | *AT THE BASKET BALL BLACKTOP OF HAMILTON MEADOW PARK ELEMENTARY NORTHWEST OF TINKER WAY.* | *CAPTAIN NURSE REGULATED ZONE 2* |
| *6* | *PAVED ROADWAY BETWEEN 5420 NAVE DR. AND 5520 NAVE DR. NOVATO, CA, 94949* | *CAPTAIN NURSE REGULATED ZONE 2* |
| *7* | *AT THE INTERSECTION OF BOLLING DR. AND NAVE DR.* | *CAPTAIN NURSE REGULATED ZONE 2* |

| NO. | DATE | REVISION | BY | APP. |
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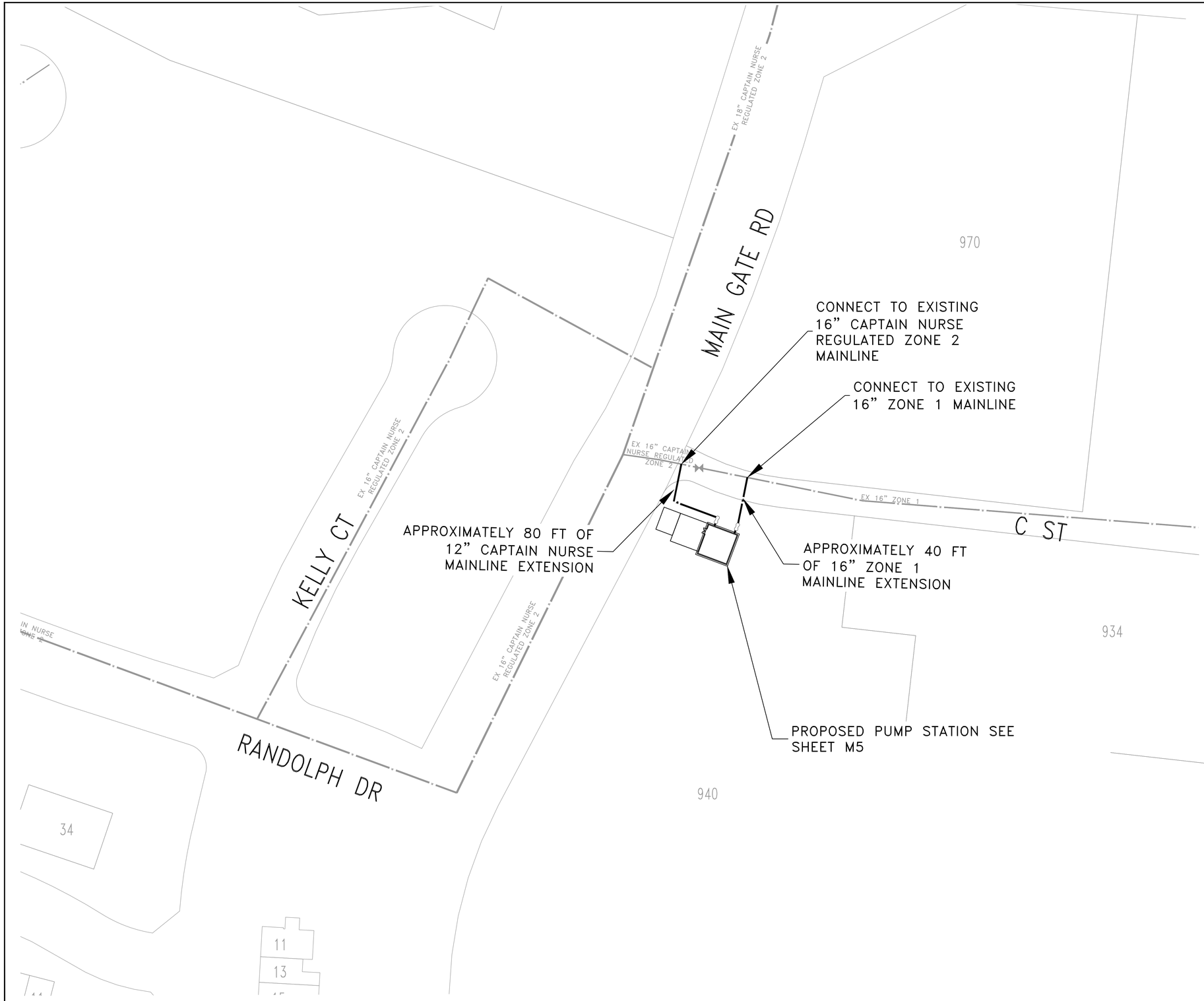
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

# SITE 4
# ALTERNATIVE D

| DES | DR | CH | SCALE : AS NOTED | |
|---|---|---|---|---|
| | | | DATE : 01/17/2024 | |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 9 OF 19 | SHEETS |
| R.E. C78430 | | | SERVICE AREA | JOB.NO. NO. C6 |





GRAPHIC SCALE

40 0 20 40 80 160

( IN FEET )
1 inch = 40 ft.

*NOTES:*

1. *ALL EXISTING UTILITIES ARE NOTED ONLY AS APPROXIMATE. POTHOLING IS REQUIRED TO VERIFY LOCATION OF ALL EXISTING UTILITIES. NOT ALL EXISTING UTILITIES ARE NOTED. IT IS RESPONSIBILITY OF THE CONTRACTOR TO VERIFY.*
2. *THE EXACT POINT OF CONNECTION IS NOTED ONLY AS APPROXIMATE.*
3. *EXISTING UTILITY INFORMATION SHOWN WHERE CONFLICTS OCCUR. ALL OTHER EXISTING UTILITIES OMITTED FOR CLARITY.*
4. *THE AIRBASE AND CAPTAIN NURSE ZONE 2 SYSTEMS ARE NOT ABLE TO BACK FEED THROUGH AIR BASE TANK TO PACHECO VALLEY TANK. PROPOSED PIPE MODIFICATIONS ISOLATE AN EXISTING CAPTIAN NURSE REGULATED ZONE 2 PIPING AND CONVERTS IT TO PRIMARY ZONE 2 TO FILL PACHECO VALLEY TANK.*
5. *THIS SITE LOCATION REQUIRES THE INSTALLATION OF PRESSURE REDUCING VALVES ALONG THE CAPTAIN NURSE REGULATED ZONE 2 ALONG MAIN GATE AND NAVE DRIVE. PLEASE SEE TABLE BELOW.*

| *PRESSURE REDUCING VALVES* | | |
|---|---|---|
| *NUMBER* | *APPROXIMATE LOCATION* | *PRESSURE ZONE* |
| *1* | *ON MARTIN DR. NORTH OF MARTIN DR. AND MAIN GATE RD. INTERSECTION BEFORE LIVINGSTON CT.* | *CAPTAIN NURSE REGULATED ZONE 2* |
| *2* | *ON MAIN GATE RD. WEST OF MARTIN DR. AND MAIN GATE RD. INTERSECTION BEFORE NAVE DR.* | *CAPTAIN NURSE REGULATED ZONE 2* |
| *3* | *ON MAIN GATE RD. WEST OF MARTIN DR. AND MAIN GATE RD. INTERSECTION BEFORE NAVE DR.* | *CAPTAIN NURSE REGULATED ZONE 2* |
| *4* | *AT THE PARKING LOT OF 5530 NAVE DR. NOVATO, CA, 94949* | *CAPTAIN NURSE REGULATED ZONE 2* |
| *5* | *AT THE BASKET BALL BLACKTOP OF HAMILTON MEADOW PARK ELEMENTARY NORTHWEST OF TINKER WAY.* | *CAPTAIN NURSE REGULATED ZONE 2* |
| *6* | *PAVED ROADWAY BETWEEN 5420 NAVE DR. AND 5520 NAVE DR. NOVATO, CA, 94949* | *CAPTAIN NURSE REGULATED ZONE 2* |
| *7* | *AT THE INTERSECTION OF BOLLING DR. AND NAVE DR.* | *CAPTAIN NURSE REGULATED ZONE 2* |

| NO. | DATE | REVISION | BY | APP. |
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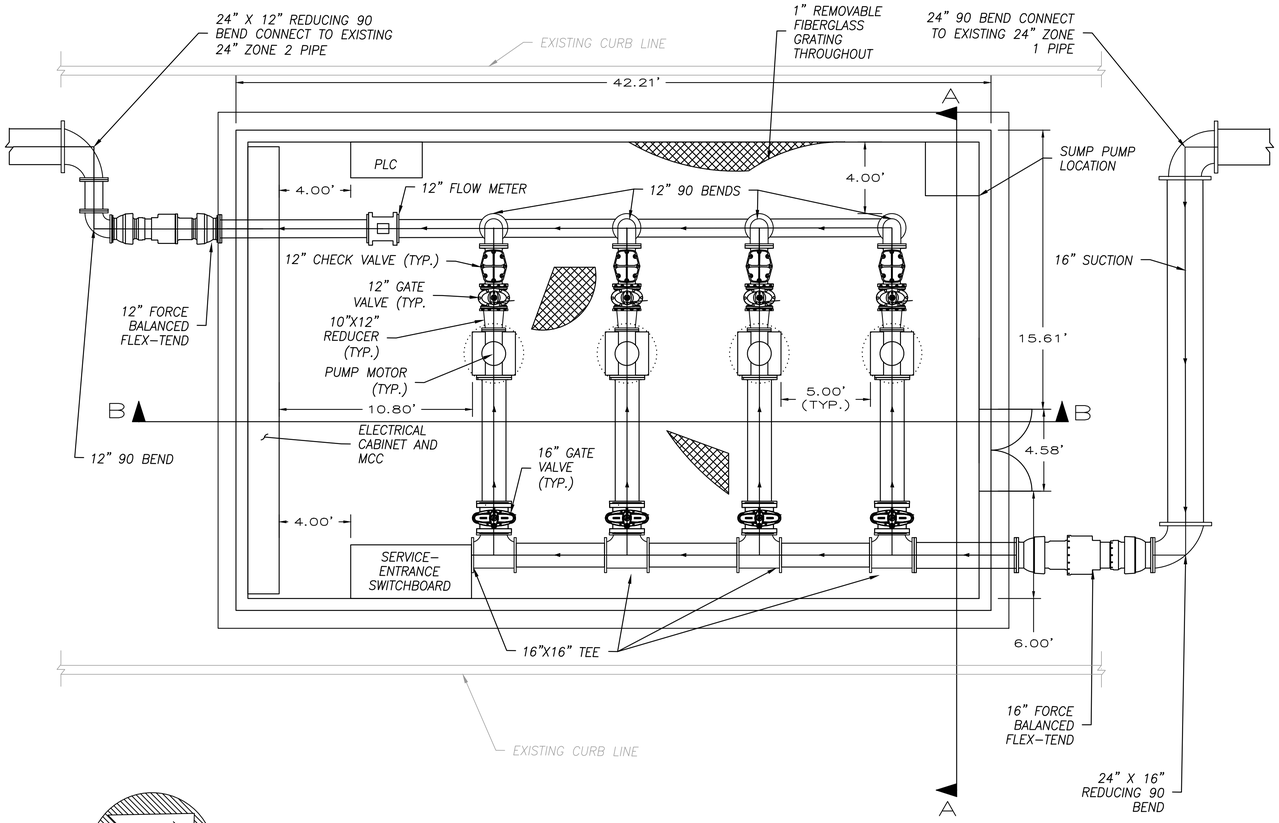
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

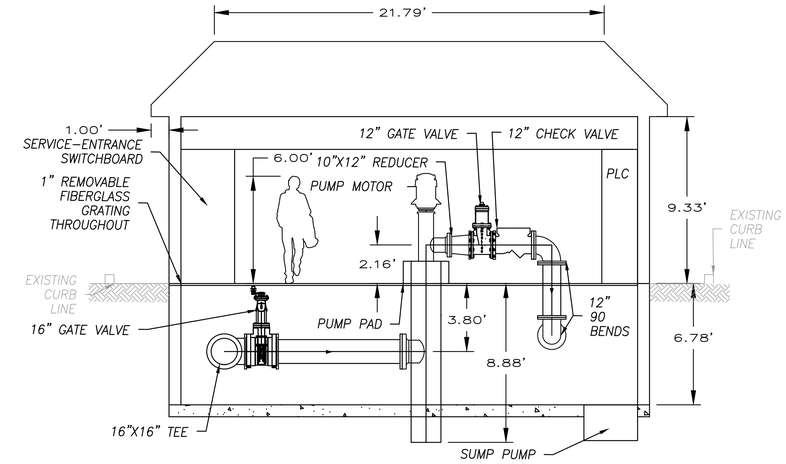
NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

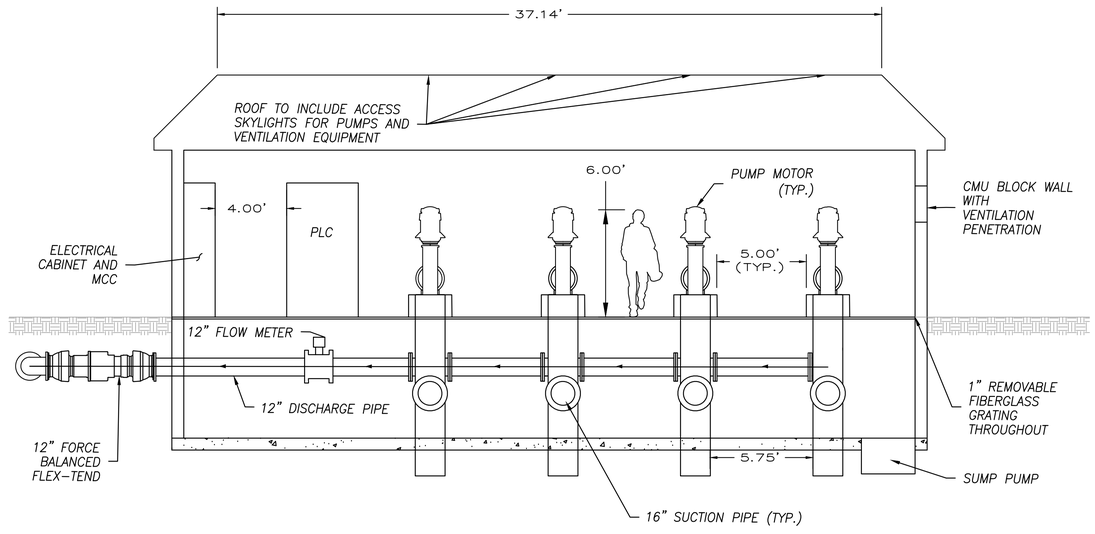
# SITE 5
# ALTERNATIVE E

| DES | DR | CH | SCALE : **AS NOTED** | |
|---|---|---|---|---|
| | | | DATE : 01/17/2024 | |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : **10** OF 19 SHEETS | |
| R.E. C78430 | | | SERVICE AREA | JOB.NO. NO. **C7** |

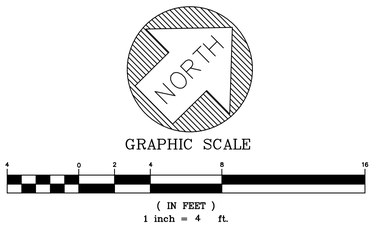



A-A
–
PUMP HOUSE SECTION VIEW
SCALE: 1" = 4'




B-B
–
PUMP HOUSE SECTION VIEW
SCALE: 1" = 4'




NOTES:

1. ALL EXISTING UTILITIES ARE NOTED ONLY AS APPROXIMATE. POTHOLING IS REQUIRED TO VERIFY LOCATION OF ALL EXISTING UTILITIES. NOT ALL EXISTING UTILITIES ARE NOTED. IT IS RESPONSIBILITY OF THE CONTRACTOR TO VERIFY.
2. THE EXACT POINT OF CONNECTION IS NOTED ONLY AS APPROXIMATE.
3. PUMP SUCTION AND DISCHARGE MUST BE 71 INCHES MEASURED FROM CENTERLINE TO CENTERLINE.
4. PER HYDRAULIC INSTITUTE GUIDELINES THERE MUST BE 5 PIPE DIAMETERS OF STRAIGHT PIPE BETWEEN ANY FLANGE AND THE SUCTION FLANGE.
5. ALL ELECTRICAL CABINETS SHALL HAVE 4 FOOT CLEAR SPACE IN FRONT.

| NO. | DATE | REVISION | BY | APP. |
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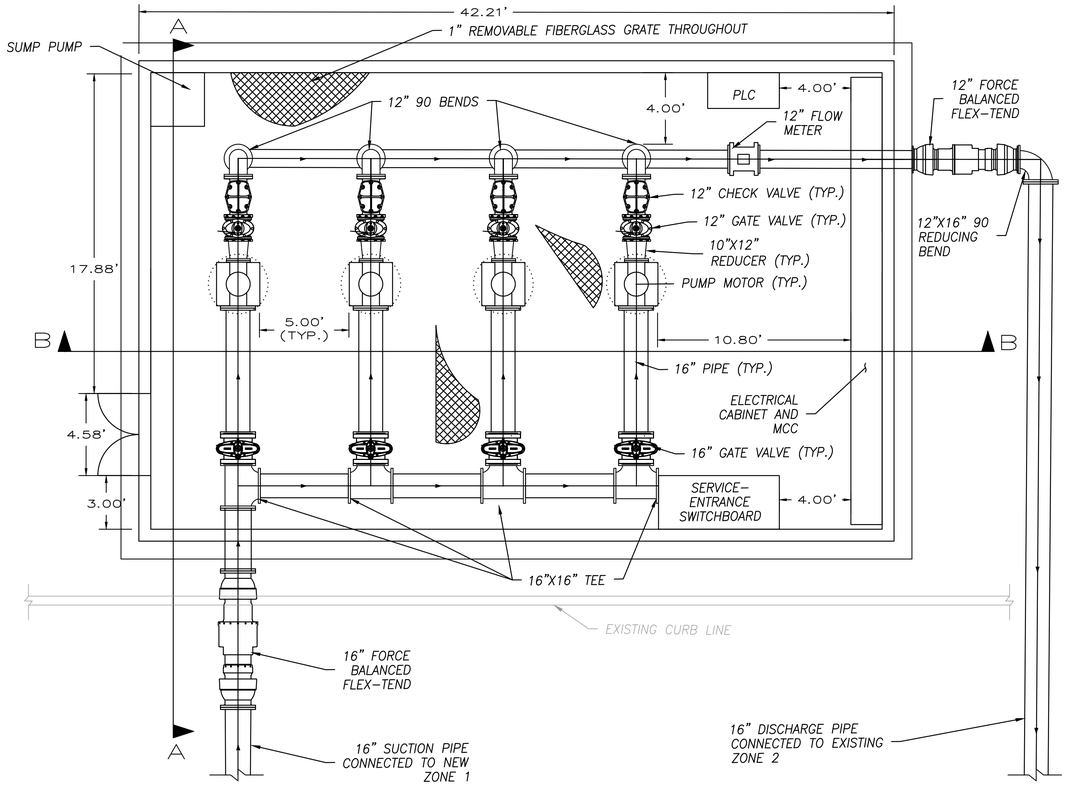
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

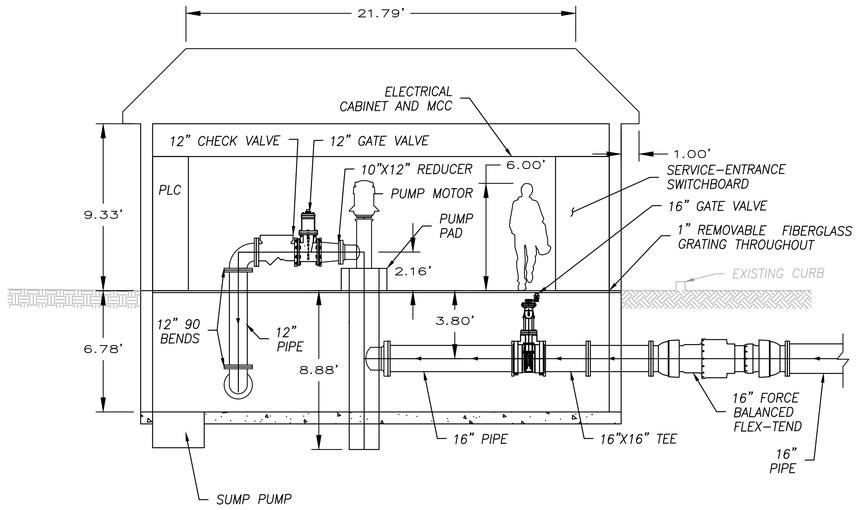
NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

# PUMP STATION SITE 1 ALTERNATIVE A

| DES | DR | CH | SCALE : AS NOTED |
|---|---|---|---|
| | | | DATE : 01/17/2024 |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 11 OF 19 SHEETS |
| R.E. C78430 | | | SERVICE AREA / JOB.NO. / NO. M1 |

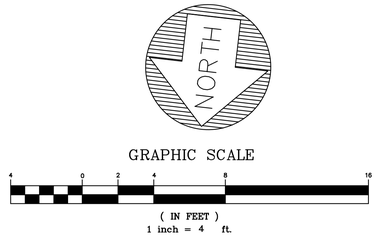


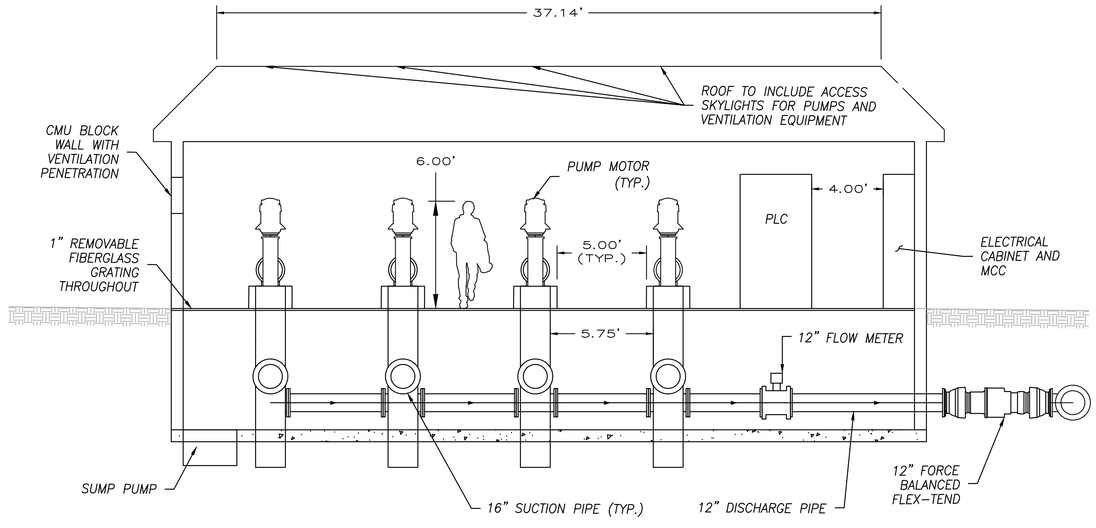




A-A
-

## PUMP HOUSE SECTION VIEW

SCALE: 1" = 4'




B-B
-

## PUMP HOUSE SECTION VIEW

SCALE: 1" = 4'

NOTES:

1. ALL EXISTING UTILITIES ARE NOTED ONLY AS APPROXIMATE. POTHOLING IS REQUIRED TO VERIFY LOCATION OF ALL EXISTING UTILITIES. NOT ALL EXISTING UTILITIES ARE NOTED. IT IS RESPONSIBILITY OF THE CONTRACTOR TO VERIFY.
2. THE EXACT POINT OF CONNECTION IS NOTED ONLY AS APPROXIMATE.
3. PUMP SUCTION AND DISCHARGE MUST BE 71 INCHES MEASURED FROM CENTERLINE TO CENTERLINE.
4. PER HYDRAULIC INSTITUTE GUIDELINES THERE MUST BE 5 PIPE DIAMETERS OF STRAIGHT PIPE BETWEEN ANY FLANGE AND THE SUCTION FLANGE.
5. ALL ELECTRICAL CABINETS SHALL HAVE 4 FOOT CLEAR SPACE IN FRONT.

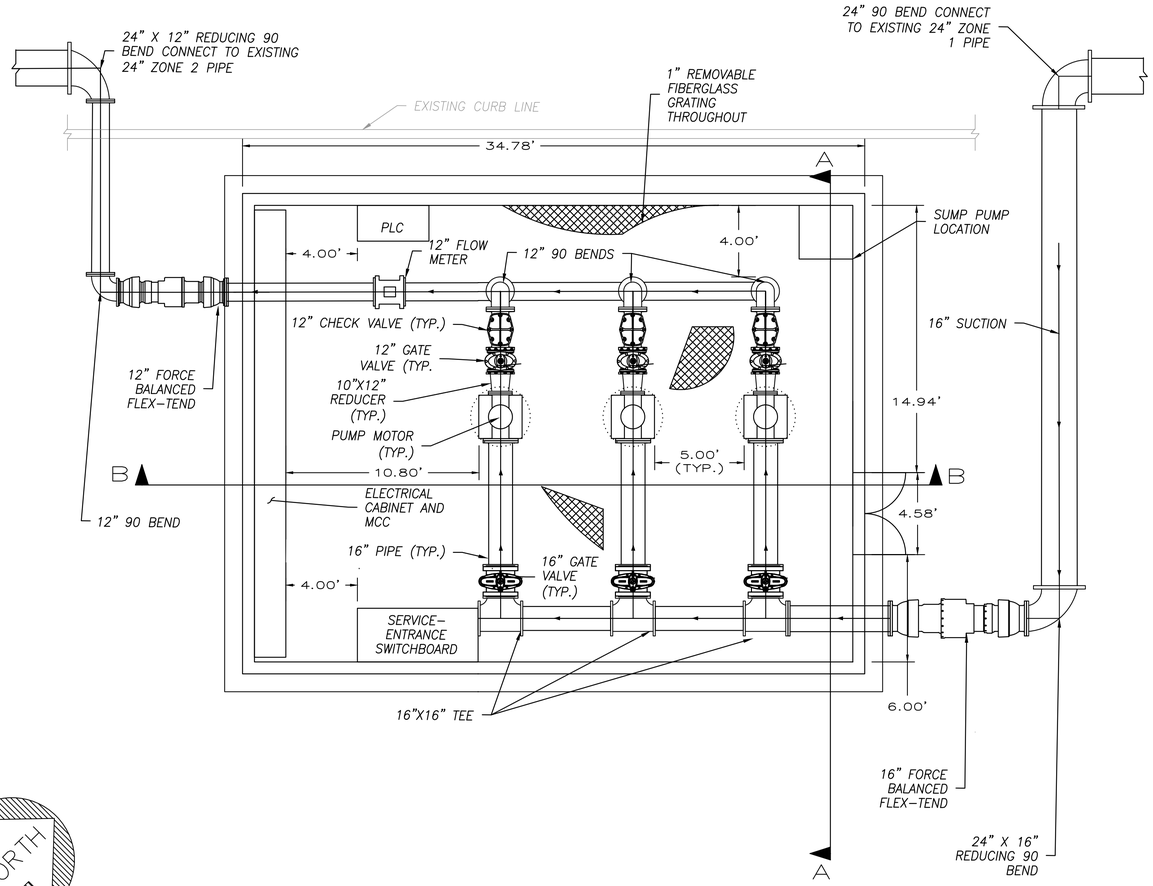
| NO. | DATE | REVISION | BY | APP. |
|---|---|---|---|---|
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

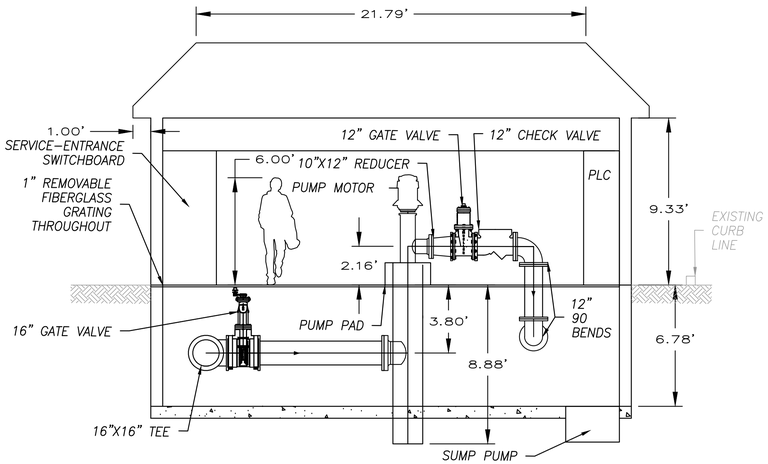
NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

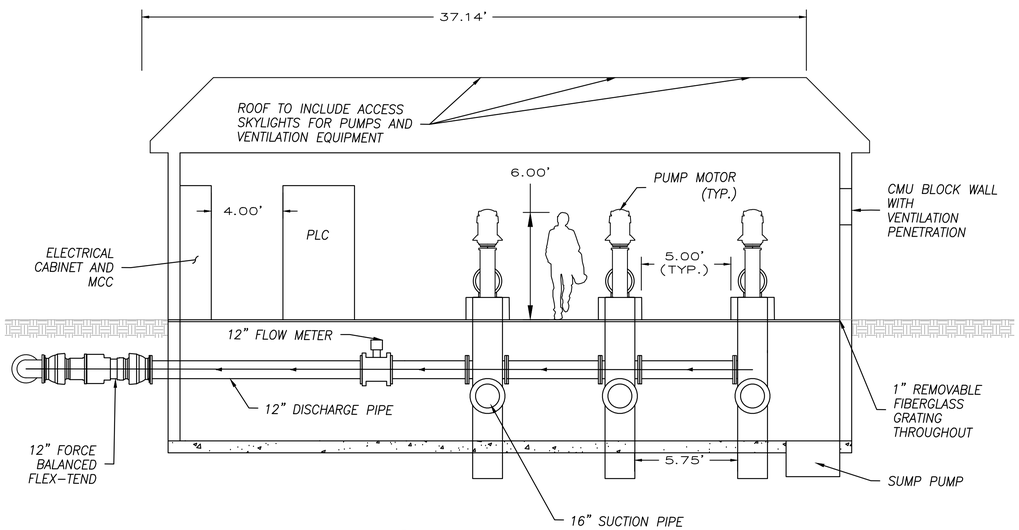
# PUMP STATION SITE 2
# ALTERNATIVE B

| | | | | |
|---|---|---|---|---|
| DES | DR | CH | SCALE | : AS NOTED |
| | | | DATE | : 01/17/2024 |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. | : 12 OF 19 SHEETS |
| R.E. C78430 | | | SERVICE AREA | JOB.NO. NO. M2 |

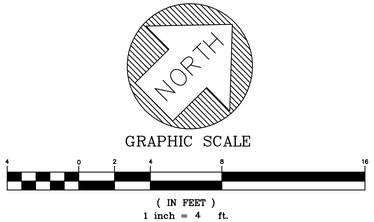



A-A
-
PUMP HOUSE SECTION VIEW
SCALE: 1" = 4'




B-B
-
PUMP HOUSE SECTION VIEW
SCALE: 1" = 4'




NOTES:

1. ALL EXISTING UTILITIES ARE NOTED ONLY AS APPROXIMATE. POTHOLING IS REQUIRED TO VERIFY LOCATION OF ALL EXISTING UTILITIES. NOT ALL EXISTING UTILITIES ARE NOTED. IT IS RESPONSIBILITY OF THE CONTRACTOR TO VERIFY.
2. THE EXACT POINT OF CONNECTION IS NOTED ONLY AS APPROXIMATE.
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4. PER HYDRAULIC INSTITUTE GUIDELINES THERE MUST BE 5 PIPE DIAMETERS OF STRAIGHT PIPE BETWEEN ANY FLANGE AND THE SUCTION FLANGE.
5. ALL ELECTRICAL CABINETS SHALL HAVE 4 FOOT CLEAR SPACE IN FRONT.

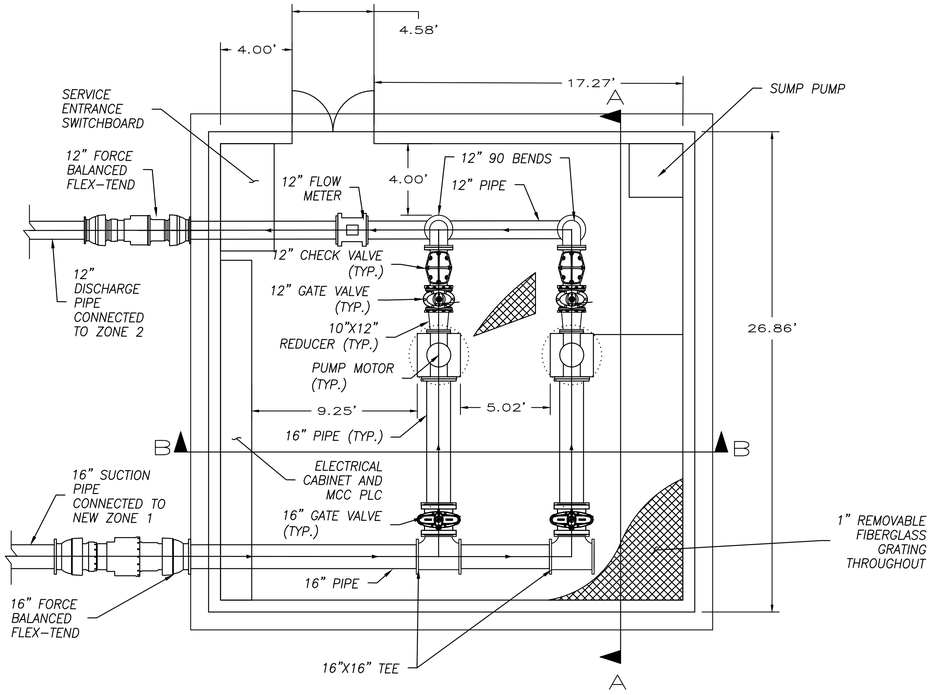
| NO. | DATE | REVISION | BY | APP. |
|---|---|---|---|---|
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

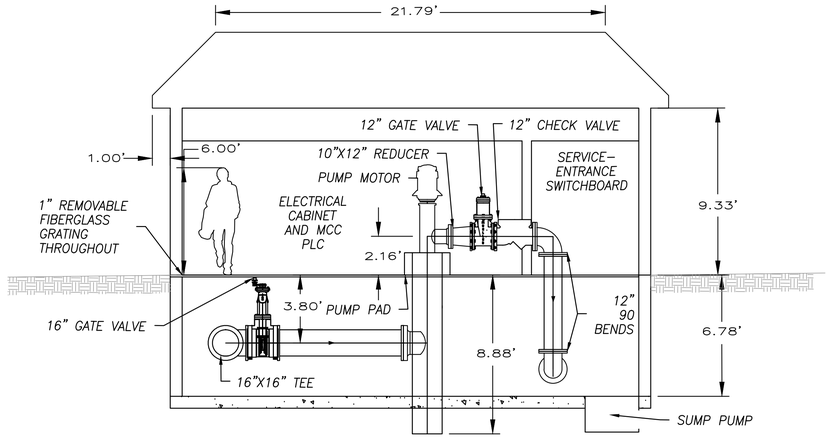
NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

# PUMP STATION SITE 2
# ALTERNATIVE C, D, AND E

| DES | DR | CH | SCALE : AS NOTED |
|---|---|---|---|
| | | | DATE : 01/17/2024 |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 13 OF 19 SHEETS |
| R.E. C78430 | | | SERVICE AREA / JOB.NO. / NO. M3 |




A-A
-

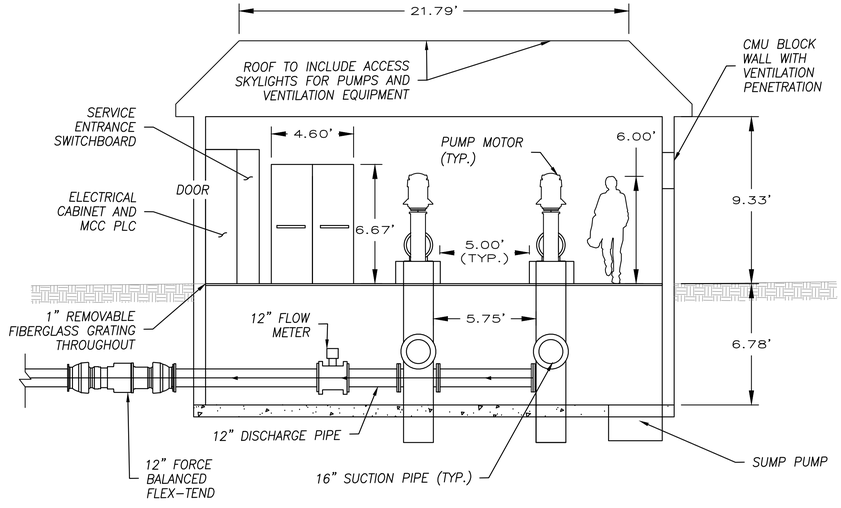
PUMP HOUSE SECTION VIEW

SCALE: 1" = 4'


GRAPHIC SCALE

4 0 2 4 8 16

( IN FEET )
1 inch = 4 ft.




B-B
-

PUMP HOUSE SECTION VIEW

SCALE: 1" = 4'

NOTES:

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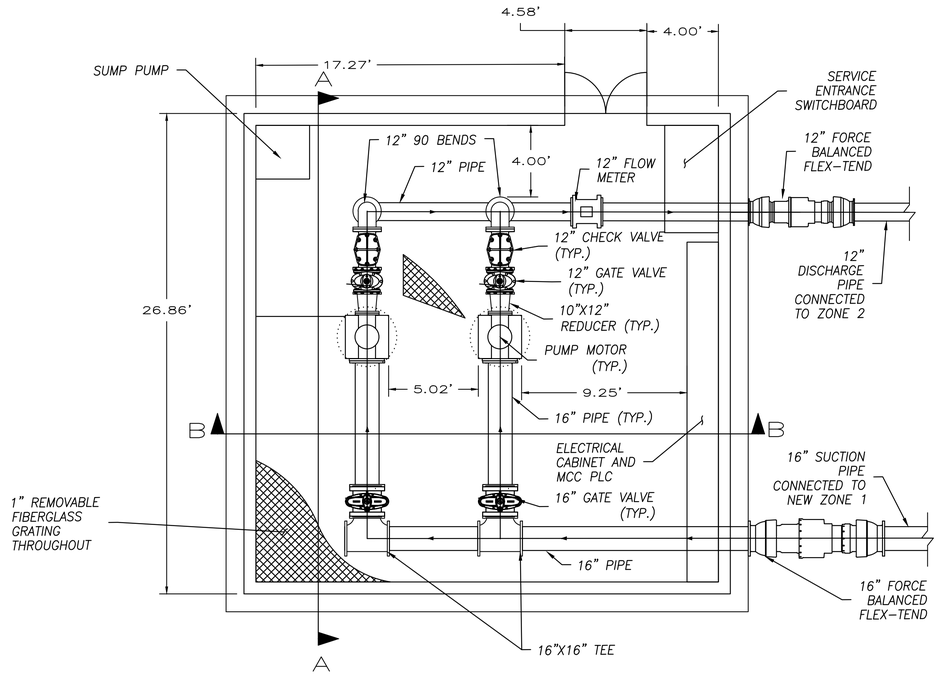
| NO. | DATE | REVISION | BY | APP. |
|---|---|---|---|---|
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

# PUMP STATION SITE 4 ALTERNATIVE D

| DES | DR | CH | SCALE : AS NOTED | |
|---|---|---|---|---|
| | | | DATE : 01/17/2024 | |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 14 OF 19 | SHEETS |
| R.E. C78430 | | | SERVICE AREA | JOB.NO. NO. M4 |

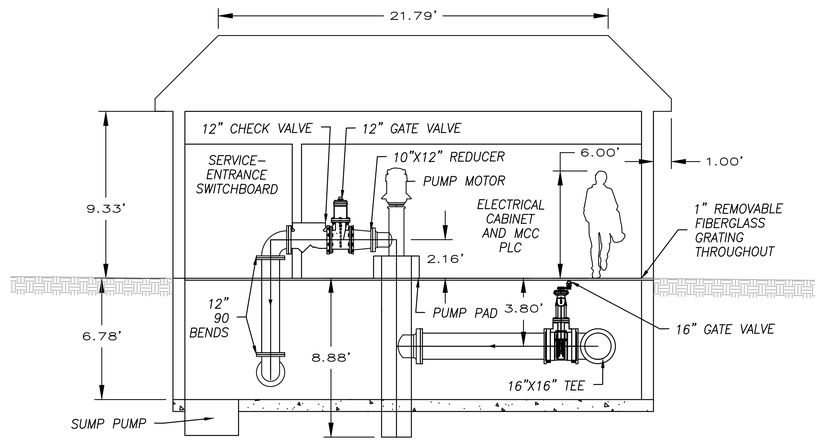




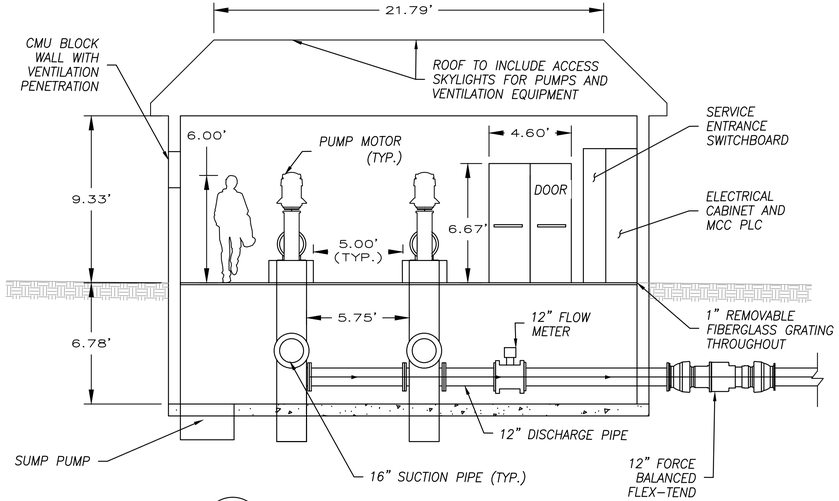
GRAPHIC SCALE

4 0 2 4 8 16

( IN FEET )
1 inch = 4 ft.




A-A
-
PUMP HOUSE SECTION VIEW
SCALE: 1" = 4'




B-B
-
PUMP HOUSE SECTION VIEW
SCALE: 1" = 4'

NOTES:

1. ALL EXISTING UTILITIES ARE NOTED ONLY AS APPROXIMATE. POTHOLING IS REQUIRED TO VERIFY LOCATION OF ALL EXISTING UTILITIES. NOT ALL EXISTING UTILITIES ARE NOTED. IT IS RESPONSIBILITY OF THE CONTRACTOR TO VERIFY.
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| NO. | DATE | REVISION | BY | APP. |
|---|---|---|---|---|
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

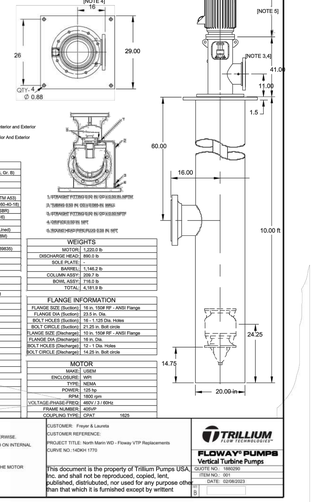
LYNWOOD PUMP STATION REPLACEMENT PROJECT

# PUMP STATION SITE 3 AND 5 ALTERNATIVE C AND E

| DES | DR | CH | SCALE : AS NOTED | |
|---|---|---|---|---|
| | | | DATE : 01/17/2024 | |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 15 OF 19 | SHEETS |
| R.E. C78430 | | | SERVICE AREA | JOB.NO. NO. M5 |

NOT TO BE USED FOR CONSTRUCTION UNLESS CERTIFIED.

## GENERAL ARRANGEMENT DRAWING
## VERTICAL TURBINE PUMP
## 14DKH ASSEMBLY




COATING:
BOWLS: Carboguard 891 Epoxy - Exterior Only
COLUMN: Carboguard 891 Epoxy - Interior and Exterior
DISCHARGE HEAD: Carboguard 891 Epoxy Coating - Interior and Exterior
BARREL: Carboguard 891 Epoxy Coating - Barrel - Interior And Exterior
BEARING RETAINER: Carboguard 891 Epoxy

| MATERIALS | |
|---|---|
| DISCHARGE HEAD | Steel, Plate (A36), Plate (A53, Gr. B) |
| SEAL HOUSING | Cast Iron (ASTM A48 CL30) |
| MECHANICAL SEAL | Chesterton 155 |
| SOLE PLATE | Not Supplied |
| COLUMN PIPE | Plate (ASTM A36), Pipe (ASTM A53) |
| BEARING RETAINER | Bronze (ASTM B584 Gr.C90300) |
| LINESHAFT | 416SS (ASTM A582 Type 416) |
| LINESHAFT | 416SS (ASTM A582 Type 416) |
| BOWL SHAFT | ASTM A582-Mod, Type 416 |
| BOWL | (ASTM A48 CL 35, Enamel Lined) |
| IMPELLER | 316SS (ASTM A743 Gr. CF-8M) |
| IMPELLER WEAR RING | N/A |
| BOWL BEARING | Bismuth Tin Bronze (UNS C89835) |
| BOWL WEAR RING | N/A |
| STRAINER | 316 SS |
| BOWL BOLTING | 304SS |
| PUMP | |
| HEAD TYPE | Fabricated |
| HEAD SIZE | 24" x 16.5" x 20" - "UT" Head |
| SEAL ARRANGEMENT | Special |
| LINESHAFT DIAMETER | 1.25 in |
| COLUMN SIZE | 10.00 in (Nominal) |
| ENCLOSING TUBE SIZE | N/A (Nominal) |
| LUBRICATION TYPE | Product |
| BOWL MODEL | 14DKH |
| NUMBER OF STAGES | 3STAGE TYPE 14DKH |
| RATED RPM | 1,770 RPM |
| NUMBER OF COLUMN PIPES | 3 @ 10ga/m |
| NPSHR AT RATED FLOW | 15 ft |
| IMPELLER TYPE | Enclosed |
| STRAINER TYPE | Grip on basket type / 14DK |
| LIQUID | |
| LIQUID | Water |
| SPECIFIC GRAVITY | 1.000 SG |
| VISCOSITY | 1.00 cP |
| TEMPERATURE | 68.00 deg F |

| WEIGHTS | |
|---|---|
| MOTOR | 1,200.0 lb |
| DISCHARGE HEAD | 880.0 lb |
| SOLE PLATE | |
| BARREL | 1,146.2 lb |
| COLUMN ASSY | 2882 lb |
| BOWL ASSY | 715.9 lb |
| TOTAL | 6,181.9 lb |

| FLANGE INFORMATION | |
|---|---|
| FLANGE SIZE (Suction) | 16 in, 150# RF - ANSI Flange |
| FLANGE DIA (Suction) | 23.5 in, Dia. |
| BOLT HOLES (Suction) | 16 - 1.125 Dia. Holes |
| BOLT CIRCLE (Suction) | 21.25 in, Bolt circle |
| FLANGE SIZE (Discharge) | 10 in, 150# RF - ANSI Flange |
| FLANGE DIA (Discharge) | 16 in, Dia. |
| BOLT HOLES (Discharge) | 12 - 1.13a. Holes |
| BOLT CIRCLE (Discharge) | 14.25 in, Bolt circle |

| MOTOR | |
|---|---|
| MAKE | US/EM |
| ENCLOSURE | WPI |
| TYPE | NEMA |
| POWER | 125 hp |
| RPM | 1800 rpm |
| VOLTAGE-PHASE-FREQ | 460V / 3 / 60Hz |
| FRAME NUMBER | 405HP |
| COUPLING TYPE | OPAT |

NOTES:
1. DRAWING NOT TO SCALE.
2. ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE.
3. FINAL HEAD HEIGHT WILL BE DETERMINED BASED ON INTERNAL ANALYSIS AND SPECIFICATION REVIEW.
4. TYPICAL LOCATION FOR DISCHARGE NOZZLE.
5. FINAL MOTOR HEIGHT WILL BE DETERMINED BY THE MOTOR MANUFACTURER.

CUSTOMER: Freyer & Laureta
CUSTOMER REFERENCE:
PROJECT TITLE: North Marin WD - Floway VTP Replacements
CURVE NO.: 14DKH 1770



TRILLIUM FLOW TECHNOLOGIES
FLOWAY® PUMPS
Vertical Turbine Pumps
QUOTE NO.: 1880290
ITEM NO.: 001
DATE: 02/08/2023
B



1 – 1,900 GPM PUMP CUT SHEET
SCALE: N.T.S.

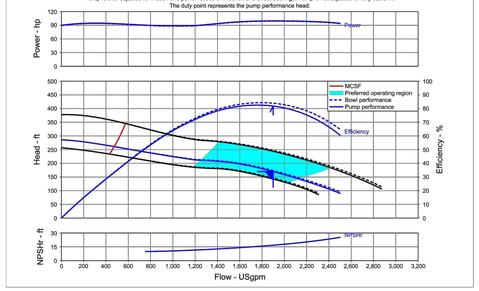


## FLOWAY® PUMPS — Pump Performance Datasheet

| | | | |
|---|---|---|---|
| Customer | : Freyer & Laureta | Quote number | : 1880290 |
| Customer reference | : | Size | : 14DKH |
| Item number | : 001 | Stages | : 3 |
| Service | : Duplicate Hydraulics to 53013, 50734-2 & 48398 | Based on curve number | : 14DKH 1770 Rev. 0 |
| Quantity | : 3 | Date last saved | : 02/08/2023 12:01 PM |

| Operating Conditions | | Liquid | |
|---|---|---|---|
| Flow, rated | : 1,900.0 USgpm | Liquid type | : Water - Potable |
| Differential head / pressure, rated (requested) | : 170.0 ft | Solids diameter, max | : -00.00 in |
| Differential head / pressure, rated (actual) | : 171.2 ft | Solids concentration, by volume | : 0.00 % |
| Suction pressure, rated / max | : 0.00 / 0.00 psi.g | Solids concentration, by weight | : 0.00 % |
| NPSH available, rated | : Ample | Temperature, max | : 68.00 deg F |
| Site Supply Frequency | : 60 Hz | Fluid density, rated / max | : 1.000 / 1.000 SG |
| **Performance** | | Viscosity, rated | : 1.00 cP |
| Speed criteria | : Synchronous | Vapor pressure, rated | : 0.00 psi.a |
| Speed, rated | : 1770 rpm | **Material** | |
| Impeller diameter, rated | : 8.00 in | Bowl material selected | : Cast Iron |
| Impeller diameter, maximum | : 9.13 in | Impeller material selected | : 316SS |
| Impeller diameter, minimum | : 7.50 in | **Pressure Data** | |
| Efficiency (bowl / pump) | : 83.92 / 81.84 % | Maximum working pressure | : See the Additional Data page |
| NPSH required / margin required | : 16.76 / 0.00 ft | Component pressure limit | : See the Additional Data page |
| Ns (imp. eye flow) / Nss (imp. eye flow) | : 3,083 / 9,013 US Units | Maximum allowable suction pressure | : N/A |
| MCSF | : 473.7 USgpm | Hydrostatic test pressure | : See the Additional Data page |
| Head, maximum, rated diameter | : 286.0 ft | **Driver & Power Data (@ this density)** | |
| Head rise to shutoff (bowl / pump) | : 64.88 / 68.24 % | Driver sizing specification | : Max power + 4% |
| Flow, best eff. point (bowl / pump) | : 1,790.0 / 1,757.6 USgpm | Margin over specification | : 0.00 % |
| Flow ratio, rated / BEP (bowl / pump) | : 106.14 / 108.10 % | Service factor | : 1.15 |
| Diameter ratio (rated / max) | : 87.67 % | Power, hydraulic | : 83.23 hp |
| Head ratio (rated dia / max dia) | : 70.13 % | Power (bowl / pump) | : 99.18 / 99.66 hp |
| Cq/Ch/CeCn [ANSI/HI 9.6.7-2010] | : 1.00 / 1.00 / 1.00 / 1.00 | Power, maximum, rated diameter | : 99.67 hp |
| Selection status | : Acceptable | Minimum recommended motor rating | : 125 hp / 93.21 kW |

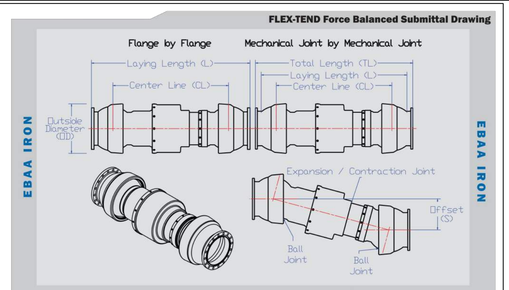
Pump and bowl (clashed) performance. Bowl adjusted for construction and viscosity.
Pump further adjusted for friction and power losses of lineshaft and thrust bearings. Pump is not adjusted for any static lift.
The duty point represents the pump performance head.






2 – 1,900 GPM PUMP PERFORMANCE CURVE
SCALE: N.T.S.

## FLEX-TEND Force Balanced Submittal Drawing




*DIMENSIONS ARE IN INCHES

| Nominal Pipe Size | OD | D* | E** | CL | S | Flange by Flange: Series Number | Flange by Flange: L | Flange by Flange: Weight (lbs) | Mechanical Joint by Mechanical Joint: Series Number | Mechanical Joint by Mechanical Joint: L | Mechanical Joint by Mechanical Joint: TL | Mechanical Joint by Mechanical Joint: Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 10.2 | 20° | 8 | 42.5 | 15.9 | 4403F20B | 53.7(±4) | 210 | 4403M20B | 50.3 (±4) | 55.3 (±4) | 204 |
| 4 | 10.2 | 20° | 8 | 42.5 | 15.9 | 4404F20B | 53.8(±4) | 167 | 4404M20B | 49.7 (±4) | 54.7 (±4) | 206 |
| 6 | 12.3 | 20° | 8 | 44.0 | 16.5 | 4406F20B | 56.8(±4) | 275 | 4406M20B | 52.4 (±4) | 57.4 (±4) | 316 |
| 8 | 14.9 | 20° | 8 | 48.1 | 17.8 | 4408F20B | 62.9(±4) | 377 | 4408M20B | 57.8 (±4) | 62.8 (±4) | 496 |
| 10 | 18.1 | 20° | 8 | 50.6 | 18.7 | 4410F20B | 67.0(±4) | 594 | 4410M20B | 63.0 (±4) | 68.0 (±4) | 635 |
| 12 | 20.8 | 20° | 8 | 52.9 | 19.4 | 4412F20B | 72.0(±4) | 786 | 4412M20B | 66.3 (±4) | 71.3 (±4) | 880 |
| 14 | 26.5 | 15° | 10 | 65.3 | 17.5 | 4414F20B | 93.5(±5) | 1,846 | 4414M20B | 84.6 (±5) | 91.5 (±5) | 1768 |
| 16 | 26.5 | 15° | 10 | 65.3 | 17.5 | 4416F20B | 91.5(±5) | 1,779 | 4416M20B | 86.0 (±5) | 93.0 (±5) | 1709 |
| 18 | 29.8 | 15° | 10 | 69.5 | 18.6 | 4418F20B | 95.4(±5) | 2,573 | 4418M20B | 87.6 (±5) | 94.6 (±5) | 2431 |
| 20 | 33.1 | 15° | 12 | 75.0 | 20.1 | 4420F20B | 98.3(±6) | 2,885 | 4420M20B | 95.7 (±6) | 102.7 (±6) | 2697 |
| 24 | 39.1 | 15° | 12 | 81.7 | 20.6 | 4424F20B | 110.9(±6) | 4,394 | 4424M20B | 109.0 (±6) | 116.0 (±6) | 4340 |
| 30 | 47.8 | 15° | 16 | 103.5 | 28.9 | 4430F20B | 136.8(±8) | 9,224 | 4430M20B | 127.2 (±8) | 135.2 (±8) | 9156 |
| 36 | 59.3 | 15° | 16 | 105.9 | 29.5 | 4436F20B | 140.1(±8) | 11,158 | – | – | – | – |
| 48 | 79.4 | 12° | 24 | 148.0 | 33.2 | 4448F20B | 193.0(±12) | 26,680 | – | – | – | – |

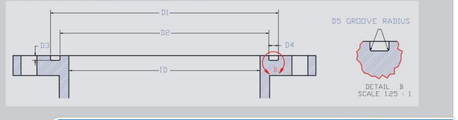
NOTE: Dimensions are in inches, and are subject to change without notice. End connection combinations available (14 inch - 24 inch).
*Deflection Angle is per ball.
**Maximum expansion.

## Additional Applications

**Applicable**
- Potable or Non-Potable Water (no solids or debris)
- Fire Service Mains
- Fire Sprinkler Systems
- Chilled or Heated Water Systems (HVAC)
- Above or Below Ground

**Not Applicable**
- Water with solids, such as storm or waste-sewage (use standard FLEX-TEND)
- Petroleum liquids or gas
- Steam

## FLEX-TEND, EX-TEND, and FLEX-900 O-ring Groove




| Size | D1 | D2 | D3 | D4 | D5 | O-ring Diameter | O-ring Part Number |
|---|---|---|---|---|---|---|---|
| 3 | 4.885 | 4.185 | 0.175 | 0.350 | 0.0625 | 0.25 | 983003 |
| 4 | 5.900 | 4.700 | 0.300 | 0.600 | 0.0625 | 0.5 | 983004 |
| 6 | 8.00 | 6.800 | 0.300 | 0.600 | 0.0625 | 0.5 | 983006 |
| 8 | 10.100 | 8.900 | 0.300 | 0.600 | 0.0625 | 0.5 | 983008 |
| 10 | 12.200 | 11.000 | 0.300 | 0.600 | 0.0625 | 0.5 | 983010 |
| 12 | 14.300 | 13.100 | 0.300 | 0.600 | 0.0625 | 0.5 | 983012 |
| 14 | 16.200 | 15.00 | 0.300 | 0.600 | 0.0625 | 0.5 | 983014 |
| 16 | 18.500 | 16.900 | 0.400 | 0.800 | 0.1250 | 0.625 | 983016 |
| 18 | 20.700 | 19.100 | 0.400 | 0.800 | 0.1250 | 0.625 | 983018 |
| 20 | 23.000 | 21.400 | 0.400 | 0.800 | 0.1250 | 0.625 | 983020 |
| 24 | 27.200 | 25.600 | 0.400 | 0.800 | 0.1250 | 0.625 | 983024 |
| 30 | 33.500 | 31.700 | 0.400 | 0.900 | 0.1250 | 0.75 | 983030 |
| 36 | 40.000 | 38.300 | 0.400 | 0.850 | 0.1250 | 0.75 | 983036 |
| 42 | 46.580 | 44.080 | 0.650 | 1.250 | 0.1250 | N/A | 983042 |
| 48 | 52.720 | 50.220 | 0.650 | 1.250 | 0.1250 | 1 | 983048 |

**Sample Specification**
1. Flexible expansion joints shall be installed in the locations indicated on the drawings and shall be manufactured of ductile iron conforming to the material requirements of ASTM A536 and ANSI/AWWA C153/A21.53. Foundry certification of material shall be readily available upon request.
2. Each flexible expansion joint shall be pressure tested prior to shipment against its own restraint to a minimum of 350 PSI for 3 inch through 16 inch and 250 PSI for 18 inch and greater. A minimum 2:1 safety factor, determined from the published pressure rating, shall apply.
3. Each flexible expansion joint shall consist of an expansion joint designed and cast as an integral part of a ball and socket type flexible joint, having a minimum per ball deflection of: 20° for sizes 4-inch through 12-inch; 15° for sizes 14-inch through 36-inch and 12 ° for size 48-inch. The flexible expansion fitting shall not expand or exert an axial imparting thrust under internal water pressure. The flexible expansion fitting shall not increase or decrease the internal water volume as the unit expands or contracts. The minimum total linear travel shall be 8-inches.
4. All internal surfaces (wetted parts) shall be lined with a minimum of 15 mils of fusion bonded epoxy conforming to the applicable requirements of ANSI/AWWA C213. Sealing gaskets shall be constructed of EPDM. The coating shall meet ANSI/NSF-61.
5. Exterior surfaces shall be coated with a minimum of 6 mils of fusion bonded epoxy conforming to the applicable requirements of ANSI/AWWA C116/A21.16.
6. Polyethylene sleeves, meeting ANSI/AWWA C105/A21.5, shall be included for direct buried applications.
7. Manufacturer's certification of compliance to the above standards and requirements shall be readily available upon request. The purchaser (or owner) shall reserve the right to inspect the manufacturer's facility for compliance. All flexible expansion joints shall be The Force Balanced FLEX-TEND as manufactured by EBAA Iron, Inc. Eastland, TX., U.S.A.

**Important Notes**

The EBAA Force Balanced Flex-Tend® is particularly suited for use in above ground applications where unbalanced thrust forces are neither desirable nor easily accommodated. These applications require special attention to the overall forces and restraint of the piping system.

The installation of a Force Balanced Flex-Tend requires the restraint of all adjacent pipe joints in order to transfer expansion/contraction forces to the unit and to produce the desired force-balancing effect without undue movement or separation of the adjacent joints. Lock-ring type pipe and fitting joints are required to have the assembly clearance removed by extending the joint prior to the installation of the Force Balanced Flex-Tend and pressurization of the system.

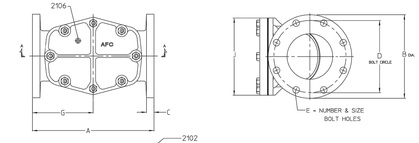
Joint restraint and clearance removal of adjacent joints is necessary in both above and below ground Force Balanced Flex-Tend installations.

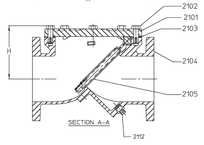
When connecting a Force Balanced FLEX-TEND to HDPE pipe, a flanged end connection is required. This is to be joined to a fused flange adapter on the HDPE pipe. A filler flange between the two gaskets is necessary to assure proper seal contact.

3 – FLEX-TEND FORCE BALANCED FLEXIBLE EXPANSION JOINTS
SCALE: N.T.S.

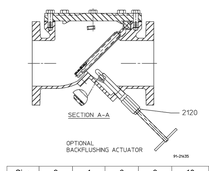
## AMERICAN Flow Control Submittal Information

### 3" - 12" SERIES 2100 RESILIENT SEATED CHECK VALVE




| Ref. No. | Description | Material |
|---|---|---|
| 2101 | Bonnet | Ductile Iron ASTM A536 Grade 65-45-12 |
| 2102 | Bonnet Bolts | 304 Stainless Steel |
| 2103 | Bonnet Gasket | EPDM Rubber |
| 2104 | Flanged Ends Body | Ductile Iron ASTM A536 Grade 65-45-12 |
| 2105 | Disc | See Note 6 |
| 2106 | Pipe Plug, 3/8" NPT | Stainless Steel |
| 2112 | Pipe Plug, Square Head | Stainless Steel |
| 2120 | Backflushing Actuator | Assembly |




NOTES:
1. Series 2100 Check Valves meet or exceed requirements of ANSI/AWWA C508.
2. 250 psig rated working pressure, 500 psig test pressure.
3. Bolt patterns of class 125 flanged ends are in accordance with ANSI/AWWA C110/A21.10 (ASME B16.1 class 125).
4. Body and bonnet coated with fusion-bonded-epoxy coating in compliance with ANSI/AWWA C550.
5. Valves have manufacturer's name, pressure class and year of manufacture cast on body or bonnet.
6. Disc is ductile iron with stainless steel shaft and nylon reinforcement, all encapsulated with EPDM rubber.
7. 3"-16" valves are Certified to NSF/ANSI 61 & 372.

| Size | 3 | 4 | 6 | 8 | 10 | 12 |
|---|---|---|---|---|---|---|
| A | 11.00 | 13.00 | 16.00 | 19.50 | 24.50 | 27.50 |
| B | 7.50 | 9.00 | 11.00 | 13.50 | 16.00 | 19.00 |
| C | 0.75 | 0.94 | 1.00 | 1.13 | 1.19 | 1.25 |
| D | 6.00 | 7.50 | 9.50 | 11.75 | 14.25 | 17.00 |
| E | 4 - 0.75 | 8 - 0.75 | 8 - 0.88 | 8 - 0.88 | 12 - 1.00 | 12 - 1.00 |
| G | 5.50 | 6.50 | 8.00 | 9.75 | 12.25 | 13.75 |
| H | 4.50 | 5.19 | 7.00 | 8.41 | 10.19 | 11.94 |
| J | 5.31 | 6.75 | 10.25 | 12.06 | 14.88 | 17.63 |
| Weight | 31 lbs. | 53 lbs. | 110 lbs. | 165 lbs. | 268 lbs. | 390 lbs. |

AMERICAN FLOW CONTROL
THE RIGHT WAY

AMERICAN Flow Control
P.O. Box 2727
Birmingham, AL 35202-2727
Phone: 800-423-1951
Fax: 8-901-0-3955
Email: afcsales@american-usa.com

Waterous Company
125 Hardman Avenue South
South St. Paul, Mn. 55075-1191
Phone: 800-803-7896
Fax: 8-651-0-3836
Email: afcsales@american-usa.com

WWW.AMERICAN-USA.COM

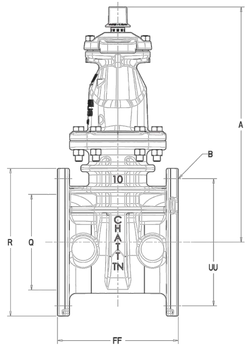


4 – 12 IN CHECK VALVE
SCALE: N.T.S.

## 3"- 12" A-2361 RESILIENT WEDGE GATE VALVES - FL. x FL.

MUELLER **10.7**

Rev. 1-22




**Dimensions**

| Dimension | Nominal Size 3" | 4" | 6" | 8" | 10" | 12" |
|---|---|---|---|---|---|---|
| A | 12.38 | 14.19 | 18.00 | 21.50 | 25.50 | 28.62 |
| R | 7.50 | 9.00 | 11.00 | 13.50 | 16.00 | 19.00 |
| FF | 8.00 | 9.00 | 10.50 | 11.50 | 13.00 | 14.00 |
| Q (bore) | 3.30 | 4.30 | 6.30 | 8.30 | 10.30 | 12.30 |
| UU (bolt circle diameter) | 6.00 | 7.50 | 9.50 | 11.75 | 14.25 | 17.00 |
| B (number and size of holes) | 4–.75 | 8–.75 | 8–.88 | 8–.88 | 12–1.00 | 12–1.00 |
| Turns to open | 11 | 14 | 20.5 | 26.5 | 33 | 38.5 |
| Weight* | 73 | 81 | 136 | 213 | 326 | 440 |
| Closing Torque (FT-LBS), Non-Geared | 52 | 75 | 110 | 150 | 185 | 225 |
| Closing Torque (FT-LBS), Bevel | 31 | 44 | 65 | 88 | 109 | 132 |
| Closing Torque (FT-LBS), Spur | N/A | 41 | 60 | 82 | 101 | 123 |

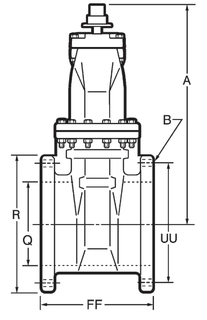
*All dimensions are in inches. All weights are in pounds and are approximate.

5 – 12 IN GATE VALVE
SCALE: N.T.S.

## 14"- 54" A-2361 D.I. RESILIENT WEDGE GATE VALVES - FL. x FL.

MUELLER **10.25**

Rev. 1-22




**Dimensions**

| Dimension* | Nominal Size 14" | 16" | 18" | 20" | 24" | 30" † | 36" † | 42" † | 48" † | 54" † |
|---|---|---|---|---|---|---|---|---|---|---|
| A | 32.75 | 37.88 | 44.19 | 48.25 | 53.88 | See A for Spur or Bevel Gear | | | | |
| R | 21.00 | 23.50 | 25.00 | 27.50 | 32.00 | 38.75 | 46.00 | 53.00 | 59.50 | 66.34 |
| FF | 15.06 | 16.06 | 17.00 | 18.00 | 20.00 | 26.00 | 30.00 | 38.00 | 43.00 | 48.00 |
| Q (bore) | 14.38 | 16.00 | 18.38 | 20.38 | 24.38 | 30.38 | 36.38 | 42.38 | 48.38 | 48.38 |
| UU (bolt circle diameter) | 18.75 | 21.25 | 22.75 | 25.00 | 29.50 | 36.00 | 42.75 | 49.50 | 56.00 | 62.76 |
| B (number and size of holes) | 12–1.125 | 16–1.125 | 16–1.25 | 20–1.25 | 20–1.38 | 28–1.38 | 32–1.63 | 36–1.63 | 44–1.63 | 44–2.00 |
| A- Spur Gear | 40.49 | 43.58 | 49.41 | 53.01 | 59.15 | 70.81 | 83.08 | 97.74 | 109.70 | 109.70 |
| A - Bevel Gear** | 34.55 | 37.77 | 44.50 | 47.69 | 54.06 | 64.93 | 77.19 | 90.75 | 102.61 | 102.61 |
| Turns to open (without gearing) | 43.5 | 49 | 57 | 63 | 75 | - | - | - | - | - |
| Turns to open (Spur gearing)†† | 178 | 201 | 234 | 258 | 308 | 381 | 455 | 524 | 596 | 596 |
| Turns to open (Bevel gearing)†† | 174 | 196 | 228 | 252 | 300 | 372 | 444 | 524 | 596 | 596 |
| Weight* | 690 | 859 | 1284 | 1774 | 2481 | 6390 | 8220 | 13400 | 19978 | 20900 |
| Closing Torque (FT-LBS), Non-Geared | 225 | 275 | 275 | 300 | 325 | N/A | N/A | N/A | N/A | N/A |
| Closing Torque (FT-LBS), Bevel | 66 | 81 | 81 | 88 | 96 | 132 | 162 | 206 | 235 | 294 |
| Closing Torque (FT-LBS), Spur | 61 | 75 | 75 | 81 | 88 | 122 | 149 | 199 | 227 | 284 |

*All dimensions are in inches. All weights are in pounds and are approximate. Weights for 30"-54" valves are with gearing; for all others without gearing.
**Center line of operating nut to center line of valve.
†Spur or Bevel Gear must be used with 30", 36", 42", 48" & 54" valves.
††Turns shown are for Rotoric gearing supplied by Mueller Co.

6 – 16 IN GATE VALVE
SCALE: N.T.S.

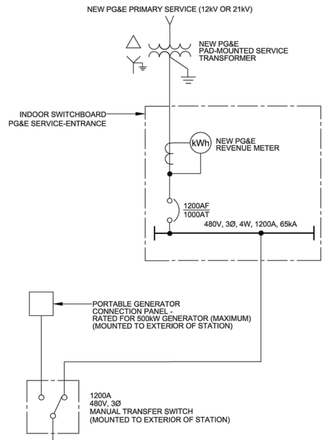
| NO. | DATE | REVISION | BY | APP. |
|---|---|---|---|---|
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

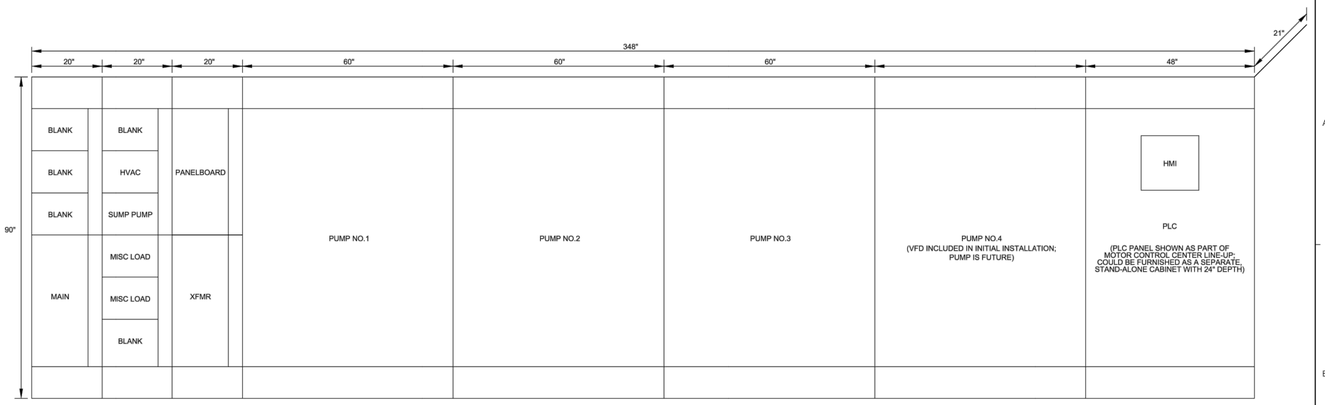
NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

# DETAILS

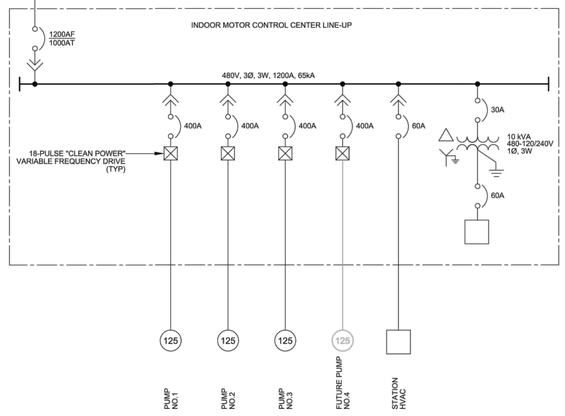
| DES | DR | CH | SCALE : AS NOTED |
|---|---|---|---|
| | | | DATE : 01/17/2024 |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 16 OF 19 SHEETS |
| R.E. C78430 | | | SERVICE AREA / JOB.NO. / NO. M6 |

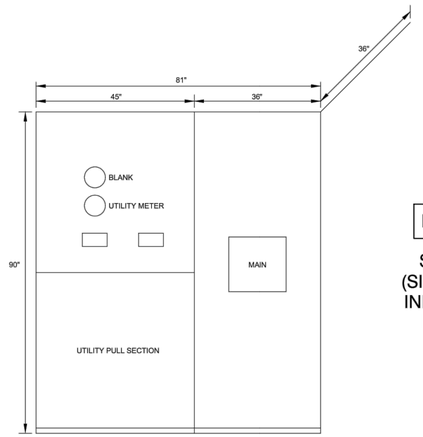



FRONT ELEVATION - OPTION "3" INDOOR MOTOR CONTROL CENTER LINE-UP

SCALE: NO SCALE




48 INCHES CLEAR SPACE IN FRONT OF SWITCHBOARD REQUIRED PER PG&E

FRONT ELEVATION - INDOOR SERVICE-ENTRANCE SWITCHBOARD

SCALE: NO SCALE

## ELECTRICAL CONFIGURATION OPTION "3"

SYSTEM SIZED FOR FOUR (4) 125HP PUMPS (SIMULTANEOUS OPERATION OF FOUR PUMPS); INITIAL INSTALLATION INCLUDES 3 PUMPS WITH PROVISIONS FOR A FOURTH, FUTURE PUMP

| NO: | DATE | BY | REVISIONS |
|---|---|---|---|
| | | | PRELIMINARY NOT FOR CONSTRUCTION |

REGISTERED PROFESSIONAL ENGINEER TODD A. BEECHER E014712 Exp. 6/30/23 ELECTRICAL STATE OF CALIFORNIA

| | |
|---|---|
| NMWD PROJECT NO.: | xxxxxx |
| DESIGN BY: | TB |
| DRAWN BY: | BEI |
| CHECKED BY: | xxx |
| DRAWING DATE: | APRIL 2023 |

Beecher Engineering, Inc.

NORTH MARIN WATER DISTRICT
LYNWOOD PUMP STATION
PRE-DESIGN REPORT

NORTH MARIN WATER DISTRICT

ELECTRICAL

LYNWOOD PUMP STATION - OPTION "3" SINGLE LINE DIAGRAM

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

PROJECT NO. xxxxxx
DRAWING NO. E013
SHEET NO. x OF xxx

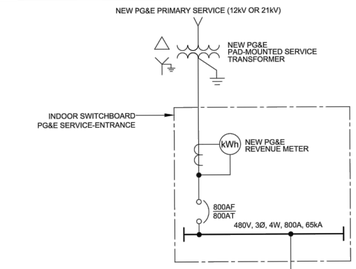
| NO. | DATE | REVISION | BY | APP. |
|---|---|---|---|---|
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

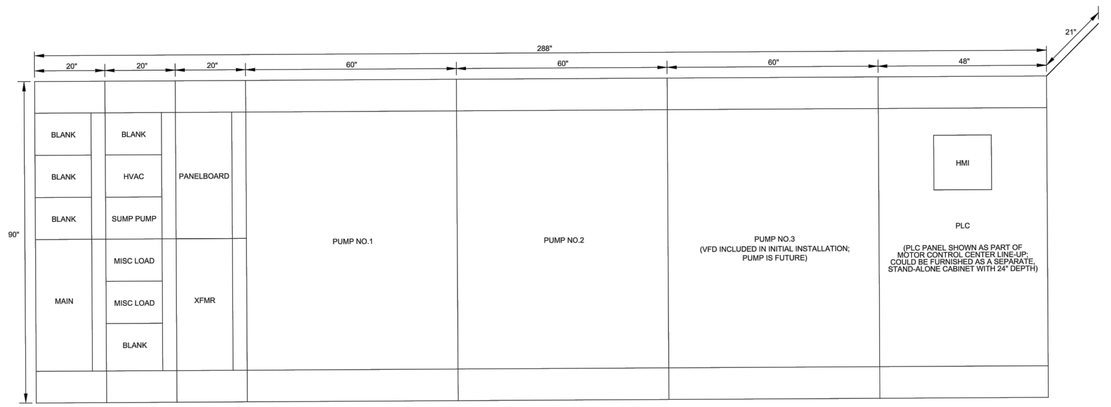
NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

# ALTERNATIVE 1 + 2
# ELECTRICAL EQUIPMENT

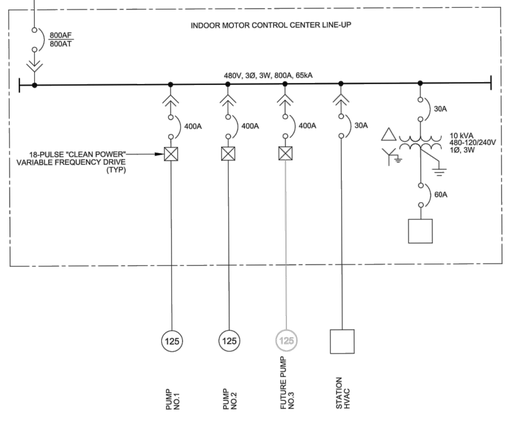
| DES | DR | CH | SCALE : AS NOTED |
|---|---|---|---|
| | | | DATE : 01/17/2024 |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 12 OF 19 SHEETS |
| R.E. C78430 | | | SERVICE AREA / JOB.NO. / NO. E1 |

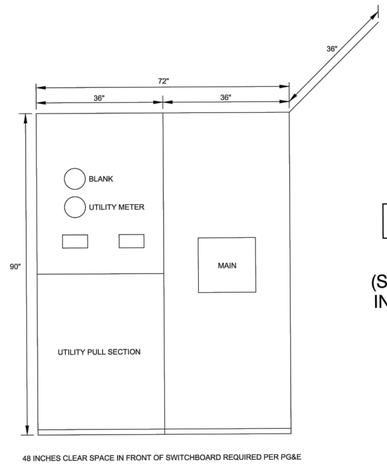



FRONT ELEVATION - OPTION "2" INDOOR MOTOR CONTROL CENTER LINE-UP

SCALE: NO SCALE




48 INCHES CLEAR SPACE IN FRONT OF SWITCHBOARD REQUIRED PER PG&E

FRONT ELEVATION - INDOOR SERVICE-ENTRANCE SWITCHBOARD

SCALE: NO SCALE

**ELECTRICAL CONFIGURATION OPTION "2"**

SYSTEM SIZED FOR THREE (3) 125HP PUMPS (SIMULTANEOUS OPERATION OF THREE PUMPS); INITIAL INSTALLATION INCLUDES 2 PUMPS WITH PROVISIONS FOR A THIRD, FUTURE PUMP

| NO: | DATE | BY | REVISIONS |
|---|---|---|---|
| | | | PRELIMINARY NOT FOR CONSTRUCTION |

LOUIS A. BEECHER JR. — REGISTERED PROFESSIONAL ENGINEER — E014713 — Exp. 6/30/23 — ELECTRICAL — STATE OF CALIFORNIA

| | |
|---|---|
| NMWD PROJECT NO.: | xxxxxxx |
| DESIGN BY: | TB |
| DRAWN BY: | BEI |
| CHECKED BY: | xxx |
| DRAWING DATE: | APRIL 2023 |

Beecher Engineering, Inc.

NORTH MARIN WATER DISTRICT
LYNWOOD PUMP STATION
PRE-DESIGN REPORT

NORTH MARIN WATER DISTRICT

ELECTRICAL

LYNWOOD PUMP STATION -
OPTION "2" SINGLE LINE DIAGRAM

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 — 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

PROJECT NO. xxxxxx
DRAWING NO. E012
SHEET NO. x OF xxx

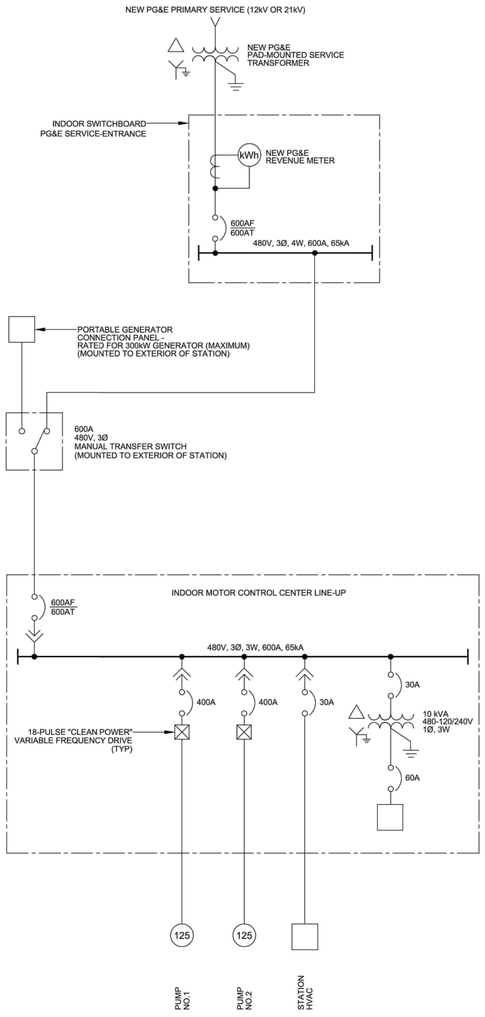
| NO. | DATE | REVISION | BY | APP. |
|---|---|---|---|---|
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

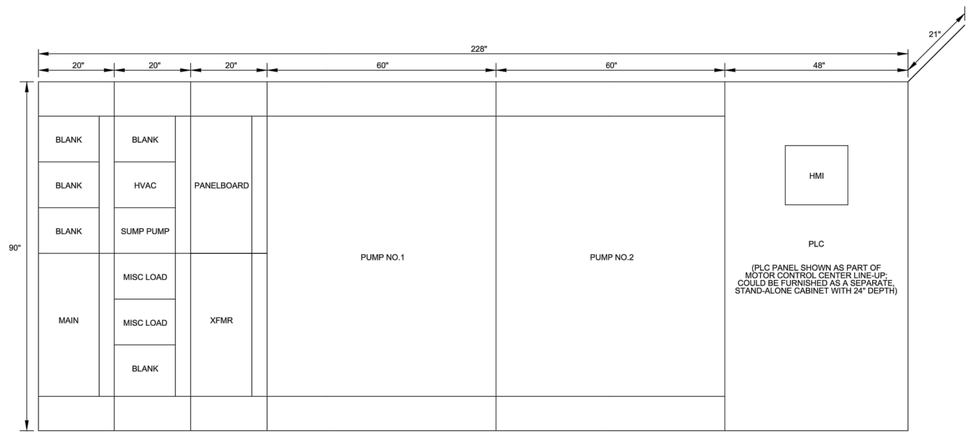
NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

# ALTERNATIVE 3
# ELECTRICAL EQUIPMENT SHEET 1

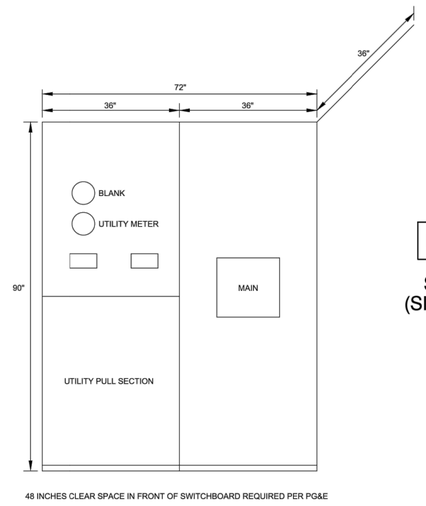
| DES | DR | CH | SCALE : AS NOTED |
|---|---|---|---|
| | | | DATE : 01/17/2024 |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 13 OF 19 SHEETS |
| R.E. C78430 | | | SERVICE AREA / JOB.NO. / NO. E2 |




FRONT ELEVATION - OPTION "1" INDOOR MOTOR CONTROL CENTER LINE-UP

SCALE: NO SCALE




FRONT ELEVATION - INDOOR SERVICE-ENTRANCE SWITCHBOARD

SCALE: NO SCALE

## ELECTRICAL CONFIGURATION OPTION "1"

SYSTEM SIZED FOR TWO (2) 125HP PUMPS
(SIMULTANEOUS OPERATION OF BOTH PUMPS)

| NO: | DATE | BY | REVISIONS |
|---|---|---|---|
| | | | PRELIMINARY NOT FOR CONSTRUCTION |

REGISTERED PROFESSIONAL ENGINEER TODD A. BEECHER E014712 Exp. 6/30/23 ELECTRICAL STATE OF CALIFORNIA

| | |
|---|---|
| NMWD PROJECT NO.: | xxxxxxx |
| DESIGN BY: | TB |
| DRAWN BY: | BEI |
| CHECKED BY: | xxx |
| DRAWING DATE: | APRIL 2023 |

Beecher Engineering, Inc.

NORTH MARIN WATER DISTRICT
LYNWOOD PUMP STATION
PRE-DESIGN REPORT

NORTH MARIN WATER DISTRICT

ELECTRICAL

LYNWOOD PUMP STATION -
OPTION "1" SINGLE LINE DIAGRAM

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

PROJECT NO. xxxxxx
DRAWING NO. E011
SHEET NO. x OF xxx

| NO. | DATE | REVISION | BY | APP. |
|---|---|---|---|---|
| | 01/17/2024 | CONCEPTUAL DESIGN | | |

NORTH MARIN WATER DISTRICT
NOVATO, CALIFORNIA

LYNWOOD PUMP STATION REPLACEMENT PROJECT

# ALTERNATIVE 3
# ELECTRICAL EQUIPMENT SHEET 2

| DES | DR | CH | SCALE : AS NOTED |
|---|---|---|---|
| | | | DATE : 01/17/2024 |
| APPROVED: CHIEF ENGINEER | | | SHEET NO. : 14 OF 19 SHEETS |
| R.E. C78430 | | | SERVICE AREA / JOB.NO. / NO. E3 |

# APPENDIX B. BUILDING DIMENSION EXHIBITS


NORTH

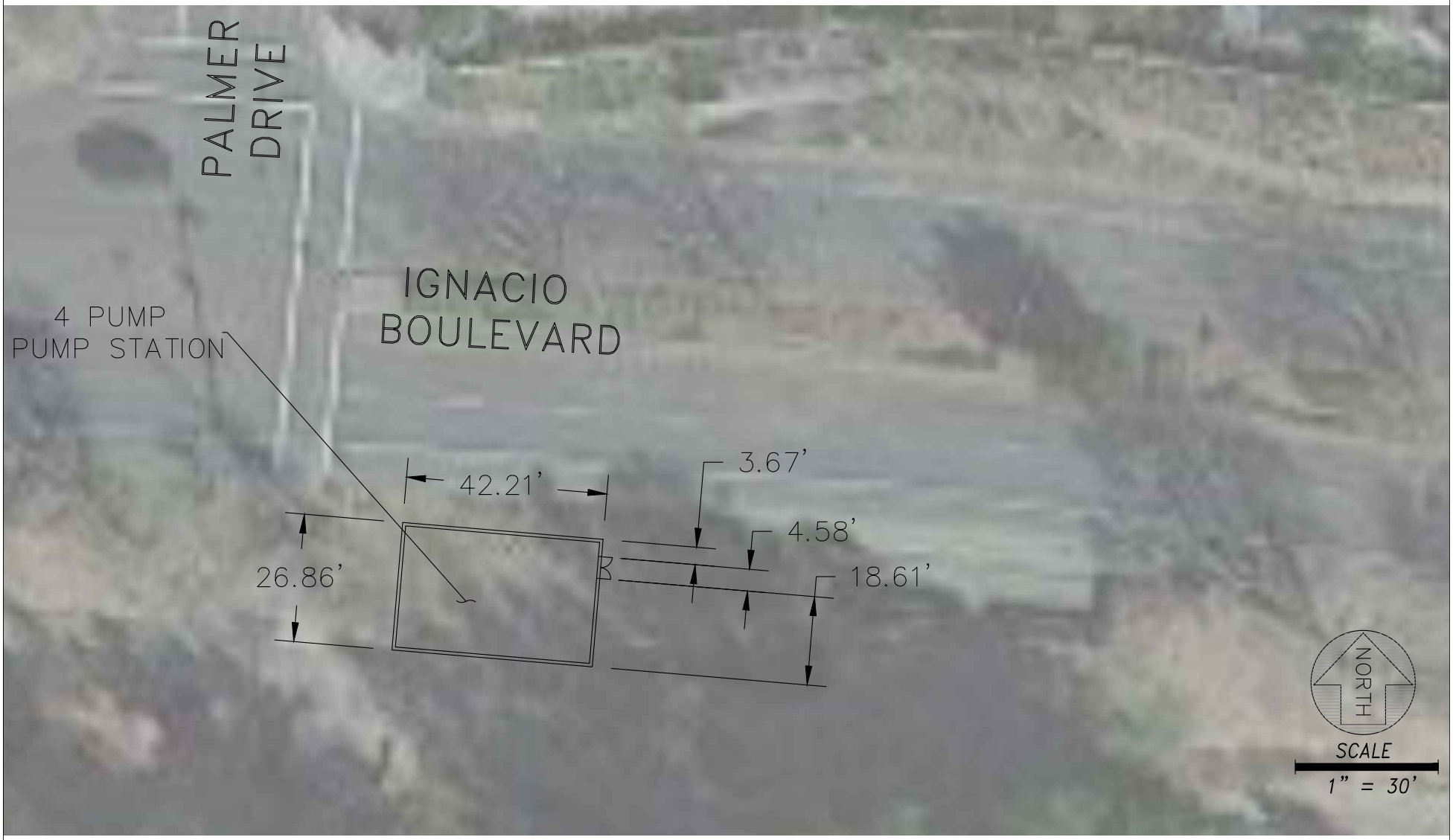
SCALE

1" = 40'

FREYER & LAURETA, INC.
CIVIL ENGINEERS • SURVEYORS • CONSTRUCTION MANAGERS

505 San Marin Dr Suite A220 • Novato, CA 94945
(415)534-7070 • www.freyerlaureta.com

ALTERNATIVE A LYNWOOD PUMP STATION LOCATION
SITE 1 BUILDING DIMENSION EXHIBIT
NORTH MARIN WATER DISTRICT
NOVATO, CA

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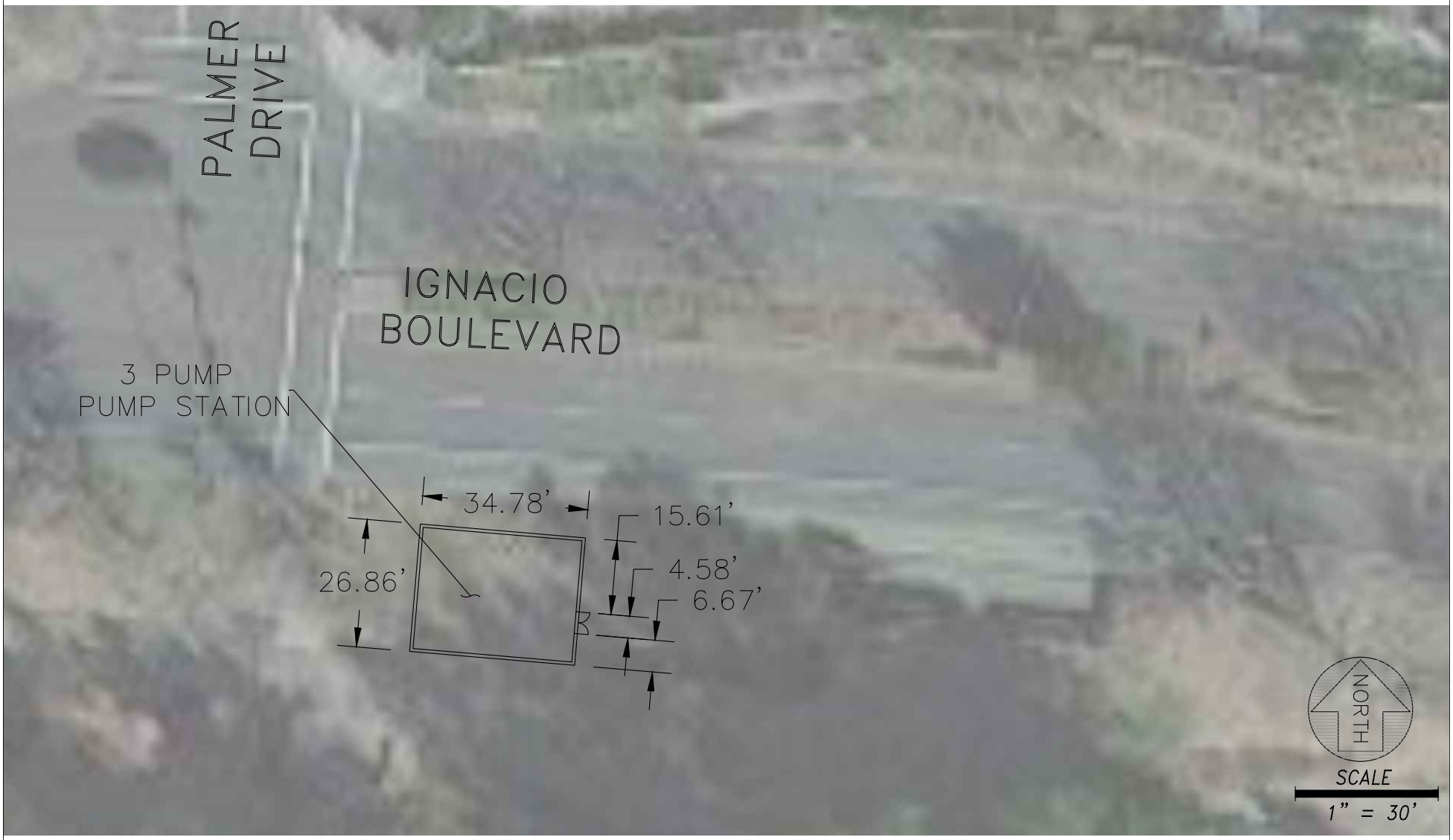
(415)534-7070 • www.freyerlaureta.com

ALTERNATIVE B LYNWOOD PUMP STATION LOCATION
SITE 2 BUILDING DIMENSION EXHIBIT
NORTH MARIN WATER DISTRICT
NOVATO, CA




FREYER & LAURETA, INC.
CIVIL ENGINEERS • SURVEYORS • CONSTRUCTION MANAGERS

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(415)534-7070 • www.freyerlaureta.com

ALTERNATIVE C, D AND E LYNWOOD PUMP STATION LOCATION
SITE 2 BUILDING DIMENSION EXHIBIT
NORTH MARIN WATER DISTRICT
NOVATO, CA


FREYER & LAURETA, INC.
CIVIL ENGINEERS • SURVEYORS • CONSTRUCTION MANAGERS

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ALTERNATIVE C LYNWOOD PUMP STATION LOCATION
SITE 3 BUILDING DIMENSION EXHIBIT
NORTH MARIN WATER DISTRICT
NOVATO, CA


NORTH

SCALE

1" = 30'

FREYER & LAURETA, INC.
CIVIL ENGINEERS • SURVEYORS • CONSTRUCTION MANAGERS

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ALTERNATIVE D LYNWOOD PUMP STATION LOCATION
SITE 4 BUILDING DIMENSION EXHIBIT
NORTH MARIN WATER DISTRICT
NOVATO, CA


NORTH

SCALE

1" = 30'

FREYER & LAURETA, INC.
CIVIL ENGINEERS • SURVEYORS • CONSTRUCTION MANAGERS

505 San Marin Dr Suite A220 • Novato, CA 94945
(415)534-7070 • www.freyerlaureta.com

ALTERNATIVE E LYNWOOD PUMP STATION LOCATION
SITE 5 BUILDING DIMENSION EXHIBIT
NORTH MARIN WATER DISTRICT
NOVATO, CA

# APPENDIX C. AIR QUALITY DATA

# Lynwood Alt A Custom Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Lynwood Alt A |
| Construction Start Date | 1/2/2025 |
| Operational Year | 2026 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.60 |
| Precipitation (days) | 39.6 |
| Location | 38.084624543920626, -122.56262647392842 |
| County | Marin |
| City | Novato |
| Air District | Bay Area AQMD |
| Air Basin | San Francisco Bay Area |
| TAZ | 913 |
| EDFZ | 2 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.21 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 2.00 | 1000sqft | 0.05 | 2,000 | 0.00 | — | — | New Pump Station |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 2.2. Construction Emissions by Year, Unmitigated

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

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 8.71 | 8.62 | 2.43 | 6.55 | 0.01 | 0.10 | 0.15 | 0.25 | 0.09 | 0.04 | 0.12 | — | 1,029 | 1,029 | 0.06 | 0.04 | 0.85 | 1,044 |
| 2026 | 0.29 | 0.25 | 1.61 | 3.65 | 0.01 | 0.06 | 0.12 | 0.18 | 0.05 | 0.03 | 0.08 | — | 589 | 589 | 0.02 | 0.01 | 0.35 | 593 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 8.67 | 8.60 | 2.11 | 5.57 | 0.01 | 0.09 | 0.14 | 0.23 | 0.08 | 0.03 | 0.11 | — | 806 | 806 | 0.04 | 0.03 | 0.02 | 816 |
| 2026 | 0.51 | 0.43 | 2.93 | 5.05 | 0.01 | 0.10 | 0.23 | 0.33 | 0.10 | 0.05 | 0.15 | — | 915 | 915 | 0.04 | 0.02 | 0.02 | 923 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 1.63 | 1.59 | 1.14 | 1.95 | < 0.005 | 0.04 | 0.08 | 0.12 | 0.04 | 0.02 | 0.06 | — | 365 | 365 | 0.02 | 0.01 | 0.18 | 369 |
| 2026 | 0.09 | 0.08 | 0.52 | 0.89 | < 0.005 | 0.02 | 0.04 | 0.06 | 0.02 | 0.01 | 0.03 | — | 162 | 162 | 0.01 | < 0.005 | 0.06 | 164 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.30 | 0.29 | 0.21 | 0.36 | < 0.005 | 0.01 | 0.01 | 0.02 | 0.01 | < 0.005 | 0.01 | — | 60.3 | 60.3 | < 0.005 | < 0.005 | 0.03 | 61.1 |
| 2026 | 0.02 | 0.01 | 0.09 | 0.16 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 26.9 | 26.9 | < 0.005 | < 0.005 | 0.01 | 27.1 |

## 2.5. Operations Emissions by Sector, Unmitigated

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

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.02 | 0.06 | < 0.005 | 0.09 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.36 | 0.36 | < 0.005 | < 0.005 | — | 0.36 |
| Energy | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38.9 | 38.9 | < 0.005 | < 0.005 | — | 39.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Stationary | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.36 | 0.37 | 1.40 | 0.89 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 2.22 | 199 | 201 | 0.24 | < 0.005 | 0.52 | 208 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | — | 0.05 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38.9 | 38.9 | < 0.005 | < 0.005 | — | 39.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Stationary | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.34 | 0.36 | 1.40 | 0.80 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 2.22 | 198 | 200 | 0.24 | < 0.005 | 0.52 | 208 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.01 | 0.06 | < 0.005 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.18 | 0.18 | < 0.005 | < 0.005 | — | 0.18 |
| Energy | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38.9 | 38.9 | < 0.005 | < 0.005 | — | 39.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Stationary | 0.33 | 0.30 | 1.35 | 0.77 | < 0.005 | 0.04 | 0.00 | 0.04 | 0.04 | 0.00 | 0.04 | 0.00 | 154 | 154 | 0.01 | < 0.005 | 0.00 | 155 |
| Total | 0.34 | 0.36 | 1.37 | 0.83 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 2.22 | 195 | 197 | 0.24 | < 0.005 | 0.52 | 205 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | < 0.005 | 0.01 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.03 | 0.03 | < 0.005 | < 0.005 | — | 0.03 |
| Energy | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 6.43 | 6.43 | < 0.005 | < 0.005 | — | 6.46 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.28 | 0.42 | 0.02 | < 0.005 | — | 0.91 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.22 | 0.00 | 0.22 | 0.02 | 0.00 | — | 0.77 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.09 | 0.09 |
| Stationary | 0.06 | 0.06 | 0.25 | 0.14 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 25.5 | 25.5 | < 0.005 | < 0.005 | 0.00 | 25.6 |
| Total | 0.06 | 0.07 | 0.25 | 0.15 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.37 | 32.3 | 32.6 | 0.04 | < 0.005 | 0.09 | 33.9 |

# 3. Construction Emissions Details

## 3.1. Existing PS Demolition (2026) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.25 | 0.21 | 1.56 | 3.26 | 0.01 | 0.06 | — | 0.06 | 0.05 | — | 0.05 | — | 487 | 487 | 0.02 | < 0.005 | — | 489 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.25 | 0.21 | 1.56 | 3.26 | 0.01 | 0.06 | — | 0.06 | 0.05 | — | 0.05 | — | 487 | 487 | 0.02 | < 0.005 | — | 489 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.04 | 0.28 | 0.58 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 86.8 | 86.8 | < 0.005 | < 0.005 | — | 87.1 |
| Demolition | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.11 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 14.4 | 14.4 | < 0.005 | < 0.005 | — | 14.4 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.04 | 0.04 | 0.02 | 0.37 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 85.9 | 85.9 | < 0.005 | < 0.005 | 0.32 | 87.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 15.4 | 15.4 | < 0.005 | < 0.005 | 0.03 | 16.2 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.03 | 0.33 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 80.1 | 80.1 | < 0.005 | < 0.005 | 0.01 | 81.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 15.4 | 15.4 | < 0.005 | < 0.005 | < 0.005 | 16.2 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 14.3 | 14.3 | < 0.005 | < 0.005 | 0.02 | 14.5 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.74 | 2.74 | < 0.005 | < 0.005 | < 0.005 | 2.88 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.37 | 2.37 | < 0.005 | < 0.005 | < 0.005 | 2.41 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.45 | 0.45 | < 0.005 | < 0.005 | < 0.005 | 0.48 |

## 3.3. Pavement Removal (2025) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.02 | 0.02 | 0.09 | 1.33 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 246 | 246 | 0.01 | < 0.005 | — | 247 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.01 | 0.16 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 29.0 | 29.0 | < 0.005 | < 0.005 | — | 29.1 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | < 0.005 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 4.80 | 4.80 | < 0.005 | < 0.005 | — | 4.81 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 22.7 | 22.7 | < 0.005 | < 0.005 | < 0.005 | 23.9 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.68 | 2.68 | < 0.005 | < 0.005 | < 0.005 | 2.82 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.44 | 0.44 | < 0.005 | < 0.005 | < 0.005 | 0.47 |

## 3.5. New Pump Station Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.19 | 0.15 | 1.24 | 1.03 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 201 | 201 | 0.01 | < 0.005 | — | 202 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.19 | 0.15 | 1.24 | 1.03 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 201 | 201 | 0.01 | < 0.005 | — | 202 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.13 | 0.11 | 0.89 | 0.74 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 144 | 144 | 0.01 | < 0.005 | — | 144 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.16 | 0.13 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 23.8 | 23.8 | < 0.005 | < 0.005 | — | 23.9 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.46 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 101 | 101 | < 0.005 | < 0.005 | 0.41 | 103 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.47 | 6.47 | < 0.005 | < 0.005 | 0.02 | 6.77 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 32.7 | 32.7 | < 0.005 | 0.01 | 0.07 | 34.4 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.04 | 0.41 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 94.4 | 94.4 | < 0.005 | < 0.005 | 0.01 | 95.7 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.47 | 6.47 | < 0.005 | < 0.005 | < 0.005 | 6.76 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 32.7 | 32.7 | < 0.005 | 0.01 | < 0.005 | 34.4 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.02 | 0.28 | 0.00 | 0.00 | 0.07 | 0.07 | 0.00 | 0.02 | 0.02 | — | 67.7 | 67.7 | < 0.005 | < 0.005 | 0.13 | 68.7 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 4.62 | 4.62 | < 0.005 | < 0.005 | 0.01 | 4.83 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.4 | 23.4 | < 0.005 | < 0.005 | 0.02 | 24.6 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 11.2 | 11.2 | < 0.005 | < 0.005 | 0.02 | 11.4 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.77 | 0.77 | < 0.005 | < 0.005 | < 0.005 | 0.80 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.87 | 3.87 | < 0.005 | < 0.005 | < 0.005 | 4.07 |

## 3.7. New Pump Station Construction (2026) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.18 | 0.15 | 1.22 | 1.03 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 201 | 201 | 0.01 | < 0.005 | — | 202 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.21 | 0.18 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 35.5 | 35.5 | < 0.005 | < 0.005 | — | 35.6 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.87 | 5.87 | < 0.005 | < 0.005 | — | 5.89 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.38 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 92.6 | 92.6 | < 0.005 | < 0.005 | 0.01 | 93.9 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.35 | 6.35 | < 0.005 | < 0.005 | < 0.005 | 6.63 |
| Hauling | < 0.005 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 32.0 | 32.0 | < 0.005 | 0.01 | < 0.005 | 33.7 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.07 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 16.4 | 16.4 | < 0.005 | < 0.005 | 0.03 | 16.6 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.12 | 1.12 | < 0.005 | < 0.005 | < 0.005 | 1.17 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.64 | 5.64 | < 0.005 | < 0.005 | < 0.005 | 5.94 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.71 | 2.71 | < 0.005 | < 0.005 | < 0.005 | 2.75 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.19 | 0.19 | < 0.005 | < 0.005 | < 0.005 | 0.19 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.93 | 0.93 | < 0.005 | < 0.005 | < 0.005 | 0.98 |

## 3.9. Paving (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.04 | 0.34 | 2.22 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 389 | 389 | 0.02 | < 0.005 | — | 390 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.04 | 0.27 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.9 | 46.9 | < 0.005 | < 0.005 | — | 47.0 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.01 | 0.05 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.76 | 7.76 | < 0.005 | < 0.005 | — | 7.78 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.14 | 0.08 | < 0.005 | < 0.005 | 0.02 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 95.9 | 95.9 | 0.01 | 0.02 | 0.20 | 101 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 11.6 | 11.6 | < 0.005 | < 0.005 | 0.01 | 12.2 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.91 | 1.91 | < 0.005 | < 0.005 | < 0.005 | 2.01 |

## 3.11. Trench Excavation and Pipe Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 8.40 | 8.38 | 0.50 | 2.66 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 127 | 127 | 0.01 | < 0.005 | — | 127 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 8.40 | 8.38 | 0.50 | 2.66 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 127 | 127 | 0.01 | < 0.005 | — | 127 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.45 | 1.45 | 0.09 | 0.46 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 21.9 | 21.9 | < 0.005 | < 0.005 | — | 21.9 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.26 | 0.26 | 0.02 | 0.08 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 3.62 | 3.62 | < 0.005 | < 0.005 | — | 3.63 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.13 | 0.08 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 75.7 | 75.7 | 0.01 | 0.01 | 0.15 | 79.8 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.14 | 0.08 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 75.8 | 75.8 | 0.01 | 0.01 | < 0.005 | 79.6 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 13.1 | 13.1 | < 0.005 | < 0.005 | 0.01 | 13.8 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.16 | 2.16 | < 0.005 | < 0.005 | < 0.005 | 2.28 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 1.92 | 1.92 | < 0.005 | < 0.005 | — | 1.94 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1.92 | 1.92 | < 0.005 | < 0.005 | — | 1.94 |

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |
| Total | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 4.51 | 4.51 | < 0.005 | < 0.005 | — | 4.53 |
| Total | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 4.51 | 4.51 | < 0.005 | < 0.005 | — | 4.53 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

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

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.04 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.02 | 0.01 | < 0.005 | 0.09 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.36 | 0.36 | < 0.005 | < 0.005 | — | 0.36 |
| Total | 0.02 | 0.06 | < 0.005 | 0.09 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.36 | 0.36 | < 0.005 | < 0.005 | — | 0.36 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.04 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architectural | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | 0.05 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.03 | 0.03 | < 0.005 | < 0.005 | — | 0.03 |
| Total | < 0.005 | 0.01 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.03 | 0.03 | < 0.005 | < 0.005 | — | 0.03 |

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.28 | 0.42 | 0.02 | < 0.005 | — | 0.91 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.28 | 0.42 | 0.02 | < 0.005 | — | 0.91 |

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.22 | 0.00 | 0.22 | 0.02 | 0.00 | — | 0.77 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.22 | 0.00 | 0.22 | 0.02 | 0.00 | — | 0.77 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.09 | 0.09 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.09 | 0.09 |

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

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

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

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

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

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.06 | 0.06 | 0.25 | 0.14 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 25.5 | 25.5 | < 0.005 | < 0.005 | 0.00 | 25.6 |
| Total | 0.06 | 0.06 | 0.25 | 0.14 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 25.5 | 25.5 | < 0.005 | < 0.005 | 0.00 | 25.6 |

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

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

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

## 4.10. Soil Carbon Accumulation By Vegetation Type

### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

## 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sequest | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Existing PS Demolition | Demolition | 3/1/2026 | 5/31/2026 | 5.00 | 65.0 | Demo Existing PS |
| Pavement Removal | Site Preparation | 1/1/2025 | 2/28/2025 | 5.00 | 43.0 | Pavement Removal For new pipe |
| New Pump Station Construction | Building Construction | 1/1/2025 | 3/31/2026 | 5.00 | 325 | New PS Construction |
| Paving | Paving | 4/1/2025 | 5/31/2025 | 5.00 | 44.0 | Asphalt Pavement of Road |
| Trench Excavation and Pipe Construction | Trenching | 2/1/2025 | 4/30/2025 | 5.00 | 63.0 | Excavation and Pipe Construction |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Existing PS Demolition | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 6.00 | 84.0 | 0.37 |
| Existing PS Demolition | Rubber Tired Dozers | Diesel | Average | 0.00 | 1.00 | 367 | 0.40 |
| Existing PS Demolition | Concrete/Industrial Saws | Diesel | Average | 0.00 | 8.00 | 33.0 | 0.73 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Existing PS Demolition | Excavators | Diesel | Tier 4 Final | 1.00 | 4.90 | 130 | 0.38 |
| Existing PS Demolition | Air Compressors | Diesel | Average | 1.00 | 2.40 | 37.0 | 0.48 |
| Existing PS Demolition | Plate Compactors | Diesel | Average | 1.00 | 2.00 | 8.00 | 0.43 |
| Existing PS Demolition | Forklifts | Diesel | Average | 1.00 | 1.30 | 82.0 | 0.20 |
| Existing PS Demolition | Generator Sets | Diesel | Average | 1.00 | 5.00 | 14.0 | 0.74 |
| Existing PS Demolition | Pumps | Diesel | Average | 1.00 | 5.30 | 11.0 | 0.74 |
| Pavement Removal | Graders | Diesel | Average | 0.00 | 8.00 | 148 | 0.41 |
| Pavement Removal | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 3.30 | 24.0 | 0.38 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 3.30 | 130 | 0.38 |
| New Pump Station Construction | Cranes | Diesel | Average | 0.00 | 4.00 | 367 | 0.29 |
| New Pump Station Construction | Forklifts | Diesel | Average | 1.00 | 1.00 | 82.0 | 0.20 |
| New Pump Station Construction | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| New Pump Station Construction | Air Compressors | Diesel | Average | 1.00 | 0.80 | 37.0 | 0.48 |
| New Pump Station Construction | Dumpers/Tenders | Diesel | Average | 1.00 | 1.50 | 16.0 | 0.38 |
| New Pump Station Construction | Plate Compactors | Diesel | Average | 1.00 | 1.50 | 8.00 | 0.43 |
| New Pump Station Construction | Aerial Lifts | Diesel | Average | 1.00 | 1.00 | 46.0 | 0.31 |
| New Pump Station Construction | Generator Sets | Diesel | Average | 1.00 | 5.90 | 14.0 | 0.74 |
| New Pump Station Construction | Pumps | Diesel | Average | 1.00 | 2.00 | 11.0 | 0.74 |
| New Pump Station Construction | Off-Highway Trucks | Diesel | Average | 1.00 | 0.20 | 350 | 0.38 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Paving | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 7.00 | 84.0 | 0.37 |
| Paving | Cement and Mortar Mixers | Diesel | Average | 0.00 | 6.00 | 10.0 | 0.56 |
| Paving | Pavers | Diesel | Tier 4 Final | 1.00 | 1.50 | 148 | 0.42 |
| Paving | Rollers | Diesel | Tier 4 Final | 1.00 | 1.50 | 48.0 | 0.38 |
| Paving | Off-Highway Trucks | Diesel | Tier 4 Final | 1.00 | 3.00 | 185 | 0.38 |
| Trench Excavation and Pipe Construction | Excavators | Diesel | Tier 4 Final | 1.00 | 1.10 | 130 | 0.38 |
| Trench Excavation and Pipe Construction | Pumps | Diesel | Average | 1.00 | 5.50 | 11.0 | 0.74 |
| Trench Excavation and Pipe Construction | Welders | Electric | Average | 1.00 | 4.70 | 36.0 | 0.45 |
| Trench Excavation and Pipe Construction | Plate Compactors | Diesel | Tier 4 Final | 1.00 | 2.30 | 3.00 | 0.43 |
| Trench Excavation and Pipe Construction | Plate Compactors | Gasoline | Average | 1.00 | 2.30 | 3.00 | 0.55 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Existing PS Demolition | — | — | — | — |
| Existing PS Demolition | Worker | 10.2 | 11.7 | LDA,LDT1,LDT2 |
| Existing PS Demolition | Vendor | — | 0.00 | HHDT,MHDT |
| Existing PS Demolition | Hauling | 0.68 | 5.91 | HHDT |
| Existing PS Demolition | Onsite truck | — | — | HHDT |
| Pavement Removal | — | — | — | — |
| Pavement Removal | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Pavement Removal | Vendor | — | 8.40 | HHDT,MHDT |

| | | | | |
|---|---|---|---|---|
| Pavement Removal | Hauling | 0.84 | 7.00 | HHDT |
| Pavement Removal | Onsite truck | — | — | HHDT |
| Trench Excavation and Pipe Construction | — | — | — | — |
| Trench Excavation and Pipe Construction | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Trench Excavation and Pipe Construction | Vendor | — | 8.40 | HHDT,MHDT |
| Trench Excavation and Pipe Construction | Hauling | 2.57 | 7.67 | HHDT |
| Trench Excavation and Pipe Construction | Onsite truck | — | — | HHDT |
| New Pump Station Construction | — | — | — | — |
| New Pump Station Construction | Worker | 11.7 | 11.7 | LDA,LDT1,LDT2 |
| New Pump Station Construction | Vendor | 0.23 | 8.40 | HHDT,MHDT |
| New Pump Station Construction | Hauling | 0.46 | 19.2 | HHDT |
| New Pump Station Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 8.40 | HHDT,MHDT |
| Paving | Hauling | 1.00 | 26.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

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

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (Building Square Footage) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Existing PS Demolition | 0.00 | 0.00 | 0.00 | 2,000 | — |
| Pavement Removal | 700 | 1,500 | 0.00 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| General Light Industry | 0.00 | 0% |

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 56.8 | 204 | 0.03 | < 0.005 |
| 2026 | 0.00 | 204 | 0.03 | < 0.005 |

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 0 | 0.00 | 3,000 | 1,000 | — |

### 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| General Light Industry | 20,737 | 204 | 0.0330 | 0.0040 | 85,088 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| General Light Industry | 462,500 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| General Light Industry | 2.48 | — |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| General Light Industry | Other commercial A/C and heat pumps | R-410A | 2,088 | 0.30 | 4.00 | 4.00 | 18.0 |

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

| Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

| Equipment Type | Fuel Type | Number per Day | Hours per Day | Hours per Year | Horsepower | Load Factor |
|---|---|---|---|---|---|---|
| Emergency Generator | Diesel | 1.00 | 0.14 | 50.0 | 1,341 | 0.73 |

### 5.16.2. Process Boilers

| Equipment Type | Fuel Type | Number | Boiler Rating (MMBtu/hr) | Daily Heat Input (MMBtu/day) | Annual Heat Input (MMBtu/yr) |
|---|---|---|---|---|---|

## 5.17. User Defined

| Equipment Type | Fuel Type |
|---|---|

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

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

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Construction: Construction Phases | Information provided by the District. |

| | |
|---|---|
| Construction: Off-Road Equipment | Project-specific construction equipment list was provided by the District. |
| Construction: Trips and VMT | Construction trips were provided by the District. Worker commute trips between January 2025 to February 2026 and March 2026 to May 2026 are included in the new pump station construction phase and the existing pump station demolition phase, respectively. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase. |
| Operations: Vehicle Data | This project size is below BAAQMD screening criteria. Operation emissions are only estimated for the emergency generator. |

# Lynwood Alt B Custom Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Lynwood Alt B |
| Construction Start Date | 1/1/2025 |
| Operational Year | 2026 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.60 |
| Precipitation (days) | 39.4 |
| Location | 38.06871769733715, -122.54995998861456 |
| County | Marin |
| City | Novato |
| Air District | Bay Area AQMD |
| Air Basin | San Francisco Bay Area |
| TAZ | 913 |
| EDFZ | 2 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.21 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 2.00 | 1000sqft | 0.05 | 2,000 | 0.00 | — | — | New Pump Station |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 2.2. Construction Emissions by Year, Unmitigated

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

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 8.00 | 8.21 | 2.51 | 6.98 | 0.01 | 0.09 | 0.22 | 0.31 | 0.08 | 0.06 | 0.14 | — | 1,500 | 1,500 | 0.08 | 0.07 | 1.35 | 1,520 |
| 2026 | 0.29 | 0.25 | 1.61 | 3.65 | 0.01 | 0.06 | 0.12 | 0.18 | 0.05 | 0.03 | 0.08 | — | 594 | 594 | 0.02 | 0.01 | 0.36 | 598 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 8.07 | 8.26 | 2.96 | 9.76 | 0.02 | 0.11 | 0.25 | 0.36 | 0.09 | 0.06 | 0.16 | — | 1,847 | 1,847 | 0.12 | 0.09 | 0.04 | 1,878 |
| 2026 | 0.52 | 0.44 | 2.95 | 5.14 | 0.01 | 0.10 | 0.25 | 0.36 | 0.10 | 0.06 | 0.15 | — | 946 | 946 | 0.04 | 0.02 | 0.02 | 954 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 1.59 | 1.60 | 1.45 | 3.51 | 0.01 | 0.05 | 0.12 | 0.17 | 0.04 | 0.03 | 0.07 | — | 722 | 722 | 0.04 | 0.03 | 0.29 | 732 |
| 2026 | 0.09 | 0.08 | 0.52 | 0.91 | < 0.005 | 0.02 | 0.04 | 0.06 | 0.02 | 0.01 | 0.03 | — | 168 | 168 | 0.01 | < 0.005 | 0.07 | 169 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.29 | 0.29 | 0.26 | 0.64 | < 0.005 | 0.01 | 0.02 | 0.03 | 0.01 | 0.01 | 0.01 | — | 119 | 119 | 0.01 | 0.01 | 0.05 | 121 |
| 2026 | 0.02 | 0.01 | 0.10 | 0.17 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 27.8 | 27.8 | < 0.005 | < 0.005 | 0.01 | 28.0 |

## 2.5. Operations Emissions by Sector, Unmitigated

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

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.02 | 0.06 | < 0.005 | 0.09 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.36 | 0.36 | < 0.005 | < 0.005 | — | 0.36 |
| Energy | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38.9 | 38.9 | < 0.005 | < 0.005 | — | 39.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Stationary | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.36 | 0.37 | 1.40 | 0.89 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 2.22 | 199 | 201 | 0.24 | < 0.005 | 0.52 | 208 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | — | 0.05 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38.9 | 38.9 | < 0.005 | < 0.005 | — | 39.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Stationary | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.34 | 0.36 | 1.40 | 0.80 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 2.22 | 198 | 200 | 0.24 | < 0.005 | 0.52 | 208 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.01 | 0.06 | < 0.005 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.18 | 0.18 | < 0.005 | < 0.005 | — | 0.18 |
| Energy | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38.9 | 38.9 | < 0.005 | < 0.005 | — | 39.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Stationary | 0.33 | 0.30 | 1.35 | 0.77 | < 0.005 | 0.04 | 0.00 | 0.04 | 0.04 | 0.00 | 0.04 | 0.00 | 154 | 154 | 0.01 | < 0.005 | 0.00 | 155 |
| Total | 0.34 | 0.36 | 1.37 | 0.83 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 2.22 | 195 | 197 | 0.24 | < 0.005 | 0.52 | 205 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | < 0.005 | 0.01 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.03 | 0.03 | < 0.005 | < 0.005 | — | 0.03 |
| Energy | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 6.43 | 6.43 | < 0.005 | < 0.005 | — | 6.46 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.28 | 0.42 | 0.02 | < 0.005 | — | 0.91 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.22 | 0.00 | 0.22 | 0.02 | 0.00 | — | 0.77 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.09 | 0.09 |
| Stationary | 0.06 | 0.06 | 0.25 | 0.14 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 25.5 | 25.5 | < 0.005 | < 0.005 | 0.00 | 25.6 |
| Total | 0.06 | 0.07 | 0.25 | 0.15 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.37 | 32.3 | 32.6 | 0.04 | < 0.005 | 0.09 | 33.9 |

# 3. Construction Emissions Details

## 3.1. Existing Pump Station Demolition (2026) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.25 | 0.21 | 1.56 | 3.26 | 0.01 | 0.06 | — | 0.06 | 0.05 | — | 0.05 | — | 487 | 487 | 0.02 | < 0.005 | — | 489 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.25 | 0.21 | 1.56 | 3.26 | 0.01 | 0.06 | — | 0.06 | 0.05 | — | 0.05 | — | 487 | 487 | 0.02 | < 0.005 | — | 489 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.04 | 0.28 | 0.58 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 86.8 | 86.8 | < 0.005 | < 0.005 | — | 87.1 |
| Demolition | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.11 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 14.4 | 14.4 | < 0.005 | < 0.005 | — | 14.4 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.04 | 0.04 | 0.02 | 0.37 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 85.9 | 85.9 | < 0.005 | < 0.005 | 0.32 | 87.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 20.9 | 20.9 | < 0.005 | < 0.005 | 0.04 | 22.0 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.03 | 0.33 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 80.1 | 80.1 | < 0.005 | < 0.005 | 0.01 | 81.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 20.9 | 20.9 | < 0.005 | < 0.005 | < 0.005 | 21.9 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 14.3 | 14.3 | < 0.005 | < 0.005 | 0.02 | 14.5 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.72 | 3.72 | < 0.005 | < 0.005 | < 0.005 | 3.91 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.37 | 2.37 | < 0.005 | < 0.005 | < 0.005 | 2.41 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.62 | 0.62 | < 0.005 | < 0.005 | < 0.005 | 0.65 |

## 3.3. Pavement Removal (2025) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.05 | 0.05 | 0.27 | 3.83 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 708 | 708 | 0.03 | 0.01 | — | 710 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.67 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 124 | 124 | 0.01 | < 0.005 | — | 125 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.01 | 0.12 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 20.6 | 20.6 | < 0.005 | < 0.005 | — | 20.6 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.14 | 0.08 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 81.6 | 81.6 | 0.01 | 0.01 | < 0.005 | 85.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 14.3 | 14.3 | < 0.005 | < 0.005 | 0.01 | 15.1 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.37 | 2.37 | < 0.005 | < 0.005 | < 0.005 | 2.49 |

## 3.5. New Pump Station Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.19 | 0.15 | 1.24 | 1.03 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 201 | 201 | 0.01 | < 0.005 | — | 202 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.19 | 0.15 | 1.24 | 1.03 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 201 | 201 | 0.01 | < 0.005 | — | 202 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.13 | 0.11 | 0.89 | 0.74 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 144 | 144 | 0.01 | < 0.005 | — | 144 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.16 | 0.13 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 23.8 | 23.8 | < 0.005 | < 0.005 | — | 23.9 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.04 | 0.56 | 0.00 | 0.00 | 0.12 | 0.12 | 0.00 | 0.03 | 0.03 | — | 123 | 123 | < 0.005 | < 0.005 | 0.50 | 125 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.29 | 9.29 | < 0.005 | < 0.005 | 0.02 | 9.71 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 34.8 | 34.8 | < 0.005 | 0.01 | 0.07 | 36.6 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.04 | 0.50 | 0.00 | 0.00 | 0.12 | 0.12 | 0.00 | 0.03 | 0.03 | — | 115 | 115 | < 0.005 | < 0.005 | 0.01 | 116 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.29 | 9.29 | < 0.005 | < 0.005 | < 0.005 | 9.69 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 34.8 | 34.8 | < 0.005 | 0.01 | < 0.005 | 36.6 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.03 | 0.03 | 0.35 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 82.4 | 82.4 | < 0.005 | < 0.005 | 0.15 | 83.7 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.63 | 6.63 | < 0.005 | < 0.005 | 0.01 | 6.93 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 24.9 | 24.9 | < 0.005 | < 0.005 | 0.02 | 26.1 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.06 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 13.6 | 13.6 | < 0.005 | < 0.005 | 0.03 | 13.9 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.10 | 1.10 | < 0.005 | < 0.005 | < 0.005 | 1.15 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 4.12 | 4.12 | < 0.005 | < 0.005 | < 0.005 | 4.33 |

## 3.7. New Pump Station Construction (2026) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.18 | 0.15 | 1.22 | 1.03 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 201 | 201 | 0.01 | < 0.005 | — | 202 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.21 | 0.18 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 35.5 | 35.5 | < 0.005 | < 0.005 | — | 35.6 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.87 | 5.87 | < 0.005 | < 0.005 | — | 5.89 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.04 | 0.47 | 0.00 | 0.00 | 0.12 | 0.12 | 0.00 | 0.03 | 0.03 | — | 113 | 113 | < 0.005 | < 0.005 | 0.01 | 114 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.12 | 9.12 | < 0.005 | < 0.005 | < 0.005 | 9.52 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 34.1 | 34.1 | < 0.005 | 0.01 | < 0.005 | 35.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.08 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 19.9 | 19.9 | < 0.005 | < 0.005 | 0.03 | 20.2 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.61 | 1.61 | < 0.005 | < 0.005 | < 0.005 | 1.68 |
| Hauling | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.00 | 6.00 | < 0.005 | < 0.005 | 0.01 | 6.31 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 3.30 | 3.30 | < 0.005 | < 0.005 | 0.01 | 3.35 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.27 | 0.27 | < 0.005 | < 0.005 | < 0.005 | 0.28 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.99 | 0.99 | < 0.005 | < 0.005 | < 0.005 | 1.05 |

## 3.9. Paving (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.09 | 0.09 | 0.79 | 5.17 | 0.01 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 907 | 907 | 0.04 | 0.01 | — | 910 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.14 | 0.92 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 162 | 162 | 0.01 | < 0.005 | — | 162 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.03 | 0.17 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 26.7 | 26.7 | < 0.005 | < 0.005 | — | 26.8 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.03 | 0.01 | 0.32 | 0.19 | < 0.005 | < 0.005 | 0.06 | 0.06 | < 0.005 | 0.02 | 0.02 | — | 224 | 224 | 0.03 | 0.04 | 0.48 | 236 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.06 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 40.0 | 40.0 | 0.01 | 0.01 | 0.04 | 42.0 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.62 | 6.62 | < 0.005 | < 0.005 | 0.01 | 6.96 |

## 3.11. Trench Excavation and Pipe Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 7.69 | 7.67 | 0.56 | 3.92 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 328 | 328 | 0.01 | < 0.005 | — | 329 |
| Architectural Coatings | — | 0.32 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 7.69 | 7.67 | 0.56 | 3.92 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 328 | 328 | 0.01 | < 0.005 | — | 329 |
| Architectural Coatings | — | 0.32 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.37 | 1.37 | 0.10 | 0.70 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 58.4 | 58.4 | < 0.005 | < 0.005 | — | 58.6 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architect Coatings | — | 0.06 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.25 | 0.25 | 0.02 | 0.13 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 9.67 | 9.67 | < 0.005 | < 0.005 | — | 9.70 |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.06 | 0.01 | 0.61 | 0.36 | < 0.005 | 0.01 | 0.09 | 0.10 | < 0.005 | 0.02 | 0.03 | — | 369 | 369 | 0.05 | 0.06 | 0.76 | 389 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.06 | 0.01 | 0.64 | 0.37 | < 0.005 | 0.01 | 0.09 | 0.10 | < 0.005 | 0.02 | 0.03 | — | 369 | 369 | 0.05 | 0.06 | 0.02 | 388 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.11 | 0.07 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | — | 65.7 | 65.7 | 0.01 | 0.01 | 0.06 | 69.1 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 10.9 | 10.9 | < 0.005 | < 0.005 | 0.01 | 11.4 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 1.92 | 1.92 | < 0.005 | < 0.005 | — | 1.94 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1.92 | 1.92 | < 0.005 | < 0.005 | — | 1.94 |

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |
| Total | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |
| Total | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 4.51 | 4.51 | < 0.005 | < 0.005 | — | 4.53 |
| Total | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 4.51 | 4.51 | < 0.005 | < 0.005 | — | 4.53 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

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

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.04 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.02 | 0.01 | < 0.005 | 0.09 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.36 | 0.36 | < 0.005 | < 0.005 | — | 0.36 |
| Total | 0.02 | 0.06 | < 0.005 | 0.09 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.36 | 0.36 | < 0.005 | < 0.005 | — | 0.36 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.04 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | 0.05 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.03 | 0.03 | < 0.005 | < 0.005 | — | 0.03 |
| Total | < 0.005 | 0.01 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.03 | 0.03 | < 0.005 | < 0.005 | — | 0.03 |

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.28 | 0.42 | 0.02 | < 0.005 | — | 0.91 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.28 | 0.42 | 0.02 | < 0.005 | — | 0.91 |

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

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

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.22 | 0.00 | 0.22 | 0.02 | 0.00 | — | 0.77 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.22 | 0.00 | 0.22 | 0.02 | 0.00 | — | 0.77 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.09 | 0.09 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.09 | 0.09 |

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

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

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

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

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

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.06 | 0.06 | 0.25 | 0.14 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 25.5 | 25.5 | < 0.005 | < 0.005 | 0.00 | 25.6 |
| Total | 0.06 | 0.06 | 0.25 | 0.14 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 25.5 | 25.5 | < 0.005 | < 0.005 | 0.00 | 25.6 |

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.10. Soil Carbon Accumulation By Vegetation Type

### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Demolition | 3/1/2026 | 5/31/2026 | 5.00 | 65.0 | Existing PS Demolition |
| Pavement Removal | Site Preparation | 1/1/2025 | 3/31/2025 | 5.00 | 64.0 | Pavement Removal for New Pipe |

| | | | | | | |
|---|---|---|---|---|---|---|
| New Pump Station Construction | Building Construction | 1/1/2025 | 3/31/2026 | 5.00 | 325 | New PS Construction |
| Paving | Paving | 6/1/2025 | 8/31/2025 | 5.00 | 65.0 | Asphalt Pavement of Road |
| Trench Excavation and Pipe Construction | Trenching | 3/1/2025 | 5/31/2025 | 5.00 | 65.0 | Excavation and Pipe Construction |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 6.00 | 84.0 | 0.37 |
| Existing Pump Station Demolition | Rubber Tired Dozers | Diesel | Average | 0.00 | 1.00 | 367 | 0.40 |
| Existing Pump Station Demolition | Concrete/Industrial Saws | Diesel | Average | 0.00 | 8.00 | 33.0 | 0.73 |
| Existing Pump Station Demolition | Excavators | Diesel | Tier 4 Final | 1.00 | 4.90 | 130 | 0.38 |
| Existing Pump Station Demolition | Air Compressors | Diesel | Average | 1.00 | 2.40 | 37.0 | 0.48 |
| Existing Pump Station Demolition | Plate Compactors | Diesel | Average | 1.00 | 2.00 | 8.00 | 0.43 |
| Existing Pump Station Demolition | Forklifts | Diesel | Average | 1.00 | 1.30 | 82.0 | 0.20 |
| Existing Pump Station Demolition | Generator Sets | Diesel | Average | 1.00 | 5.00 | 14.0 | 0.74 |
| Existing Pump Station Demolition | Pumps | Diesel | Average | 1.00 | 5.30 | 11.0 | 0.74 |
| Pavement Removal | Graders | Diesel | Average | 0.00 | 8.00 | 148 | 0.41 |
| Pavement Removal | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 9.50 | 24.0 | 0.38 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 9.50 | 130 | 0.38 |
| New Pump Station Construction | Cranes | Diesel | Average | 0.00 | 4.00 | 367 | 0.29 |
| New Pump Station Construction | Forklifts | Diesel | Average | 1.00 | 1.00 | 82.0 | 0.20 |
| New Pump Station Construction | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| New Pump Station Construction | Air Compressors | Diesel | Average | 1.00 | 0.80 | 37.0 | 0.48 |
| New Pump Station Construction | Dumpers/Tenders | Diesel | Average | 1.00 | 1.50 | 16.0 | 0.38 |
| New Pump Station Construction | Generator Sets | Diesel | Average | 1.00 | 5.90 | 14.0 | 0.74 |
| New Pump Station Construction | Plate Compactors | Diesel | Average | 1.00 | 1.50 | 8.00 | 0.43 |
| New Pump Station Construction | Pumps | Diesel | Average | 1.00 | 2.00 | 11.0 | 0.74 |
| New Pump Station Construction | Aerial Lifts | Diesel | Average | 1.00 | 1.00 | 46.0 | 0.31 |
| New Pump Station Construction | Off-Highway Trucks | Diesel | Average | 1.00 | 0.20 | 350 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 7.00 | 84.0 | 0.37 |
| Paving | Cement and Mortar Mixers | Diesel | Average | 0.00 | 6.00 | 10.0 | 0.56 |
| Paving | Pavers | Diesel | Tier 4 Final | 1.00 | 3.50 | 148 | 0.42 |
| Paving | Rollers | Diesel | Tier 4 Final | 1.00 | 3.50 | 48.0 | 0.38 |
| Paving | Off-Highway Trucks | Diesel | Tier 4 Final | 1.00 | 3.50 | 185 | 0.38 |
| Paving | Off-Highway Trucks | Diesel | Tier 4 Final | 1.00 | 3.50 | 185 | 0.38 |
| Trench Excavation and Pipe Construction | Excavators | Diesel | Tier 4 Final | 1.00 | 4.70 | 130 | 0.38 |
| Trench Excavation and Pipe Construction | Pumps | Diesel | Average | 1.00 | 5.00 | 11.0 | 0.74 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Trench Excavation and Pipe Construction | Welders | Electric | Average | 1.00 | 2.10 | 36.0 | 0.45 |
| Trench Excavation and Pipe Construction | Plate Compactors | Diesel | Tier 4 Final | 1.00 | 2.10 | 3.00 | 0.43 |
| Trench Excavation and Pipe Construction | Plate Compactors | Gasoline | Average | 1.00 | 2.10 | 3.00 | 0.55 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Existing Pump Station Demolition | — | — | — | — |
| Existing Pump Station Demolition | Worker | 10.2 | 11.7 | LDA,LDT1,LDT2 |
| Existing Pump Station Demolition | Vendor | — | 8.40 | HHDT,MHDT |
| Existing Pump Station Demolition | Hauling | 0.68 | 8.18 | HHDT |
| Existing Pump Station Demolition | Onsite truck | — | — | HHDT |
| Pavement Removal | — | — | — | — |
| Pavement Removal | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Pavement Removal | Vendor | 0.00 | 8.40 | HHDT,MHDT |
| Pavement Removal | Hauling | 2.38 | 9.00 | HHDT |
| Pavement Removal | Onsite truck | — | — | HHDT |
| New Pump Station Construction | — | — | — | — |
| New Pump Station Construction | Worker | 14.3 | 11.7 | LDA,LDT1,LDT2 |
| New Pump Station Construction | Vendor | 0.33 | 8.40 | HHDT,MHDT |
| New Pump Station Construction | Hauling | 0.47 | 20.0 | HHDT |
| New Pump Station Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |

| | | | | |
|---|---|---|---|---|
| Paving | Vendor | — | 8.40 | HHDT,MHDT |
| Paving | Hauling | 2.34 | 26.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Trench Excavation and Pipe Construction | — | — | — | — |
| Trench Excavation and Pipe Construction | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Trench Excavation and Pipe Construction | Vendor | — | 8.40 | HHDT,MHDT |
| Trench Excavation and Pipe Construction | Hauling | 10.5 | 9.22 | HHDT |
| Trench Excavation and Pipe Construction | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| Trench Excavation and Pipe Construction | 0.00 | 0.00 | 3,000 | 1,000 | — |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (Building Square Footage) | Acres Paved (acres) |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Existing Pump Station Demolition | 0.00 | 0.00 | 0.00 | 2,000 | — |
| Pavement Removal | 2,800 | 4,000 | 0.00 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| General Light Industry | 0.00 | 0% |

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 25.4 | 204 | 0.03 | < 0.005 |
| 2026 | 0.00 | 204 | 0.03 | < 0.005 |

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 0 | 0.00 | 3,000 | 1,000 | — |

### 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| General Light Industry | 20,737 | 204 | 0.0330 | 0.0040 | 85,088 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| General Light Industry | 462,500 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| General Light Industry | 2.48 | — |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| General Light Industry | Other commercial A/C and heat pumps | R-410A | 2,088 | 0.30 | 4.00 | 4.00 | 18.0 |

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

| Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

| Equipment Type | Fuel Type | Number per Day | Hours per Day | Hours per Year | Horsepower | Load Factor |
|---|---|---|---|---|---|---|
| Emergency Generator | Diesel | 1.00 | 0.14 | 50.0 | 1,341 | 0.73 |

### 5.16.2. Process Boilers

| Equipment Type | Fuel Type | Number | Boiler Rating (MMBtu/hr) | Daily Heat Input (MMBtu/day) | Annual Heat Input (MMBtu/yr) |
|---|---|---|---|---|---|

## 5.17. User Defined

| Equipment Type | Fuel Type |
|---|---|

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

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

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Construction: Construction Phases | Information provided by the District. |
| Construction: Off-Road Equipment | Project-specific construction equipment list was provided by the District. |
| Construction: Trips and VMT | Construction trips were provided by the District. Worker commute trips between January 2025 to February 2026 and March 2026 to May 2026 are included in the new pump station construction phase and the existing pump station demolition phase, respectively. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase. |

| | |
|---|---|
| Operations: Vehicle Data | This project size is below BAAQMD screening criteria. Operation emissions are only estimated for the emergency generator. |

# Lynwood Alt C Custom Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Lynwood Alt C |
| Construction Start Date | 1/1/2025 |
| Operational Year | 2027 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.60 |
| Precipitation (days) | 39.4 |
| Location | 38.06871769733715, -122.54995998861456 |
| County | Marin |
| City | Novato |
| Air District | Bay Area AQMD |
| Air Basin | San Francisco Bay Area |
| TAZ | 913 |
| EDFZ | 2 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.21 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 3.40 | 1000sqft | 0.08 | 3,400 | 0.00 | — | — | New Pump Stations |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

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

| Un/Mit. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 15.9 | 15.9 | 4.81 | 18.7 | 0.03 | 0.16 | 0.36 | 0.52 | 0.14 | 0.09 | 0.23 | — | 3,470 | 3,470 | 0.23 | 0.17 | 2.41 | 3,529 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 15.8 | 15.8 | 3.65 | 12.9 | 0.02 | 0.14 | 0.29 | 0.43 | 0.12 | 0.07 | 0.20 | — | 2,225 | 2,225 | 0.15 | 0.12 | 0.05 | 2,266 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 3.84 | 3.83 | 1.94 | 5.77 | 0.01 | 0.07 | 0.15 | 0.21 | 0.06 | 0.04 | 0.09 | — | 1,119 | 1,119 | 0.07 | 0.05 | 0.38 | 1,136 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.70 | 0.70 | 0.35 | 1.05 | < 0.005 | 0.01 | 0.03 | 0.04 | 0.01 | 0.01 | 0.02 | — | 185 | 185 | 0.01 | 0.01 | 0.06 | 188 |

### 2.2. Construction Emissions by Year, Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 15.9 | 15.9 | 4.81 | 18.7 | 0.03 | 0.16 | 0.36 | 0.52 | 0.14 | 0.09 | 0.23 | — | 3,470 | 3,470 | 0.23 | 0.17 | 2.41 | 3,529 |
| 2026 | 0.25 | 0.21 | 1.42 | 1.64 | < 0.005 | 0.05 | 0.12 | 0.17 | 0.05 | 0.03 | 0.07 | — | 373 | 373 | 0.02 | 0.01 | 0.52 | 378 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 15.8 | 15.8 | 3.65 | 12.9 | 0.02 | 0.14 | 0.29 | 0.43 | 0.12 | 0.07 | 0.20 | — | 2,225 | 2,225 | 0.15 | 0.12 | 0.05 | 2,266 |
| 2026 | 0.49 | 0.40 | 2.90 | 5.06 | 0.01 | 0.10 | 0.16 | 0.27 | 0.10 | 0.04 | 0.13 | — | 902 | 902 | 0.04 | 0.02 | 0.01 | 909 |
| 2027 | 0.48 | 0.40 | 2.86 | 5.02 | 0.01 | 0.10 | 0.16 | 0.26 | 0.09 | 0.04 | 0.13 | — | 899 | 899 | 0.04 | 0.02 | 0.01 | 906 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 3.84 | 3.83 | 1.94 | 5.77 | 0.01 | 0.07 | 0.15 | 0.21 | 0.06 | 0.04 | 0.09 | — | 1,119 | 1,119 | 0.07 | 0.05 | 0.38 | 1,136 |
| 2026 | 0.19 | 0.16 | 1.11 | 1.33 | < 0.005 | 0.04 | 0.09 | 0.13 | 0.04 | 0.02 | 0.06 | — | 294 | 294 | 0.01 | 0.01 | 0.16 | 297 |
| 2027 | 0.07 | 0.06 | 0.42 | 0.67 | < 0.005 | 0.01 | 0.03 | 0.04 | 0.01 | 0.01 | 0.02 | — | 126 | 126 | 0.01 | < 0.005 | 0.04 | 127 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.70 | 0.70 | 0.35 | 1.05 | < 0.005 | 0.01 | 0.03 | 0.04 | 0.01 | 0.01 | 0.02 | — | 185 | 185 | 0.01 | 0.01 | 0.06 | 188 |
| 2026 | 0.04 | 0.03 | 0.20 | 0.24 | < 0.005 | 0.01 | 0.02 | 0.02 | 0.01 | < 0.005 | 0.01 | — | 48.7 | 48.7 | < 0.005 | < 0.005 | 0.03 | 49.2 |
| 2027 | 0.01 | 0.01 | 0.08 | 0.12 | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 20.8 | 20.8 | < 0.005 | < 0.005 | 0.01 | 21.0 |

## 2.4. Operations Emissions Compared Against Thresholds

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

| Un/Mit. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.71 | 0.73 | 2.80 | 1.75 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 385 | 389 | 0.40 | 0.01 | 0.89 | 401 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.68 | 0.70 | 2.79 | 1.60 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 384 | 388 | 0.40 | 0.01 | 0.89 | 401 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.68 | 0.70 | 2.74 | 1.64 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 378 | 381 | 0.40 | 0.01 | 0.89 | 394 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.12 | 0.13 | 0.50 | 0.30 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.63 | 62.5 | 63.1 | 0.07 | < 0.005 | 0.15 | 65.3 |

## 2.5. Operations Emissions by Sector, Unmitigated

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

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.03 | 0.11 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.71 | 0.73 | 2.80 | 1.75 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 385 | 389 | 0.40 | 0.01 | 0.89 | 401 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | — | 0.08 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.70 | 2.79 | 1.60 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 384 | 388 | 0.40 | 0.01 | 0.89 | 401 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.01 | 0.09 | < 0.005 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.30 | 0.30 | < 0.005 | < 0.005 | — | 0.30 |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.66 | 0.60 | 2.70 | 1.54 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 308 | 308 | 0.01 | < 0.005 | 0.00 | 309 |
| Total | 0.68 | 0.70 | 2.74 | 1.64 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 378 | 381 | 0.40 | 0.01 | 0.89 | 394 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | < 0.005 | 0.02 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |
| Energy | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 10.9 | 10.9 | < 0.005 | < 0.005 | — | 11.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |
| Stationary | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |
| Total | 0.12 | 0.13 | 0.50 | 0.30 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.63 | 62.5 | 63.1 | 0.07 | < 0.005 | 0.15 | 65.3 |

# 3. Construction Emissions Details

## 3.1. Existing Pump Station Demolition (2026) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.23 | 0.20 | 1.42 | 3.45 | 0.01 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 513 | 513 | 0.02 | < 0.005 | — | 514 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.09 | 0.21 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 31.1 | 31.1 | < 0.005 | < 0.005 | — | 31.2 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.15 | 5.15 | < 0.005 | < 0.005 | — | 5.17 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.6 | 23.6 | < 0.005 | < 0.005 | < 0.005 | 24.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.43 | 1.43 | < 0.005 | < 0.005 | < 0.005 | 1.51 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.24 | 0.24 | < 0.005 | < 0.005 | < 0.005 | 0.25 |

## 3.3. Existing Pump Station Demolition (2027) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.23 | 0.19 | 1.41 | 3.44 | 0.01 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 513 | 513 | 0.02 | < 0.005 | — | 514 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.16 | 0.40 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 59.2 | 59.2 | < 0.005 | < 0.005 | — | 59.4 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.03 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 9.80 | 9.80 | < 0.005 | < 0.005 | — | 9.83 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.1 | 23.1 | < 0.005 | < 0.005 | < 0.005 | 24.3 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.67 | 2.67 | < 0.005 | < 0.005 | < 0.005 | 2.80 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.44 | 0.44 | < 0.005 | < 0.005 | < 0.005 | 0.46 |

## 3.5. Pavement Removal (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.06 | 0.06 | 0.29 | 4.11 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 760 | 760 | 0.03 | 0.01 | — | 763 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.06 | 0.06 | 0.29 | 4.11 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 760 | 760 | 0.03 | 0.01 | — | 763 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.09 | 1.22 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 225 | 225 | 0.01 | < 0.005 | — | 226 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.22 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 37.2 | 37.2 | < 0.005 | < 0.005 | — | 37.4 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.02 | < 0.005 | 0.16 | 0.09 | < 0.005 | < 0.005 | 0.02 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 97.1 | 97.1 | 0.01 | 0.02 | 0.20 | 102 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.02 | < 0.005 | 0.17 | 0.09 | < 0.005 | < 0.005 | 0.02 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 97.1 | 97.1 | 0.01 | 0.02 | 0.01 | 102 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 28.7 | 28.7 | < 0.005 | < 0.005 | 0.03 | 30.2 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 4.76 | 4.76 | < 0.005 | < 0.005 | < 0.005 | 5.00 |

## 3.7. New Pump Station Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.17 | 1.36 | 1.12 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 217 | 217 | 0.01 | < 0.005 | — | 217 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.17 | 1.36 | 1.12 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 217 | 217 | 0.01 | < 0.005 | — | 217 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 0.97 | 0.80 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 155 | 155 | 0.01 | < 0.005 | — | 155 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.18 | 0.15 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 25.6 | 25.6 | < 0.005 | < 0.005 | — | 25.7 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.03 | 0.53 | 0.00 | 0.00 | 0.11 | 0.11 | 0.00 | 0.03 | 0.03 | — | 117 | 117 | < 0.005 | < 0.005 | 0.47 | 119 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.29 | 9.29 | < 0.005 | < 0.005 | 0.02 | 9.71 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 33.6 | 33.6 | < 0.005 | 0.01 | 0.07 | 35.4 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.04 | 0.48 | 0.00 | 0.00 | 0.11 | 0.11 | 0.00 | 0.03 | 0.03 | — | 109 | 109 | < 0.005 | < 0.005 | 0.01 | 110 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.29 | 9.29 | < 0.005 | < 0.005 | < 0.005 | 9.69 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 33.6 | 33.6 | < 0.005 | 0.01 | < 0.005 | 35.3 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.03 | 0.33 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 78.1 | 78.1 | < 0.005 | < 0.005 | 0.15 | 79.3 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.63 | 6.63 | < 0.005 | < 0.005 | 0.01 | 6.93 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 24.0 | 24.0 | < 0.005 | < 0.005 | 0.02 | 25.2 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.01 | 0.01 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 12.9 | 12.9 | < 0.005 | < 0.005 | 0.02 | 13.1 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.10 | 1.10 | < 0.005 | < 0.005 | < 0.005 | 1.15 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.97 | 3.97 | < 0.005 | < 0.005 | < 0.005 | 4.18 |

## 3.9. New Pump Station Construction (2026) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.17 | 1.34 | 1.11 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 217 | 217 | 0.01 | < 0.005 | — | 217 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.17 | 1.34 | 1.11 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 217 | 217 | 0.01 | < 0.005 | — | 217 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.14 | 0.12 | 0.95 | 0.79 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 155 | 155 | 0.01 | < 0.005 | — | 155 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.17 | 0.14 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 25.6 | 25.6 | < 0.005 | < 0.005 | — | 25.7 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.03 | 0.49 | 0.00 | 0.00 | 0.11 | 0.11 | 0.00 | 0.03 | 0.03 | — | 115 | 115 | < 0.005 | < 0.005 | 0.43 | 116 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.11 | 9.11 | < 0.005 | < 0.005 | 0.02 | 9.54 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 32.9 | 32.9 | < 0.005 | 0.01 | 0.07 | 34.7 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.04 | 0.44 | 0.00 | 0.00 | 0.11 | 0.11 | 0.00 | 0.03 | 0.03 | — | 107 | 107 | < 0.005 | < 0.005 | 0.01 | 108 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.12 | 9.12 | < 0.005 | < 0.005 | < 0.005 | 9.52 |
| Hauling | < 0.005 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 32.9 | 32.9 | < 0.005 | 0.01 | < 0.005 | 34.6 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.02 | 0.30 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 76.6 | 76.6 | < 0.005 | < 0.005 | 0.13 | 77.8 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.51 | 6.51 | < 0.005 | < 0.005 | 0.01 | 6.80 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.5 | 23.5 | < 0.005 | < 0.005 | 0.02 | 24.7 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 12.7 | 12.7 | < 0.005 | < 0.005 | 0.02 | 12.9 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.08 | 1.08 | < 0.005 | < 0.005 | < 0.005 | 1.13 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.89 | 3.89 | < 0.005 | < 0.005 | < 0.005 | 4.10 |

## 3.11. New Pump Station Construction (2027) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.16 | 1.32 | 1.11 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 217 | 217 | 0.01 | < 0.005 | — | 217 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.23 | 0.20 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 38.2 | 38.2 | < 0.005 | < 0.005 | — | 38.3 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.04 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 6.32 | 6.32 | < 0.005 | < 0.005 | — | 6.34 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.41 | 0.00 | 0.00 | 0.11 | 0.11 | 0.00 | 0.03 | 0.03 | — | 105 | 105 | < 0.005 | < 0.005 | 0.01 | 106 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 8.92 | 8.92 | < 0.005 | < 0.005 | < 0.005 | 9.32 |
| Hauling | < 0.005 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 32.2 | 32.2 | < 0.005 | 0.01 | < 0.005 | 33.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.01 | 0.01 | 0.01 | 0.07 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 18.6 | 18.6 | < 0.005 | < 0.005 | 0.03 | 18.8 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.57 | 1.57 | < 0.005 | < 0.005 | < 0.005 | 1.64 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.66 | 5.66 | < 0.005 | < 0.005 | < 0.005 | 5.95 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 3.07 | 3.07 | < 0.005 | < 0.005 | < 0.005 | 3.12 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.26 | 0.26 | < 0.005 | < 0.005 | < 0.005 | 0.27 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.94 | 0.94 | < 0.005 | < 0.005 | < 0.005 | 0.99 |

## 3.13. Paving (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.10 | 0.10 | 0.86 | 5.62 | 0.01 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 985 | 985 | 0.04 | 0.01 | — | 988 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.26 | 1.68 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 294 | 294 | 0.01 | < 0.005 | — | 295 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.31 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 48.7 | 48.7 | < 0.005 | < 0.005 | — | 48.9 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.04 | 0.01 | 0.36 | 0.21 | < 0.005 | < 0.005 | 0.06 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 252 | 252 | 0.03 | 0.04 | 0.53 | 265 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.11 | 0.06 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 75.2 | 75.2 | 0.01 | 0.01 | 0.07 | 79.1 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 12.5 | 12.5 | < 0.005 | < 0.005 | 0.01 | 13.1 |

## 3.15. Trench Excavation and Pipe Construction (2025) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 15.3 | 15.3 | 0.81 | 6.51 | < 0.005 | 0.07 | — | 0.07 | 0.06 | — | 0.06 | — | 460 | 460 | 0.02 | < 0.005 | — | 461 |
| Architectural Coatings | — | 0.25 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 15.3 | 15.3 | 0.81 | 6.51 | < 0.005 | 0.07 | — | 0.07 | 0.06 | — | 0.06 | — | 460 | 460 | 0.02 | < 0.005 | — | 461 |
| Architectural Coatings | — | 0.25 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 3.57 | 3.56 | 0.19 | 1.52 | < 0.005 | 0.02 | — | 0.02 | 0.01 | — | 0.01 | — | 107 | 107 | < 0.005 | < 0.005 | — | 107 |
| Architectural Coatings | — | 0.06 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.65 | 0.65 | 0.03 | 0.28 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 17.7 | 17.7 | < 0.005 | < 0.005 | — | 17.8 |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.09 | 0.02 | 0.88 | 0.52 | < 0.005 | 0.01 | 0.13 | 0.14 | 0.01 | 0.04 | 0.04 | — | 540 | 540 | 0.07 | 0.09 | 1.11 | 568 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.09 | 0.02 | 0.93 | 0.53 | < 0.005 | 0.01 | 0.13 | 0.14 | 0.01 | 0.04 | 0.04 | — | 540 | 540 | 0.07 | 0.09 | 0.03 | 567 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.02 | < 0.005 | 0.21 | 0.12 | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 126 | 126 | 0.02 | 0.02 | 0.11 | 132 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 20.8 | 20.8 | < 0.005 | < 0.005 | 0.02 | 21.9 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 3.26 | 3.26 | < 0.005 | < 0.005 | — | 3.29 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 3.26 | 3.26 | < 0.005 | < 0.005 | — | 3.29 |

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Total | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.68 | 7.68 | < 0.005 | < 0.005 | — | 7.70 |
| Total | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.68 | 7.68 | < 0.005 | < 0.005 | — | 7.70 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

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

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.07 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.03 | 0.02 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Total | 0.03 | 0.11 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.07 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architectural | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | 0.08 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |
| Total | < 0.005 | 0.02 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

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

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

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

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

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |
| Total | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

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

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

## 4.10. Soil Carbon Accumulation By Vegetation Type

### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

## 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sequest | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Demolition | 12/1/2026 | 2/28/2027 | 5.00 | 64.0 | Existing PS Demolition |
| Pavement Removal | Site Preparation | 1/1/2025 | 5/31/2025 | 5.00 | 108 | Pavement Removal for New Pipe |
| New Pump Station Construction | Building Construction | 1/1/2025 | 3/31/2027 | 5.00 | 586 | New PS Construction |
| Paving | Paving | 5/1/2025 | 9/30/2025 | 5.00 | 109 | Asphalt Pavement of Road |
| Trench Excavation and Pipe Construction | Trenching | 2/1/2025 | 5/31/2025 | 5.00 | 85.0 | Excavation and Pipe Construction |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 6.00 | 84.0 | 0.37 |
| Existing Pump Station Demolition | Rubber Tired Dozers | Diesel | Average | 0.00 | 1.00 | 367 | 0.40 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Concrete/Industrial Saws | Diesel | Average | 0.00 | 8.00 | 33.0 | 0.73 |
| Existing Pump Station Demolition | Excavators | Diesel | Tier 4 Final | 1.00 | 5.80 | 130 | 0.38 |
| Existing Pump Station Demolition | Air Compressors | Diesel | Average | 1.00 | 2.20 | 37.0 | 0.48 |
| Existing Pump Station Demolition | Plate Compactors | Diesel | Average | 1.00 | 0.60 | 8.00 | 0.43 |
| Existing Pump Station Demolition | Forklifts | Diesel | Average | 1.00 | 0.70 | 82.0 | 0.20 |
| Existing Pump Station Demolition | Generator Sets | Diesel | Average | 1.00 | 4.80 | 14.0 | 0.74 |
| Existing Pump Station Demolition | Pumps | Diesel | Average | 1.00 | 5.10 | 11.0 | 0.74 |
| Pavement Removal | Graders | Diesel | Average | 0.00 | 8.00 | 148 | 0.41 |
| Pavement Removal | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 10.2 | 24.0 | 0.38 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 10.2 | 130 | 0.38 |
| New Pump Station Construction | Cranes | Diesel | Average | 0.00 | 4.00 | 367 | 0.29 |
| New Pump Station Construction | Forklifts | Diesel | Average | 1.00 | 1.00 | 82.0 | 0.20 |
| New Pump Station Construction | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| New Pump Station Construction | Air Compressors | Diesel | Average | 1.00 | 0.90 | 37.0 | 0.48 |
| New Pump Station Construction | Dumpers/Tenders | Diesel | Average | 1.00 | 1.70 | 16.0 | 0.38 |
| New Pump Station Construction | Generator Sets | Diesel | Average | 1.00 | 6.50 | 14.0 | 0.74 |
| New Pump Station Construction | Plate Compactors | Diesel | Average | 1.00 | 1.70 | 8.00 | 0.43 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| New Pump Station Construction | Pumps | Diesel | Average | 1.00 | 2.30 | 11.0 | 0.74 |
| New Pump Station Construction | Aerial Lifts | Diesel | Average | 1.00 | 1.00 | 46.0 | 0.31 |
| New Pump Station Construction | Off-Highway Trucks | Diesel | Average | 1.00 | 0.20 | 350 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 7.00 | 84.0 | 0.37 |
| Paving | Cement and Mortar Mixers | Diesel | Average | 0.00 | 6.00 | 10.0 | 0.56 |
| Paving | Pavers | Diesel | Tier 4 Final | 1.00 | 3.80 | 148 | 0.42 |
| Paving | Rollers | Diesel | Tier 4 Final | 1.00 | 3.80 | 48.0 | 0.38 |
| Paving | Off-Highway Trucks | Diesel | Tier 4 Final | 1.00 | 7.60 | 185 | 0.38 |
| Trench Excavation and Pipe Construction | Excavators | Diesel | Tier 4 Final | 1.00 | 6.50 | 130 | 0.38 |
| Trench Excavation and Pipe Construction | Pumps | Diesel | Average | 1.00 | 7.10 | 11.0 | 0.74 |
| Trench Excavation and Pipe Construction | Welders | Electric | Average | 1.00 | 4.20 | 36.0 | 0.45 |
| Trench Excavation and Pipe Construction | Plate Compactors | Diesel | Tier 4 Final | 1.00 | 4.20 | 3.00 | 0.43 |
| Trench Excavation and Pipe Construction | Plate Compactors | Gasoline | Average | 1.00 | 4.20 | 3.00 | 0.55 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Existing Pump Station Demolition | — | — | — | — |
| Existing Pump Station Demolition | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Existing Pump Station Demolition | Vendor | — | 8.40 | HHDT,MHDT |

| | | | | |
|---|---|---|---|---|
| Existing Pump Station Demolition | Hauling | 0.69 | 9.18 | HHDT |
| Existing Pump Station Demolition | Onsite truck | — | — | HHDT |
| Pavement Removal | — | — | — | — |
| Pavement Removal | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Pavement Removal | Vendor | 0.00 | 8.40 | HHDT,MHDT |
| Pavement Removal | Hauling | 2.56 | 10.0 | HHDT |
| Pavement Removal | Onsite truck | — | — | HHDT |
| New Pump Station Construction | — | — | — | — |
| New Pump Station Construction | Worker | 13.5 | 11.7 | LDA,LDT1,LDT2 |
| New Pump Station Construction | Vendor | 0.33 | 8.40 | HHDT,MHDT |
| New Pump Station Construction | Hauling | 0.42 | 21.6 | HHDT |
| New Pump Station Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 8.40 | HHDT,MHDT |
| Paving | Hauling | 2.53 | 27.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Trench Excavation and Pipe Construction | — | — | — | — |
| Trench Excavation and Pipe Construction | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Trench Excavation and Pipe Construction | Vendor | — | 8.40 | HHDT,MHDT |
| Trench Excavation and Pipe Construction | Hauling | 14.5 | 9.78 | HHDT |
| Trench Excavation and Pipe Construction | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| Trench Excavation and Pipe Construction | 0.00 | 0.00 | 3,000 | 1,000 | — |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (Building Square Footage) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Existing Pump Station Demolition | 0.00 | 0.00 | 0.00 | 2,000 | — |
| Pavement Removal | 5,100 | 7,100 | 0.00 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| General Light Industry | 0.00 | 0% |

## 5.8. Construction Electricity Consumption and Emissions Factors

### kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 2025 | 50.7 | 204 | 0.03 | < 0.005 |
| 2026 | 0.00 | 204 | 0.03 | < 0.005 |
| 2027 | 0.00 | 204 | 0.03 | < 0.005 |

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 0 | 0.00 | 5,100 | 1,700 | — |

### 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| General Light Industry | 35,252 | 204 | 0.0330 | 0.0040 | 144,649 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| General Light Industry | 786,250 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| General Light Industry | 4.22 | — |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| General Light Industry | Other commercial A/C and heat pumps | R-410A | 2,088 | 0.30 | 4.00 | 4.00 | 18.0 |

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

| Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

| Equipment Type | Fuel Type | Number per Day | Hours per Day | Hours per Year | Horsepower | Load Factor |
|---|---|---|---|---|---|---|
| Emergency Generator | Diesel | 2.00 | 0.14 | 50.0 | 1,341 | 0.73 |

### 5.16.2. Process Boilers

| Equipment Type | Fuel Type | Number | Boiler Rating (MMBtu/hr) | Daily Heat Input (MMBtu/day) | Annual Heat Input (MMBtu/yr) |
|---|---|---|---|---|---|

## 5.17. User Defined

| Equipment Type | Fuel Type |
|---|---|

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

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

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Construction: Construction Phases | Information provided by the District. |
| Construction: Off-Road Equipment | Project-specific construction equipment list was provided by the District. |
| Construction: Trips and VMT | Construction trips were provided by the District. Worker commute trips are included in the new pump station construction phase. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase. |
| Operations: Vehicle Data | This project size is below BAAQMD screening criteria. Operation emissions are only estimated for the emergency generator. |
| Operations: Emergency Generators and Fire Pumps | Assumed one generator at each site. |

# Lynwood Alt D Custom Report

## Table of Contents

8. User Changes to Default Data

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Lynwood Alt D |
| Construction Start Date | 1/1/2025 |
| Operational Year | 2027 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.60 |
| Precipitation (days) | 39.4 |
| Location | 38.06871769733715, -122.54995998861456 |
| County | Marin |
| City | Novato |
| Air District | Bay Area AQMD |
| Air Basin | San Francisco Bay Area |
| TAZ | 913 |
| EDFZ | 2 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.21 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 3.40 | 1000sqft | 0.08 | 3,400 | 0.00 | — | — | New Pump Stations |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 2.2. Construction Emissions by Year, Unmitigated

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

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 10.8 | 10.9 | 4.50 | 16.3 | 0.03 | 0.14 | 0.32 | 0.47 | 0.13 | 0.08 | 0.21 | — | 3,175 | 3,175 | 0.21 | 0.16 | 2.20 | 3,228 |
| 2026 | 0.26 | 0.22 | 1.45 | 1.63 | < 0.005 | 0.05 | 0.11 | 0.17 | 0.05 | 0.03 | 0.07 | — | 367 | 367 | 0.02 | 0.01 | 0.48 | 371 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 10.6 | 10.8 | 3.26 | 10.1 | 0.02 | 0.12 | 0.25 | 0.37 | 0.10 | 0.06 | 0.17 | — | 1,858 | 1,858 | 0.13 | 0.10 | 0.04 | 1,892 |
| 2026 | 0.49 | 0.41 | 2.93 | 5.05 | 0.01 | 0.11 | 0.15 | 0.26 | 0.10 | 0.03 | 0.13 | — | 896 | 896 | 0.04 | 0.02 | 0.01 | 903 |
| 2027 | 0.48 | 0.40 | 2.89 | 5.02 | 0.01 | 0.10 | 0.15 | 0.25 | 0.09 | 0.03 | 0.13 | — | 893 | 893 | 0.04 | 0.02 | 0.01 | 899 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 2.01 | 2.01 | 1.62 | 3.92 | 0.01 | 0.05 | 0.12 | 0.17 | 0.05 | 0.03 | 0.08 | — | 793 | 793 | 0.05 | 0.03 | 0.29 | 804 |
| 2026 | 0.20 | 0.16 | 1.13 | 1.33 | < 0.005 | 0.04 | 0.08 | 0.12 | 0.04 | 0.02 | 0.06 | — | 290 | 290 | 0.01 | 0.01 | 0.15 | 293 |
| 2027 | 0.07 | 0.06 | 0.42 | 0.67 | < 0.005 | 0.01 | 0.02 | 0.04 | 0.01 | 0.01 | 0.02 | — | 125 | 125 | 0.01 | < 0.005 | 0.04 | 126 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.37 | 0.37 | 0.30 | 0.71 | < 0.005 | 0.01 | 0.02 | 0.03 | 0.01 | 0.01 | 0.01 | — | 131 | 131 | 0.01 | 0.01 | 0.05 | 133 |
| 2026 | 0.04 | 0.03 | 0.21 | 0.24 | < 0.005 | 0.01 | 0.01 | 0.02 | 0.01 | < 0.005 | 0.01 | — | 47.9 | 47.9 | < 0.005 | < 0.005 | 0.02 | 48.5 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2027 | 0.01 | 0.01 | 0.08 | 0.12 | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 20.7 | 20.7 | < 0.005 | < 0.005 | 0.01 | 20.8 |

## 2.5. Operations Emissions by Sector, Unmitigated

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

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.03 | 0.11 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.71 | 0.73 | 2.80 | 1.75 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 385 | 389 | 0.40 | 0.01 | 0.89 | 401 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | — | 0.08 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.70 | 2.79 | 1.60 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 384 | 388 | 0.40 | 0.01 | 0.89 | 401 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.01 | 0.09 | < 0.005 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.30 | 0.30 | < 0.005 | < 0.005 | — | 0.30 |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.66 | 0.60 | 2.70 | 1.54 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 308 | 308 | 0.01 | < 0.005 | 0.00 | 309 |
| Total | 0.68 | 0.70 | 2.74 | 1.64 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 378 | 381 | 0.40 | 0.01 | 0.89 | 394 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | < 0.005 | 0.02 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |
| Energy | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 10.9 | 10.9 | < 0.005 | < 0.005 | — | 11.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |
| Stationary | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |
| Total | 0.12 | 0.13 | 0.50 | 0.30 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.63 | 62.5 | 63.1 | 0.07 | < 0.005 | 0.15 | 65.3 |

# 3. Construction Emissions Details

## 3.1. Existing Pump Station Demolition (2026) - Unmitigated

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

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

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.23 | 0.20 | 1.42 | 3.45 | 0.01 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 513 | 513 | 0.02 | < 0.005 | — | 514 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.09 | 0.21 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 31.1 | 31.1 | < 0.005 | < 0.005 | — | 31.2 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.15 | 5.15 | < 0.005 | < 0.005 | — | 5.17 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.6 | 23.6 | < 0.005 | < 0.005 | < 0.005 | 24.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.43 | 1.43 | < 0.005 | < 0.005 | < 0.005 | 1.51 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.24 | 0.24 | < 0.005 | < 0.005 | < 0.005 | 0.25 |

## 3.3. Existing Pump Station Demolition (2027) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.23 | 0.19 | 1.41 | 3.44 | 0.01 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 513 | 513 | 0.02 | < 0.005 | — | 514 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.16 | 0.40 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 59.2 | 59.2 | < 0.005 | < 0.005 | — | 59.4 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.03 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 9.80 | 9.80 | < 0.005 | < 0.005 | — | 9.83 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.1 | 23.1 | < 0.005 | < 0.005 | < 0.005 | 24.3 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.67 | 2.67 | < 0.005 | < 0.005 | < 0.005 | 2.80 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.44 | 0.44 | < 0.005 | < 0.005 | < 0.005 | 0.46 |

## 3.5. Pavement Removal (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.04 | 0.23 | 3.22 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 596 | 596 | 0.02 | < 0.005 | — | 598 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.04 | 0.23 | 3.22 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 596 | 596 | 0.02 | < 0.005 | — | 598 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.76 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 140 | 140 | 0.01 | < 0.005 | — | 141 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.01 | 0.14 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 23.3 | 23.3 | < 0.005 | < 0.005 | — | 23.3 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.12 | 0.07 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 75.8 | 75.8 | 0.01 | 0.01 | 0.16 | 79.8 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.13 | 0.07 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 75.9 | 75.9 | 0.01 | 0.01 | < 0.005 | 79.7 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 17.9 | 17.9 | < 0.005 | < 0.005 | 0.02 | 18.8 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.96 | 2.96 | < 0.005 | < 0.005 | < 0.005 | 3.11 |

## 3.7. New Pump Station Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.40 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.40 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 1.00 | 0.82 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 159 | 159 | 0.01 | < 0.005 | — | 159 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.18 | 0.15 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 26.2 | 26.2 | < 0.005 | < 0.005 | — | 26.3 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.03 | 0.49 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 109 | 109 | < 0.005 | < 0.005 | 0.44 | 111 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.60 | 7.60 | < 0.005 | < 0.005 | 0.02 | 7.95 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.6 | 30.6 | < 0.005 | < 0.005 | 0.06 | 32.3 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.04 | 0.45 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 102 | 102 | < 0.005 | < 0.005 | 0.01 | 103 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.60 | 7.60 | < 0.005 | < 0.005 | < 0.005 | 7.93 |
| Hauling | < 0.005 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.6 | 30.6 | < 0.005 | < 0.005 | < 0.005 | 32.2 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.03 | 0.31 | 0.00 | 0.00 | 0.07 | 0.07 | 0.00 | 0.02 | 0.02 | — | 73.1 | 73.1 | < 0.005 | < 0.005 | 0.14 | 74.2 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.43 | 5.43 | < 0.005 | < 0.005 | 0.01 | 5.67 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 21.9 | 21.9 | < 0.005 | < 0.005 | 0.02 | 23.0 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 12.1 | 12.1 | < 0.005 | < 0.005 | 0.02 | 12.3 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.90 | 0.90 | < 0.005 | < 0.005 | < 0.005 | 0.94 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.62 | 3.62 | < 0.005 | < 0.005 | < 0.005 | 3.81 |

## 3.9. New Pump Station Construction (2026) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.37 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.37 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 0.98 | 0.81 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 159 | 159 | 0.01 | < 0.005 | — | 159 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.18 | 0.15 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 26.2 | 26.2 | < 0.005 | < 0.005 | — | 26.3 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.46 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 107 | 107 | < 0.005 | < 0.005 | 0.40 | 109 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.46 | 7.46 | < 0.005 | < 0.005 | 0.02 | 7.80 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.0 | 30.0 | < 0.005 | < 0.005 | 0.06 | 31.6 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.04 | 0.41 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 100.0 | 100.0 | < 0.005 | < 0.005 | 0.01 | 101 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.46 | 7.46 | < 0.005 | < 0.005 | < 0.005 | 7.79 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.0 | 30.0 | < 0.005 | < 0.005 | < 0.005 | 31.6 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.02 | 0.29 | 0.00 | 0.00 | 0.07 | 0.07 | 0.00 | 0.02 | 0.02 | — | 71.7 | 71.7 | < 0.005 | < 0.005 | 0.12 | 72.8 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.33 | 5.33 | < 0.005 | < 0.005 | 0.01 | 5.57 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 21.4 | 21.4 | < 0.005 | < 0.005 | 0.02 | 22.6 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 11.9 | 11.9 | < 0.005 | < 0.005 | 0.02 | 12.1 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.88 | 0.88 | < 0.005 | < 0.005 | < 0.005 | 0.92 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.55 | 3.55 | < 0.005 | < 0.005 | < 0.005 | 3.73 |

## 3.11. New Pump Station Construction (2027) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.17 | 1.36 | 1.13 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.03 | 0.24 | 0.20 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 39.1 | 39.1 | < 0.005 | < 0.005 | — | 39.2 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.04 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 6.47 | 6.47 | < 0.005 | < 0.005 | — | 6.49 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.39 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 98.2 | 98.2 | < 0.005 | < 0.005 | 0.01 | 99.5 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.30 | 7.30 | < 0.005 | < 0.005 | < 0.005 | 7.63 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 29.3 | 29.3 | < 0.005 | < 0.005 | < 0.005 | 30.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.07 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 17.4 | 17.4 | < 0.005 | < 0.005 | 0.03 | 17.6 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.29 | 1.29 | < 0.005 | < 0.005 | < 0.005 | 1.34 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.16 | 5.16 | < 0.005 | < 0.005 | < 0.005 | 5.43 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.87 | 2.87 | < 0.005 | < 0.005 | < 0.005 | 2.92 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.21 | 0.21 | < 0.005 | < 0.005 | < 0.005 | 0.22 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.86 | 0.86 | < 0.005 | < 0.005 | < 0.005 | 0.90 |

## 3.13. Paving (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.10 | 0.10 | 0.91 | 5.91 | 0.01 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 1,037 | 1,037 | 0.04 | 0.01 | — | 1,040 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.16 | 1.05 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 185 | 185 | 0.01 | < 0.005 | — | 185 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.03 | 0.19 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 30.6 | 30.6 | < 0.005 | < 0.005 | — | 30.7 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.04 | 0.01 | 0.39 | 0.22 | < 0.005 | < 0.005 | 0.07 | 0.08 | < 0.005 | 0.02 | 0.02 | — | 273 | 273 | 0.03 | 0.04 | 0.58 | 288 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.07 | 0.04 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 48.7 | 48.7 | 0.01 | 0.01 | 0.04 | 51.2 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 8.06 | 8.06 | < 0.005 | < 0.005 | 0.01 | 8.48 |

## 3.15. Trench Excavation and Pipe Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 10.2 | 10.2 | 0.64 | 4.77 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 371 | 371 | 0.02 | < 0.005 | — | 372 |
| Architectural Coatings | — | 0.33 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 10.2 | 10.2 | 0.64 | 4.77 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 371 | 371 | 0.02 | < 0.005 | — | 372 |
| Architectural Coatings | — | 0.33 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.77 | 1.76 | 0.11 | 0.82 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 64.0 | 64.0 | < 0.005 | < 0.005 | — | 64.2 |
| Architectural Coatings | — | 0.06 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.32 | 0.32 | 0.02 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 10.6 | 10.6 | < 0.005 | < 0.005 | — | 10.6 |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.08 | 0.02 | 0.74 | 0.44 | < 0.005 | 0.01 | 0.11 | 0.12 | 0.01 | 0.03 | 0.04 | — | 453 | 453 | 0.06 | 0.07 | 0.93 | 476 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.08 | 0.01 | 0.78 | 0.44 | < 0.005 | 0.01 | 0.11 | 0.12 | 0.01 | 0.03 | 0.04 | — | 453 | 453 | 0.06 | 0.07 | 0.02 | 476 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.13 | 0.08 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 78.1 | 78.1 | 0.01 | 0.01 | 0.07 | 82.2 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 12.9 | 12.9 | < 0.005 | < 0.005 | 0.01 | 13.6 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 3.26 | 3.26 | < 0.005 | < 0.005 | — | 3.29 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 3.26 | 3.26 | < 0.005 | < 0.005 | — | 3.29 |

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Total | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Total | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.68 | 7.68 | < 0.005 | < 0.005 | — | 7.70 |
| Total | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.68 | 7.68 | < 0.005 | < 0.005 | — | 7.70 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

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

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.07 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.03 | 0.02 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Total | 0.03 | 0.11 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.07 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | 0.08 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Landsca Equipment | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |
| Total | < 0.005 | 0.02 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

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

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emergency Generato | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |
| Total | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

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

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

## 4.10. Soil Carbon Accumulation By Vegetation Type

### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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

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

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

### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Demolition | 12/1/2026 | 2/28/2027 | 5.00 | 64.0 | Existing PS Demolition |
| Pavement Removal | Site Preparation | 1/1/2025 | 4/30/2025 | 5.00 | 86.0 | Pavement Removal for New Pipe |
| New Pump Station Construction | Building Construction | 1/1/2025 | 3/31/2027 | 5.00 | 586 | New PS Construction |
| Paving | Paving | 4/1/2025 | 6/30/2025 | 5.00 | 65.0 | Asphalt Pavement of Road |
| Trench Excavation and Pipe Construction | Trenching | 2/1/2025 | 4/30/2025 | 5.00 | 63.0 | Excavation and Pipe Construction |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 6.00 | 84.0 | 0.37 |
| Existing Pump Station Demolition | Rubber Tired Dozers | Diesel | Average | 0.00 | 1.00 | 367 | 0.40 |
| Existing Pump Station Demolition | Concrete/Industrial Saws | Diesel | Average | 0.00 | 8.00 | 33.0 | 0.73 |
| Existing Pump Station Demolition | Excavators | Diesel | Tier 4 Final | 1.00 | 5.80 | 130 | 0.38 |
| Existing Pump Station Demolition | Air Compressors | Diesel | Average | 1.00 | 2.20 | 37.0 | 0.48 |
| Existing Pump Station Demolition | Plate Compactors | Diesel | Average | 1.00 | 0.60 | 8.00 | 0.43 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Forklifts | Diesel | Average | 1.00 | 0.70 | 82.0 | 0.20 |
| Existing Pump Station Demolition | Generator Sets | Diesel | Average | 1.00 | 4.80 | 14.0 | 0.74 |
| Existing Pump Station Demolition | Pumps | Diesel | Average | 1.00 | 5.10 | 11.0 | 0.74 |
| Pavement Removal | Graders | Diesel | Average | 0.00 | 8.00 | 148 | 0.41 |
| Pavement Removal | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 8.00 | 24.0 | 0.38 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 8.00 | 130 | 0.38 |
| New Pump Station Construction | Cranes | Diesel | Average | 0.00 | 4.00 | 367 | 0.29 |
| New Pump Station Construction | Forklifts | Diesel | Average | 1.00 | 1.00 | 82.0 | 0.20 |
| New Pump Station Construction | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| New Pump Station Construction | Air Compressors | Diesel | Average | 1.00 | 0.90 | 37.0 | 0.48 |
| New Pump Station Construction | Dumpers/Tenders | Diesel | Average | 1.00 | 1.70 | 16.0 | 0.38 |
| New Pump Station Construction | Generator Sets | Diesel | Average | 1.00 | 6.90 | 14.0 | 0.74 |
| New Pump Station Construction | Plate Compactors | Diesel | Average | 1.00 | 1.70 | 8.00 | 0.43 |
| New Pump Station Construction | Pumps | Diesel | Average | 1.00 | 2.30 | 11.0 | 0.74 |
| New Pump Station Construction | Aerial Lifts | Diesel | Average | 1.00 | 1.00 | 46.0 | 0.31 |
| New Pump Station Construction | Off-Highway Trucks | Diesel | Average | 1.00 | 0.20 | 350 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 7.00 | 84.0 | 0.37 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Paving | Cement and Mortar Mixers | Diesel | Average | 0.00 | 6.00 | 10.0 | 0.56 |
| Paving | Pavers | Diesel | Tier 4 Final | 1.00 | 4.00 | 148 | 0.42 |
| Paving | Rollers | Diesel | Tier 4 Final | 1.00 | 4.00 | 48.0 | 0.38 |
| Paving | Off-Highway Trucks | Diesel | Tier 4 Final | 1.00 | 8.00 | 185 | 0.38 |
| Trench Excavation and Pipe Construction | Excavators | Diesel | Tier 4 Final | 1.00 | 5.30 | 130 | 0.38 |
| Trench Excavation and Pipe Construction | Pumps | Diesel | Average | 1.00 | 5.60 | 11.0 | 0.74 |
| Trench Excavation and Pipe Construction | Welders | Electric | Average | 1.00 | 2.80 | 36.0 | 0.45 |
| Trench Excavation and Pipe Construction | Plate Compactors | Diesel | Tier 4 Final | 1.00 | 2.80 | 3.00 | 0.43 |
| Trench Excavation and Pipe Construction | Plate Compactors | Gasoline | Average | 1.00 | 2.80 | 3.00 | 0.55 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Existing Pump Station Demolition | — | — | — | — |
| Existing Pump Station Demolition | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Existing Pump Station Demolition | Vendor | — | 8.40 | HHDT,MHDT |
| Existing Pump Station Demolition | Hauling | 0.69 | 9.18 | HHDT |
| Existing Pump Station Demolition | Onsite truck | — | — | HHDT |
| Pavement Removal | — | — | — | — |
| Pavement Removal | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Pavement Removal | Vendor | 0.00 | 8.40 | HHDT,MHDT |
| Pavement Removal | Hauling | 2.00 | 10.0 | HHDT |
| Pavement Removal | Onsite truck | — | — | HHDT |

| | | | | |
|---|---|---|---|---|
| New Pump Station Construction | — | — | — | — |
| New Pump Station Construction | Worker | 12.7 | 11.7 | LDA,LDT1,LDT2 |
| New Pump Station Construction | Vendor | 0.27 | 8.40 | HHDT,MHDT |
| New Pump Station Construction | Hauling | 0.40 | 20.7 | HHDT |
| New Pump Station Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 8.40 | HHDT,MHDT |
| Paving | Hauling | 2.65 | 28.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Trench Excavation and Pipe Construction | — | — | — | — |
| Trench Excavation and Pipe Construction | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Trench Excavation and Pipe Construction | Vendor | — | 8.40 | HHDT,MHDT |
| Trench Excavation and Pipe Construction | Hauling | 12.2 | 9.78 | HHDT |
| Trench Excavation and Pipe Construction | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| Trench Excavation and Pipe Construction | 0.00 | 0.00 | 3,000 | 1,000 | — |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (Building Square Footage) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Existing Pump Station Demolition | 0.00 | 0.00 | 0.00 | 2,000 | — |
| Pavement Removal | 3,200 | 4,600 | 0.00 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| General Light Industry | 0.00 | 0% |

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 33.8 | 204 | 0.03 | < 0.005 |
| 2026 | 0.00 | 204 | 0.03 | < 0.005 |
| 2027 | 0.00 | 204 | 0.03 | < 0.005 |

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 0 | 0.00 | 5,100 | 1,700 | — |

### 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| General Light Industry | 35,252 | 204 | 0.0330 | 0.0040 | 144,649 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| General Light Industry | 786,250 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| General Light Industry | 4.22 | — |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| General Light Industry | Other commercial A/C and heat pumps | R-410A | 2,088 | 0.30 | 4.00 | 4.00 | 18.0 |

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

| Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

| Equipment Type | Fuel Type | Number per Day | Hours per Day | Hours per Year | Horsepower | Load Factor |
|---|---|---|---|---|---|---|
| Emergency Generator | Diesel | 2.00 | 0.14 | 50.0 | 1,341 | 0.73 |

### 5.16.2. Process Boilers

| Equipment Type | Fuel Type | Number | Boiler Rating (MMBtu/hr) | Daily Heat Input (MMBtu/day) | Annual Heat Input (MMBtu/yr) |
|---|---|---|---|---|---|

## 5.17. User Defined

| Equipment Type | Fuel Type |
|---|---|

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

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

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Construction: Construction Phases | Information provided by the District. |

| | |
|---|---|
| Construction: Off-Road Equipment | Project-specific construction equipment list was provided by the District. |
| Construction: Trips and VMT | Construction trips were provided by the District. Worker commute trips are included in the new pump station construction phase. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase. |
| Operations: Vehicle Data | This project size is below BAAQMD screening criteria. Operation emissions are only estimated for the emergency generator. |
| Operations: Emergency Generators and Fire Pumps | Assumed one generator at each site |

# Lynwood Alt E Custom Report

## Table of Contents

8. User Changes to Default Data

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Lynwood Alt E |
| Construction Start Date | 1/1/2025 |
| Operational Year | 2027 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.60 |
| Precipitation (days) | 39.4 |
| Location | 38.06871769733715, -122.54995998861456 |
| County | Marin |
| City | Novato |
| Air District | Bay Area AQMD |
| Air Basin | San Francisco Bay Area |
| TAZ | 913 |
| EDFZ | 2 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.21 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 3.40 | 1000sqft | 0.08 | 3,400 | 0.00 | — | — | New Pump Stations |

## 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

## 2.2. Construction Emissions by Year, Unmitigated

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

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 10.7 | 10.9 | 3.97 | 12.3 | 0.02 | 0.13 | 0.28 | 0.41 | 0.11 | 0.07 | 0.19 | — | 2,326 | 2,326 | 0.16 | 0.13 | 1.92 | 2,370 |
| 2026 | 0.26 | 0.22 | 1.45 | 1.63 | < 0.005 | 0.05 | 0.11 | 0.17 | 0.05 | 0.03 | 0.07 | — | 366 | 366 | 0.02 | 0.01 | 0.48 | 370 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 10.6 | 10.8 | 3.25 | 10.7 | 0.02 | 0.12 | 0.25 | 0.37 | 0.11 | 0.06 | 0.17 | — | 1,944 | 1,944 | 0.13 | 0.10 | 0.04 | 1,978 |
| 2026 | 0.49 | 0.41 | 2.93 | 5.05 | 0.01 | 0.11 | 0.15 | 0.26 | 0.10 | 0.03 | 0.13 | — | 895 | 895 | 0.04 | 0.02 | 0.01 | 902 |
| 2027 | 0.48 | 0.40 | 2.89 | 5.01 | 0.01 | 0.10 | 0.15 | 0.25 | 0.09 | 0.03 | 0.13 | — | 892 | 892 | 0.04 | 0.02 | 0.01 | 899 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 2.00 | 2.00 | 1.58 | 3.71 | 0.01 | 0.05 | 0.11 | 0.17 | 0.05 | 0.03 | 0.08 | — | 744 | 744 | 0.04 | 0.03 | 0.28 | 755 |
| 2026 | 0.20 | 0.16 | 1.13 | 1.33 | < 0.005 | 0.04 | 0.08 | 0.12 | 0.04 | 0.02 | 0.06 | — | 289 | 289 | 0.01 | 0.01 | 0.15 | 292 |
| 2027 | 0.07 | 0.06 | 0.42 | 0.67 | < 0.005 | 0.01 | 0.02 | 0.04 | 0.01 | 0.01 | 0.02 | — | 125 | 125 | 0.01 | < 0.005 | 0.04 | 126 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.36 | 0.37 | 0.29 | 0.68 | < 0.005 | 0.01 | 0.02 | 0.03 | 0.01 | 0.01 | 0.01 | — | 123 | 123 | 0.01 | 0.01 | 0.05 | 125 |
| 2026 | 0.04 | 0.03 | 0.21 | 0.24 | < 0.005 | 0.01 | 0.01 | 0.02 | 0.01 | < 0.005 | 0.01 | — | 47.9 | 47.9 | < 0.005 | < 0.005 | 0.02 | 48.4 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2027 | 0.01 | 0.01 | 0.08 | 0.12 | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 20.6 | 20.6 | < 0.005 | < 0.005 | 0.01 | 20.8 |

## 2.5. Operations Emissions by Sector, Unmitigated

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

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.03 | 0.11 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.71 | 0.73 | 2.80 | 1.75 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 385 | 389 | 0.40 | 0.01 | 0.89 | 401 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | — | 0.08 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.70 | 2.79 | 1.60 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 384 | 388 | 0.40 | 0.01 | 0.89 | 401 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.01 | 0.09 | < 0.005 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.30 | 0.30 | < 0.005 | < 0.005 | — | 0.30 |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.66 | 0.60 | 2.70 | 1.54 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 308 | 308 | 0.01 | < 0.005 | 0.00 | 309 |
| Total | 0.68 | 0.70 | 2.74 | 1.64 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 378 | 381 | 0.40 | 0.01 | 0.89 | 394 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | < 0.005 | 0.02 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |
| Energy | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 10.9 | 10.9 | < 0.005 | < 0.005 | — | 11.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |
| Stationary | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |
| Total | 0.12 | 0.13 | 0.50 | 0.30 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.63 | 62.5 | 63.1 | 0.07 | < 0.005 | 0.15 | 65.3 |

# 3. Construction Emissions Details

## 3.1. Existing Pump Station Demolition (2026) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.23 | 0.20 | 1.42 | 3.45 | 0.01 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 513 | 513 | 0.02 | < 0.005 | — | 514 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.09 | 0.21 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 31.1 | 31.1 | < 0.005 | < 0.005 | — | 31.2 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.15 | 5.15 | < 0.005 | < 0.005 | — | 5.17 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.6 | 23.6 | < 0.005 | < 0.005 | < 0.005 | 24.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.43 | 1.43 | < 0.005 | < 0.005 | < 0.005 | 1.51 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.24 | 0.24 | < 0.005 | < 0.005 | < 0.005 | 0.25 |

## 3.3. Existing Pump Station Demolition (2027) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.23 | 0.19 | 1.41 | 3.44 | 0.01 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 513 | 513 | 0.02 | < 0.005 | — | 514 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.16 | 0.40 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 59.2 | 59.2 | < 0.005 | < 0.005 | — | 59.4 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.03 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 9.80 | 9.80 | < 0.005 | < 0.005 | — | 9.83 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.1 | 23.1 | < 0.005 | < 0.005 | < 0.005 | 24.3 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.67 | 2.67 | < 0.005 | < 0.005 | < 0.005 | 2.80 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.44 | 0.44 | < 0.005 | < 0.005 | < 0.005 | 0.46 |

## 3.5. Pavement Removal (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.05 | 0.05 | 0.28 | 3.95 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 730 | 730 | 0.03 | 0.01 | — | 733 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.69 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 128 | 128 | 0.01 | < 0.005 | — | 128 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | < 0.005 | < 0.005 | 0.01 | 0.13 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 21.2 | 21.2 | < 0.005 | < 0.005 | — | 21.3 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.13 | 0.07 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 75.9 | 75.9 | 0.01 | 0.01 | < 0.005 | 79.7 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 13.3 | 13.3 | < 0.005 | < 0.005 | 0.01 | 14.0 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.20 | 2.20 | < 0.005 | < 0.005 | < 0.005 | 2.32 |

## 3.7. New Pump Station Construction (2025) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.40 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.40 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 1.00 | 0.82 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 159 | 159 | 0.01 | < 0.005 | — | 159 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.18 | 0.15 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 26.2 | 26.2 | < 0.005 | < 0.005 | — | 26.3 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.03 | 0.49 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 109 | 109 | < 0.005 | < 0.005 | 0.44 | 110 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.60 | 7.60 | < 0.005 | < 0.005 | 0.02 | 7.95 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.6 | 30.6 | < 0.005 | < 0.005 | 0.06 | 32.3 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.04 | 0.44 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 101 | 101 | < 0.005 | < 0.005 | 0.01 | 103 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.60 | 7.60 | < 0.005 | < 0.005 | < 0.005 | 7.93 |
| Hauling | < 0.005 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.6 | 30.6 | < 0.005 | < 0.005 | < 0.005 | 32.2 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.03 | 0.31 | 0.00 | 0.00 | 0.07 | 0.07 | 0.00 | 0.02 | 0.02 | — | 72.6 | 72.6 | < 0.005 | < 0.005 | 0.14 | 73.7 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.43 | 5.43 | < 0.005 | < 0.005 | 0.01 | 5.67 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 21.9 | 21.9 | < 0.005 | < 0.005 | 0.02 | 23.0 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 12.0 | 12.0 | < 0.005 | < 0.005 | 0.02 | 12.2 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.90 | 0.90 | < 0.005 | < 0.005 | < 0.005 | 0.94 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.62 | 3.62 | < 0.005 | < 0.005 | < 0.005 | 3.81 |

## 3.9. New Pump Station Construction (2026) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.37 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.21 | 0.17 | 1.37 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 0.98 | 0.81 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 159 | 159 | 0.01 | < 0.005 | — | 159 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.18 | 0.15 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 26.2 | 26.2 | < 0.005 | < 0.005 | — | 26.3 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.46 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 107 | 107 | < 0.005 | < 0.005 | 0.40 | 108 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.46 | 7.46 | < 0.005 | < 0.005 | 0.02 | 7.80 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.0 | 30.0 | < 0.005 | < 0.005 | 0.06 | 31.6 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.04 | 0.41 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 99.3 | 99.3 | < 0.005 | < 0.005 | 0.01 | 101 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.46 | 7.46 | < 0.005 | < 0.005 | < 0.005 | 7.79 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.0 | 30.0 | < 0.005 | < 0.005 | < 0.005 | 31.6 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.02 | 0.28 | 0.00 | 0.00 | 0.07 | 0.07 | 0.00 | 0.02 | 0.02 | — | 71.3 | 71.3 | < 0.005 | < 0.005 | 0.12 | 72.4 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.33 | 5.33 | < 0.005 | < 0.005 | 0.01 | 5.57 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 21.4 | 21.4 | < 0.005 | < 0.005 | 0.02 | 22.6 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | < 0.005 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 11.8 | 11.8 | < 0.005 | < 0.005 | 0.02 | 12.0 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.88 | 0.88 | < 0.005 | < 0.005 | < 0.005 | 0.92 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.55 | 3.55 | < 0.005 | < 0.005 | < 0.005 | 3.73 |

## 3.11. New Pump Station Construction (2027) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.17 | 1.36 | 1.13 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.03 | 0.24 | 0.20 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 39.1 | 39.1 | < 0.005 | < 0.005 | — | 39.2 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.04 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 6.47 | 6.47 | < 0.005 | < 0.005 | — | 6.49 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.38 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 97.5 | 97.5 | < 0.005 | < 0.005 | 0.01 | 98.9 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.30 | 7.30 | < 0.005 | < 0.005 | < 0.005 | 7.63 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 29.3 | 29.3 | < 0.005 | < 0.005 | < 0.005 | 30.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.07 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 17.2 | 17.2 | < 0.005 | < 0.005 | 0.03 | 17.5 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.29 | 1.29 | < 0.005 | < 0.005 | < 0.005 | 1.34 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.16 | 5.16 | < 0.005 | < 0.005 | < 0.005 | 5.43 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.86 | 2.86 | < 0.005 | < 0.005 | < 0.005 | 2.90 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.21 | 0.21 | < 0.005 | < 0.005 | < 0.005 | 0.22 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.86 | 0.86 | < 0.005 | < 0.005 | < 0.005 | 0.90 |

## 3.13. Paving (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.09 | 0.09 | 0.82 | 5.32 | 0.01 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 933 | 933 | 0.04 | 0.01 | — | 936 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.15 | 0.95 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 166 | 166 | 0.01 | < 0.005 | — | 167 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.03 | 0.17 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.5 | 27.5 | < 0.005 | < 0.005 | — | 27.6 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.04 | 0.01 | 0.35 | 0.20 | < 0.005 | < 0.005 | 0.06 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 248 | 248 | 0.03 | 0.04 | 0.53 | 261 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.01 | < 0.005 | 0.06 | 0.04 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 44.1 | 44.1 | 0.01 | 0.01 | 0.04 | 46.4 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.30 | 7.30 | < 0.005 | < 0.005 | 0.01 | 7.68 |

## 3.15. Trench Excavation and Pipe Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 10.2 | 10.2 | 0.63 | 4.65 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 354 | 354 | 0.01 | < 0.005 | — | 355 |
| Architectural Coatings | — | 0.33 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 10.2 | 10.2 | 0.63 | 4.65 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 354 | 354 | 0.01 | < 0.005 | — | 355 |
| Architectural Coatings | — | 0.33 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 1.77 | 1.76 | 0.11 | 0.80 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 61.0 | 61.0 | < 0.005 | < 0.005 | — | 61.2 |
| Architectural Coatings | — | 0.06 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.32 | 0.32 | 0.02 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 10.1 | 10.1 | < 0.005 | < 0.005 | — | 10.1 |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.07 | 0.01 | 0.69 | 0.41 | < 0.005 | 0.01 | 0.11 | 0.11 | < 0.005 | 0.03 | 0.03 | — | 423 | 423 | 0.06 | 0.07 | 0.87 | 446 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.07 | 0.01 | 0.73 | 0.42 | < 0.005 | 0.01 | 0.11 | 0.11 | 0.01 | 0.03 | 0.03 | — | 423 | 423 | 0.06 | 0.07 | 0.02 | 445 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.01 | < 0.005 | 0.12 | 0.07 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | — | 73.1 | 73.1 | 0.01 | 0.01 | 0.06 | 76.8 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 12.1 | 12.1 | < 0.005 | < 0.005 | 0.01 | 12.7 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 3.26 | 3.26 | < 0.005 | < 0.005 | — | 3.29 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 3.26 | 3.26 | < 0.005 | < 0.005 | — | 3.29 |

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Total | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Total | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.68 | 7.68 | < 0.005 | < 0.005 | — | 7.70 |
| Total | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.68 | 7.68 | < 0.005 | < 0.005 | — | 7.70 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

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

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.07 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.03 | 0.02 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Total | 0.03 | 0.11 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.07 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | 0.08 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |
| Total | < 0.005 | 0.02 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

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

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

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

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

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

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

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |
| Total | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.10. Soil Carbon Accumulation By Vegetation Type

### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Demolition | 12/1/2026 | 2/28/2027 | 5.00 | 64.0 | Existing PS Demolition |
| Pavement Removal | Site Preparation | 1/1/2025 | 3/31/2025 | 5.00 | 64.0 | Pavement Removal for New Pipe |

| | | | | | | |
|---|---|---|---|---|---|---|
| New Pump Station Construction | Building Construction | 1/1/2025 | 3/31/2027 | 5.00 | 586 | New PS Construction |
| Paving | Paving | 4/1/2025 | 6/30/2025 | 5.00 | 65.0 | Asphalt Pavement of Road |
| Trench Excavation and Pipe Construction | Trenching | 2/1/2025 | 4/30/2025 | 5.00 | 63.0 | Excavation and Pipe Construction |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 6.00 | 84.0 | 0.37 |
| Existing Pump Station Demolition | Rubber Tired Dozers | Diesel | Average | 0.00 | 1.00 | 367 | 0.40 |
| Existing Pump Station Demolition | Concrete/Industrial Saws | Diesel | Average | 0.00 | 8.00 | 33.0 | 0.73 |
| Existing Pump Station Demolition | Excavators | Diesel | Tier 4 Final | 1.00 | 5.80 | 130 | 0.38 |
| Existing Pump Station Demolition | Air Compressors | Diesel | Average | 1.00 | 2.20 | 37.0 | 0.48 |
| Existing Pump Station Demolition | Plate Compactors | Diesel | Average | 1.00 | 0.60 | 8.00 | 0.43 |
| Existing Pump Station Demolition | Forklifts | Diesel | Average | 1.00 | 0.70 | 82.0 | 0.20 |
| Existing Pump Station Demolition | Generator Sets | Diesel | Average | 1.00 | 4.80 | 14.0 | 0.74 |
| Existing Pump Station Demolition | Pumps | Diesel | Average | 1.00 | 5.10 | 11.0 | 0.74 |
| Pavement Removal | Graders | Diesel | Average | 0.00 | 8.00 | 148 | 0.41 |
| Pavement Removal | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 9.80 | 24.0 | 0.38 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 9.80 | 130 | 0.38 |
| New Pump Station Construction | Cranes | Diesel | Average | 0.00 | 4.00 | 367 | 0.29 |
| New Pump Station Construction | Forklifts | Diesel | Average | 1.00 | 1.00 | 82.0 | 0.20 |
| New Pump Station Construction | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| New Pump Station Construction | Air Compressors | Diesel | Average | 1.00 | 0.90 | 37.0 | 0.48 |
| New Pump Station Construction | Dumpers/Tenders | Diesel | Average | 1.00 | 1.70 | 16.0 | 0.38 |
| New Pump Station Construction | Generator Sets | Diesel | Average | 1.00 | 6.90 | 14.0 | 0.74 |
| New Pump Station Construction | Plate Compactors | Diesel | Average | 1.00 | 1.70 | 8.00 | 0.43 |
| New Pump Station Construction | Pumps | Diesel | Average | 1.00 | 2.30 | 11.0 | 0.74 |
| New Pump Station Construction | Aerial Lifts | Diesel | Average | 1.00 | 1.00 | 46.0 | 0.31 |
| New Pump Station Construction | Off-Highway Trucks | Diesel | Average | 1.00 | 0.20 | 350 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 7.00 | 84.0 | 0.37 |
| Paving | Cement and Mortar Mixers | Diesel | Average | 0.00 | 6.00 | 10.0 | 0.56 |
| Paving | Pavers | Diesel | Tier 4 Final | 1.00 | 3.60 | 148 | 0.42 |
| Paving | Rollers | Diesel | Tier 4 Final | 1.00 | 3.60 | 48.0 | 0.38 |
| Paving | Off-Highway Trucks | Diesel | Tier 4 Final | 1.00 | 7.20 | 185 | 0.38 |
| Trench Excavation and Pipe Construction | Excavators | Diesel | Tier 4 Final | 1.00 | 5.00 | 130 | 0.38 |
| Trench Excavation and Pipe Construction | Pumps | Diesel | Average | 1.00 | 5.60 | 11.0 | 0.74 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Trench Excavation and Pipe Construction | Welders | Electric | Average | 1.00 | 2.80 | 36.0 | 0.45 |
| Trench Excavation and Pipe Construction | Plate Compactors | Diesel | Tier 4 Final | 1.00 | 2.80 | 3.00 | 0.43 |
| Trench Excavation and Pipe Construction | Plate Compactors | Gasoline | Average | 1.00 | 2.80 | 3.00 | 0.55 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Existing Pump Station Demolition | — | — | — | — |
| Existing Pump Station Demolition | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Existing Pump Station Demolition | Vendor | — | 8.40 | HHDT,MHDT |
| Existing Pump Station Demolition | Hauling | 0.69 | 9.18 | HHDT |
| Existing Pump Station Demolition | Onsite truck | — | — | HHDT |
| Pavement Removal | — | — | — | — |
| Pavement Removal | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Pavement Removal | Vendor | 0.00 | 8.40 | HHDT,MHDT |
| Pavement Removal | Hauling | 2.00 | 10.0 | HHDT |
| Pavement Removal | Onsite truck | — | — | HHDT |
| New Pump Station Construction | — | — | — | — |
| New Pump Station Construction | Worker | 12.6 | 11.7 | LDA,LDT1,LDT2 |
| New Pump Station Construction | Vendor | 0.27 | 8.40 | HHDT,MHDT |
| New Pump Station Construction | Hauling | 0.40 | 20.7 | HHDT |
| New Pump Station Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |

| | | | | |
|---|---|---|---|---|
| Paving | Vendor | — | 8.40 | HHDT,MHDT |
| Paving | Hauling | 2.40 | 28.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Trench Excavation and Pipe Construction | — | — | — | — |
| Trench Excavation and Pipe Construction | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Trench Excavation and Pipe Construction | Vendor | — | 8.40 | HHDT,MHDT |
| Trench Excavation and Pipe Construction | Hauling | 11.4 | 9.78 | HHDT |
| Trench Excavation and Pipe Construction | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| Trench Excavation and Pipe Construction | 0.00 | 0.00 | 3,000 | 1,000 | — |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (Building Square Footage) | Acres Paved (acres) |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Existing Pump Station Demolition | 0.00 | 0.00 | 0.00 | 2,000 | — |
| Pavement Removal | 2,900 | 4,300 | 0.00 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| General Light Industry | 0.00 | 0% |

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 33.8 | 204 | 0.03 | < 0.005 |
| 2026 | 0.00 | 204 | 0.03 | < 0.005 |
| 2027 | 0.00 | 204 | 0.03 | < 0.005 |

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 0 | 0.00 | 5,100 | 1,700 | — |

### 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| General Light Industry | 35,252 | 204 | 0.0330 | 0.0040 | 144,649 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| General Light Industry | 786,250 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| General Light Industry | 4.22 | — |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| General Light Industry | Other commercial A/C and heat pumps | R-410A | 2,088 | 0.30 | 4.00 | 4.00 | 18.0 |

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

| Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

| Equipment Type | Fuel Type | Number per Day | Hours per Day | Hours per Year | Horsepower | Load Factor |
|---|---|---|---|---|---|---|
| Emergency Generator | Diesel | 2.00 | 0.14 | 50.0 | 1,341 | 0.73 |

### 5.16.2. Process Boilers

| Equipment Type | Fuel Type | Number | Boiler Rating (MMBtu/hr) | Daily Heat Input (MMBtu/day) | Annual Heat Input (MMBtu/yr) |
|---|---|---|---|---|---|

## 5.17. User Defined

| Equipment Type | Fuel Type |
|---|---|

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

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

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Construction: Construction Phases | Information provided by the District. |
| Construction: Off-Road Equipment | Project-specific construction equipment list was provided by the District. |
| Construction: Trips and VMT | Construction trips were provided by the District. Worker commute trips are included in the new pump station construction phase. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase. |

| | |
|---|---|
| Operations: Vehicle Data | This project size is below BAAQMD screening criteria. Operation emissions are only estimated for the emergency generator. |
| Operations: Emergency Generators and Fire Pumps | Assume one generator at each site. |

## Alt A_Construction Off-Road Equipment Activity (Total Hours per Month)

| Equipment Type | CalEEMod Equipment Type | Fuel Type | Horsepower | Engine Tier | 2025 | | | | | | | | | | | | 2026 | | | | | Duration (day) | Average Hours per day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | |
| Excavators | Excavators | Diesel | 130 | Tier 4 | | | | | | | | | | | | | | | 96 | 176 | 44 | 65 | 4.9 |
| Air Compressors | Air Compressors | Diesel | 37 | Average | | | | | | | | | | | | | | | 88 | 44 | 22 | | 2.4 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | | | | | | | | | | | | | | | 42 | 44 | 44 | | 2.0 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | | | | | | | | | | 42 | 44 | | | 1.3 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | | | | | | | | | | | | | | | 126 | 132 | 66 | | 5.0 |
| Pumps | Pumps | Diesel | 11 | Average | | | | | | | | | | | | | | | 168 | 176 | | | 5.3 |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | |
| Drill and Mini Excavator | Excavators | Diesel | 24 | Tier 4 | 16 | 128 | | | | | | | | | | | | | | | | 43 | 3.3 |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | 16 | 128 | | | | | | | | | | | | | | | | | 3.3 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | | 21 | 40 | 11 | | | | | | | | | | | | | | 63 | 1.1 |
| Pumps for Dewatering | Pumps | Diesel | 11 | Average | | 48 | 168 | 128 | | | | | | | | | | | | | | | 5.5 |
| Welding Machine | Welders | Electric | 36 | N/A | | | 168 | 128 | | | | | | | | | | | | | | | 4.7 |
| Trench Compactor | Plate Compactors | Diesel | 3 | Tier 4 | | | 84 | 64 | | | | | | | | | | | | | | | 2.3 |
| Tamping Rammer Compacter | Plate Compactors | Gas | 3 | Average | | | 84 | 64 | | | | | | | | | | | | | | | 2.3 |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | |
| Water Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | 42 | 24 | | | | | | | | | | | | | 44 | 1.5 |
| Tack Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | 42 | 24 | | | | | | | | | | | | | | 1.5 |
| Asphalt Paver | Pavers | Diesel | 148 | Tier 4 | | | | 42 | 24 | | | | | | | | | | | | | | 1.5 |
| Tandem Roller | Rollers | Diesel | 48 | Tier 4 | | | | 42 | 24 | | | | | | | | | | | | | | 1.5 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | |
| Air Compressors | Air Compressors | Diesel | 37 | Average | 42 | 38 | 42 | 44 | 21 | 20 | 22 | 21 | | | | | | | | | | 325 | 0.8 |
| Dumpers/Tenders | Dumpers/Tenders | Diesel | 16 | Average | 126 | 114 | 126 | 132 | | | | | | | | | | | | | | | 1.5 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | 126 | 114 | 126 | 132 | | | | | | | | | | | | | | | 1.5 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | | 1.0 |
| Aerial Lifts | Aerial Lifts | Diesel | 46 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | | 1.0 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | 168 | 152 | 168 | 176 | 126 | 120 | 132 | 126 | 126 | 132 | 108 | 132 | 120 | 114 | 12 | | | | 5.9 |
| Pumps | Pumps | Diesel | 11 | Average | 168 | 152 | 168 | 176 | | | | | | | | | | | | | | | 2.0 |
| Cement Pump Truck | Off-Highway Trucks | Diesel | 350 | Average | | | | | 72 | | | | | | | | | | | | | | 0.2 |

Note: CalEEMod default values were used as project-specific hoursepower data were not available. Assumed diesel engine to be conservative when fuel type is unknown.

## Alt B_Construction Off-Road Equipment Activity (Total Hours per Month)

| Equipment Type | CalEEMod Equipment Type | Fuel Type | Horsepower | Engine Tier | 2025 | | | | | | | | | | | | 2026 | | | | | Duration (day) | Average Hours per day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | |
| Excavators | Excavators | Diesel | 130 | Tier 4 | | | | | | | | | | | | | | | 96 | 176 | 44 | 65 | 4.9 |
| Air Compressors | Air Compressors | Diesel | 37 | Average | | | | | | | | | | | | | | | 88 | 44 | 22 | | 2.4 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | | | | | | | | | | | | | | | 42 | 44 | 44 | | 2.0 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | | | | | | | | | | 42 | 44 | | | 1.3 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | | | | | | | | | | | | | | | 126 | 132 | 66 | | 5.0 |
| Pumps | Pumps | Diesel | 11 | Average | | | | | | | | | | | | | | | 168 | 176 | | | 5.3 |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | |
| Drill and Mini Excavator | Excavators | Diesel | 24 | Tier 4 | 16 | 304 | 288 | | | | | | | | | | | | | | | 64 | 9.5 |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | 16 | 304 | 288 | | | | | | | | | | | | | | | | 9.5 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | | | 52 | 163 | 89 | | | | | | | | | | | | | 65 | 4.7 |
| Pumps for Dewatering | Pumps | Diesel | 11 | Average | | | 56 | 176 | 96 | | | | | | | | | | | | | | 5.0 |
| Welding Machine | Welders | Electric | 36 | N/A | | | | 88 | 48 | | | | | | | | | | | | | | 2.1 |
| Trench Compactor | Plate Compactors | Diesel | 3 | Tier 4 | | | | 88 | 48 | | | | | | | | | | | | | | 2.1 |
| Tamping Rammer Compacter | Plate Compactors | Gas | 3 | Average | | | | 88 | 48 | | | | | | | | | | | | | | 2.1 |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | |
| Water Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | | | 12 | 132 | 84 | | | | | | | | | | 65 | 3.5 |
| Tack Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | | | 12 | 132 | 84 | | | | | | | | | | | 3.5 |
| Asphalt Paver | Pavers | Diesel | 148 | Tier 4 | | | | | | 12 | 132 | 84 | | | | | | | | | | | 3.5 |
| Tandem Roller | Rollers | Diesel | 48 | Tier 4 | | | | | | 12 | 132 | 84 | | | | | | | | | | | 3.5 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | |
| Air Compressors | Air Compressors | Diesel | 37 | Average | 42 | 38 | 42 | 44 | 21 | 20 | 22 | 21 | | | | | | | | | | 325 | 0.8 |
| Dumpers/Tenders | Dumpers/Tenders | Diesel | 16 | Average | 126 | 114 | 126 | 132 | | | | | | | | | | | | | | | 1.5 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | | 1.0 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | 168 | 152 | 168 | 176 | 126 | 120 | 132 | 126 | 126 | 132 | 108 | 132 | 120 | 114 | 12 | | | | 5.9 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | 126 | 114 | 126 | 132 | | | | | | | | | | | | | | | 1.5 |
| Pumps | Pumps | Diesel | 11 | Average | 168 | 152 | 168 | 176 | | | | | | | | | | | | | | | 2.0 |
| Aerial Lifts | Aerial Lifts | Diesel | 63 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | | 1.0 |
| Cement Pump Truck | Off-Highway Trucks | Diesel | 350 | Average | | | | | 56 | | | | | | | | | | | | | | 0.2 |

Note: CalEEMod default values were used as project-specific hoursepower data were not available. Assumed diesel engine to be conservative when fuel type is unknown.

## Alt C_Construction Off-Road Equipment Activity (Total Hours per Month)

| Equipment Type | CalEEMod Equipment Type | Fuel Type | Horsepower | Engine Tier | 2025 | | | | | | | | | | | | 2026 | | | | | | | | | | | | 2027 | | | Duration (day) | Average Hours per day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Excavators | Excavators | Diesel | 130 | Tier 4 | | | | | | | | | | | | | | | | | | | | | | | 176 | 152 | 40 | | 64 | 5.8 |
| Air Compressors | Air Compressors | Diesel | 37 | Average | | | | | | | | | | | | | | | | | | | | | | | 88 | 38 | 20 | | | 2.3 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | | | | | | | | | | | | | | | | | | | | | | | | | 40 | | | 0.6 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | | | | | | | | | | | | | | | | | | 44 | | | | | 0.7 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | | | | | | | | | | | | | | | | | | | | | | | 132 | 114 | 60 | | | 4.8 |
| Pumps | Pumps | Diesel | 11 | Average | | | | | | | | | | | | | | | | | | | | | | | 176 | 152 | | | | 5.1 |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drill and Mini Excavator | Excavators | Diesel | 24 | Tier 4 | 16 | 304 | 336 | 352 | 96 | | | | | | | | | | | | | | | | | | | | | | 108 | 10.2 |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | 16 | 304 | 336 | 352 | 96 | | | | | | | | | | | | | | | | | | | | | | | 10.2 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | | 120 | 168 | 176 | 88 | | | | | | | | | | | | | | | | | | | | | | 85 | 6.5 |
| Pumps for Dewatering | Pumps | Diesel | 11 | Average | | 120 | 168 | 176 | 136 | | | | | | | | | | | | | | | | | | | | | | | 7.1 |
| Welding Machine | Welders | Electric | 36 | N/A | | | 126 | 132 | 102 | | | | | | | | | | | | | | | | | | | | | | | 4.2 |
| Trench Compactor | Plate Compactors | Diesel | 3 | Tier 4 | | | 126 | 132 | 102 | | | | | | | | | | | | | | | | | | | | | | | 4.2 |
| Tamping Rammer Compacter | Plate Compactors | Gas | 3 | Average | | | 126 | 132 | 102 | | | | | | | | | | | | | | | | | | | | | | | 4.2 |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Water Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | | 30 | 120 | 132 | 126 | 6 | | | | | | | | | | | | | | | | | | 109 | 3.8 |
| Tack Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | | 30 | 120 | 132 | 126 | 6 | | | | | | | | | | | | | | | | | | | 3.8 |
| Asphalt Paver | Pavers | Diesel | 148 | Tier 4 | | | | | 30 | 120 | 132 | 126 | 6 | | | | | | | | | | | | | | | | | | | 3.8 |
| Tandem Roller | Rollers | Diesel | 48 | Tier 4 | | | | | 30 | 120 | 132 | 126 | 6 | | | | | | | | | | | | | | | | | | | 3.8 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Air Compressors | Air Compressors | Diesel | 37 | Average | 42 | 38 | 42 | 44 | 21 | 20 | 22 | 21 | | | | | 40 | 38 | 44 | 44 | 20 | 21 | 22 | 21 | | | | | | | | 0.9 |
| Dumpers/Tenders | Dumpers/Tenders | Diesel | 16 | Average | 126 | 114 | 126 | 132 | | | | | | | | | 120 | 114 | 132 | 132 | | | | | | | | | | | | 1.7 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | 42 | 22 | 21 | 21 | 21 | 19 | 22 | 19 | 19 | 23 | | 1.0 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | 168 | 152 | 168 | 176 | 126 | 120 | 132 | 126 | 126 | 132 | 108 | 132 | 280 | 266 | 28 | 176 | 120 | 126 | 132 | 126 | 126 | 126 | 114 | 132 | 114 | 114 | 138 | | 6.5 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | 126 | 114 | 126 | 132 | | | | | | | | | 120 | 114 | 132 | 132 | | | | | | | | | | | | 586 | 1.7 |
| Pumps | Pumps | Diesel | 11 | Average | 168 | 152 | 168 | 176 | | | | | | | | | 160 | 152 | 176 | 176 | | | | | | | | | | | | | 2.3 |
| Aerial Lifts | Aerial Lifts | Diesel | 63 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | 42 | 22 | 21 | 21 | 21 | 19 | 22 | 19 | 19 | 23 | | 1.0 |
| Cement Pump Truck | Off-Highway Trucks | Diesel | 350 | Average | | | | | 48 | | | | | | | | | | | | 40 | | | | | | | | | | | | 0.2 |

Note: CalEEMod default values were used as project-specific hoursepower data were not available. Assumed diesel engine to be conservative when fuel type is unknown.

## Alt D_Construction Off-Road Equipment Activity (Total Hours per Month)

| Equipment Type | CalEEMod Equipment Type | Fuel Type | Horsepower | Engine Tier | 2025 | | | | | | | | | | | | 2026 | | | | | | | | | | | | 2027 | | | Duration (day) | Average Hours per day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Excavators | Excavators | Diesel | 130 | Tier 4 | | | | | | | | | | | | | | | | | | | | | | | 176 | 152 | 40 | | 64 | 5.8 |
| Air Compressors | Air Compressors | Diesel | 37 | Average | | | | | | | | | | | | | | | | | | | | | | | 88 | 38 | 20 | | | 2.3 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | | | | | | | | | | | | | | | | | | | | | | | | | 40 | | | 0.6 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | | | | | | | | | | | | | | | | | | 44 | | | | | 0.7 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | | | | | | | | | | | | | | | | | | | | | | | 132 | 114 | 60 | | | 4.8 |
| Pumps | Pumps | Diesel | 11 | Average | | | | | | | | | | | | | | | | | | | | | | | 176 | 152 | | | | 5.1 |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drill and Mini Excavator | Excavators | Diesel | 24 | Tier 4 | 16 | 304 | 336 | 32 | | | | | | | | | | | | | | | | | | | | | | | 86 | 8.0 |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | 16 | 304 | 336 | 32 | | | | | | | | | | | | | | | | | | | | | | | | 8.0 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | | 120 | 168 | 48 | | | | | | | | | | | | | | | | | | | | | | | 63 | 5.3 |
| Pumps for Dewatering | Pumps | Diesel | 11 | Average | | 120 | 168 | 64 | | | | | | | | | | | | | | | | | | | | | | | | 5.6 |
| Welding Machine | Welders | Electric | 36 | N/A | | | 126 | 48 | | | | | | | | | | | | | | | | | | | | | | | | 2.8 |
| Trench Compactor | Plate Compactors | Diesel | 3 | Tier 4 | | | 126 | 48 | | | | | | | | | | | | | | | | | | | | | | | | 2.8 |
| Tamping Rammer Compacter | Plate Compactors | Gas | 3 | Average | | | 126 | 48 | | | | | | | | | | | | | | | | | | | | | | | | 2.8 |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Water Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | 78 | 126 | 54 | | | | | | | | | | | | | | | | | | | | | 65 | 4.0 |
| Tack Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | 78 | 126 | 54 | | | | | | | | | | | | | | | | | | | | | | 4.0 |
| Asphalt Paver | Pavers | Diesel | 148 | Tier 4 | | | | 78 | 126 | 54 | | | | | | | | | | | | | | | | | | | | | | 4.0 |
| Tandem Roller | Rollers | Diesel | 48 | Tier 4 | | | | 78 | 126 | 54 | | | | | | | | | | | | | | | | | | | | | | 4.0 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Air Compressors | Air Compressors | Diesel | 37 | Average | 42 | 38 | 42 | 44 | 21 | 20 | 22 | 21 | | | | | 40 | 38 | 44 | 44 | 20 | 21 | 22 | 21 | | | | | | | | 0.9 | |
| Dumpers/Tenders | Dumpers/Tenders | Diesel | 16 | Average | 126 | 114 | 126 | 132 | | | | | | | | | 120 | 114 | 132 | 132 | | | | | | | | | | | | 1.7 | |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | 42 | 22 | 21 | 21 | 21 | 19 | 22 | 19 | 19 | 23 | 1.0 | |
| Generator Sets | Generator Sets | Diesel | 14 | Average | 168 | 152 | 168 | 176 | 126 | 120 | 132 | 126 | 126 | 132 | 108 | 132 | 280 | 266 | 308 | 176 | 120 | 126 | 132 | 126 | 126 | 126 | 114 | 132 | 114 | 114 | 138 | 6.9 | |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | 126 | 114 | 126 | 132 | | | | | | | | | 120 | 114 | 132 | 132 | | | | | | | | | | | | 1.7 | |
| Pumps | Pumps | Diesel | 11 | Average | 168 | 152 | 168 | 176 | | | | | | | | | 160 | 152 | 176 | 176 | | | | | | | | | | | | 2.3 | |
| Aerial Lifts | Aerial Lifts | Diesel | 63 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | 42 | 22 | 21 | 21 | 21 | 19 | 22 | 19 | 19 | 23 | 1.0 | |
| Cement Pump Truck | Off-Highway Trucks | Diesel | 350 | Average | | | | | 48 | | | | | | | | | | | | 40 | | | | | | | | | | | 0.2 | |

Note: CalEEMod default values were used as project-specific hoursepower data were not available. Assumed diesel engine to be conservative when fuel type is unknown.

## Alt E_Construction Off-Road Equipment Activity (Total Hours per Month)

| Equipment Type | CalEEMod Equipment Type | Fuel Type | Horsepower | Engine Tier | 2025 | | | | | | | | | | | | 2026 | | | | | | | | | | | | 2027 | | | Duration (day) | Average Hours per day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Excavators | Excavators | Diesel | 130 | Tier 4 | | | | | | | | | | | | | | | | | | | | | | | 176 | 152 | 40 | | 64 | 5.8 |
| Air Compressors | Air Compressors | Diesel | 37 | Average | | | | | | | | | | | | | | | | | | | | | | | 88 | 38 | 20 | | | 2.3 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | | | | | | | | | | | | | | | | | | | | | | | | | 40 | | | 0.6 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | | | | | | | | | | | | | | | | | | 44 | | | | | 0.7 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | | | | | | | | | | | | | | | | | | | | | | | 132 | 114 | 60 | | | 4.8 |
| Pumps | Pumps | Diesel | 11 | Average | | | | | | | | | | | | | | | | | | | | | | | 176 | 152 | | | | 5.1 |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drill and Mini Excavator | Excavators | Diesel | 24 | Tier 4 | 16 | 304 | 304 | | | | | | | | | | | | | | | | | | | | | | | | | 64 | 9.8 |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | 16 | 304 | 304 | | | | | | | | | | | | | | | | | | | | | | | | | | 9.8 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | | 120 | 168 | 24 | | | | | | | | | | | | | | | | | | | | | | | | | 5.0 |
| Pumps for Dewatering | Pumps | Diesel | 11 | Average | | 120 | 168 | 64 | | | | | | | | | | | | | | | | | | | | | | | | | 5.6 |
| Welding Machine | Welders | Electric | 36 | N/A | | | 126 | 48 | | | | | | | | | | | | | | | | | | | | | | | | 63 | 2.8 |
| Trench Compactor | Plate Compactors | Diesel | 3 | Tier 4 | | | 126 | 48 | | | | | | | | | | | | | | | | | | | | | | | | | 2.8 |
| Tamping Rammer Compacter | Plate Compactors | Gas | 3 | Average | | | 126 | 48 | | | | | | | | | | | | | | | | | | | | | | | | | 2.8 |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Water Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | 78 | 126 | 30 | | | | | | | | | | | | | | | | | | | | | | | 3.6 |
| Tack Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | 78 | 126 | 30 | | | | | | | | | | | | | | | | | | | | | | 65 | 3.6 |
| Asphalt Paver | Pavers | Diesel | 148 | Tier 4 | | | | 78 | 126 | 30 | | | | | | | | | | | | | | | | | | | | | | | 3.6 |
| Tandem Roller | Rollers | Diesel | 48 | Tier 4 | | | | 78 | 126 | 30 | | | | | | | | | | | | | | | | | | | | | | | 3.6 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Air Compressors | Air Compressors | Diesel | 37 | Average | 42 | 38 | 42 | 44 | 21 | 20 | 22 | 21 | | | | | 40 | 38 | 44 | 44 | 20 | 21 | 22 | 21 | | | | | | | | | 0.9 |
| Dumpers/Tenders | Dumpers/Tenders | Diesel | 16 | Average | 126 | 114 | 126 | 132 | | | | | | | | | 120 | 114 | 132 | 132 | | | | | | | | | | | | | 1.7 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | 42 | 22 | 21 | 21 | 21 | 19 | 22 | 19 | 19 | 23 | | 1.0 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | 168 | 152 | 168 | 176 | 126 | 120 | 132 | 126 | 126 | 132 | 108 | 132 | 280 | 266 | 308 | 176 | 120 | 126 | 132 | 126 | 126 | 126 | 114 | 132 | 114 | 114 | 138 | 586 | 6.9 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | 126 | 114 | 126 | 132 | | | | | | | | | 120 | 114 | 132 | 132 | | | | | | | | | | | | | 1.7 |
| Pumps | Pumps | Diesel | 11 | Average | 168 | 152 | 168 | 176 | | | | | | | | | 160 | 152 | 176 | 176 | | | | | | | | | | | | | 2.3 |
| Aerial Lifts | Aerial Lifts | Diesel | 63 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | 42 | 22 | 21 | 21 | 21 | 19 | 22 | 19 | 19 | 23 | | 1.0 |
| Cement Pump Truck | Off-Highway Trucks | Diesel | 350 | Average | | | | | 48 | | | | | | | | | | | | 40 | | | | | | | | | | | | 0.2 |

Note: CalEEMod default values were used as project-specific hoursepower data were not available. Assumed diesel engine to be conservative when fuel type is unknown.

## Alt A_Construction Vehicle Trip Activity (Total Round Trips per Month)

| Vehicle Trip Activity | Travel Distance (Round Trip Miles) | Travel Destination | Fleet Mix (percentage) | | | | 2025 | | | | | | | | | | | | 2026 | | | | | Duration (day) | Average One-Way Trips per day | Average VMT per day | Trip Type | Trip Type - Average One-Way Trips per day | Average One-Way Trip Length (miles) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LDA | LHD | MHD | HHD | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | | | | | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Worker Commute Trips - demo | 23.4 | | 100% | | | | | | | | | | | | | | | | | | 132 | 132 | 66 | 65 | 10.15 | 118.80 | Worker Commute | 10.15 | 11.70 |
| Soil Import Truck Trips for Existing Pump Station | 6 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | | | | | | | | | | | | | | | 6 | | | 0.18 | 0.55 | Hauling | 0.68 | 5.91 |
| Demolition Haul Trips Soil from Excavation of Ex. Pump Station | 14 | Redwood Landfill | | | | 100% | | | | | | | | | | | | | | | 16 | | | | 0.49 | 3.45 | | | |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pavement Removal | 14 | Redwood Landfill | | | | 100% | 2 | 16 | | | | | | | | | | | | | | | | 43 | 0.84 | 5.86 | Hauling | 0.84 | 7.00 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Demolition Haul Trips Soil from Trench | 14 | Redwood Landfill | | | | 100% | | 5 | 13 | 9 | | | | | | | | | | | | | | 63 | 0.86 | 6.00 | Hauling | 2.57 | 7.67 |
| Demolition Haul Trips Agreggate Base | 14 | Redwood Landfill | | | | 100% | | 3 | 9 | 6 | | | | | | | | | | | | | | | 0.57 | 4.00 | | | |
| Soil Import Truck Trips for pit zone | 6 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | 3 | 9 | 6 | | | | | | | | | | | | | | | 0.57 | 1.71 | | | |
| Agregate Base Trucks Trips - Import | 28 | Dutra Materials | | | | 100% | | 3 | 9 | 6 | | | | | | | | | | | | | | | 0.57 | 8.00 | | | |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asphalt Trucks Trips - Import | 52 | Vulcan Materials Company 885 Lake Herman Rd | | | | 100% | | | | 14 | 8 | | | | | | | | | | | | | 44 | 1.00 | 26.00 | Hauling | 1.00 | 26.00 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Worker Commute Trips - other | 23.4 | | 100% | | | | 50 | 190 | 210 | 222 | 126 | 120 | 132 | 126 | 126 | 132 | 108 | 132 | 120 | 114 | | | | 325 | 11.74 | 137.38 | Worker Commute | 11.74 | 11.70 |
| Vendor Trips | 16.8 | | | | 50% | 50% | | | 3 | 3 | 3 | 9 | 9 | 7 | 3 | | | | | | | | | | 0.23 | 1.91 | Vendor | 0.23 | 8.40 |
| Concrete Trucks Trips | 52 | Crown Hill Ready Mix 650 Green Island Rd | | | | 100% | | 3 | 3 | | 42 | | | | | | | | | | | | | | 0.30 | 7.68 | Hauling | 0.46 | 19.16 |
| Demolition Haul Trips for excavation of new pump station | 14 | Redwood Landfill | | | | 100% | 27 | | | | | | | | | | | | | | | | | | 0.17 | 1.16 | | | |

Notes: Worker commute trips between January 2025 to February 2026 and March 2026 to May 2026 are included in the new pump station construction phase and the existing pump station demolition phase, respectively. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase.

## Alt B_Construction Vehicle Trip Activity (Total Round Trips per Month)

| Vehicle Trip Activity | Travel Distance (Round Trip Miles) | Travel Destination | Fleet Mix (percentage) | | | | 2025 | | | | | | | | | | | | 2026 | | | | | Duration (day) | Average One-Way Trips per day | Average VMT per day | Trip Type | Trip Type - Average One-Way Trips per day | Average One-Way Trip Length (miles) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LDA | LHD | MHD | HHD | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | | | | | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Worker Commute Trips - demo | 23.4 | | 100% | | | | | | | | | | | | | | | | | | 132 | 132 | 66 | | 10.15 | 118.80 | Worker Commute | 10.15 | 11.70 |
| Demolition Haul Trips for Excavation of Ex. Pump Station | 18 | Redwood Landfill | | | | 100% | | | | | | | | | | | | | | | 16 | | | 65 | 0.49 | 4.43 | Hauling | 0.68 | 8.18 |
| Soil Import Truck Trips for Existing Pump Station | 12 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | | | | | | | | | | | | | | | 6 | | | 0.18 | 1.11 | | | |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pavement Removal | 18 | Redwood Landfill | | | | 100% | 2 | 38 | 36 | | | | | | | | | | | | | | | 64 | 2.38 | 21.38 | Hauling | 2.38 | 9.00 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Demolition Haul Trips Soil from Trench | 18 | Redwood Landfill | | | | 100% | | | 20 | 61 | 33 | | | | | | | | | | | | | 65 | 3.51 | 31.57 | Hauling | 10.52 | 9.22 |
| Demolition Haul Trips Agreggate Base | 18 | Redwood Landfill | | | | 100% | | | 13 | 41 | 22 | | | | | | | | | | | | | | 2.34 | 21.05 | | | |
| Soil Import Truck Trips for pit zone | 12 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | | 13 | 41 | 22 | | | | | | | | | | | | | | 2.34 | 14.03 | | | |
| Agregate Base Trucks Trips - Import | 26 | Dutra Materials | | | | 100% | | | 13 | 41 | 22 | | | | | | | | | | | | | | 2.34 | 30.40 | | | |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asphalt Trucks Trips - Import | 52 | Vulcan Materials Company 885 Lake Herman Rd | | | | 100% | | | | | | 4 | 44 | 28 | | | | | | | | | | 65 | 2.34 | 60.80 | Hauling | 2.34 | 26.00 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Worker Commute Trips | 23.4 | | 100% | | | | 50 | 190 | 210 | 220 | 210 | 212 | 276 | 222 | 126 | 132 | 108 | 132 | 120 | 114 | | | | 325 | 14.29 | 167.18 | Worker Commute | 14.29 | 11.70 |
| Vendor Trips | 16.8 | | | | 50% | 50% | | | 20 | 3 | 3 | 9 | 9 | 7 | 3 | | | | | | | | | | 0.33 | 2.79 | Vendor | 0.33 | 8.40 |
| Concrete Trucks Trips | 52 | Crown Hill Ready Mix 650 Green Island Rd | | | | 100% | | | 4 | 3 | | 42 | | | | | | | | | | | | | 0.30 | 7.84 | Hauling | 0.47 | 19.96 |
| Demolition Haul Trips for excavation of new pump station | 18 | Redwood Landfill | | | | 100% | 27 | | | | | | | | | | | | | | | | | | 0.17 | 1.50 | | | |

Notes: Worker commute trips between January 2025 to February 2026 and March 2026 to May 2026 are included in the new pump station construction phase and the existing pump station demolition phase, respectively. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase.

## Alt C_Construction Vehicle Trip Activity (Total Round Trips per Month)

| Vehicle Trip Activity | Travel Distance (Round Trip Miles) | Travel Destination | Fleet Mix (percentage) | | | | 2025 | | | | | | | | | | | | 2026 | | | | | | | | | | | | 2027 | | | Duration (day) | Average One-Way Trips per day | Average VMT per day | Trip Type | Trip Type - Average One-Way Trips per day | Average One-Way Trip Length (miles) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LDA | LHD | MHD | HHD | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | | | | | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Demolition Haul Trips for Excavation of Ex. Pump Station | 20 | Redwood Landfill | | | | 100% | | | | | | | | | | | | | | | | | | | | | | | 16 | | | | 64 | 0.50 | 5.00 | Hauling | 0.69 | 9.18 |
| Soil Import Truck Trips for Existing Pump Station | 14 | Marin/Sonoma 8120 Binford Rd | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | | | | 0.19 | 1.31 | | | |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pavement Removal | 20 | Redwood Landfill | | | | | 2 | 38 | 42 | 44 | 12 | | | | | | | | | | | | | | | | | | | | | | | 108 | 2.56 | 25.56 | Hauling | 2.56 | 10.00 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Demolition Haul Trips Soil from Trench | 20 | Redwood Landfill | | | | 100% | | 45 | 63 | 66 | 30 | | | | | | | | | | | | | | | | | | | | | | | | 4.80 | 48.00 | | | | |
| Demolition Haul Trips Agreggate Base | 20 | Redwood Landfill | | | | 100% | | 30 | 42 | 44 | 22 | | | | | | | | | | | | | | | | | | | | | | | 85 | 3.25 | 32.47 | Hauling | 14.54 | 9.78 |
| Soil Import Truck Trips for pit zone | 14 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | 30 | 42 | 44 | 22 | | | | | | | | | | | | | | | | | | | | | | | | 3.25 | 22.73 | | | | |
| Agregate Base Trucks Trips - Import | 24 | Dutra Materials | | | | 100% | | 30 | 42 | 44 | 22 | | | | | | | | | | | | | | | | | | | | | | | | 3.25 | 38.96 | | | | |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asphalt Trucks Trips - Import | 54 | Vulcan Materials Company 885 Lake Herman Rd | | | | 100% | | | | | 10 | 40 | 44 | 42 | 2 | | | | | | | | | | | | | | | | | | | | 109 | 2.53 | 68.37 | Hauling | 2.53 | 27.00 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Worker Commute Trips | 23.4 | | 100% | | | | 50 | 190 | 210 | 220 | 204 | 240 | 264 | 252 | 132 | 132 | 108 | 132 | 160 | 114 | 132 | 132 | 120 | 126 | 132 | 126 | 126 | 126 | 114 | 132 | 114 | 114 | 66 | | 13.54 | 158.45 | Worker Commute | 13.54 | 11.70 |
| Vendor Trips | 16.8 | | | | 50% | 50% | | | 36 | 3 | 3 | 9 | 9 | 6 | 3 | | | | | | | 3 | 3 | 14 | 5 | 3 | | | | | | | | 586 | 0.33 | 2.78 | Vendor | 0.33 | 8.40 |
| Concrete Trucks Trips | 54 | Crown Hill Ready Mix 650 Green Island Rd | | | | 100% | | 7 | 7 | | 37 | | | | | | | | | | | | 33 | | | | | | | | | | | | 0.29 | 7.74 | Hauling | 0.42 | 21.61 |
| Demolition Haul Trips for excavation of new pump station | 20 | Redwood Landfill | | | | 100% | 22 | | | | | | | | | | | | 17 | | | | | | | | | | | | | | | | 0.13 | 1.33 | | | |

Notes: Worker commute trips are included in the new pump station construction phase. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase.

## Alt D_Construction Vehicle Trip Activity (Total Round Trips per Month)

| Vehicle Trip Activity | Travel Distance (Round Trip Miles) | Custom Travel Destination | Fleet Mix (percentage) | | | | 2025 | | | | | | | | | | | | 2026 | | | | | | | | | | | | 2027 | | | Duration (day) | Average One-Way Trips per day | Average VMT per day | Trip Type | Trip Type - Average One-Way Trips per day | Average One-Way Trip Length (miles) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LDA | LHD | MHD | HHD | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | | | | | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Demolition Haul Trips for Excavation of Ex. Pump Station | 20 | Redwood Landfill | | | | 100% | | | | | | | | | | | | | | | | | | | | | | | 16 | | | | 64 | 0.50 | 5.00 | Hauling | 0.69 | 9.18 |
| Soil Import Truck Trips for Existing Pump Station | 14 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | | | | | | | | | | | | | | | | | | | | | | | 6 | | | | 0.19 | 1.31 | | | |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pavement Removal | 20 | Redwood Landfill | | | | 100% | 2 | 38 | 42 | 4 | | | | | | | | | | | | | | | | | | | | | | | | 86 | 2.00 | 20.00 | Hauling | 2.00 | 10.00 |
| Demolition Haul Trips Soil from Trench | 20 | Redwood Landfill | | | | 100% | | 45 | 63 | 18 | | | | | | | | | | | | | | | | | | | | | | | | 63 | 4.00 | 40.00 | Hauling | 12.19 | 9.78 |
| Demolition Haul Trips Aggregate Base | 20 | Redwood Landfill | | | | 100% | | 30 | 42 | 14 | | | | | | | | | | | | | | | | | | | | | | | | | 2.73 | 27.30 | | | |
| Soil Import Truck Trips for pit zone | 14 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | 30 | 42 | 14 | | | | | | | | | | | | | | | | | | | | | | | | | 2.73 | 19.11 | | | |
| Aggregate Base Trucks Trips - Import | 24 | Dutra Materials | | | | 100% | | 30 | 42 | 14 | | | | | | | | | | | | | | | | | | | | | | | | | 2.73 | 32.76 | | | |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asphalt Trucks Trips - Import | 56 | Vulcan Materials Company 885 Lake Herman Rd | | | | 100% | | | | 26 | 42 | 18 | | | | | | | | | | | | | | | | | | | | | | | 65 | 2.65 | 74.09 | Hauling | 2.65 | 28.00 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Worker Commute Trips | 23.4 | | 100% | | | | 50 | 190 | 210 | 246 | 252 | 174 | 132 | 126 | 126 | 132 | 108 | 132 | 160 | 114 | 132 | 132 | 120 | 126 | 132 | 126 | 126 | 126 | 114 | 132 | 114 | 114 | 66 | 586 | 12.67 | 148.23 | Worker Commute | 12.67 | 11.70 |
| Vendor Trips | 16.8 | | | | 50% | 50% | | | 20 | 3 | 3 | 8 | 9 | 6 | 3 | | | | | | | 3 | 3 | 14 | 5 | 3 | | | | | | | | | 0.27 | 2.29 | Vendor | 0.27 | 8.40 |
| Concrete Trucks Trips | 52 | Crown Hill Ready Mix 650 Green Island Rd | | | | 100% | | 4 | 4 | | 37 | | | | | | | | | | | | 33 | | | | | | | | | | | | 0.27 | 6.92 | Hauling | 0.40 | 20.67 |
| Demolition Haul Trips for excavation of new pump station | 20 | Redwood Landfill | | | | 100% | 22 | | | | | | | | | | | | 17 | | | | | | | | | | | | | | | | 0.13 | 1.33 | | | |

Notes: Worker commute trips are included in the new pump station construction phase. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase.

## Alt E_Construction Vehicle Trip Activity (Total Round Trips per Month)

| Vehicle Trip Activity | Travel Distance (Round Trip Miles) | Travel Destination | Fleet Mix (percentage) | | | | 2025 | | | | | | | | | | | | 2026 | | | | | | | | | | | | 2027 | | | Duration (day) | Average One-Way Trips per day | Average VMT per day | Trip Type | Trip Type - Average One-Way Trips per day | Average One-Way Trip Length (miles) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LDA | LHD | MHD | HHD | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | | | | | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Demolition Haul Trips for Excavation of Ex. Pump Station | 20 | Redwood Landfill | | | | 100% | | | | | | | | | | | | | | | | | | | | | | | | 16 | | | | 64 | 0.50 | 5.00 | Hauling | 0.69 | 9.18 |
| Soil Import Truck Trips for Existing Pump Station | 14 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | | | | | | | | | | | | | | | | | | | | | | | | 6 | | | | 0.19 | 1.31 | | | |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pavement Removal | 20 | Redwood Landfill | | | | 100% | 2 | 38 | 38 | | | | | | | | | | | | | | | | | | | | | | | | | 64 | 2.44 | 24.38 | Hauling | 2.44 | 10.00 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Demolition Haul Trips Soil from Trench | 20 | Redwood Landfill | | | | 100% | | 45 | 63 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | 3.71 | 37.14 | | | |
| Demolition Haul Trips Aggregate Base | 20 | Redwood Landfill | | | | 100% | | 30 | 42 | 6 | | | | | | | | | | | | | | | | | | | | | | | | 63 | 2.48 | 24.76 | Hauling | 11.14 | 9.78 |
| Soil Import Truck Trips for pit zone | 14 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | 30 | 42 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | 2.48 | 17.33 | | | |
| Aggregate Base Trucks Trips - Import | 24 | Dutra Materials | | | | 100% | | 30 | 42 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | 2.48 | 29.71 | | | |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asphalt Trucks Trips - Import | 56 | Vulcan Materials Company 885 Lake Herman Rd | | | | 100% | | | | 26 | 42 | 10 | | | | | | | | | | | | | | | | | | | | | | | 65 | 2.40 | 67.20 | Hauling | 2.40 | 28.00 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Worker Commute Trips | 23.4 | | 100% | | | | 50 | 190 | 210 | 246 | 252 | 150 | 132 | 126 | 126 | 132 | 108 | 132 | 160 | 114 | 132 | 132 | 120 | 126 | 132 | 126 | 126 | 126 | 114 | 132 | 114 | 114 | 66 | | 12.59 | 147.27 | Worker Commute | 12.59 | 11.70 |
| Vendor Trips | 16.8 | | | | 50% | 50% | | | 20 | 3 | 3 | 8 | 9 | 6 | 3 | | | | | | | 3 | 3 | 14 | 5 | 3 | | | | | | | | | 0.27 | 2.29 | Vendor | 0.27 | 8.40 |
| Concrete Trucks Trips | 52 | Crown Hill Ready Mix 650 Green Island Rd | | | | 100% | | 4 | 4 | | 37 | | | | | | | | | | | | 33 | | | | | | | | | | | 586 | 0.27 | 6.92 | Hauling | 0.40 | 20.67 |
| Demolition Haul Trips for excavation of new pump station | 20 | Redwood Landfill | | | | 100% | 22 | | | | | | | | | | | | 17 | | | | | | | | | | | | | | | | 0.13 | 1.33 | | | |

Notes: Worker commute trips are included in the new pump station construction phase. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase.

# MEMORANDUM

**Date:** January 10, 2024

**Project:** 21202-14

**To:** Geoff Reilly, Senior Environmental Planner, WRA, Inc.

**From:** Yilin Tian, Project Environmental Engineer, Baseline Environmental Consulting

**Subject:** **Air Quality Health Risk Assessment for the Lynwood Pump Station Replacement Project**

Baseline Environmental Consulting (Baseline) has prepared this technical memorandum to evaluate the potential health risk impacts associated with the proposed Lynwood Pump Station Replacement Project (project) in Novato, California. The project would replace the existing North Marin Water District (NMWD) Lynwood Pump Station (Existing PS Site) in Novato, California, at a new location. The following five Alternatives are currently being considered for the project at the sites shown on **Figure 1**:

- **Alternative A:** Alternative A would include one new pump station (PS) with four pumps located at the Sunset Parkway Site (Site 1). Site 1 is located approximately 330 feet southwest of the Existing PS Site. The proposed PS footprint is approximately 2,000 square feet (SF) and the proposed pipe improvements are approximately 9,000 SF.

- **Alternative B:** Alternative B would include one new PS with four pumps located at the Ignacio Boulevard Site (Site 2). The Ignacio Boulevard Site is located approximately 1.3 miles south of the Existing PS Site. The proposed PS footprint is approximately 2,000 SF and the proposed pipe improvements are approximately 37,500 SF.

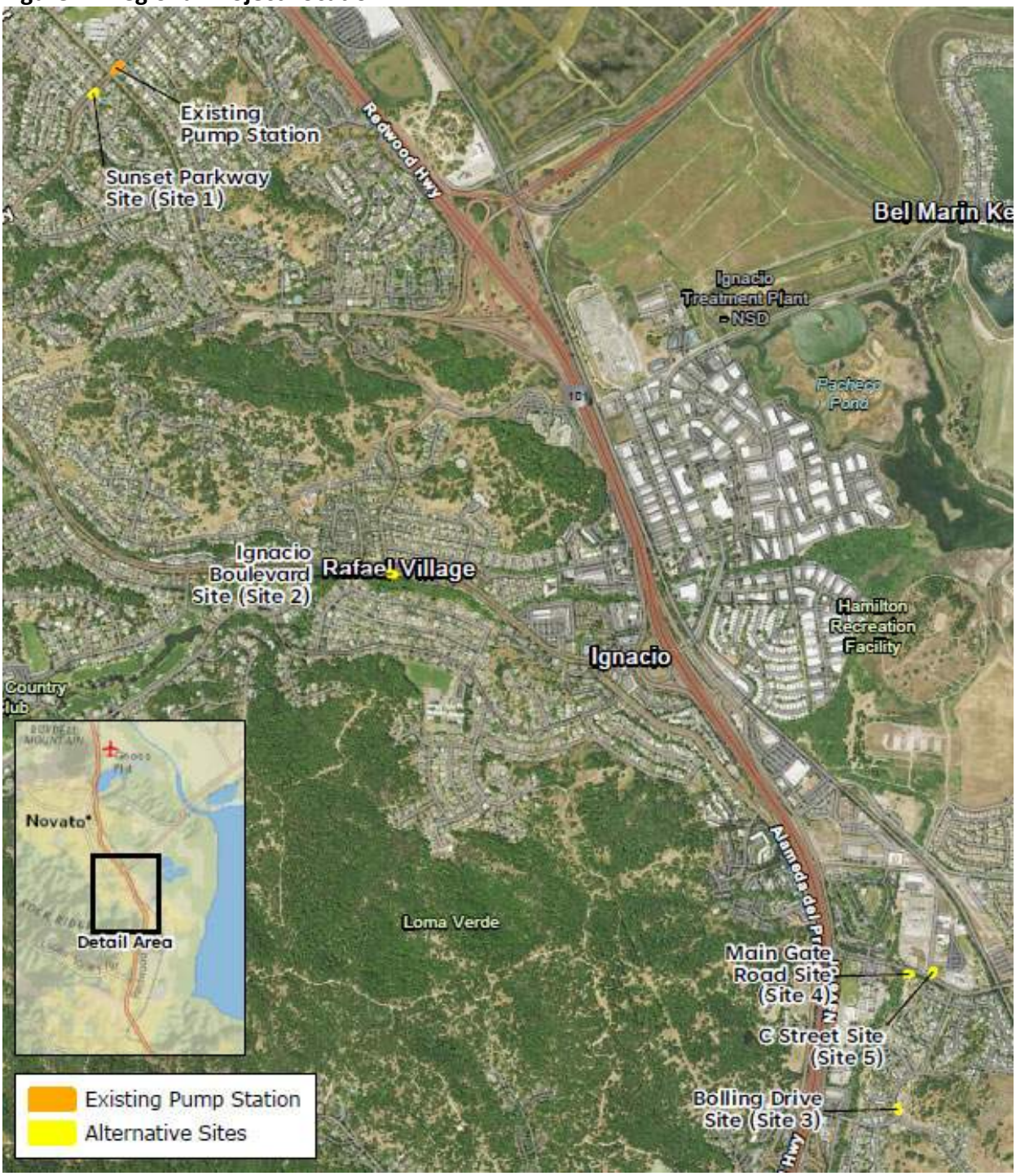
- **Alternative C:** Alternative C would include the construction of two new PS, one at the Ignacio Boulevard Site (Site 2) and one at the Bolling Drive Site (Site 3). The new PS at the Ignacio Boulevard Site would include three pumps and the new PS at Bolling Drive Site would include two pumps. The Boling Drive Site is located approximately 3 miles southeast of the Existing PS Site. The proposed PS footprint at the Ignacio Boulevard Site is approximately 1,800 SF and the proposed pipe improvements are approximately 37,500 SF. The proposed PS footprint at the Bolling Drive Site is approximately 1,600 SF and the proposed pipe improvements are approximately 31,000 SF.

- **Alternative D:** Alternative D would include the construction of two new PS, one at the Ignacio Boulevard Site (Site 2) with three pumps, and one at the Main Gate Road Site (Site 4) with two pumps. This alternative would fulfill the same objectives as Alternative C given that the Main Gate Road Site (Site 4) is located approximately 0.3 miles north of the Bolling Drive Site (Site 3). The proposed PS footprint at the Ignacio Boulevard Site is approximately 1,800 SF and the proposed pipe improvements are approximately 37,500 SF. The proposed PS footprint at the Main Gate Road Site is approximately 1,600 SF and the proposed pipe improvements are approximately 4,700 SF.

- **Alternative E:** Alternative E would include the construction of two new PS, one at the Ignacio Boulevard Site (Site 2) with three pumps, and one at the C Street Site (Site 5) with two pumps. This alternative would fulfill the same objectives as Alternative C given that the C Street Site is located approximately 0.3 miles north of the Bolling Drive Site (Site 3). The proposed PS footprint at the Ignacio Boulevard Site is approximately 1,800 SF and the proposed pipe improvements are approximately 37,500 SF. The proposed PS footprint at the C Street Site is approximately 1,600 SF and the proposed pipe improvements are approximately 1,200 SF.

This technical memorandum evaluates the potential health risk impacts to nearby sensitive receptors associated with diesel particulate matter (DPM) emissions during project construction. The health risks to nearby sensitive receptors were evaluated in accordance with guidance from the Office of Environmental Health Hazard Assessment (OEHHA) and the Bay Area Air Quality Management District's (BAAQMD's) recommended thresholds of significance. This study will be used to support environmental review of the project under the California Environmental Quality Act (CEQA).

**Figure 1: Regional Project Location**



## PROJECT ANALYSIS

During construction, the project would generate emissions of diesel particulate matter (DPM) and fine particulate matter ($PM_{2.5}$) from the exhaust of diesel-powered engines; these emissions are a complex mixture of soot, ash particulates, metallic abrasion particles, volatile organic compounds, and other components that can penetrate deeply into the lungs and contribute to a range of health problems. In 1998, the California Air Resources Board (CARB) identified DPM from diesel-powered engines as a toxic air contaminant (TAC) based on its potential to cause cancer and other adverse health effects.[1] While diesel exhaust is a complex mixture that includes hundreds of individual constituents, DPM is used as a surrogate measure of exposure, under California regulatory guidelines, for the mixture of chemicals that make up diesel exhaust as a whole.

### Health Risk Screening Thresholds

For risk assessment purposes, toxic air contaminants (TACs) are separated into carcinogens and non-carcinogens. Carcinogens are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per 1 million exposed individuals over a lifetime of exposure. Non-carcinogenic substances are generally assumed to have a safe threshold below which health impacts would not occur. Acute and chronic exposure to non-carcinogens is expressed as a hazard index (HI), which is the sum of expected exposure levels divided by the corresponding acceptable exposure levels.

The project site is located in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the BAAQMD. The BAAQMD has adopted thresholds of significance to assist lead agencies in the evaluation and mitigation of air quality impacts under CEQA.[2] The BAAQMD's recommend health risk thresholds are summarized in **Table 1**.

[1] California Air Resources Board (CARB), 1998. Initial Statement of Reasons for Rulemaking; Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant, June.
[2] Bay Area Air Quality Management District (BAAQMD), 2023. CEQA Air Quality Guidelines, May.

**Table 1: BAAQMD Health Risk Screening Thresholds**

| Impact Analysis | Pollutant | Screening Thresholds |
|---|---|---|
| Local Community Risks and Hazards (Operation and/or Construction) | $PM_{2.5}$ (project) | 0.3 µg/$m^3$ (annual average) |
| | TACs (project) | Cancer risk increase > 10 in one million<br>Chronic hazard index > 1.0 |
| | $PM_{2.5}$ (cumulative) | 0.8 µg/$m^3$ (annual average) |
| | TACs (cumulative) | Cancer risk > 100 in one million<br>Chronic hazard index > 10.0 |

Notes: TACs = Toxic air contaminants; $PM_{2.5}$ = Fine particulate matter; µg/$m^3$ = micrograms per cubic meter.
Source: BAAQMD, 2023. 2022 California Environmental Quality Act Air Quality Guidelines. April.

## Sensitive Receptors

Sensitive receptors are areas where individuals are more susceptible to the adverse effects of poor air quality. Sensitive receptors include, but are not limited to, hospitals, schools, daycare facilities, parks, elderly housing, and convalescent facilities. Residential areas are also considered sensitive receptors because people are often at home for extended periods, thereby increasing the duration of exposure to potential air contaminants. Existing sensitive land uses in the vicinity of each alternative site location are listed below:

- **Site 1:** Residences to the north, west, south, and east as close as 40 feet and the Lynwood Elementary School about 580 feet to the north of Site 1. No offsite worker receptors are within 1,000 feet of Site 1.

- **Site 2:** Residences to the north, west, south, and east of Site 2 as close as 140 feet. No offsite worker receptors are within 1,000 feet of Site 2.

- **Site 3:** Residences to the west, east, and south as close as 95 feet; North Bay Children's Center, Tinker Way School Age Program about 585 feet to the north; the Novato Children's Center about 650 feet to the northwest; and, the Hamilton Meadow Park School about 880 feet to the northwest. The playground within the Clark A Blasdel Park is located about 300 feet north of Site 3. Offsite worker receptors are located at the Novato Fire Station 65 about 135 feet to the south and along Nave Drive as close as 635 feet west of Site 3.

- **Site 4:** Residences to the east, south, and northwest as close as 155 feet; the Hamilton Meadow Park School about 300 feet to the southwest; the Novato Charter School about 375 feet to the northeast; the North Bay Children Center, C Street about 480 feet to the northeast; the Wonder Nook Preschool about 690 feet to the north; the North Bay Children's Center, Tinker Way School Age Program about 950 feet to the south; and, the

Espino C Family Child Care about 975 feet to the east of Site 4. Offsite worker receptors are located about 860 feet to the northwest and 750 feet to the northeast of Site 4.

- **Site 5:** Residences to the east, south, and northwest as close as 105 feet; the Hamilton Meadow Park School about 630 feet to the southwest; the Novato Charter School about 200 feet to the north; the North Bay Children Center, C Street about 330 feet to the north; the Wonder Nook Preschool about 880 feet to the northwest; the North Bay Children's Center, Tinker Way School Age Program about 980 feet to the south; and, the Espino C Family Child Care about 670 feet to the southeast of Site 5. Offsite worker receptors are located about 860 feet to the northwest and 650 feet to the northeast of Site 5.

## Diesel Particulate Matter Emissions from Construction

Project construction would generate DPM and $PM_{2.5}$ emissions from the exhaust of off-road diesel construction equipment and fugitive $PM_{2.5}$ emissions from construction activities. The BAAQMD recommends using the most recent version of the California Emissions Estimator Model (CalEEMod Version 2022.1) to estimate air pollutant emissions from construction of a project. CalEEMod uses widely accepted models for emission estimates combined with appropriate default data for a variety of land-use projects that can be used if site-specific information is not available. The primary input data used to estimate emissions associated with construction of the project were provided by NMWD and contain information on construction duration, import and export volumes, construction-related vehicle trips, trip lengths, and off-road construction equipment inventory and usage. Construction information provided by NMWD and a copy of the CalEEMod report for each Alternative of the proposed project, which summarize the input parameters, assumptions, and findings, are included in **Attachment A**.

For this analysis, emissions of exhaust $PM_{10}$ were used as a surrogate for DPM, which is a conservative assumption because more than 90 percent of DPM is less than 1 micron in diameter.[3] The total DPM emissions from construction activities at the five alternative site locations are presented in **Table 2**. As shown in **Table 2**, on-site construction DPM emission from offroad equipment at Site 1 would be the highest. As described above, Site 1 (Alternative A) is the closest Alternative to sensitive receptors, with residential receptors as close as 40 feet across Sunset Parkway to the north. Therefore, Site 1 (Alternative A) was selected as a reasonable worst-case scenario among the five Alternative sites to evaluate the potential exposure of nearby sensitive receptors to TACs.

[3] California Air Resources Board (CARB), 2016. Overview: Diesel Exhaust and Health. Available at: https://www.arb.ca.gov/research/diesel/diesel-health.htm, accessed January 13, 2017. Last updated April 12, 2016.

**Table 2: On-site DPM Emissions (Pounds)**

| Construction Emission Scenario | Total On-site DPM Emissions from Offroad Construction Equipment |
|---|---|
| Site 1 (Alternative A) | 21.8 |
| Site 2 (Alternative B) | 19.4 |
| Site 3 (Alternative C, excluding Site 2 emissions) | 18.7 |
| Site 4 (Alternative D, excluding Site 2 emissions) | 15.8 |
| Site 5 (Alternative E, excluding Site 2 emissions) | 15.6 |

Notes: DPM emissions from existing pump station demolition were included for Site 1 but not for Site 2 to 5 due to the distances between the existing pump station and Site 2 to 5. DPM emissions from Site 3 to 5 were estimated by subtracting the total on-site offroad construction equipment DPM emissions estimated for Alternative B (Site 2 only) from the total on-site offroad construction equipment DPM emissions estimated for Alternative C through E.
Source: **Attachment A**.

## Health Risk Analysis

### *Exposure to Diesel Particulate Matter Emissions during Construction*

In accordance with guidance from the BAAQMD[4] and OEHHA,[5] a health risk assessment was conducted to estimate the incremental increase in cancer risk and chronic HI to sensitive receptors from DPM emissions during construction. The acute HI for DPM was not calculated because an acute reference exposure level has not been approved by OEHHA and CARB, and the BAAQMD does not recommend analysis of acute non-cancer health hazards from construction activity.

The annual average concentrations of DPM and exhaust $PM_{2.5}$ during construction were estimated within 1,000 feet of the project using the U.S. Environmental Protection Agency's Industrial Source Complex Short Term (ISCST3) air dispersion model. The input parameters and assumptions used for estimating the dispersion of DPM and $PM_{2.5}$ from off-road diesel construction equipment are included in **Attachment A**.

Daily emissions from construction were assumed to primarily occur between 7 a.m. and 6 p.m. Monday through Friday, and between 10 a.m. and 5 p.m. on Saturdays, in accordance with the construction hours established in the City of Novato Municipal Code Division 19.22.070. The exhaust and fugitive dust from off-road equipment was represented in the ISCST3 model as an area source encompassing the project site. Exhaust and fugitive dust emission rates for off-road

[4] Bay Area Air Quality Management District (BAAQMD), 2023. CEQA Air Quality Guidelines, May.
[5] Office of Environmental Health Hazard Assessment (OEHHA), 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, May.

equipment were based on the actual hours of work and averaged over the entire duration of construction.

A uniform grid of receptors spaced 20 meters apart was created for ground level receptors at heights of 1.5 meters to develop isopleths (i.e., concentration contours) around the project site that illustrate the air dispersion pattern from the emissions sources. In addition, discrete receptors were created for ground level receptors at heights of 1.5 meters to calculate concentrations at the maximally exposed individual resident (MEIR) and the maximally exposed individual student (MEIS). The ISCST3 model input parameters included 5 years of BAAQMD meteorological data from the Sonoma Baylands Meteorological Site located about 5.7 miles to the northeast of the Existing PS Site.

The air dispersion model was used to estimate annual average concentrations of $PM_{10}$ and $PM_{2.5}$ from project construction emissions for Alternative A (the worst-case scenario). Based on the results of the air dispersion model (**Attachment A**), potential off-site health risks were evaluated for the MEIR on the ground floor of a single-family residence located about 40 feet to the north of Site 1, and the MEIS at Lynwood Elementary School located about 580 feet to the north of Site 1 (see **Figure 2**).

For the MEIR, the incremental increase in cancer risk from on-site DPM emissions during project construction was assessed for an infant exposed to DPM starting from birth. It was conservatively assumed that the infant would be exposed to annual average DPM concentrations over the entire construction duration of 17 months. This exposure scenario represents the most sensitive individual who could be exposed to adverse air quality conditions in the vicinity of the project site. For the MEIS, it was conservatively assumed that a student in the age of 2-16 years old would attend school at the Lynwood Elementary School during the entire construction duration of 17 months.

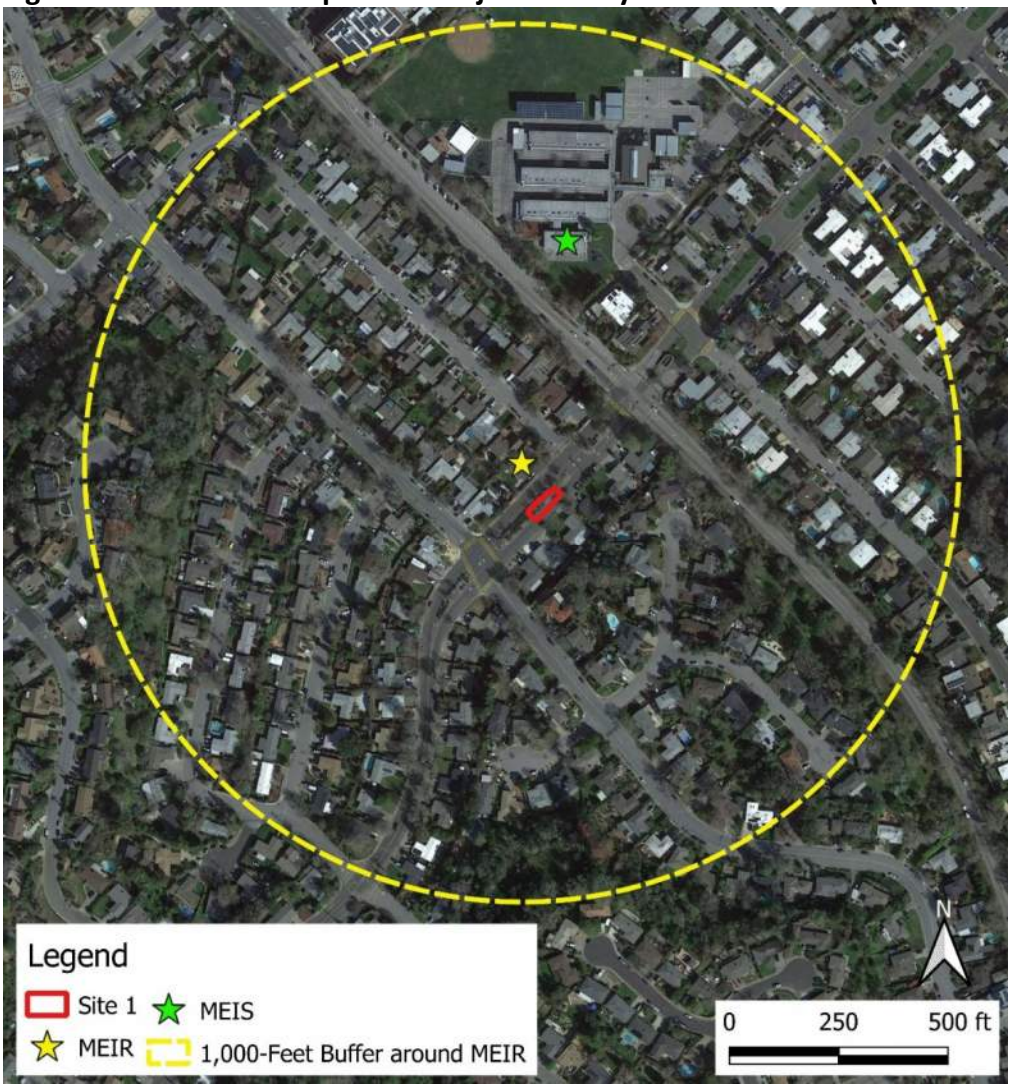
Estimates of the health risks at the MEIR and MEIS from exposure to DPM and $PM_{2.5}$ concentrations during project construction are summarized and compared to the BAAQMD's thresholds of significance in **Table 3**. The estimated excess cancer risk and chronic HI for DPM and annual average $PM_{2.5}$ concentration from construction emissions at Site 1 (Alternative A) were below the thresholds of significance. Therefore, construction of the project would not expose existing sensitive receptors to substantial concentrations of TACs and $PM_{2.5}$ from construction of Alternative A (the worst-case scenario) and this impact would be less than significant for Alternatives A through E.

**Table 3: Health Risks during Project Construction for Alternative A (Worst-Case Scenario)**

| Emissions Scenario | Receptor | Diesel Particulate Matter | | $PM_{2.5}$ Annual Average Concentration ($\mu g/m^3$) |
|---|---|---|---|---|
| | | Cancer Risk (per million) | Chronic Hazard Index | |
| Construction Exhaust (Site 1) | MEIR | 9.39 | 0.01 | 0.04 |
| | MEIS | 0.75 | <0.01 | 0.01 |
| **Thresholds of Significance** | | 10 | 1.0 | 0.3 |
| **Exceed Threshold?** | | No | No | No |

Notes: $\mu g/m^3$ = micrograms per cubic meter
Source: **Attachment A**

**Figure 2: Sensitive Receptors in Project Vicinity for Alternative A (Worst-Case Scenario)**



***Exposure to Diesel Particulate Matter Emissions during Operation***

In this analysis, it was assumed that a 1,000-kilowatt emergency diesel generator would be required for each Alternative, and the generator would be used for non-emergency operation up to 50 hours per year for routine testing and maintenance. Operation of stationary sources is subject to BAAQMD permitting requirements to minimize the potential exposure of nearby sensitive receptors to TACs. In accordance with BAAQMD's Regulation 2-5, New Source Review of Toxic Air Contaminants, the BAAQMD does not issue permits for generators that would result in an excess cancer risk greater than 10 in 1 million or a chronic HI greater than 1.0. Therefore, operation of the project would not expose existing sensitive receptors to substantial concentrations of TACs and $PM_{2.5}$ for Alternatives A through E.

***Cumulative Toxic Air Contaminant Emissions***

In addition to a project's individual TAC emissions during construction and operation, the potential cumulative health risks to sensitive receptors from existing TACs were evaluated. Cumulative health risks were estimated at the MEIR for Alternative A to represent the worst-case-exposure scenario for sensitive receptors in the project vicinity.

Conservatively assuming the project's emergency generators would result in the BAAQMD's maximum permissible excess cancer risk of 10 in 1 million due to emissions of DPM, the BAAQMD Health Risk Calculator (Beta Version 5.0)[6] was used to back-calculate the equivalent screening-level health risk values for chronic HI and annual average $PM_{2.5}$ concentrations. Based on the emission rate for DPM (0.0071 pounds per day) that would result in a maximum cancer risk of 10 in 1 million, the associated fraction of $PM_{2.5}$ emissions from an emergency generator were estimated using the CARB's speciation profiles. The supporting health risk calculations are included in **Attachment A**.

Based on the BAAQMD's permitted stationary source risk map,[7] there are no existing stationary sources within 1,000 feet of the MEIR. At the time of preparation of this analysis, there are no reasonably foreseeable future projects within 1,000 feet of Site 1 that would introduce a new source of TAC and/or $PM_{2.5}$ emissions.

[6] Bay Area Air Quality Management District (BAAQMD), 2022. Health Risk Calculator with Distance Multipliers (Beta 5.0). Available at: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools/health-risk-screening-and-modeling.
[7] Bay Area Air Quality Management District (BAAQMD), 2023. Stationary Source Screening Map. Available at: https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=845658c19eae4594b9f4b805fb9d89a3.

Preliminary health risk screening values at the MEIR from exposure to mobile sources of TACs were estimated based on the BAAQMD's Mobile Source Screening Map,[8] which provides health risk estimates reflective of 2022 for residents living near roadways, rail lines, and rail yards.

Estimates of the cumulative health risks at the MEIR for the project are summarized and compared to the cumulative thresholds of significance in **Table 4**. As shown in **Table 4,** the cumulative cancer risk, cumulative chronic HI, and annual average $PM_{2.5}$ at the MEIR location were below the BAAQMD's cumulative thresholds for Alternative A (the worst-case scenario). Therefore, the exposure of existing sensitive receptors to substantial concentrations of TACs and $PM_{2.5}$ from implementation of the project would not be cumulatively considerable and the impact would be less than significant for Alternatives A through E.

**Table 4: Cumulative Health Risks for Alternative A (Worst-Case Scenario)**

| Source | Source Type | Ref | Diesel Particulate Matter | | $PM_{2.5}$ Annual Average Concentration ($\mu g/m^3$) |
|---|---|---|---|---|---|
| | | | Cancer Risk (per million) | Chronic Hazard Index | |
| **Project** | | | | | |
| Off-Road Construction Equipment | Diesel Exhaust | | 9.39 | 0.01 | 0.04 |
| *Emergency Generator* | *Diesel Generator* | 1 | 9.99 | <0.01 | 0.01 |
| **Existing Mobile Sources** | | | | | |
| Roadway | Mobile | 2 | 9.5 | 0.03 | 0.2 |
| **Cumulative Health Risks** | | | 28.9 | <0.1 | 0.3 |
| **Thresholds of Significance** | | | 100 | 10.0 | 0.8 |
| **Exceed Threshold?** | | | No | No | No |

Notes: $\mu g/m^3$=micrograms per cubic meter; HI=hazard index; NA=not applicable; Ref=reference
Health risk screening values derived using the following BAAQMD tools and methodologies:
1) BAAQMD's Health Risk Calculator (Beta Version 5.0)
2) BAAQMD Beta version Mobile Source Screening Map, 2023
Source: **Attachment A**

[8] Bay Area Air Quality Management District (BAAQMD), 2023. Bay Area Air Quality Management District Mobile Source Screening Map, Beta Version. Available at: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools/health-risk-screening-and-modeling.

## CONCLUSION

Based on the conservative analysis of the potential health risks related to emissions from off-road construction equipment during project construction and emergency diesel generators during project operation, the project would not result in a substantial increase in the exposure of sensitive receptors to DPM and $PM_{2.5,}$ and the health risk impacts would be less than significant for Alternatives A through E.

# Attachment A

# Supporting Air Quality Calculations

# Lynwood Alt A Custom Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Lynwood Alt A |
| Construction Start Date | 1/2/2025 |
| Operational Year | 2026 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.60 |
| Precipitation (days) | 39.6 |
| Location | 38.084624543920626, -122.56262647392842 |
| County | Marin |
| City | Novato |
| Air District | Bay Area AQMD |
| Air Basin | San Francisco Bay Area |
| TAZ | 913 |
| EDFZ | 2 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.21 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 2.00 | 1000sqft | 0.05 | 2,000 | 0.00 | — | — | New Pump Station |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 2.2. Construction Emissions by Year, Unmitigated

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

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 8.71 | 8.62 | 2.43 | 6.55 | 0.01 | 0.10 | 0.15 | 0.25 | 0.09 | 0.04 | 0.12 | — | 1,029 | 1,029 | 0.06 | 0.04 | 0.85 | 1,044 |
| 2026 | 0.29 | 0.25 | 1.61 | 3.65 | 0.01 | 0.06 | 0.12 | 0.18 | 0.05 | 0.03 | 0.08 | — | 589 | 589 | 0.02 | 0.01 | 0.35 | 593 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 8.67 | 8.60 | 2.11 | 5.57 | 0.01 | 0.09 | 0.14 | 0.23 | 0.08 | 0.03 | 0.11 | — | 806 | 806 | 0.04 | 0.03 | 0.02 | 816 |
| 2026 | 0.51 | 0.43 | 2.93 | 5.05 | 0.01 | 0.10 | 0.23 | 0.33 | 0.10 | 0.05 | 0.15 | — | 915 | 915 | 0.04 | 0.02 | 0.02 | 923 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 1.63 | 1.59 | 1.14 | 1.95 | < 0.005 | 0.04 | 0.08 | 0.12 | 0.04 | 0.02 | 0.06 | — | 365 | 365 | 0.02 | 0.01 | 0.18 | 369 |
| 2026 | 0.09 | 0.08 | 0.52 | 0.89 | < 0.005 | 0.02 | 0.04 | 0.06 | 0.02 | 0.01 | 0.03 | — | 162 | 162 | 0.01 | < 0.005 | 0.06 | 164 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.30 | 0.29 | 0.21 | 0.36 | < 0.005 | 0.01 | 0.01 | 0.02 | 0.01 | < 0.005 | 0.01 | — | 60.3 | 60.3 | < 0.005 | < 0.005 | 0.03 | 61.1 |
| 2026 | 0.02 | 0.01 | 0.09 | 0.16 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 26.9 | 26.9 | < 0.005 | < 0.005 | 0.01 | 27.1 |

## 2.5. Operations Emissions by Sector, Unmitigated

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

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.02 | 0.06 | < 0.005 | 0.09 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.36 | 0.36 | < 0.005 | < 0.005 | — | 0.36 |
| Energy | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38.9 | 38.9 | < 0.005 | < 0.005 | — | 39.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Stationary | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.36 | 0.37 | 1.40 | 0.89 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 2.22 | 199 | 201 | 0.24 | < 0.005 | 0.52 | 208 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | — | 0.05 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38.9 | 38.9 | < 0.005 | < 0.005 | — | 39.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Stationary | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.34 | 0.36 | 1.40 | 0.80 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 2.22 | 198 | 200 | 0.24 | < 0.005 | 0.52 | 208 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.01 | 0.06 | < 0.005 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.18 | 0.18 | < 0.005 | < 0.005 | — | 0.18 |
| Energy | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38.9 | 38.9 | < 0.005 | < 0.005 | — | 39.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Stationary | 0.33 | 0.30 | 1.35 | 0.77 | < 0.005 | 0.04 | 0.00 | 0.04 | 0.04 | 0.00 | 0.04 | 0.00 | 154 | 154 | 0.01 | < 0.005 | 0.00 | 155 |
| Total | 0.34 | 0.36 | 1.37 | 0.83 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 2.22 | 195 | 197 | 0.24 | < 0.005 | 0.52 | 205 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | < 0.005 | 0.01 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.03 | 0.03 | < 0.005 | < 0.005 | — | 0.03 |
| Energy | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 6.43 | 6.43 | < 0.005 | < 0.005 | — | 6.46 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.28 | 0.42 | 0.02 | < 0.005 | — | 0.91 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.22 | 0.00 | 0.22 | 0.02 | 0.00 | — | 0.77 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.09 | 0.09 |
| Stationary | 0.06 | 0.06 | 0.25 | 0.14 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 25.5 | 25.5 | < 0.005 | < 0.005 | 0.00 | 25.6 |
| Total | 0.06 | 0.07 | 0.25 | 0.15 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.37 | 32.3 | 32.6 | 0.04 | < 0.005 | 0.09 | 33.9 |

# 3. Construction Emissions Details

## 3.1. Existing PS Demolition (2026) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.25 | 0.21 | 1.56 | 3.26 | 0.01 | 0.06 | — | 0.06 | 0.05 | — | 0.05 | — | 487 | 487 | 0.02 | < 0.005 | — | 489 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.25 | 0.21 | 1.56 | 3.26 | 0.01 | 0.06 | — | 0.06 | 0.05 | — | 0.05 | — | 487 | 487 | 0.02 | < 0.005 | — | 489 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.04 | 0.28 | 0.58 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 86.8 | 86.8 | < 0.005 | < 0.005 | — | 87.1 |
| Demolition | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.11 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 14.4 | 14.4 | < 0.005 | < 0.005 | — | 14.4 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.04 | 0.04 | 0.02 | 0.37 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 85.9 | 85.9 | < 0.005 | < 0.005 | 0.32 | 87.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 15.4 | 15.4 | < 0.005 | < 0.005 | 0.03 | 16.2 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.03 | 0.33 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 80.1 | 80.1 | < 0.005 | < 0.005 | 0.01 | 81.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 15.4 | 15.4 | < 0.005 | < 0.005 | < 0.005 | 16.2 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 14.3 | 14.3 | < 0.005 | < 0.005 | 0.02 | 14.5 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.74 | 2.74 | < 0.005 | < 0.005 | < 0.005 | 2.88 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.37 | 2.37 | < 0.005 | < 0.005 | < 0.005 | 2.41 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.45 | 0.45 | < 0.005 | < 0.005 | < 0.005 | 0.48 |

## 3.3. Pavement Removal (2025) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.02 | 0.02 | 0.09 | 1.33 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 246 | 246 | 0.01 | < 0.005 | — | 247 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.01 | 0.16 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 29.0 | 29.0 | < 0.005 | < 0.005 | — | 29.1 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | < 0.005 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 4.80 | 4.80 | < 0.005 | < 0.005 | — | 4.81 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 22.7 | 22.7 | < 0.005 | < 0.005 | < 0.005 | 23.9 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.68 | 2.68 | < 0.005 | < 0.005 | < 0.005 | 2.82 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.44 | 0.44 | < 0.005 | < 0.005 | < 0.005 | 0.47 |

## 3.5. New Pump Station Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.19 | 0.15 | 1.24 | 1.03 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 201 | 201 | 0.01 | < 0.005 | — | 202 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.19 | 0.15 | 1.24 | 1.03 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 201 | 201 | 0.01 | < 0.005 | — | 202 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.13 | 0.11 | 0.89 | 0.74 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 144 | 144 | 0.01 | < 0.005 | — | 144 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.16 | 0.13 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 23.8 | 23.8 | < 0.005 | < 0.005 | — | 23.9 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.46 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 101 | 101 | < 0.005 | < 0.005 | 0.41 | 103 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.47 | 6.47 | < 0.005 | < 0.005 | 0.02 | 6.77 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 32.7 | 32.7 | < 0.005 | 0.01 | 0.07 | 34.4 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.04 | 0.41 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 94.4 | 94.4 | < 0.005 | < 0.005 | 0.01 | 95.7 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.47 | 6.47 | < 0.005 | < 0.005 | < 0.005 | 6.76 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 32.7 | 32.7 | < 0.005 | 0.01 | < 0.005 | 34.4 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.02 | 0.28 | 0.00 | 0.00 | 0.07 | 0.07 | 0.00 | 0.02 | 0.02 | — | 67.7 | 67.7 | < 0.005 | < 0.005 | 0.13 | 68.7 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 4.62 | 4.62 | < 0.005 | < 0.005 | 0.01 | 4.83 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.4 | 23.4 | < 0.005 | < 0.005 | 0.02 | 24.6 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 11.2 | 11.2 | < 0.005 | < 0.005 | 0.02 | 11.4 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.77 | 0.77 | < 0.005 | < 0.005 | < 0.005 | 0.80 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.87 | 3.87 | < 0.005 | < 0.005 | < 0.005 | 4.07 |

## 3.7. New Pump Station Construction (2026) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.18 | 0.15 | 1.22 | 1.03 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 201 | 201 | 0.01 | < 0.005 | — | 202 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.21 | 0.18 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 35.5 | 35.5 | < 0.005 | < 0.005 | — | 35.6 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.87 | 5.87 | < 0.005 | < 0.005 | — | 5.89 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.38 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 92.6 | 92.6 | < 0.005 | < 0.005 | 0.01 | 93.9 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.35 | 6.35 | < 0.005 | < 0.005 | < 0.005 | 6.63 |
| Hauling | < 0.005 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 32.0 | 32.0 | < 0.005 | 0.01 | < 0.005 | 33.7 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.07 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 16.4 | 16.4 | < 0.005 | < 0.005 | 0.03 | 16.6 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.12 | 1.12 | < 0.005 | < 0.005 | < 0.005 | 1.17 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.64 | 5.64 | < 0.005 | < 0.005 | < 0.005 | 5.94 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.71 | 2.71 | < 0.005 | < 0.005 | < 0.005 | 2.75 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.19 | 0.19 | < 0.005 | < 0.005 | < 0.005 | 0.19 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.93 | 0.93 | < 0.005 | < 0.005 | < 0.005 | 0.98 |

## 3.9. Paving (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.04 | 0.34 | 2.22 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 389 | 389 | 0.02 | < 0.005 | — | 390 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.04 | 0.27 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.9 | 46.9 | < 0.005 | < 0.005 | — | 47.0 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.01 | 0.05 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.76 | 7.76 | < 0.005 | < 0.005 | — | 7.78 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.14 | 0.08 | < 0.005 | < 0.005 | 0.02 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 95.9 | 95.9 | 0.01 | 0.02 | 0.20 | 101 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 11.6 | 11.6 | < 0.005 | < 0.005 | 0.01 | 12.2 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.91 | 1.91 | < 0.005 | < 0.005 | < 0.005 | 2.01 |

## 3.11. Trench Excavation and Pipe Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 8.40 | 8.38 | 0.50 | 2.66 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 127 | 127 | 0.01 | < 0.005 | — | 127 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 8.40 | 8.38 | 0.50 | 2.66 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 127 | 127 | 0.01 | < 0.005 | — | 127 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.45 | 1.45 | 0.09 | 0.46 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 21.9 | 21.9 | < 0.005 | < 0.005 | — | 21.9 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.26 | 0.26 | 0.02 | 0.08 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 3.62 | 3.62 | < 0.005 | < 0.005 | — | 3.63 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.13 | 0.08 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 75.7 | 75.7 | 0.01 | 0.01 | 0.15 | 79.8 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.14 | 0.08 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 75.8 | 75.8 | 0.01 | 0.01 | < 0.005 | 79.6 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 13.1 | 13.1 | < 0.005 | < 0.005 | 0.01 | 13.8 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.16 | 2.16 | < 0.005 | < 0.005 | < 0.005 | 2.28 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 1.92 | 1.92 | < 0.005 | < 0.005 | — | 1.94 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1.92 | 1.92 | < 0.005 | < 0.005 | — | 1.94 |

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |
| Total | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 4.51 | 4.51 | < 0.005 | < 0.005 | — | 4.53 |
| Total | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 4.51 | 4.51 | < 0.005 | < 0.005 | — | 4.53 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

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

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.04 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.02 | 0.01 | < 0.005 | 0.09 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.36 | 0.36 | < 0.005 | < 0.005 | — | 0.36 |
| Total | 0.02 | 0.06 | < 0.005 | 0.09 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.36 | 0.36 | < 0.005 | < 0.005 | — | 0.36 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.04 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architectural | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | 0.05 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.03 | 0.03 | < 0.005 | < 0.005 | — | 0.03 |
| Total | < 0.005 | 0.01 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.03 | 0.03 | < 0.005 | < 0.005 | — | 0.03 |

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.28 | 0.42 | 0.02 | < 0.005 | — | 0.91 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.28 | 0.42 | 0.02 | < 0.005 | — | 0.91 |

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.22 | 0.00 | 0.22 | 0.02 | 0.00 | — | 0.77 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.22 | 0.00 | 0.22 | 0.02 | 0.00 | — | 0.77 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.09 | 0.09 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.09 | 0.09 |

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

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

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

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

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

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.06 | 0.06 | 0.25 | 0.14 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 25.5 | 25.5 | < 0.005 | < 0.005 | 0.00 | 25.6 |
| Total | 0.06 | 0.06 | 0.25 | 0.14 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 25.5 | 25.5 | < 0.005 | < 0.005 | 0.00 | 25.6 |

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

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

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

## 4.10. Soil Carbon Accumulation By Vegetation Type

### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

## 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sequest | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Existing PS Demolition | Demolition | 3/1/2026 | 5/31/2026 | 5.00 | 65.0 | Demo Existing PS |
| Pavement Removal | Site Preparation | 1/1/2025 | 2/28/2025 | 5.00 | 43.0 | Pavement Removal For new pipe |
| New Pump Station Construction | Building Construction | 1/1/2025 | 3/31/2026 | 5.00 | 325 | New PS Construction |
| Paving | Paving | 4/1/2025 | 5/31/2025 | 5.00 | 44.0 | Asphalt Pavement of Road |
| Trench Excavation and Pipe Construction | Trenching | 2/1/2025 | 4/30/2025 | 5.00 | 63.0 | Excavation and Pipe Construction |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Existing PS Demolition | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 6.00 | 84.0 | 0.37 |
| Existing PS Demolition | Rubber Tired Dozers | Diesel | Average | 0.00 | 1.00 | 367 | 0.40 |
| Existing PS Demolition | Concrete/Industrial Saws | Diesel | Average | 0.00 | 8.00 | 33.0 | 0.73 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Existing PS Demolition | Excavators | Diesel | Tier 4 Final | 1.00 | 4.90 | 130 | 0.38 |
| Existing PS Demolition | Air Compressors | Diesel | Average | 1.00 | 2.40 | 37.0 | 0.48 |
| Existing PS Demolition | Plate Compactors | Diesel | Average | 1.00 | 2.00 | 8.00 | 0.43 |
| Existing PS Demolition | Forklifts | Diesel | Average | 1.00 | 1.30 | 82.0 | 0.20 |
| Existing PS Demolition | Generator Sets | Diesel | Average | 1.00 | 5.00 | 14.0 | 0.74 |
| Existing PS Demolition | Pumps | Diesel | Average | 1.00 | 5.30 | 11.0 | 0.74 |
| Pavement Removal | Graders | Diesel | Average | 0.00 | 8.00 | 148 | 0.41 |
| Pavement Removal | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 3.30 | 24.0 | 0.38 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 3.30 | 130 | 0.38 |
| New Pump Station Construction | Cranes | Diesel | Average | 0.00 | 4.00 | 367 | 0.29 |
| New Pump Station Construction | Forklifts | Diesel | Average | 1.00 | 1.00 | 82.0 | 0.20 |
| New Pump Station Construction | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| New Pump Station Construction | Air Compressors | Diesel | Average | 1.00 | 0.80 | 37.0 | 0.48 |
| New Pump Station Construction | Dumpers/Tenders | Diesel | Average | 1.00 | 1.50 | 16.0 | 0.38 |
| New Pump Station Construction | Plate Compactors | Diesel | Average | 1.00 | 1.50 | 8.00 | 0.43 |
| New Pump Station Construction | Aerial Lifts | Diesel | Average | 1.00 | 1.00 | 46.0 | 0.31 |
| New Pump Station Construction | Generator Sets | Diesel | Average | 1.00 | 5.90 | 14.0 | 0.74 |
| New Pump Station Construction | Pumps | Diesel | Average | 1.00 | 2.00 | 11.0 | 0.74 |
| New Pump Station Construction | Off-Highway Trucks | Diesel | Average | 1.00 | 0.20 | 350 | 0.38 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Paving | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 7.00 | 84.0 | 0.37 |
| Paving | Cement and Mortar Mixers | Diesel | Average | 0.00 | 6.00 | 10.0 | 0.56 |
| Paving | Pavers | Diesel | Tier 4 Final | 1.00 | 1.50 | 148 | 0.42 |
| Paving | Rollers | Diesel | Tier 4 Final | 1.00 | 1.50 | 48.0 | 0.38 |
| Paving | Off-Highway Trucks | Diesel | Tier 4 Final | 1.00 | 3.00 | 185 | 0.38 |
| Trench Excavation and Pipe Construction | Excavators | Diesel | Tier 4 Final | 1.00 | 1.10 | 130 | 0.38 |
| Trench Excavation and Pipe Construction | Pumps | Diesel | Average | 1.00 | 5.50 | 11.0 | 0.74 |
| Trench Excavation and Pipe Construction | Welders | Electric | Average | 1.00 | 4.70 | 36.0 | 0.45 |
| Trench Excavation and Pipe Construction | Plate Compactors | Diesel | Tier 4 Final | 1.00 | 2.30 | 3.00 | 0.43 |
| Trench Excavation and Pipe Construction | Plate Compactors | Gasoline | Average | 1.00 | 2.30 | 3.00 | 0.55 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Existing PS Demolition | — | — | — | — |
| Existing PS Demolition | Worker | 10.2 | 11.7 | LDA,LDT1,LDT2 |
| Existing PS Demolition | Vendor | — | 0.00 | HHDT,MHDT |
| Existing PS Demolition | Hauling | 0.68 | 5.91 | HHDT |
| Existing PS Demolition | Onsite truck | — | — | HHDT |
| Pavement Removal | — | — | — | — |
| Pavement Removal | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Pavement Removal | Vendor | — | 8.40 | HHDT,MHDT |

| | | | | |
|---|---|---|---|---|
| Pavement Removal | Hauling | 0.84 | 7.00 | HHDT |
| Pavement Removal | Onsite truck | — | — | HHDT |
| Trench Excavation and Pipe Construction | — | — | — | — |
| Trench Excavation and Pipe Construction | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Trench Excavation and Pipe Construction | Vendor | — | 8.40 | HHDT,MHDT |
| Trench Excavation and Pipe Construction | Hauling | 2.57 | 7.67 | HHDT |
| Trench Excavation and Pipe Construction | Onsite truck | — | — | HHDT |
| New Pump Station Construction | — | — | — | — |
| New Pump Station Construction | Worker | 11.7 | 11.7 | LDA,LDT1,LDT2 |
| New Pump Station Construction | Vendor | 0.23 | 8.40 | HHDT,MHDT |
| New Pump Station Construction | Hauling | 0.46 | 19.2 | HHDT |
| New Pump Station Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 8.40 | HHDT,MHDT |
| Paving | Hauling | 1.00 | 26.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

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

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (Building Square Footage) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Existing PS Demolition | 0.00 | 0.00 | 0.00 | 2,000 | — |
| Pavement Removal | 700 | 1,500 | 0.00 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| General Light Industry | 0.00 | 0% |

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 56.8 | 204 | 0.03 | < 0.005 |
| 2026 | 0.00 | 204 | 0.03 | < 0.005 |

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 0 | 0.00 | 3,000 | 1,000 | — |

### 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| General Light Industry | 20,737 | 204 | 0.0330 | 0.0040 | 85,088 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| General Light Industry | 462,500 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| General Light Industry | 2.48 | — |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| General Light Industry | Other commercial A/C and heat pumps | R-410A | 2,088 | 0.30 | 4.00 | 4.00 | 18.0 |

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

| Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

| Equipment Type | Fuel Type | Number per Day | Hours per Day | Hours per Year | Horsepower | Load Factor |
|---|---|---|---|---|---|---|
| Emergency Generator | Diesel | 1.00 | 0.14 | 50.0 | 1,341 | 0.73 |

### 5.16.2. Process Boilers

| Equipment Type | Fuel Type | Number | Boiler Rating (MMBtu/hr) | Daily Heat Input (MMBtu/day) | Annual Heat Input (MMBtu/yr) |
|---|---|---|---|---|---|

## 5.17. User Defined

| Equipment Type | Fuel Type |
|---|---|

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

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

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Construction: Construction Phases | Information provided by the District. |

| | |
|---|---|
| Construction: Off-Road Equipment | Project-specific construction equipment list was provided by the District. |
| Construction: Trips and VMT | Construction trips were provided by the District. Worker commute trips between January 2025 to February 2026 and March 2026 to May 2026 are included in the new pump station construction phase and the existing pump station demolition phase, respectively. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase. |
| Operations: Vehicle Data | This project size is below BAAQMD screening criteria. Operation emissions are only estimated for the emergency generator. |

# Lynwood Alt B Custom Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Lynwood Alt B |
| Construction Start Date | 1/1/2025 |
| Operational Year | 2026 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.60 |
| Precipitation (days) | 39.4 |
| Location | 38.06871769733715, -122.54995998861456 |
| County | Marin |
| City | Novato |
| Air District | Bay Area AQMD |
| Air Basin | San Francisco Bay Area |
| TAZ | 913 |
| EDFZ | 2 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.21 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 2.00 | 1000sqft | 0.05 | 2,000 | 0.00 | — | — | New Pump Station |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 2.2. Construction Emissions by Year, Unmitigated

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

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 8.00 | 8.21 | 2.51 | 6.98 | 0.01 | 0.09 | 0.22 | 0.31 | 0.08 | 0.06 | 0.14 | — | 1,500 | 1,500 | 0.08 | 0.07 | 1.35 | 1,520 |
| 2026 | 0.29 | 0.25 | 1.61 | 3.65 | 0.01 | 0.06 | 0.12 | 0.18 | 0.05 | 0.03 | 0.08 | — | 594 | 594 | 0.02 | 0.01 | 0.36 | 598 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 8.07 | 8.26 | 2.96 | 9.76 | 0.02 | 0.11 | 0.25 | 0.36 | 0.09 | 0.06 | 0.16 | — | 1,847 | 1,847 | 0.12 | 0.09 | 0.04 | 1,878 |
| 2026 | 0.52 | 0.44 | 2.95 | 5.14 | 0.01 | 0.10 | 0.25 | 0.36 | 0.10 | 0.06 | 0.15 | — | 946 | 946 | 0.04 | 0.02 | 0.02 | 954 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 1.59 | 1.60 | 1.45 | 3.51 | 0.01 | 0.05 | 0.12 | 0.17 | 0.04 | 0.03 | 0.07 | — | 722 | 722 | 0.04 | 0.03 | 0.29 | 732 |
| 2026 | 0.09 | 0.08 | 0.52 | 0.91 | < 0.005 | 0.02 | 0.04 | 0.06 | 0.02 | 0.01 | 0.03 | — | 168 | 168 | 0.01 | < 0.005 | 0.07 | 169 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.29 | 0.29 | 0.26 | 0.64 | < 0.005 | 0.01 | 0.02 | 0.03 | 0.01 | 0.01 | 0.01 | — | 119 | 119 | 0.01 | 0.01 | 0.05 | 121 |
| 2026 | 0.02 | 0.01 | 0.10 | 0.17 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 27.8 | 27.8 | < 0.005 | < 0.005 | 0.01 | 28.0 |

## 2.5. Operations Emissions by Sector, Unmitigated

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

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.02 | 0.06 | < 0.005 | 0.09 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.36 | 0.36 | < 0.005 | < 0.005 | — | 0.36 |
| Energy | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38.9 | 38.9 | < 0.005 | < 0.005 | — | 39.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Stationary | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.36 | 0.37 | 1.40 | 0.89 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 2.22 | 199 | 201 | 0.24 | < 0.005 | 0.52 | 208 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | — | 0.05 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38.9 | 38.9 | < 0.005 | < 0.005 | — | 39.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Stationary | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.34 | 0.36 | 1.40 | 0.80 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 2.22 | 198 | 200 | 0.24 | < 0.005 | 0.52 | 208 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.01 | 0.06 | < 0.005 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.18 | 0.18 | < 0.005 | < 0.005 | — | 0.18 |
| Energy | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38.9 | 38.9 | < 0.005 | < 0.005 | — | 39.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Stationary | 0.33 | 0.30 | 1.35 | 0.77 | < 0.005 | 0.04 | 0.00 | 0.04 | 0.04 | 0.00 | 0.04 | 0.00 | 154 | 154 | 0.01 | < 0.005 | 0.00 | 155 |
| Total | 0.34 | 0.36 | 1.37 | 0.83 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 2.22 | 195 | 197 | 0.24 | < 0.005 | 0.52 | 205 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | < 0.005 | 0.01 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.03 | 0.03 | < 0.005 | < 0.005 | — | 0.03 |
| Energy | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 6.43 | 6.43 | < 0.005 | < 0.005 | — | 6.46 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.28 | 0.42 | 0.02 | < 0.005 | — | 0.91 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.22 | 0.00 | 0.22 | 0.02 | 0.00 | — | 0.77 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.09 | 0.09 |
| Stationary | 0.06 | 0.06 | 0.25 | 0.14 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 25.5 | 25.5 | < 0.005 | < 0.005 | 0.00 | 25.6 |
| Total | 0.06 | 0.07 | 0.25 | 0.15 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.37 | 32.3 | 32.6 | 0.04 | < 0.005 | 0.09 | 33.9 |

# 3. Construction Emissions Details

## 3.1. Existing Pump Station Demolition (2026) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.25 | 0.21 | 1.56 | 3.26 | 0.01 | 0.06 | — | 0.06 | 0.05 | — | 0.05 | — | 487 | 487 | 0.02 | < 0.005 | — | 489 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.25 | 0.21 | 1.56 | 3.26 | 0.01 | 0.06 | — | 0.06 | 0.05 | — | 0.05 | — | 487 | 487 | 0.02 | < 0.005 | — | 489 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.04 | 0.28 | 0.58 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 86.8 | 86.8 | < 0.005 | < 0.005 | — | 87.1 |
| Demolition | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.11 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 14.4 | 14.4 | < 0.005 | < 0.005 | — | 14.4 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.04 | 0.04 | 0.02 | 0.37 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 85.9 | 85.9 | < 0.005 | < 0.005 | 0.32 | 87.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 20.9 | 20.9 | < 0.005 | < 0.005 | 0.04 | 22.0 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.03 | 0.33 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 80.1 | 80.1 | < 0.005 | < 0.005 | 0.01 | 81.2 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 20.9 | 20.9 | < 0.005 | < 0.005 | < 0.005 | 21.9 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 14.3 | 14.3 | < 0.005 | < 0.005 | 0.02 | 14.5 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.72 | 3.72 | < 0.005 | < 0.005 | < 0.005 | 3.91 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.37 | 2.37 | < 0.005 | < 0.005 | < 0.005 | 2.41 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.62 | 0.62 | < 0.005 | < 0.005 | < 0.005 | 0.65 |

## 3.3. Pavement Removal (2025) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.05 | 0.05 | 0.27 | 3.83 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 708 | 708 | 0.03 | 0.01 | — | 710 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.67 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 124 | 124 | 0.01 | < 0.005 | — | 125 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.01 | 0.12 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 20.6 | 20.6 | < 0.005 | < 0.005 | — | 20.6 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.14 | 0.08 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 81.6 | 81.6 | 0.01 | 0.01 | < 0.005 | 85.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 14.3 | 14.3 | < 0.005 | < 0.005 | 0.01 | 15.1 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.37 | 2.37 | < 0.005 | < 0.005 | < 0.005 | 2.49 |

## 3.5. New Pump Station Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.19 | 0.15 | 1.24 | 1.03 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 201 | 201 | 0.01 | < 0.005 | — | 202 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.19 | 0.15 | 1.24 | 1.03 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 201 | 201 | 0.01 | < 0.005 | — | 202 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.13 | 0.11 | 0.89 | 0.74 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 144 | 144 | 0.01 | < 0.005 | — | 144 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.16 | 0.13 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 23.8 | 23.8 | < 0.005 | < 0.005 | — | 23.9 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.04 | 0.56 | 0.00 | 0.00 | 0.12 | 0.12 | 0.00 | 0.03 | 0.03 | — | 123 | 123 | < 0.005 | < 0.005 | 0.50 | 125 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.29 | 9.29 | < 0.005 | < 0.005 | 0.02 | 9.71 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 34.8 | 34.8 | < 0.005 | 0.01 | 0.07 | 36.6 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.04 | 0.50 | 0.00 | 0.00 | 0.12 | 0.12 | 0.00 | 0.03 | 0.03 | — | 115 | 115 | < 0.005 | < 0.005 | 0.01 | 116 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.29 | 9.29 | < 0.005 | < 0.005 | < 0.005 | 9.69 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 34.8 | 34.8 | < 0.005 | 0.01 | < 0.005 | 36.6 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.03 | 0.03 | 0.35 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 82.4 | 82.4 | < 0.005 | < 0.005 | 0.15 | 83.7 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.63 | 6.63 | < 0.005 | < 0.005 | 0.01 | 6.93 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 24.9 | 24.9 | < 0.005 | < 0.005 | 0.02 | 26.1 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.06 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 13.6 | 13.6 | < 0.005 | < 0.005 | 0.03 | 13.9 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.10 | 1.10 | < 0.005 | < 0.005 | < 0.005 | 1.15 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 4.12 | 4.12 | < 0.005 | < 0.005 | < 0.005 | 4.33 |

## 3.7. New Pump Station Construction (2026) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.18 | 0.15 | 1.22 | 1.03 | < 0.005 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 201 | 201 | 0.01 | < 0.005 | — | 202 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.21 | 0.18 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 35.5 | 35.5 | < 0.005 | < 0.005 | — | 35.6 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.87 | 5.87 | < 0.005 | < 0.005 | — | 5.89 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.04 | 0.47 | 0.00 | 0.00 | 0.12 | 0.12 | 0.00 | 0.03 | 0.03 | — | 113 | 113 | < 0.005 | < 0.005 | 0.01 | 114 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.12 | 9.12 | < 0.005 | < 0.005 | < 0.005 | 9.52 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 34.1 | 34.1 | < 0.005 | 0.01 | < 0.005 | 35.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.08 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 19.9 | 19.9 | < 0.005 | < 0.005 | 0.03 | 20.2 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.61 | 1.61 | < 0.005 | < 0.005 | < 0.005 | 1.68 |
| Hauling | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.00 | 6.00 | < 0.005 | < 0.005 | 0.01 | 6.31 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 3.30 | 3.30 | < 0.005 | < 0.005 | 0.01 | 3.35 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.27 | 0.27 | < 0.005 | < 0.005 | < 0.005 | 0.28 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.99 | 0.99 | < 0.005 | < 0.005 | < 0.005 | 1.05 |

## 3.9. Paving (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.09 | 0.09 | 0.79 | 5.17 | 0.01 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 907 | 907 | 0.04 | 0.01 | — | 910 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.14 | 0.92 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 162 | 162 | 0.01 | < 0.005 | — | 162 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.03 | 0.17 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 26.7 | 26.7 | < 0.005 | < 0.005 | — | 26.8 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.03 | 0.01 | 0.32 | 0.19 | < 0.005 | < 0.005 | 0.06 | 0.06 | < 0.005 | 0.02 | 0.02 | — | 224 | 224 | 0.03 | 0.04 | 0.48 | 236 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.06 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 40.0 | 40.0 | 0.01 | 0.01 | 0.04 | 42.0 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.62 | 6.62 | < 0.005 | < 0.005 | 0.01 | 6.96 |

## 3.11. Trench Excavation and Pipe Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 7.69 | 7.67 | 0.56 | 3.92 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 328 | 328 | 0.01 | < 0.005 | — | 329 |
| Architectural Coatings | — | 0.32 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 7.69 | 7.67 | 0.56 | 3.92 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 328 | 328 | 0.01 | < 0.005 | — | 329 |
| Architectural Coatings | — | 0.32 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.37 | 1.37 | 0.10 | 0.70 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 58.4 | 58.4 | < 0.005 | < 0.005 | — | 58.6 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architect Coatings | — | 0.06 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.25 | 0.25 | 0.02 | 0.13 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 9.67 | 9.67 | < 0.005 | < 0.005 | — | 9.70 |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.06 | 0.01 | 0.61 | 0.36 | < 0.005 | 0.01 | 0.09 | 0.10 | < 0.005 | 0.02 | 0.03 | — | 369 | 369 | 0.05 | 0.06 | 0.76 | 389 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.06 | 0.01 | 0.64 | 0.37 | < 0.005 | 0.01 | 0.09 | 0.10 | < 0.005 | 0.02 | 0.03 | — | 369 | 369 | 0.05 | 0.06 | 0.02 | 388 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.11 | 0.07 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | — | 65.7 | 65.7 | 0.01 | 0.01 | 0.06 | 69.1 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 10.9 | 10.9 | < 0.005 | < 0.005 | 0.01 | 11.4 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 11.6 | 11.6 | < 0.005 | < 0.005 | — | 11.7 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 1.92 | 1.92 | < 0.005 | < 0.005 | — | 1.94 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 1.92 | 1.92 | < 0.005 | < 0.005 | — | 1.94 |

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |
| Total | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |
| Total | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.3 | 27.3 | < 0.005 | < 0.005 | — | 27.3 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 4.51 | 4.51 | < 0.005 | < 0.005 | — | 4.53 |
| Total | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 4.51 | 4.51 | < 0.005 | < 0.005 | — | 4.53 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

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

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.04 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.02 | 0.01 | < 0.005 | 0.09 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.36 | 0.36 | < 0.005 | < 0.005 | — | 0.36 |
| Total | 0.02 | 0.06 | < 0.005 | 0.09 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.36 | 0.36 | < 0.005 | < 0.005 | — | 0.36 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.04 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | 0.05 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.03 | 0.03 | < 0.005 | < 0.005 | — | 0.03 |
| Total | < 0.005 | 0.01 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.03 | 0.03 | < 0.005 | < 0.005 | — | 0.03 |

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 1.67 | 2.56 | 0.09 | < 0.005 | — | 5.49 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.28 | 0.42 | 0.02 | < 0.005 | — | 0.91 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.28 | 0.42 | 0.02 | < 0.005 | — | 0.91 |

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

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

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.34 | 0.00 | 1.34 | 0.13 | 0.00 | — | 4.68 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.22 | 0.00 | 0.22 | 0.02 | 0.00 | — | 0.77 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.22 | 0.00 | 0.22 | 0.02 | 0.00 | — | 0.77 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.52 | 0.52 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.09 | 0.09 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.09 | 0.09 |

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

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

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

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

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

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Total | 0.34 | 0.31 | 1.38 | 0.79 | < 0.005 | 0.05 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.00 | 158 | 158 | 0.01 | < 0.005 | 0.00 | 158 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.06 | 0.06 | 0.25 | 0.14 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 25.5 | 25.5 | < 0.005 | < 0.005 | 0.00 | 25.6 |
| Total | 0.06 | 0.06 | 0.25 | 0.14 | < 0.005 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 25.5 | 25.5 | < 0.005 | < 0.005 | 0.00 | 25.6 |

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.10. Soil Carbon Accumulation By Vegetation Type

### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Demolition | 3/1/2026 | 5/31/2026 | 5.00 | 65.0 | Existing PS Demolition |
| Pavement Removal | Site Preparation | 1/1/2025 | 3/31/2025 | 5.00 | 64.0 | Pavement Removal for New Pipe |

| | | | | | | |
|---|---|---|---|---|---|---|
| New Pump Station Construction | Building Construction | 1/1/2025 | 3/31/2026 | 5.00 | 325 | New PS Construction |
| Paving | Paving | 6/1/2025 | 8/31/2025 | 5.00 | 65.0 | Asphalt Pavement of Road |
| Trench Excavation and Pipe Construction | Trenching | 3/1/2025 | 5/31/2025 | 5.00 | 65.0 | Excavation and Pipe Construction |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 6.00 | 84.0 | 0.37 |
| Existing Pump Station Demolition | Rubber Tired Dozers | Diesel | Average | 0.00 | 1.00 | 367 | 0.40 |
| Existing Pump Station Demolition | Concrete/Industrial Saws | Diesel | Average | 0.00 | 8.00 | 33.0 | 0.73 |
| Existing Pump Station Demolition | Excavators | Diesel | Tier 4 Final | 1.00 | 4.90 | 130 | 0.38 |
| Existing Pump Station Demolition | Air Compressors | Diesel | Average | 1.00 | 2.40 | 37.0 | 0.48 |
| Existing Pump Station Demolition | Plate Compactors | Diesel | Average | 1.00 | 2.00 | 8.00 | 0.43 |
| Existing Pump Station Demolition | Forklifts | Diesel | Average | 1.00 | 1.30 | 82.0 | 0.20 |
| Existing Pump Station Demolition | Generator Sets | Diesel | Average | 1.00 | 5.00 | 14.0 | 0.74 |
| Existing Pump Station Demolition | Pumps | Diesel | Average | 1.00 | 5.30 | 11.0 | 0.74 |
| Pavement Removal | Graders | Diesel | Average | 0.00 | 8.00 | 148 | 0.41 |
| Pavement Removal | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 9.50 | 24.0 | 0.38 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 9.50 | 130 | 0.38 |
| New Pump Station Construction | Cranes | Diesel | Average | 0.00 | 4.00 | 367 | 0.29 |
| New Pump Station Construction | Forklifts | Diesel | Average | 1.00 | 1.00 | 82.0 | 0.20 |
| New Pump Station Construction | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| New Pump Station Construction | Air Compressors | Diesel | Average | 1.00 | 0.80 | 37.0 | 0.48 |
| New Pump Station Construction | Dumpers/Tenders | Diesel | Average | 1.00 | 1.50 | 16.0 | 0.38 |
| New Pump Station Construction | Generator Sets | Diesel | Average | 1.00 | 5.90 | 14.0 | 0.74 |
| New Pump Station Construction | Plate Compactors | Diesel | Average | 1.00 | 1.50 | 8.00 | 0.43 |
| New Pump Station Construction | Pumps | Diesel | Average | 1.00 | 2.00 | 11.0 | 0.74 |
| New Pump Station Construction | Aerial Lifts | Diesel | Average | 1.00 | 1.00 | 46.0 | 0.31 |
| New Pump Station Construction | Off-Highway Trucks | Diesel | Average | 1.00 | 0.20 | 350 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 7.00 | 84.0 | 0.37 |
| Paving | Cement and Mortar Mixers | Diesel | Average | 0.00 | 6.00 | 10.0 | 0.56 |
| Paving | Pavers | Diesel | Tier 4 Final | 1.00 | 3.50 | 148 | 0.42 |
| Paving | Rollers | Diesel | Tier 4 Final | 1.00 | 3.50 | 48.0 | 0.38 |
| Paving | Off-Highway Trucks | Diesel | Tier 4 Final | 1.00 | 3.50 | 185 | 0.38 |
| Paving | Off-Highway Trucks | Diesel | Tier 4 Final | 1.00 | 3.50 | 185 | 0.38 |
| Trench Excavation and Pipe Construction | Excavators | Diesel | Tier 4 Final | 1.00 | 4.70 | 130 | 0.38 |
| Trench Excavation and Pipe Construction | Pumps | Diesel | Average | 1.00 | 5.00 | 11.0 | 0.74 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Trench Excavation and Pipe Construction | Welders | Electric | Average | 1.00 | 2.10 | 36.0 | 0.45 |
| Trench Excavation and Pipe Construction | Plate Compactors | Diesel | Tier 4 Final | 1.00 | 2.10 | 3.00 | 0.43 |
| Trench Excavation and Pipe Construction | Plate Compactors | Gasoline | Average | 1.00 | 2.10 | 3.00 | 0.55 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Existing Pump Station Demolition | — | — | — | — |
| Existing Pump Station Demolition | Worker | 10.2 | 11.7 | LDA,LDT1,LDT2 |
| Existing Pump Station Demolition | Vendor | — | 8.40 | HHDT,MHDT |
| Existing Pump Station Demolition | Hauling | 0.68 | 8.18 | HHDT |
| Existing Pump Station Demolition | Onsite truck | — | — | HHDT |
| Pavement Removal | — | — | — | — |
| Pavement Removal | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Pavement Removal | Vendor | 0.00 | 8.40 | HHDT,MHDT |
| Pavement Removal | Hauling | 2.38 | 9.00 | HHDT |
| Pavement Removal | Onsite truck | — | — | HHDT |
| New Pump Station Construction | — | — | — | — |
| New Pump Station Construction | Worker | 14.3 | 11.7 | LDA,LDT1,LDT2 |
| New Pump Station Construction | Vendor | 0.33 | 8.40 | HHDT,MHDT |
| New Pump Station Construction | Hauling | 0.47 | 20.0 | HHDT |
| New Pump Station Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |

| | | | | |
|---|---|---|---|---|
| Paving | Vendor | — | 8.40 | HHDT,MHDT |
| Paving | Hauling | 2.34 | 26.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Trench Excavation and Pipe Construction | — | — | — | — |
| Trench Excavation and Pipe Construction | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Trench Excavation and Pipe Construction | Vendor | — | 8.40 | HHDT,MHDT |
| Trench Excavation and Pipe Construction | Hauling | 10.5 | 9.22 | HHDT |
| Trench Excavation and Pipe Construction | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| Trench Excavation and Pipe Construction | 0.00 | 0.00 | 3,000 | 1,000 | — |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (Building Square Footage) | Acres Paved (acres) |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Existing Pump Station Demolition | 0.00 | 0.00 | 0.00 | 2,000 | — |
| Pavement Removal | 2,800 | 4,000 | 0.00 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| General Light Industry | 0.00 | 0% |

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 25.4 | 204 | 0.03 | < 0.005 |
| 2026 | 0.00 | 204 | 0.03 | < 0.005 |

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 0 | 0.00 | 3,000 | 1,000 | — |

### 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| General Light Industry | 20,737 | 204 | 0.0330 | 0.0040 | 85,088 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| General Light Industry | 462,500 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| General Light Industry | 2.48 | — |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| General Light Industry | Other commercial A/C and heat pumps | R-410A | 2,088 | 0.30 | 4.00 | 4.00 | 18.0 |

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

| Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

| Equipment Type | Fuel Type | Number per Day | Hours per Day | Hours per Year | Horsepower | Load Factor |
|---|---|---|---|---|---|---|
| Emergency Generator | Diesel | 1.00 | 0.14 | 50.0 | 1,341 | 0.73 |

### 5.16.2. Process Boilers

| Equipment Type | Fuel Type | Number | Boiler Rating (MMBtu/hr) | Daily Heat Input (MMBtu/day) | Annual Heat Input (MMBtu/yr) |
|---|---|---|---|---|---|

## 5.17. User Defined

| Equipment Type | Fuel Type |
|---|---|

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

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

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Construction: Construction Phases | Information provided by the District. |
| Construction: Off-Road Equipment | Project-specific construction equipment list was provided by the District. |
| Construction: Trips and VMT | Construction trips were provided by the District. Worker commute trips between January 2025 to February 2026 and March 2026 to May 2026 are included in the new pump station construction phase and the existing pump station demolition phase, respectively. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase. |

| | |
|---|---|
| Operations: Vehicle Data | This project size is below BAAQMD screening criteria. Operation emissions are only estimated for the emergency generator. |

# Lynwood Alt C Custom Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Lynwood Alt C |
| Construction Start Date | 1/1/2025 |
| Operational Year | 2027 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.60 |
| Precipitation (days) | 39.4 |
| Location | 38.06871769733715, -122.54995998861456 |
| County | Marin |
| City | Novato |
| Air District | Bay Area AQMD |
| Air Basin | San Francisco Bay Area |
| TAZ | 913 |
| EDFZ | 2 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.21 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 3.40 | 1000sqft | 0.08 | 3,400 | 0.00 | — | — | New Pump Stations |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

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

| Un/Mit. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 15.9 | 15.9 | 4.81 | 18.7 | 0.03 | 0.16 | 0.36 | 0.52 | 0.14 | 0.09 | 0.23 | — | 3,470 | 3,470 | 0.23 | 0.17 | 2.41 | 3,529 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 15.8 | 15.8 | 3.65 | 12.9 | 0.02 | 0.14 | 0.29 | 0.43 | 0.12 | 0.07 | 0.20 | — | 2,225 | 2,225 | 0.15 | 0.12 | 0.05 | 2,266 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 3.84 | 3.83 | 1.94 | 5.77 | 0.01 | 0.07 | 0.15 | 0.21 | 0.06 | 0.04 | 0.09 | — | 1,119 | 1,119 | 0.07 | 0.05 | 0.38 | 1,136 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.70 | 0.70 | 0.35 | 1.05 | < 0.005 | 0.01 | 0.03 | 0.04 | 0.01 | 0.01 | 0.02 | — | 185 | 185 | 0.01 | 0.01 | 0.06 | 188 |

### 2.2. Construction Emissions by Year, Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 15.9 | 15.9 | 4.81 | 18.7 | 0.03 | 0.16 | 0.36 | 0.52 | 0.14 | 0.09 | 0.23 | — | 3,470 | 3,470 | 0.23 | 0.17 | 2.41 | 3,529 |
| 2026 | 0.25 | 0.21 | 1.42 | 1.64 | < 0.005 | 0.05 | 0.12 | 0.17 | 0.05 | 0.03 | 0.07 | — | 373 | 373 | 0.02 | 0.01 | 0.52 | 378 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 15.8 | 15.8 | 3.65 | 12.9 | 0.02 | 0.14 | 0.29 | 0.43 | 0.12 | 0.07 | 0.20 | — | 2,225 | 2,225 | 0.15 | 0.12 | 0.05 | 2,266 |
| 2026 | 0.49 | 0.40 | 2.90 | 5.06 | 0.01 | 0.10 | 0.16 | 0.27 | 0.10 | 0.04 | 0.13 | — | 902 | 902 | 0.04 | 0.02 | 0.01 | 909 |
| 2027 | 0.48 | 0.40 | 2.86 | 5.02 | 0.01 | 0.10 | 0.16 | 0.26 | 0.09 | 0.04 | 0.13 | — | 899 | 899 | 0.04 | 0.02 | 0.01 | 906 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 3.84 | 3.83 | 1.94 | 5.77 | 0.01 | 0.07 | 0.15 | 0.21 | 0.06 | 0.04 | 0.09 | — | 1,119 | 1,119 | 0.07 | 0.05 | 0.38 | 1,136 |
| 2026 | 0.19 | 0.16 | 1.11 | 1.33 | < 0.005 | 0.04 | 0.09 | 0.13 | 0.04 | 0.02 | 0.06 | — | 294 | 294 | 0.01 | 0.01 | 0.16 | 297 |
| 2027 | 0.07 | 0.06 | 0.42 | 0.67 | < 0.005 | 0.01 | 0.03 | 0.04 | 0.01 | 0.01 | 0.02 | — | 126 | 126 | 0.01 | < 0.005 | 0.04 | 127 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.70 | 0.70 | 0.35 | 1.05 | < 0.005 | 0.01 | 0.03 | 0.04 | 0.01 | 0.01 | 0.02 | — | 185 | 185 | 0.01 | 0.01 | 0.06 | 188 |
| 2026 | 0.04 | 0.03 | 0.20 | 0.24 | < 0.005 | 0.01 | 0.02 | 0.02 | 0.01 | < 0.005 | 0.01 | — | 48.7 | 48.7 | < 0.005 | < 0.005 | 0.03 | 49.2 |
| 2027 | 0.01 | 0.01 | 0.08 | 0.12 | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 20.8 | 20.8 | < 0.005 | < 0.005 | 0.01 | 21.0 |

## 2.4. Operations Emissions Compared Against Thresholds

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

| Un/Mit. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.71 | 0.73 | 2.80 | 1.75 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 385 | 389 | 0.40 | 0.01 | 0.89 | 401 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.68 | 0.70 | 2.79 | 1.60 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 384 | 388 | 0.40 | 0.01 | 0.89 | 401 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.68 | 0.70 | 2.74 | 1.64 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 378 | 381 | 0.40 | 0.01 | 0.89 | 394 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.12 | 0.13 | 0.50 | 0.30 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.63 | 62.5 | 63.1 | 0.07 | < 0.005 | 0.15 | 65.3 |

## 2.5. Operations Emissions by Sector, Unmitigated

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

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.03 | 0.11 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.71 | 0.73 | 2.80 | 1.75 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 385 | 389 | 0.40 | 0.01 | 0.89 | 401 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | — | 0.08 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.70 | 2.79 | 1.60 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 384 | 388 | 0.40 | 0.01 | 0.89 | 401 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.01 | 0.09 | < 0.005 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.30 | 0.30 | < 0.005 | < 0.005 | — | 0.30 |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.66 | 0.60 | 2.70 | 1.54 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 308 | 308 | 0.01 | < 0.005 | 0.00 | 309 |
| Total | 0.68 | 0.70 | 2.74 | 1.64 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 378 | 381 | 0.40 | 0.01 | 0.89 | 394 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | < 0.005 | 0.02 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |
| Energy | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 10.9 | 10.9 | < 0.005 | < 0.005 | — | 11.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |
| Stationary | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |
| Total | 0.12 | 0.13 | 0.50 | 0.30 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.63 | 62.5 | 63.1 | 0.07 | < 0.005 | 0.15 | 65.3 |

# 3. Construction Emissions Details

## 3.1. Existing Pump Station Demolition (2026) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.23 | 0.20 | 1.42 | 3.45 | 0.01 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 513 | 513 | 0.02 | < 0.005 | — | 514 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.09 | 0.21 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 31.1 | 31.1 | < 0.005 | < 0.005 | — | 31.2 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.15 | 5.15 | < 0.005 | < 0.005 | — | 5.17 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.6 | 23.6 | < 0.005 | < 0.005 | < 0.005 | 24.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.43 | 1.43 | < 0.005 | < 0.005 | < 0.005 | 1.51 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.24 | 0.24 | < 0.005 | < 0.005 | < 0.005 | 0.25 |

## 3.3. Existing Pump Station Demolition (2027) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.23 | 0.19 | 1.41 | 3.44 | 0.01 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 513 | 513 | 0.02 | < 0.005 | — | 514 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.16 | 0.40 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 59.2 | 59.2 | < 0.005 | < 0.005 | — | 59.4 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.03 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 9.80 | 9.80 | < 0.005 | < 0.005 | — | 9.83 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.1 | 23.1 | < 0.005 | < 0.005 | < 0.005 | 24.3 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.67 | 2.67 | < 0.005 | < 0.005 | < 0.005 | 2.80 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.44 | 0.44 | < 0.005 | < 0.005 | < 0.005 | 0.46 |

## 3.5. Pavement Removal (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.06 | 0.06 | 0.29 | 4.11 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 760 | 760 | 0.03 | 0.01 | — | 763 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.06 | 0.06 | 0.29 | 4.11 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 760 | 760 | 0.03 | 0.01 | — | 763 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.09 | 1.22 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 225 | 225 | 0.01 | < 0.005 | — | 226 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.22 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 37.2 | 37.2 | < 0.005 | < 0.005 | — | 37.4 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.02 | < 0.005 | 0.16 | 0.09 | < 0.005 | < 0.005 | 0.02 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 97.1 | 97.1 | 0.01 | 0.02 | 0.20 | 102 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.02 | < 0.005 | 0.17 | 0.09 | < 0.005 | < 0.005 | 0.02 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 97.1 | 97.1 | 0.01 | 0.02 | 0.01 | 102 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 28.7 | 28.7 | < 0.005 | < 0.005 | 0.03 | 30.2 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 4.76 | 4.76 | < 0.005 | < 0.005 | < 0.005 | 5.00 |

## 3.7. New Pump Station Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.17 | 1.36 | 1.12 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 217 | 217 | 0.01 | < 0.005 | — | 217 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.17 | 1.36 | 1.12 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 217 | 217 | 0.01 | < 0.005 | — | 217 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 0.97 | 0.80 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 155 | 155 | 0.01 | < 0.005 | — | 155 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.18 | 0.15 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 25.6 | 25.6 | < 0.005 | < 0.005 | — | 25.7 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.03 | 0.53 | 0.00 | 0.00 | 0.11 | 0.11 | 0.00 | 0.03 | 0.03 | — | 117 | 117 | < 0.005 | < 0.005 | 0.47 | 119 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.29 | 9.29 | < 0.005 | < 0.005 | 0.02 | 9.71 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 33.6 | 33.6 | < 0.005 | 0.01 | 0.07 | 35.4 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.04 | 0.48 | 0.00 | 0.00 | 0.11 | 0.11 | 0.00 | 0.03 | 0.03 | — | 109 | 109 | < 0.005 | < 0.005 | 0.01 | 110 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.29 | 9.29 | < 0.005 | < 0.005 | < 0.005 | 9.69 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 33.6 | 33.6 | < 0.005 | 0.01 | < 0.005 | 35.3 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.03 | 0.33 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 78.1 | 78.1 | < 0.005 | < 0.005 | 0.15 | 79.3 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.63 | 6.63 | < 0.005 | < 0.005 | 0.01 | 6.93 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 24.0 | 24.0 | < 0.005 | < 0.005 | 0.02 | 25.2 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.01 | 0.01 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 12.9 | 12.9 | < 0.005 | < 0.005 | 0.02 | 13.1 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.10 | 1.10 | < 0.005 | < 0.005 | < 0.005 | 1.15 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.97 | 3.97 | < 0.005 | < 0.005 | < 0.005 | 4.18 |

## 3.9. New Pump Station Construction (2026) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.17 | 1.34 | 1.11 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 217 | 217 | 0.01 | < 0.005 | — | 217 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.17 | 1.34 | 1.11 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 217 | 217 | 0.01 | < 0.005 | — | 217 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.14 | 0.12 | 0.95 | 0.79 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 155 | 155 | 0.01 | < 0.005 | — | 155 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.17 | 0.14 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 25.6 | 25.6 | < 0.005 | < 0.005 | — | 25.7 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.03 | 0.49 | 0.00 | 0.00 | 0.11 | 0.11 | 0.00 | 0.03 | 0.03 | — | 115 | 115 | < 0.005 | < 0.005 | 0.43 | 116 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.11 | 9.11 | < 0.005 | < 0.005 | 0.02 | 9.54 |
| Hauling | 0.01 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 32.9 | 32.9 | < 0.005 | 0.01 | 0.07 | 34.7 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.04 | 0.44 | 0.00 | 0.00 | 0.11 | 0.11 | 0.00 | 0.03 | 0.03 | — | 107 | 107 | < 0.005 | < 0.005 | 0.01 | 108 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.12 | 9.12 | < 0.005 | < 0.005 | < 0.005 | 9.52 |
| Hauling | < 0.005 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 32.9 | 32.9 | < 0.005 | 0.01 | < 0.005 | 34.6 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.02 | 0.30 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 76.6 | 76.6 | < 0.005 | < 0.005 | 0.13 | 77.8 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 6.51 | 6.51 | < 0.005 | < 0.005 | 0.01 | 6.80 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.5 | 23.5 | < 0.005 | < 0.005 | 0.02 | 24.7 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 12.7 | 12.7 | < 0.005 | < 0.005 | 0.02 | 12.9 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.08 | 1.08 | < 0.005 | < 0.005 | < 0.005 | 1.13 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.89 | 3.89 | < 0.005 | < 0.005 | < 0.005 | 4.10 |

## 3.11. New Pump Station Construction (2027) - Unmitigated

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

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

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.16 | 1.32 | 1.11 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 217 | 217 | 0.01 | < 0.005 | — | 217 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.23 | 0.20 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 38.2 | 38.2 | < 0.005 | < 0.005 | — | 38.3 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.04 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 6.32 | 6.32 | < 0.005 | < 0.005 | — | 6.34 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.41 | 0.00 | 0.00 | 0.11 | 0.11 | 0.00 | 0.03 | 0.03 | — | 105 | 105 | < 0.005 | < 0.005 | 0.01 | 106 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 8.92 | 8.92 | < 0.005 | < 0.005 | < 0.005 | 9.32 |
| Hauling | < 0.005 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 32.2 | 32.2 | < 0.005 | 0.01 | < 0.005 | 33.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.01 | 0.01 | 0.01 | 0.07 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 18.6 | 18.6 | < 0.005 | < 0.005 | 0.03 | 18.8 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.57 | 1.57 | < 0.005 | < 0.005 | < 0.005 | 1.64 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.66 | 5.66 | < 0.005 | < 0.005 | < 0.005 | 5.95 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 3.07 | 3.07 | < 0.005 | < 0.005 | < 0.005 | 3.12 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.26 | 0.26 | < 0.005 | < 0.005 | < 0.005 | 0.27 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.94 | 0.94 | < 0.005 | < 0.005 | < 0.005 | 0.99 |

## 3.13. Paving (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.10 | 0.10 | 0.86 | 5.62 | 0.01 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 985 | 985 | 0.04 | 0.01 | — | 988 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.03 | 0.26 | 1.68 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 294 | 294 | 0.01 | < 0.005 | — | 295 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.31 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 48.7 | 48.7 | < 0.005 | < 0.005 | — | 48.9 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.04 | 0.01 | 0.36 | 0.21 | < 0.005 | < 0.005 | 0.06 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 252 | 252 | 0.03 | 0.04 | 0.53 | 265 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.11 | 0.06 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 75.2 | 75.2 | 0.01 | 0.01 | 0.07 | 79.1 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 12.5 | 12.5 | < 0.005 | < 0.005 | 0.01 | 13.1 |

## 3.15. Trench Excavation and Pipe Construction (2025) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 15.3 | 15.3 | 0.81 | 6.51 | < 0.005 | 0.07 | — | 0.07 | 0.06 | — | 0.06 | — | 460 | 460 | 0.02 | < 0.005 | — | 461 |
| Architectural Coatings | — | 0.25 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 15.3 | 15.3 | 0.81 | 6.51 | < 0.005 | 0.07 | — | 0.07 | 0.06 | — | 0.06 | — | 460 | 460 | 0.02 | < 0.005 | — | 461 |
| Architectural Coatings | — | 0.25 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 3.57 | 3.56 | 0.19 | 1.52 | < 0.005 | 0.02 | — | 0.02 | 0.01 | — | 0.01 | — | 107 | 107 | < 0.005 | < 0.005 | — | 107 |
| Architectural Coatings | — | 0.06 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.65 | 0.65 | 0.03 | 0.28 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 17.7 | 17.7 | < 0.005 | < 0.005 | — | 17.8 |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.09 | 0.02 | 0.88 | 0.52 | < 0.005 | 0.01 | 0.13 | 0.14 | 0.01 | 0.04 | 0.04 | — | 540 | 540 | 0.07 | 0.09 | 1.11 | 568 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.09 | 0.02 | 0.93 | 0.53 | < 0.005 | 0.01 | 0.13 | 0.14 | 0.01 | 0.04 | 0.04 | — | 540 | 540 | 0.07 | 0.09 | 0.03 | 567 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.02 | < 0.005 | 0.21 | 0.12 | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 126 | 126 | 0.02 | 0.02 | 0.11 | 132 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 20.8 | 20.8 | < 0.005 | < 0.005 | 0.02 | 21.9 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 3.26 | 3.26 | < 0.005 | < 0.005 | — | 3.29 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 3.26 | 3.26 | < 0.005 | < 0.005 | — | 3.29 |

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Total | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.68 | 7.68 | < 0.005 | < 0.005 | — | 7.70 |
| Total | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.68 | 7.68 | < 0.005 | < 0.005 | — | 7.70 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

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

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.07 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.03 | 0.02 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Total | 0.03 | 0.11 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.07 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architectural | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | 0.08 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |
| Total | < 0.005 | 0.02 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

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

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

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

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

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |
| Total | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

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

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

## 4.10. Soil Carbon Accumulation By Vegetation Type

### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

## 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sequest | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Demolition | 12/1/2026 | 2/28/2027 | 5.00 | 64.0 | Existing PS Demolition |
| Pavement Removal | Site Preparation | 1/1/2025 | 5/31/2025 | 5.00 | 108 | Pavement Removal for New Pipe |
| New Pump Station Construction | Building Construction | 1/1/2025 | 3/31/2027 | 5.00 | 586 | New PS Construction |
| Paving | Paving | 5/1/2025 | 9/30/2025 | 5.00 | 109 | Asphalt Pavement of Road |
| Trench Excavation and Pipe Construction | Trenching | 2/1/2025 | 5/31/2025 | 5.00 | 85.0 | Excavation and Pipe Construction |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 6.00 | 84.0 | 0.37 |
| Existing Pump Station Demolition | Rubber Tired Dozers | Diesel | Average | 0.00 | 1.00 | 367 | 0.40 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Concrete/Industrial Saws | Diesel | Average | 0.00 | 8.00 | 33.0 | 0.73 |
| Existing Pump Station Demolition | Excavators | Diesel | Tier 4 Final | 1.00 | 5.80 | 130 | 0.38 |
| Existing Pump Station Demolition | Air Compressors | Diesel | Average | 1.00 | 2.20 | 37.0 | 0.48 |
| Existing Pump Station Demolition | Plate Compactors | Diesel | Average | 1.00 | 0.60 | 8.00 | 0.43 |
| Existing Pump Station Demolition | Forklifts | Diesel | Average | 1.00 | 0.70 | 82.0 | 0.20 |
| Existing Pump Station Demolition | Generator Sets | Diesel | Average | 1.00 | 4.80 | 14.0 | 0.74 |
| Existing Pump Station Demolition | Pumps | Diesel | Average | 1.00 | 5.10 | 11.0 | 0.74 |
| Pavement Removal | Graders | Diesel | Average | 0.00 | 8.00 | 148 | 0.41 |
| Pavement Removal | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 10.2 | 24.0 | 0.38 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 10.2 | 130 | 0.38 |
| New Pump Station Construction | Cranes | Diesel | Average | 0.00 | 4.00 | 367 | 0.29 |
| New Pump Station Construction | Forklifts | Diesel | Average | 1.00 | 1.00 | 82.0 | 0.20 |
| New Pump Station Construction | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| New Pump Station Construction | Air Compressors | Diesel | Average | 1.00 | 0.90 | 37.0 | 0.48 |
| New Pump Station Construction | Dumpers/Tenders | Diesel | Average | 1.00 | 1.70 | 16.0 | 0.38 |
| New Pump Station Construction | Generator Sets | Diesel | Average | 1.00 | 6.50 | 14.0 | 0.74 |
| New Pump Station Construction | Plate Compactors | Diesel | Average | 1.00 | 1.70 | 8.00 | 0.43 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| New Pump Station Construction | Pumps | Diesel | Average | 1.00 | 2.30 | 11.0 | 0.74 |
| New Pump Station Construction | Aerial Lifts | Diesel | Average | 1.00 | 1.00 | 46.0 | 0.31 |
| New Pump Station Construction | Off-Highway Trucks | Diesel | Average | 1.00 | 0.20 | 350 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 7.00 | 84.0 | 0.37 |
| Paving | Cement and Mortar Mixers | Diesel | Average | 0.00 | 6.00 | 10.0 | 0.56 |
| Paving | Pavers | Diesel | Tier 4 Final | 1.00 | 3.80 | 148 | 0.42 |
| Paving | Rollers | Diesel | Tier 4 Final | 1.00 | 3.80 | 48.0 | 0.38 |
| Paving | Off-Highway Trucks | Diesel | Tier 4 Final | 1.00 | 7.60 | 185 | 0.38 |
| Trench Excavation and Pipe Construction | Excavators | Diesel | Tier 4 Final | 1.00 | 6.50 | 130 | 0.38 |
| Trench Excavation and Pipe Construction | Pumps | Diesel | Average | 1.00 | 7.10 | 11.0 | 0.74 |
| Trench Excavation and Pipe Construction | Welders | Electric | Average | 1.00 | 4.20 | 36.0 | 0.45 |
| Trench Excavation and Pipe Construction | Plate Compactors | Diesel | Tier 4 Final | 1.00 | 4.20 | 3.00 | 0.43 |
| Trench Excavation and Pipe Construction | Plate Compactors | Gasoline | Average | 1.00 | 4.20 | 3.00 | 0.55 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Existing Pump Station Demolition | — | — | — | — |
| Existing Pump Station Demolition | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Existing Pump Station Demolition | Vendor | — | 8.40 | HHDT,MHDT |

| | | | | |
|---|---|---|---|---|
| Existing Pump Station Demolition | Hauling | 0.69 | 9.18 | HHDT |
| Existing Pump Station Demolition | Onsite truck | — | — | HHDT |
| Pavement Removal | — | — | — | — |
| Pavement Removal | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Pavement Removal | Vendor | 0.00 | 8.40 | HHDT,MHDT |
| Pavement Removal | Hauling | 2.56 | 10.0 | HHDT |
| Pavement Removal | Onsite truck | — | — | HHDT |
| New Pump Station Construction | — | — | — | — |
| New Pump Station Construction | Worker | 13.5 | 11.7 | LDA,LDT1,LDT2 |
| New Pump Station Construction | Vendor | 0.33 | 8.40 | HHDT,MHDT |
| New Pump Station Construction | Hauling | 0.42 | 21.6 | HHDT |
| New Pump Station Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 8.40 | HHDT,MHDT |
| Paving | Hauling | 2.53 | 27.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Trench Excavation and Pipe Construction | — | — | — | — |
| Trench Excavation and Pipe Construction | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Trench Excavation and Pipe Construction | Vendor | — | 8.40 | HHDT,MHDT |
| Trench Excavation and Pipe Construction | Hauling | 14.5 | 9.78 | HHDT |
| Trench Excavation and Pipe Construction | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| Trench Excavation and Pipe Construction | 0.00 | 0.00 | 3,000 | 1,000 | — |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (Building Square Footage) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Existing Pump Station Demolition | 0.00 | 0.00 | 0.00 | 2,000 | — |
| Pavement Removal | 5,100 | 7,100 | 0.00 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| General Light Industry | 0.00 | 0% |

## 5.8. Construction Electricity Consumption and Emissions Factors

### kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| 2025 | 50.7 | 204 | 0.03 | < 0.005 |
| 2026 | 0.00 | 204 | 0.03 | < 0.005 |
| 2027 | 0.00 | 204 | 0.03 | < 0.005 |

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 0 | 0.00 | 5,100 | 1,700 | — |

### 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| General Light Industry | 35,252 | 204 | 0.0330 | 0.0040 | 144,649 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| General Light Industry | 786,250 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| General Light Industry | 4.22 | — |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| General Light Industry | Other commercial A/C and heat pumps | R-410A | 2,088 | 0.30 | 4.00 | 4.00 | 18.0 |

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

| Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

| Equipment Type | Fuel Type | Number per Day | Hours per Day | Hours per Year | Horsepower | Load Factor |
|---|---|---|---|---|---|---|
| Emergency Generator | Diesel | 2.00 | 0.14 | 50.0 | 1,341 | 0.73 |

### 5.16.2. Process Boilers

| Equipment Type | Fuel Type | Number | Boiler Rating (MMBtu/hr) | Daily Heat Input (MMBtu/day) | Annual Heat Input (MMBtu/yr) |
|---|---|---|---|---|---|

## 5.17. User Defined

| Equipment Type | Fuel Type |
|---|---|

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

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

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Construction: Construction Phases | Information provided by the District. |
| Construction: Off-Road Equipment | Project-specific construction equipment list was provided by the District. |
| Construction: Trips and VMT | Construction trips were provided by the District. Worker commute trips are included in the new pump station construction phase. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase. |
| Operations: Vehicle Data | This project size is below BAAQMD screening criteria. Operation emissions are only estimated for the emergency generator. |
| Operations: Emergency Generators and Fire Pumps | Assumed one generator at each site. |

# Lynwood Alt D Custom Report

## Table of Contents

8. User Changes to Default Data

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Lynwood Alt D |
| Construction Start Date | 1/1/2025 |
| Operational Year | 2027 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.60 |
| Precipitation (days) | 39.4 |
| Location | 38.06871769733715, -122.54995998861456 |
| County | Marin |
| City | Novato |
| Air District | Bay Area AQMD |
| Air Basin | San Francisco Bay Area |
| TAZ | 913 |
| EDFZ | 2 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.21 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 3.40 | 1000sqft | 0.08 | 3,400 | 0.00 | — | — | New Pump Stations |

### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

### 2.2. Construction Emissions by Year, Unmitigated

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

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 10.8 | 10.9 | 4.50 | 16.3 | 0.03 | 0.14 | 0.32 | 0.47 | 0.13 | 0.08 | 0.21 | — | 3,175 | 3,175 | 0.21 | 0.16 | 2.20 | 3,228 |
| 2026 | 0.26 | 0.22 | 1.45 | 1.63 | < 0.005 | 0.05 | 0.11 | 0.17 | 0.05 | 0.03 | 0.07 | — | 367 | 367 | 0.02 | 0.01 | 0.48 | 371 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 10.6 | 10.8 | 3.26 | 10.1 | 0.02 | 0.12 | 0.25 | 0.37 | 0.10 | 0.06 | 0.17 | — | 1,858 | 1,858 | 0.13 | 0.10 | 0.04 | 1,892 |
| 2026 | 0.49 | 0.41 | 2.93 | 5.05 | 0.01 | 0.11 | 0.15 | 0.26 | 0.10 | 0.03 | 0.13 | — | 896 | 896 | 0.04 | 0.02 | 0.01 | 903 |
| 2027 | 0.48 | 0.40 | 2.89 | 5.02 | 0.01 | 0.10 | 0.15 | 0.25 | 0.09 | 0.03 | 0.13 | — | 893 | 893 | 0.04 | 0.02 | 0.01 | 899 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 2.01 | 2.01 | 1.62 | 3.92 | 0.01 | 0.05 | 0.12 | 0.17 | 0.05 | 0.03 | 0.08 | — | 793 | 793 | 0.05 | 0.03 | 0.29 | 804 |
| 2026 | 0.20 | 0.16 | 1.13 | 1.33 | < 0.005 | 0.04 | 0.08 | 0.12 | 0.04 | 0.02 | 0.06 | — | 290 | 290 | 0.01 | 0.01 | 0.15 | 293 |
| 2027 | 0.07 | 0.06 | 0.42 | 0.67 | < 0.005 | 0.01 | 0.02 | 0.04 | 0.01 | 0.01 | 0.02 | — | 125 | 125 | 0.01 | < 0.005 | 0.04 | 126 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.37 | 0.37 | 0.30 | 0.71 | < 0.005 | 0.01 | 0.02 | 0.03 | 0.01 | 0.01 | 0.01 | — | 131 | 131 | 0.01 | 0.01 | 0.05 | 133 |
| 2026 | 0.04 | 0.03 | 0.21 | 0.24 | < 0.005 | 0.01 | 0.01 | 0.02 | 0.01 | < 0.005 | 0.01 | — | 47.9 | 47.9 | < 0.005 | < 0.005 | 0.02 | 48.5 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2027 | 0.01 | 0.01 | 0.08 | 0.12 | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 20.7 | 20.7 | < 0.005 | < 0.005 | 0.01 | 20.8 |

## 2.5. Operations Emissions by Sector, Unmitigated

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

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.03 | 0.11 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.71 | 0.73 | 2.80 | 1.75 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 385 | 389 | 0.40 | 0.01 | 0.89 | 401 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | — | 0.08 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.70 | 2.79 | 1.60 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 384 | 388 | 0.40 | 0.01 | 0.89 | 401 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.01 | 0.09 | < 0.005 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.30 | 0.30 | < 0.005 | < 0.005 | — | 0.30 |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.66 | 0.60 | 2.70 | 1.54 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 308 | 308 | 0.01 | < 0.005 | 0.00 | 309 |
| Total | 0.68 | 0.70 | 2.74 | 1.64 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 378 | 381 | 0.40 | 0.01 | 0.89 | 394 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | < 0.005 | 0.02 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |
| Energy | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 10.9 | 10.9 | < 0.005 | < 0.005 | — | 11.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |
| Stationary | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |
| Total | 0.12 | 0.13 | 0.50 | 0.30 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.63 | 62.5 | 63.1 | 0.07 | < 0.005 | 0.15 | 65.3 |

# 3. Construction Emissions Details

## 3.1. Existing Pump Station Demolition (2026) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.23 | 0.20 | 1.42 | 3.45 | 0.01 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 513 | 513 | 0.02 | < 0.005 | — | 514 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.09 | 0.21 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 31.1 | 31.1 | < 0.005 | < 0.005 | — | 31.2 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.15 | 5.15 | < 0.005 | < 0.005 | — | 5.17 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.6 | 23.6 | < 0.005 | < 0.005 | < 0.005 | 24.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.43 | 1.43 | < 0.005 | < 0.005 | < 0.005 | 1.51 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.24 | 0.24 | < 0.005 | < 0.005 | < 0.005 | 0.25 |

## 3.3. Existing Pump Station Demolition (2027) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.23 | 0.19 | 1.41 | 3.44 | 0.01 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 513 | 513 | 0.02 | < 0.005 | — | 514 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.16 | 0.40 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 59.2 | 59.2 | < 0.005 | < 0.005 | — | 59.4 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.03 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 9.80 | 9.80 | < 0.005 | < 0.005 | — | 9.83 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.1 | 23.1 | < 0.005 | < 0.005 | < 0.005 | 24.3 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.67 | 2.67 | < 0.005 | < 0.005 | < 0.005 | 2.80 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.44 | 0.44 | < 0.005 | < 0.005 | < 0.005 | 0.46 |

## 3.5. Pavement Removal (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.04 | 0.23 | 3.22 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 596 | 596 | 0.02 | < 0.005 | — | 598 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.04 | 0.23 | 3.22 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 596 | 596 | 0.02 | < 0.005 | — | 598 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.76 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 140 | 140 | 0.01 | < 0.005 | — | 141 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.01 | 0.14 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 23.3 | 23.3 | < 0.005 | < 0.005 | — | 23.3 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.12 | 0.07 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 75.8 | 75.8 | 0.01 | 0.01 | 0.16 | 79.8 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.13 | 0.07 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 75.9 | 75.9 | 0.01 | 0.01 | < 0.005 | 79.7 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 17.9 | 17.9 | < 0.005 | < 0.005 | 0.02 | 18.8 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.96 | 2.96 | < 0.005 | < 0.005 | < 0.005 | 3.11 |

## 3.7. New Pump Station Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.40 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.40 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 1.00 | 0.82 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 159 | 159 | 0.01 | < 0.005 | — | 159 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.18 | 0.15 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 26.2 | 26.2 | < 0.005 | < 0.005 | — | 26.3 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.03 | 0.49 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 109 | 109 | < 0.005 | < 0.005 | 0.44 | 111 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.60 | 7.60 | < 0.005 | < 0.005 | 0.02 | 7.95 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.6 | 30.6 | < 0.005 | < 0.005 | 0.06 | 32.3 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.04 | 0.45 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 102 | 102 | < 0.005 | < 0.005 | 0.01 | 103 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.60 | 7.60 | < 0.005 | < 0.005 | < 0.005 | 7.93 |
| Hauling | < 0.005 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.6 | 30.6 | < 0.005 | < 0.005 | < 0.005 | 32.2 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.03 | 0.31 | 0.00 | 0.00 | 0.07 | 0.07 | 0.00 | 0.02 | 0.02 | — | 73.1 | 73.1 | < 0.005 | < 0.005 | 0.14 | 74.2 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.43 | 5.43 | < 0.005 | < 0.005 | 0.01 | 5.67 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 21.9 | 21.9 | < 0.005 | < 0.005 | 0.02 | 23.0 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 12.1 | 12.1 | < 0.005 | < 0.005 | 0.02 | 12.3 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.90 | 0.90 | < 0.005 | < 0.005 | < 0.005 | 0.94 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.62 | 3.62 | < 0.005 | < 0.005 | < 0.005 | 3.81 |

## 3.9. New Pump Station Construction (2026) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.37 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.37 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 0.98 | 0.81 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 159 | 159 | 0.01 | < 0.005 | — | 159 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.18 | 0.15 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 26.2 | 26.2 | < 0.005 | < 0.005 | — | 26.3 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.46 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 107 | 107 | < 0.005 | < 0.005 | 0.40 | 109 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.46 | 7.46 | < 0.005 | < 0.005 | 0.02 | 7.80 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.0 | 30.0 | < 0.005 | < 0.005 | 0.06 | 31.6 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.04 | 0.41 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 100.0 | 100.0 | < 0.005 | < 0.005 | 0.01 | 101 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.46 | 7.46 | < 0.005 | < 0.005 | < 0.005 | 7.79 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.0 | 30.0 | < 0.005 | < 0.005 | < 0.005 | 31.6 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.02 | 0.29 | 0.00 | 0.00 | 0.07 | 0.07 | 0.00 | 0.02 | 0.02 | — | 71.7 | 71.7 | < 0.005 | < 0.005 | 0.12 | 72.8 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.33 | 5.33 | < 0.005 | < 0.005 | 0.01 | 5.57 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 21.4 | 21.4 | < 0.005 | < 0.005 | 0.02 | 22.6 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 11.9 | 11.9 | < 0.005 | < 0.005 | 0.02 | 12.1 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.88 | 0.88 | < 0.005 | < 0.005 | < 0.005 | 0.92 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.55 | 3.55 | < 0.005 | < 0.005 | < 0.005 | 3.73 |

## 3.11. New Pump Station Construction (2027) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.17 | 1.36 | 1.13 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.03 | 0.24 | 0.20 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 39.1 | 39.1 | < 0.005 | < 0.005 | — | 39.2 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.04 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 6.47 | 6.47 | < 0.005 | < 0.005 | — | 6.49 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.39 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 98.2 | 98.2 | < 0.005 | < 0.005 | 0.01 | 99.5 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.30 | 7.30 | < 0.005 | < 0.005 | < 0.005 | 7.63 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 29.3 | 29.3 | < 0.005 | < 0.005 | < 0.005 | 30.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.07 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 17.4 | 17.4 | < 0.005 | < 0.005 | 0.03 | 17.6 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.29 | 1.29 | < 0.005 | < 0.005 | < 0.005 | 1.34 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.16 | 5.16 | < 0.005 | < 0.005 | < 0.005 | 5.43 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.87 | 2.87 | < 0.005 | < 0.005 | < 0.005 | 2.92 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.21 | 0.21 | < 0.005 | < 0.005 | < 0.005 | 0.22 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.86 | 0.86 | < 0.005 | < 0.005 | < 0.005 | 0.90 |

## 3.13. Paving (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.10 | 0.10 | 0.91 | 5.91 | 0.01 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 1,037 | 1,037 | 0.04 | 0.01 | — | 1,040 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.16 | 1.05 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 185 | 185 | 0.01 | < 0.005 | — | 185 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.03 | 0.19 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 30.6 | 30.6 | < 0.005 | < 0.005 | — | 30.7 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.04 | 0.01 | 0.39 | 0.22 | < 0.005 | < 0.005 | 0.07 | 0.08 | < 0.005 | 0.02 | 0.02 | — | 273 | 273 | 0.03 | 0.04 | 0.58 | 288 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.07 | 0.04 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 48.7 | 48.7 | 0.01 | 0.01 | 0.04 | 51.2 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 8.06 | 8.06 | < 0.005 | < 0.005 | 0.01 | 8.48 |

## 3.15. Trench Excavation and Pipe Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 10.2 | 10.2 | 0.64 | 4.77 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 371 | 371 | 0.02 | < 0.005 | — | 372 |
| Architectural Coatings | — | 0.33 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 10.2 | 10.2 | 0.64 | 4.77 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 371 | 371 | 0.02 | < 0.005 | — | 372 |
| Architectural Coatings | — | 0.33 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.77 | 1.76 | 0.11 | 0.82 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 64.0 | 64.0 | < 0.005 | < 0.005 | — | 64.2 |
| Architectural Coatings | — | 0.06 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.32 | 0.32 | 0.02 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 10.6 | 10.6 | < 0.005 | < 0.005 | — | 10.6 |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.08 | 0.02 | 0.74 | 0.44 | < 0.005 | 0.01 | 0.11 | 0.12 | 0.01 | 0.03 | 0.04 | — | 453 | 453 | 0.06 | 0.07 | 0.93 | 476 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.08 | 0.01 | 0.78 | 0.44 | < 0.005 | 0.01 | 0.11 | 0.12 | 0.01 | 0.03 | 0.04 | — | 453 | 453 | 0.06 | 0.07 | 0.02 | 476 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.13 | 0.08 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 78.1 | 78.1 | 0.01 | 0.01 | 0.07 | 82.2 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 12.9 | 12.9 | < 0.005 | < 0.005 | 0.01 | 13.6 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 3.26 | 3.26 | < 0.005 | < 0.005 | — | 3.29 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 3.26 | 3.26 | < 0.005 | < 0.005 | — | 3.29 |

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Total | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Total | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.68 | 7.68 | < 0.005 | < 0.005 | — | 7.70 |
| Total | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.68 | 7.68 | < 0.005 | < 0.005 | — | 7.70 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

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

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.07 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.03 | 0.02 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Total | 0.03 | 0.11 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.07 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | 0.08 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Landsca Equipment | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |
| Total | < 0.005 | 0.02 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

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

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Emergency Generato | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |
| Total | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

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

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

## 4.10. Soil Carbon Accumulation By Vegetation Type

### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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

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

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

### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Demolition | 12/1/2026 | 2/28/2027 | 5.00 | 64.0 | Existing PS Demolition |
| Pavement Removal | Site Preparation | 1/1/2025 | 4/30/2025 | 5.00 | 86.0 | Pavement Removal for New Pipe |
| New Pump Station Construction | Building Construction | 1/1/2025 | 3/31/2027 | 5.00 | 586 | New PS Construction |
| Paving | Paving | 4/1/2025 | 6/30/2025 | 5.00 | 65.0 | Asphalt Pavement of Road |
| Trench Excavation and Pipe Construction | Trenching | 2/1/2025 | 4/30/2025 | 5.00 | 63.0 | Excavation and Pipe Construction |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 6.00 | 84.0 | 0.37 |
| Existing Pump Station Demolition | Rubber Tired Dozers | Diesel | Average | 0.00 | 1.00 | 367 | 0.40 |
| Existing Pump Station Demolition | Concrete/Industrial Saws | Diesel | Average | 0.00 | 8.00 | 33.0 | 0.73 |
| Existing Pump Station Demolition | Excavators | Diesel | Tier 4 Final | 1.00 | 5.80 | 130 | 0.38 |
| Existing Pump Station Demolition | Air Compressors | Diesel | Average | 1.00 | 2.20 | 37.0 | 0.48 |
| Existing Pump Station Demolition | Plate Compactors | Diesel | Average | 1.00 | 0.60 | 8.00 | 0.43 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Forklifts | Diesel | Average | 1.00 | 0.70 | 82.0 | 0.20 |
| Existing Pump Station Demolition | Generator Sets | Diesel | Average | 1.00 | 4.80 | 14.0 | 0.74 |
| Existing Pump Station Demolition | Pumps | Diesel | Average | 1.00 | 5.10 | 11.0 | 0.74 |
| Pavement Removal | Graders | Diesel | Average | 0.00 | 8.00 | 148 | 0.41 |
| Pavement Removal | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 8.00 | 24.0 | 0.38 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 8.00 | 130 | 0.38 |
| New Pump Station Construction | Cranes | Diesel | Average | 0.00 | 4.00 | 367 | 0.29 |
| New Pump Station Construction | Forklifts | Diesel | Average | 1.00 | 1.00 | 82.0 | 0.20 |
| New Pump Station Construction | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| New Pump Station Construction | Air Compressors | Diesel | Average | 1.00 | 0.90 | 37.0 | 0.48 |
| New Pump Station Construction | Dumpers/Tenders | Diesel | Average | 1.00 | 1.70 | 16.0 | 0.38 |
| New Pump Station Construction | Generator Sets | Diesel | Average | 1.00 | 6.90 | 14.0 | 0.74 |
| New Pump Station Construction | Plate Compactors | Diesel | Average | 1.00 | 1.70 | 8.00 | 0.43 |
| New Pump Station Construction | Pumps | Diesel | Average | 1.00 | 2.30 | 11.0 | 0.74 |
| New Pump Station Construction | Aerial Lifts | Diesel | Average | 1.00 | 1.00 | 46.0 | 0.31 |
| New Pump Station Construction | Off-Highway Trucks | Diesel | Average | 1.00 | 0.20 | 350 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 7.00 | 84.0 | 0.37 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Paving | Cement and Mortar Mixers | Diesel | Average | 0.00 | 6.00 | 10.0 | 0.56 |
| Paving | Pavers | Diesel | Tier 4 Final | 1.00 | 4.00 | 148 | 0.42 |
| Paving | Rollers | Diesel | Tier 4 Final | 1.00 | 4.00 | 48.0 | 0.38 |
| Paving | Off-Highway Trucks | Diesel | Tier 4 Final | 1.00 | 8.00 | 185 | 0.38 |
| Trench Excavation and Pipe Construction | Excavators | Diesel | Tier 4 Final | 1.00 | 5.30 | 130 | 0.38 |
| Trench Excavation and Pipe Construction | Pumps | Diesel | Average | 1.00 | 5.60 | 11.0 | 0.74 |
| Trench Excavation and Pipe Construction | Welders | Electric | Average | 1.00 | 2.80 | 36.0 | 0.45 |
| Trench Excavation and Pipe Construction | Plate Compactors | Diesel | Tier 4 Final | 1.00 | 2.80 | 3.00 | 0.43 |
| Trench Excavation and Pipe Construction | Plate Compactors | Gasoline | Average | 1.00 | 2.80 | 3.00 | 0.55 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Existing Pump Station Demolition | — | — | — | — |
| Existing Pump Station Demolition | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Existing Pump Station Demolition | Vendor | — | 8.40 | HHDT,MHDT |
| Existing Pump Station Demolition | Hauling | 0.69 | 9.18 | HHDT |
| Existing Pump Station Demolition | Onsite truck | — | — | HHDT |
| Pavement Removal | — | — | — | — |
| Pavement Removal | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Pavement Removal | Vendor | 0.00 | 8.40 | HHDT,MHDT |
| Pavement Removal | Hauling | 2.00 | 10.0 | HHDT |
| Pavement Removal | Onsite truck | — | — | HHDT |

| | | | | |
|---|---|---|---|---|
| New Pump Station Construction | — | — | — | — |
| New Pump Station Construction | Worker | 12.7 | 11.7 | LDA,LDT1,LDT2 |
| New Pump Station Construction | Vendor | 0.27 | 8.40 | HHDT,MHDT |
| New Pump Station Construction | Hauling | 0.40 | 20.7 | HHDT |
| New Pump Station Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 8.40 | HHDT,MHDT |
| Paving | Hauling | 2.65 | 28.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Trench Excavation and Pipe Construction | — | — | — | — |
| Trench Excavation and Pipe Construction | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Trench Excavation and Pipe Construction | Vendor | — | 8.40 | HHDT,MHDT |
| Trench Excavation and Pipe Construction | Hauling | 12.2 | 9.78 | HHDT |
| Trench Excavation and Pipe Construction | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| Trench Excavation and Pipe Construction | 0.00 | 0.00 | 3,000 | 1,000 | — |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (Building Square Footage) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Existing Pump Station Demolition | 0.00 | 0.00 | 0.00 | 2,000 | — |
| Pavement Removal | 3,200 | 4,600 | 0.00 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| General Light Industry | 0.00 | 0% |

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 33.8 | 204 | 0.03 | < 0.005 |
| 2026 | 0.00 | 204 | 0.03 | < 0.005 |
| 2027 | 0.00 | 204 | 0.03 | < 0.005 |

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 0 | 0.00 | 5,100 | 1,700 | — |

### 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| General Light Industry | 35,252 | 204 | 0.0330 | 0.0040 | 144,649 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| General Light Industry | 786,250 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| General Light Industry | 4.22 | — |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| General Light Industry | Other commercial A/C and heat pumps | R-410A | 2,088 | 0.30 | 4.00 | 4.00 | 18.0 |

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

| Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

| Equipment Type | Fuel Type | Number per Day | Hours per Day | Hours per Year | Horsepower | Load Factor |
|---|---|---|---|---|---|---|
| Emergency Generator | Diesel | 2.00 | 0.14 | 50.0 | 1,341 | 0.73 |

### 5.16.2. Process Boilers

| Equipment Type | Fuel Type | Number | Boiler Rating (MMBtu/hr) | Daily Heat Input (MMBtu/day) | Annual Heat Input (MMBtu/yr) |
|---|---|---|---|---|---|

## 5.17. User Defined

| Equipment Type | Fuel Type |
|---|---|

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

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

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Construction: Construction Phases | Information provided by the District. |

| | |
|---|---|
| Construction: Off-Road Equipment | Project-specific construction equipment list was provided by the District. |
| Construction: Trips and VMT | Construction trips were provided by the District. Worker commute trips are included in the new pump station construction phase. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase. |
| Operations: Vehicle Data | This project size is below BAAQMD screening criteria. Operation emissions are only estimated for the emergency generator. |
| Operations: Emergency Generators and Fire Pumps | Assumed one generator at each site |

# Lynwood Alt E Custom Report

## Table of Contents

8. User Changes to Default Data

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Lynwood Alt E |
| Construction Start Date | 1/1/2025 |
| Operational Year | 2027 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.60 |
| Precipitation (days) | 39.4 |
| Location | 38.06871769733715, -122.54995998861456 |
| County | Marin |
| City | Novato |
| Air District | Bay Area AQMD |
| Air Basin | San Francisco Bay Area |
| TAZ | 913 |
| EDFZ | 2 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.21 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 3.40 | 1000sqft | 0.08 | 3,400 | 0.00 | — | — | New Pump Stations |

## 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

## 2.2. Construction Emissions by Year, Unmitigated

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

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 10.7 | 10.9 | 3.97 | 12.3 | 0.02 | 0.13 | 0.28 | 0.41 | 0.11 | 0.07 | 0.19 | — | 2,326 | 2,326 | 0.16 | 0.13 | 1.92 | 2,370 |
| 2026 | 0.26 | 0.22 | 1.45 | 1.63 | < 0.005 | 0.05 | 0.11 | 0.17 | 0.05 | 0.03 | 0.07 | — | 366 | 366 | 0.02 | 0.01 | 0.48 | 370 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 10.6 | 10.8 | 3.25 | 10.7 | 0.02 | 0.12 | 0.25 | 0.37 | 0.11 | 0.06 | 0.17 | — | 1,944 | 1,944 | 0.13 | 0.10 | 0.04 | 1,978 |
| 2026 | 0.49 | 0.41 | 2.93 | 5.05 | 0.01 | 0.11 | 0.15 | 0.26 | 0.10 | 0.03 | 0.13 | — | 895 | 895 | 0.04 | 0.02 | 0.01 | 902 |
| 2027 | 0.48 | 0.40 | 2.89 | 5.01 | 0.01 | 0.10 | 0.15 | 0.25 | 0.09 | 0.03 | 0.13 | — | 892 | 892 | 0.04 | 0.02 | 0.01 | 899 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 2.00 | 2.00 | 1.58 | 3.71 | 0.01 | 0.05 | 0.11 | 0.17 | 0.05 | 0.03 | 0.08 | — | 744 | 744 | 0.04 | 0.03 | 0.28 | 755 |
| 2026 | 0.20 | 0.16 | 1.13 | 1.33 | < 0.005 | 0.04 | 0.08 | 0.12 | 0.04 | 0.02 | 0.06 | — | 289 | 289 | 0.01 | 0.01 | 0.15 | 292 |
| 2027 | 0.07 | 0.06 | 0.42 | 0.67 | < 0.005 | 0.01 | 0.02 | 0.04 | 0.01 | 0.01 | 0.02 | — | 125 | 125 | 0.01 | < 0.005 | 0.04 | 126 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.36 | 0.37 | 0.29 | 0.68 | < 0.005 | 0.01 | 0.02 | 0.03 | 0.01 | 0.01 | 0.01 | — | 123 | 123 | 0.01 | 0.01 | 0.05 | 125 |
| 2026 | 0.04 | 0.03 | 0.21 | 0.24 | < 0.005 | 0.01 | 0.01 | 0.02 | 0.01 | < 0.005 | 0.01 | — | 47.9 | 47.9 | < 0.005 | < 0.005 | 0.02 | 48.4 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2027 | 0.01 | 0.01 | 0.08 | 0.12 | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 20.6 | 20.6 | < 0.005 | < 0.005 | 0.01 | 20.8 |

## 2.5. Operations Emissions by Sector, Unmitigated

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

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.03 | 0.11 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.71 | 0.73 | 2.80 | 1.75 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 385 | 389 | 0.40 | 0.01 | 0.89 | 401 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | — | 0.08 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.70 | 2.79 | 1.60 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 384 | 388 | 0.40 | 0.01 | 0.89 | 401 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | 0.01 | 0.09 | < 0.005 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.30 | 0.30 | < 0.005 | < 0.005 | — | 0.30 |
| Energy | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.1 | 66.1 | 0.01 | < 0.005 | — | 66.4 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Stationary | 0.66 | 0.60 | 2.70 | 1.54 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 308 | 308 | 0.01 | < 0.005 | 0.00 | 309 |
| Total | 0.68 | 0.70 | 2.74 | 1.64 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 3.78 | 378 | 381 | 0.40 | 0.01 | 0.89 | 394 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Area | < 0.005 | 0.02 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |
| Energy | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 10.9 | 10.9 | < 0.005 | < 0.005 | — | 11.0 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |
| Stationary | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |
| Total | 0.12 | 0.13 | 0.50 | 0.30 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.63 | 62.5 | 63.1 | 0.07 | < 0.005 | 0.15 | 65.3 |

# 3. Construction Emissions Details

## 3.1. Existing Pump Station Demolition (2026) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.23 | 0.20 | 1.42 | 3.45 | 0.01 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 513 | 513 | 0.02 | < 0.005 | — | 514 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.09 | 0.21 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 31.1 | 31.1 | < 0.005 | < 0.005 | — | 31.2 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.15 | 5.15 | < 0.005 | < 0.005 | — | 5.17 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.6 | 23.6 | < 0.005 | < 0.005 | < 0.005 | 24.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.43 | 1.43 | < 0.005 | < 0.005 | < 0.005 | 1.51 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.24 | 0.24 | < 0.005 | < 0.005 | < 0.005 | 0.25 |

## 3.3. Existing Pump Station Demolition (2027) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.23 | 0.19 | 1.41 | 3.44 | 0.01 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 513 | 513 | 0.02 | < 0.005 | — | 514 |
| Demolition | — | — | — | — | — | — | 0.03 | 0.03 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.16 | 0.40 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 59.2 | 59.2 | < 0.005 | < 0.005 | — | 59.4 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.03 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 9.80 | 9.80 | < 0.005 | < 0.005 | — | 9.83 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 23.1 | 23.1 | < 0.005 | < 0.005 | < 0.005 | 24.3 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.67 | 2.67 | < 0.005 | < 0.005 | < 0.005 | 2.80 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.44 | 0.44 | < 0.005 | < 0.005 | < 0.005 | 0.46 |

## 3.5. Pavement Removal (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.05 | 0.05 | 0.28 | 3.95 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 730 | 730 | 0.03 | 0.01 | — | 733 |
| Dust From Material Movement | — | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.69 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 128 | 128 | 0.01 | < 0.005 | — | 128 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | < 0.005 | < 0.005 | 0.01 | 0.13 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 21.2 | 21.2 | < 0.005 | < 0.005 | — | 21.3 |
| Dust From Material Movement | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.13 | 0.07 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 75.9 | 75.9 | 0.01 | 0.01 | < 0.005 | 79.7 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 13.3 | 13.3 | < 0.005 | < 0.005 | 0.01 | 14.0 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.20 | 2.20 | < 0.005 | < 0.005 | < 0.005 | 2.32 |

## 3.7. New Pump Station Construction (2025) - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.40 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.40 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 1.00 | 0.82 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 159 | 159 | 0.01 | < 0.005 | — | 159 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.18 | 0.15 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 26.2 | 26.2 | < 0.005 | < 0.005 | — | 26.3 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.03 | 0.49 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 109 | 109 | < 0.005 | < 0.005 | 0.44 | 110 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.60 | 7.60 | < 0.005 | < 0.005 | 0.02 | 7.95 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.6 | 30.6 | < 0.005 | < 0.005 | 0.06 | 32.3 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.04 | 0.44 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 101 | 101 | < 0.005 | < 0.005 | 0.01 | 103 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.60 | 7.60 | < 0.005 | < 0.005 | < 0.005 | 7.93 |
| Hauling | < 0.005 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.6 | 30.6 | < 0.005 | < 0.005 | < 0.005 | 32.2 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.03 | 0.31 | 0.00 | 0.00 | 0.07 | 0.07 | 0.00 | 0.02 | 0.02 | — | 72.6 | 72.6 | < 0.005 | < 0.005 | 0.14 | 73.7 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.43 | 5.43 | < 0.005 | < 0.005 | 0.01 | 5.67 |
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 21.9 | 21.9 | < 0.005 | < 0.005 | 0.02 | 23.0 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 12.0 | 12.0 | < 0.005 | < 0.005 | 0.02 | 12.2 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.90 | 0.90 | < 0.005 | < 0.005 | < 0.005 | 0.94 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.62 | 3.62 | < 0.005 | < 0.005 | < 0.005 | 3.81 |

## 3.9. New Pump Station Construction (2026) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.21 | 0.17 | 1.37 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.21 | 0.17 | 1.37 | 1.14 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 0.98 | 0.81 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 159 | 159 | 0.01 | < 0.005 | — | 159 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.18 | 0.15 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 26.2 | 26.2 | < 0.005 | < 0.005 | — | 26.3 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.46 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 107 | 107 | < 0.005 | < 0.005 | 0.40 | 108 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.46 | 7.46 | < 0.005 | < 0.005 | 0.02 | 7.80 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.0 | 30.0 | < 0.005 | < 0.005 | 0.06 | 31.6 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.04 | 0.41 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 99.3 | 99.3 | < 0.005 | < 0.005 | 0.01 | 101 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.46 | 7.46 | < 0.005 | < 0.005 | < 0.005 | 7.79 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 30.0 | 30.0 | < 0.005 | < 0.005 | < 0.005 | 31.6 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.02 | 0.28 | 0.00 | 0.00 | 0.07 | 0.07 | 0.00 | 0.02 | 0.02 | — | 71.3 | 71.3 | < 0.005 | < 0.005 | 0.12 | 72.4 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.33 | 5.33 | < 0.005 | < 0.005 | 0.01 | 5.57 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 21.4 | 21.4 | < 0.005 | < 0.005 | 0.02 | 22.6 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | < 0.005 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 11.8 | 11.8 | < 0.005 | < 0.005 | 0.02 | 12.0 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.88 | 0.88 | < 0.005 | < 0.005 | < 0.005 | 0.92 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.55 | 3.55 | < 0.005 | < 0.005 | < 0.005 | 3.73 |

## 3.11. New Pump Station Construction (2027) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.20 | 0.17 | 1.36 | 1.13 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 222 | 222 | 0.01 | < 0.005 | — | 223 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.03 | 0.24 | 0.20 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 39.1 | 39.1 | < 0.005 | < 0.005 | — | 39.2 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.04 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 6.47 | 6.47 | < 0.005 | < 0.005 | — | 6.49 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.38 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 97.5 | 97.5 | < 0.005 | < 0.005 | 0.01 | 98.9 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.30 | 7.30 | < 0.005 | < 0.005 | < 0.005 | 7.63 |
| Hauling | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 29.3 | 29.3 | < 0.005 | < 0.005 | < 0.005 | 30.8 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.07 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 17.2 | 17.2 | < 0.005 | < 0.005 | 0.03 | 17.5 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.29 | 1.29 | < 0.005 | < 0.005 | < 0.005 | 1.34 |
| Hauling | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.16 | 5.16 | < 0.005 | < 0.005 | < 0.005 | 5.43 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.86 | 2.86 | < 0.005 | < 0.005 | < 0.005 | 2.90 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.21 | 0.21 | < 0.005 | < 0.005 | < 0.005 | 0.22 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.86 | 0.86 | < 0.005 | < 0.005 | < 0.005 | 0.90 |

## 3.13. Paving (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.09 | 0.09 | 0.82 | 5.32 | 0.01 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 933 | 933 | 0.04 | 0.01 | — | 936 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.02 | 0.15 | 0.95 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 166 | 166 | 0.01 | < 0.005 | — | 167 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.03 | 0.17 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 27.5 | 27.5 | < 0.005 | < 0.005 | — | 27.6 |
| Paving | — | 0.00 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.04 | 0.01 | 0.35 | 0.20 | < 0.005 | < 0.005 | 0.06 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 248 | 248 | 0.03 | 0.04 | 0.53 | 261 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.01 | < 0.005 | 0.06 | 0.04 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 44.1 | 44.1 | 0.01 | 0.01 | 0.04 | 46.4 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.30 | 7.30 | < 0.005 | < 0.005 | 0.01 | 7.68 |

## 3.15. Trench Excavation and Pipe Construction (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 10.2 | 10.2 | 0.63 | 4.65 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 354 | 354 | 0.01 | < 0.005 | — | 355 |
| Architectural Coatings | — | 0.33 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 10.2 | 10.2 | 0.63 | 4.65 | < 0.005 | 0.05 | — | 0.05 | 0.04 | — | 0.04 | — | 354 | 354 | 0.01 | < 0.005 | — | 355 |
| Architectural Coatings | — | 0.33 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 1.77 | 1.76 | 0.11 | 0.80 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 61.0 | 61.0 | < 0.005 | < 0.005 | — | 61.2 |
| Architectural Coatings | — | 0.06 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.32 | 0.32 | 0.02 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 10.1 | 10.1 | < 0.005 | < 0.005 | — | 10.1 |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.07 | 0.01 | 0.69 | 0.41 | < 0.005 | 0.01 | 0.11 | 0.11 | < 0.005 | 0.03 | 0.03 | — | 423 | 423 | 0.06 | 0.07 | 0.87 | 446 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.07 | 0.01 | 0.73 | 0.42 | < 0.005 | 0.01 | 0.11 | 0.11 | 0.01 | 0.03 | 0.03 | — | 423 | 423 | 0.06 | 0.07 | 0.02 | 445 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.01 | < 0.005 | 0.12 | 0.07 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | — | 73.1 | 73.1 | 0.01 | 0.01 | 0.06 | 76.8 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 12.1 | 12.1 | < 0.005 | < 0.005 | 0.01 | 12.7 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 19.7 | 19.7 | < 0.005 | < 0.005 | — | 19.9 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | 3.26 | 3.26 | < 0.005 | < 0.005 | — | 3.29 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 3.26 | 3.26 | < 0.005 | < 0.005 | — | 3.29 |

### 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Total | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Total | < 0.005 | < 0.005 | 0.04 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 46.4 | 46.4 | < 0.005 | < 0.005 | — | 46.5 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.68 | 7.68 | < 0.005 | < 0.005 | — | 7.70 |
| Total | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 7.68 | 7.68 | < 0.005 | < 0.005 | — | 7.70 |

## 4.3. Area Emissions by Source

### 4.3.1. Unmitigated

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

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.07 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.03 | 0.02 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Total | 0.03 | 0.11 | < 0.005 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | — | 0.61 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.07 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | 0.08 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |
| Total | < 0.005 | 0.02 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.05 | 0.05 | < 0.005 | < 0.005 | — | 0.05 |

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.51 | 2.85 | 4.35 | 0.15 | < 0.005 | — | 9.34 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.25 | 0.47 | 0.72 | 0.03 | < 0.005 | — | 1.55 |

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

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

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

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.27 | 0.00 | 2.27 | 0.23 | 0.00 | — | 7.95 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.38 | 0.00 | 0.38 | 0.04 | 0.00 | — | 1.32 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.89 | 0.89 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| General Light Industry | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.15 | 0.15 |

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

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

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

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

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

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Total | 0.68 | 0.62 | 2.76 | 1.57 | < 0.005 | 0.09 | 0.00 | 0.09 | 0.09 | 0.00 | 0.09 | 0.00 | 315 | 315 | 0.01 | < 0.005 | 0.00 | 316 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Emergency Generator | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |
| Total | 0.12 | 0.11 | 0.49 | 0.28 | < 0.005 | 0.02 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.00 | 51.1 | 51.1 | < 0.005 | < 0.005 | 0.00 | 51.2 |

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.10. Soil Carbon Accumulation By Vegetation Type

### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

### 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Demolition | 12/1/2026 | 2/28/2027 | 5.00 | 64.0 | Existing PS Demolition |
| Pavement Removal | Site Preparation | 1/1/2025 | 3/31/2025 | 5.00 | 64.0 | Pavement Removal for New Pipe |

| | | | | | | |
|---|---|---|---|---|---|---|
| New Pump Station Construction | Building Construction | 1/1/2025 | 3/31/2027 | 5.00 | 586 | New PS Construction |
| Paving | Paving | 4/1/2025 | 6/30/2025 | 5.00 | 65.0 | Asphalt Pavement of Road |
| Trench Excavation and Pipe Construction | Trenching | 2/1/2025 | 4/30/2025 | 5.00 | 63.0 | Excavation and Pipe Construction |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Existing Pump Station Demolition | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 6.00 | 84.0 | 0.37 |
| Existing Pump Station Demolition | Rubber Tired Dozers | Diesel | Average | 0.00 | 1.00 | 367 | 0.40 |
| Existing Pump Station Demolition | Concrete/Industrial Saws | Diesel | Average | 0.00 | 8.00 | 33.0 | 0.73 |
| Existing Pump Station Demolition | Excavators | Diesel | Tier 4 Final | 1.00 | 5.80 | 130 | 0.38 |
| Existing Pump Station Demolition | Air Compressors | Diesel | Average | 1.00 | 2.20 | 37.0 | 0.48 |
| Existing Pump Station Demolition | Plate Compactors | Diesel | Average | 1.00 | 0.60 | 8.00 | 0.43 |
| Existing Pump Station Demolition | Forklifts | Diesel | Average | 1.00 | 0.70 | 82.0 | 0.20 |
| Existing Pump Station Demolition | Generator Sets | Diesel | Average | 1.00 | 4.80 | 14.0 | 0.74 |
| Existing Pump Station Demolition | Pumps | Diesel | Average | 1.00 | 5.10 | 11.0 | 0.74 |
| Pavement Removal | Graders | Diesel | Average | 0.00 | 8.00 | 148 | 0.41 |
| Pavement Removal | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 9.80 | 24.0 | 0.38 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Pavement Removal | Excavators | Diesel | Tier 4 Final | 1.00 | 9.80 | 130 | 0.38 |
| New Pump Station Construction | Cranes | Diesel | Average | 0.00 | 4.00 | 367 | 0.29 |
| New Pump Station Construction | Forklifts | Diesel | Average | 1.00 | 1.00 | 82.0 | 0.20 |
| New Pump Station Construction | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 8.00 | 84.0 | 0.37 |
| New Pump Station Construction | Air Compressors | Diesel | Average | 1.00 | 0.90 | 37.0 | 0.48 |
| New Pump Station Construction | Dumpers/Tenders | Diesel | Average | 1.00 | 1.70 | 16.0 | 0.38 |
| New Pump Station Construction | Generator Sets | Diesel | Average | 1.00 | 6.90 | 14.0 | 0.74 |
| New Pump Station Construction | Plate Compactors | Diesel | Average | 1.00 | 1.70 | 8.00 | 0.43 |
| New Pump Station Construction | Pumps | Diesel | Average | 1.00 | 2.30 | 11.0 | 0.74 |
| New Pump Station Construction | Aerial Lifts | Diesel | Average | 1.00 | 1.00 | 46.0 | 0.31 |
| New Pump Station Construction | Off-Highway Trucks | Diesel | Average | 1.00 | 0.20 | 350 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | Diesel | Average | 0.00 | 7.00 | 84.0 | 0.37 |
| Paving | Cement and Mortar Mixers | Diesel | Average | 0.00 | 6.00 | 10.0 | 0.56 |
| Paving | Pavers | Diesel | Tier 4 Final | 1.00 | 3.60 | 148 | 0.42 |
| Paving | Rollers | Diesel | Tier 4 Final | 1.00 | 3.60 | 48.0 | 0.38 |
| Paving | Off-Highway Trucks | Diesel | Tier 4 Final | 1.00 | 7.20 | 185 | 0.38 |
| Trench Excavation and Pipe Construction | Excavators | Diesel | Tier 4 Final | 1.00 | 5.00 | 130 | 0.38 |
| Trench Excavation and Pipe Construction | Pumps | Diesel | Average | 1.00 | 5.60 | 11.0 | 0.74 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Trench Excavation and Pipe Construction | Welders | Electric | Average | 1.00 | 2.80 | 36.0 | 0.45 |
| Trench Excavation and Pipe Construction | Plate Compactors | Diesel | Tier 4 Final | 1.00 | 2.80 | 3.00 | 0.43 |
| Trench Excavation and Pipe Construction | Plate Compactors | Gasoline | Average | 1.00 | 2.80 | 3.00 | 0.55 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Existing Pump Station Demolition | — | — | — | — |
| Existing Pump Station Demolition | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Existing Pump Station Demolition | Vendor | — | 8.40 | HHDT,MHDT |
| Existing Pump Station Demolition | Hauling | 0.69 | 9.18 | HHDT |
| Existing Pump Station Demolition | Onsite truck | — | — | HHDT |
| Pavement Removal | — | — | — | — |
| Pavement Removal | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Pavement Removal | Vendor | 0.00 | 8.40 | HHDT,MHDT |
| Pavement Removal | Hauling | 2.00 | 10.0 | HHDT |
| Pavement Removal | Onsite truck | — | — | HHDT |
| New Pump Station Construction | — | — | — | — |
| New Pump Station Construction | Worker | 12.6 | 11.7 | LDA,LDT1,LDT2 |
| New Pump Station Construction | Vendor | 0.27 | 8.40 | HHDT,MHDT |
| New Pump Station Construction | Hauling | 0.40 | 20.7 | HHDT |
| New Pump Station Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |

| | | | | |
|---|---|---|---|---|
| Paving | Vendor | — | 8.40 | HHDT,MHDT |
| Paving | Hauling | 2.40 | 28.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Trench Excavation and Pipe Construction | — | — | — | — |
| Trench Excavation and Pipe Construction | Worker | 0.00 | 11.7 | LDA,LDT1,LDT2 |
| Trench Excavation and Pipe Construction | Vendor | — | 8.40 | HHDT,MHDT |
| Trench Excavation and Pipe Construction | Hauling | 11.4 | 9.78 | HHDT |
| Trench Excavation and Pipe Construction | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| Trench Excavation and Pipe Construction | 0.00 | 0.00 | 3,000 | 1,000 | — |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (Building Square Footage) | Acres Paved (acres) |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Existing Pump Station Demolition | 0.00 | 0.00 | 0.00 | 2,000 | — |
| Pavement Removal | 2,900 | 4,300 | 0.00 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| General Light Industry | 0.00 | 0% |

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 33.8 | 204 | 0.03 | < 0.005 |
| 2026 | 0.00 | 204 | 0.03 | < 0.005 |
| 2027 | 0.00 | 204 | 0.03 | < 0.005 |

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| General Light Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

### 5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|
| 0 | 0.00 | 5,100 | 1,700 | — |

### 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| General Light Industry | 35,252 | 204 | 0.0330 | 0.0040 | 144,649 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| General Light Industry | 786,250 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| General Light Industry | 4.22 | — |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| General Light Industry | Other commercial A/C and heat pumps | R-410A | 2,088 | 0.30 | 4.00 | 4.00 | 18.0 |

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

| Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

| Equipment Type | Fuel Type | Number per Day | Hours per Day | Hours per Year | Horsepower | Load Factor |
|---|---|---|---|---|---|---|
| Emergency Generator | Diesel | 2.00 | 0.14 | 50.0 | 1,341 | 0.73 |

### 5.16.2. Process Boilers

| Equipment Type | Fuel Type | Number | Boiler Rating (MMBtu/hr) | Daily Heat Input (MMBtu/day) | Annual Heat Input (MMBtu/yr) |
|---|---|---|---|---|---|

## 5.17. User Defined

| Equipment Type | Fuel Type |
|---|---|

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

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

# 8. User Changes to Default Data

| Screen | Justification |
|---|---|
| Construction: Construction Phases | Information provided by the District. |
| Construction: Off-Road Equipment | Project-specific construction equipment list was provided by the District. |
| Construction: Trips and VMT | Construction trips were provided by the District. Worker commute trips are included in the new pump station construction phase. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase. |

| | |
|---|---|
| Operations: Vehicle Data | This project size is below BAAQMD screening criteria. Operation emissions are only estimated for the emergency generator. |
| Operations: Emergency Generators and Fire Pumps | Assume one generator at each site. |

## Alt A_Construction Off-Road Equipment Activity (Total Hours per Month)

| Equipment Type | CalEEMod Equipment Type | Fuel Type | Horsepower | Engine Tier | 2025 | | | | | | | | | | | | 2026 | | | | | Duration (day) | Average Hours per day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | |
| Excavators | Excavators | Diesel | 130 | Tier 4 | | | | | | | | | | | | | | | 96 | 176 | 44 | 65 | 4.9 |
| Air Compressors | Air Compressors | Diesel | 37 | Average | | | | | | | | | | | | | | | 88 | 44 | 22 | | 2.4 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | | | | | | | | | | | | | | | 42 | 44 | 44 | | 2.0 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | | | | | | | | | | 42 | 44 | | | 1.3 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | | | | | | | | | | | | | | | 126 | 132 | 66 | | 5.0 |
| Pumps | Pumps | Diesel | 11 | Average | | | | | | | | | | | | | | | 168 | 176 | | | 5.3 |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | |
| Drill and Mini Excavator | Excavators | Diesel | 24 | Tier 4 | 16 | 128 | | | | | | | | | | | | | | | | 43 | 3.3 |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | 16 | 128 | | | | | | | | | | | | | | | | | 3.3 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | | 21 | 40 | 11 | | | | | | | | | | | | | | 63 | 1.1 |
| Pumps for Dewatering | Pumps | Diesel | 11 | Average | | 48 | 168 | 128 | | | | | | | | | | | | | | | 5.5 |
| Welding Machine | Welders | Electric | 36 | N/A | | | 168 | 128 | | | | | | | | | | | | | | | 4.7 |
| Trench Compactor | Plate Compactors | Diesel | 3 | Tier 4 | | | 84 | 64 | | | | | | | | | | | | | | | 2.3 |
| Tamping Rammer Compacter | Plate Compactors | Gas | 3 | Average | | | 84 | 64 | | | | | | | | | | | | | | | 2.3 |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | |
| Water Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | 42 | 24 | | | | | | | | | | | | | 44 | 1.5 |
| Tack Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | 42 | 24 | | | | | | | | | | | | | | 1.5 |
| Asphalt Paver | Pavers | Diesel | 148 | Tier 4 | | | | 42 | 24 | | | | | | | | | | | | | | 1.5 |
| Tandem Roller | Rollers | Diesel | 48 | Tier 4 | | | | 42 | 24 | | | | | | | | | | | | | | 1.5 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | |
| Air Compressors | Air Compressors | Diesel | 37 | Average | 42 | 38 | 42 | 44 | 21 | 20 | 22 | 21 | | | | | | | | | | 325 | 0.8 |
| Dumpers/Tenders | Dumpers/Tenders | Diesel | 16 | Average | 126 | 114 | 126 | 132 | | | | | | | | | | | | | | | 1.5 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | 126 | 114 | 126 | 132 | | | | | | | | | | | | | | | 1.5 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | | 1.0 |
| Aerial Lifts | Aerial Lifts | Diesel | 46 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | | 1.0 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | 168 | 152 | 168 | 176 | 126 | 120 | 132 | 126 | 126 | 132 | 108 | 132 | 120 | 114 | 12 | | | | 5.9 |
| Pumps | Pumps | Diesel | 11 | Average | 168 | 152 | 168 | 176 | | | | | | | | | | | | | | | 2.0 |
| Cement Pump Truck | Off-Highway Trucks | Diesel | 350 | Average | | | | | 72 | | | | | | | | | | | | | | 0.2 |

Note: CalEEMod default values were used as project-specific hoursepower data were not available. Assumed diesel engine to be conservative when fuel type is unknown.

## Alt B_Construction Off-Road Equipment Activity (Total Hours per Month)

| Equipment Type | CalEEMod Equipment Type | Fuel Type | Horsepower | Engine Tier | 2025 | | | | | | | | | | | | 2026 | | | | | Duration (day) | Average Hours per day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | |
| Excavators | Excavators | Diesel | 130 | Tier 4 | | | | | | | | | | | | | | | 96 | 176 | 44 | 65 | 4.9 |
| Air Compressors | Air Compressors | Diesel | 37 | Average | | | | | | | | | | | | | | | 88 | 44 | 22 | | 2.4 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | | | | | | | | | | | | | | | 42 | 44 | 44 | | 2.0 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | | | | | | | | | | 42 | 44 | | | 1.3 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | | | | | | | | | | | | | | | 126 | 132 | 66 | | 5.0 |
| Pumps | Pumps | Diesel | 11 | Average | | | | | | | | | | | | | | | 168 | 176 | | | 5.3 |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | |
| Drill and Mini Excavator | Excavators | Diesel | 24 | Tier 4 | 16 | 304 | 288 | | | | | | | | | | | | | | | 64 | 9.5 |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | 16 | 304 | 288 | | | | | | | | | | | | | | | | 9.5 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | | | 52 | 163 | 89 | | | | | | | | | | | | | 65 | 4.7 |
| Pumps for Dewatering | Pumps | Diesel | 11 | Average | | | 56 | 176 | 96 | | | | | | | | | | | | | | 5.0 |
| Welding Machine | Welders | Electric | 36 | N/A | | | | 88 | 48 | | | | | | | | | | | | | | 2.1 |
| Trench Compactor | Plate Compactors | Diesel | 3 | Tier 4 | | | | 88 | 48 | | | | | | | | | | | | | | 2.1 |
| Tamping Rammer Compacter | Plate Compactors | Gas | 3 | Average | | | | 88 | 48 | | | | | | | | | | | | | | 2.1 |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | |
| Water Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | | | 12 | 132 | 84 | | | | | | | | | | 65 | 3.5 |
| Tack Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | | | 12 | 132 | 84 | | | | | | | | | | | 3.5 |
| Asphalt Paver | Pavers | Diesel | 148 | Tier 4 | | | | | | 12 | 132 | 84 | | | | | | | | | | | 3.5 |
| Tandem Roller | Rollers | Diesel | 48 | Tier 4 | | | | | | 12 | 132 | 84 | | | | | | | | | | | 3.5 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | |
| Air Compressors | Air Compressors | Diesel | 37 | Average | 42 | 38 | 42 | 44 | 21 | 20 | 22 | 21 | | | | | | | | | | 325 | 0.8 |
| Dumpers/Tenders | Dumpers/Tenders | Diesel | 16 | Average | 126 | 114 | 126 | 132 | | | | | | | | | | | | | | | 1.5 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | | 1.0 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | 168 | 152 | 168 | 176 | 126 | 120 | 132 | 126 | 126 | 132 | 108 | 132 | 120 | 114 | 12 | | | | 5.9 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | 126 | 114 | 126 | 132 | | | | | | | | | | | | | | | 1.5 |
| Pumps | Pumps | Diesel | 11 | Average | 168 | 152 | 168 | 176 | | | | | | | | | | | | | | | 2.0 |
| Aerial Lifts | Aerial Lifts | Diesel | 63 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | | 1.0 |
| Cement Pump Truck | Off-Highway Trucks | Diesel | 350 | Average | | | | | 56 | | | | | | | | | | | | | | 0.2 |

Note: CalEEMod default values were used as project-specific hoursepower data were not available. Assumed diesel engine to be conservative when fuel type is unknown.

## Alt C_Construction Off-Road Equipment Activity (Total Hours per Month)

| Equipment Type | CalEEMod Equipment Type | Fuel Type | Horsepower | Engine Tier | 2025 | | | | | | | | | | | | 2026 | | | | | | | | | | | | 2027 | | | Duration (day) | Average Hours per day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Excavators | Excavators | Diesel | 130 | Tier 4 | | | | | | | | | | | | | | | | | | | | | | | 176 | 152 | 40 | | 64 | 5.8 |
| Air Compressors | Air Compressors | Diesel | 37 | Average | | | | | | | | | | | | | | | | | | | | | | | 88 | 38 | 20 | | | 2.3 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | | | | | | | | | | | | | | | | | | | | | | | | | 40 | | | 0.6 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | | | | | | | | | | | | | | | | | | 44 | | | | | 0.7 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | | | | | | | | | | | | | | | | | | | | | | | 132 | 114 | 60 | | | 4.8 |
| Pumps | Pumps | Diesel | 11 | Average | | | | | | | | | | | | | | | | | | | | | | | 176 | 152 | | | | 5.1 |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drill and Mini Excavator | Excavators | Diesel | 24 | Tier 4 | 16 | 304 | 336 | 352 | 96 | | | | | | | | | | | | | | | | | | | | | | 108 | 10.2 |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | 16 | 304 | 336 | 352 | 96 | | | | | | | | | | | | | | | | | | | | | | | 10.2 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | | 120 | 168 | 176 | 88 | | | | | | | | | | | | | | | | | | | | | | 85 | 6.5 |
| Pumps for Dewatering | Pumps | Diesel | 11 | Average | | 120 | 168 | 176 | 136 | | | | | | | | | | | | | | | | | | | | | | | 7.1 |
| Welding Machine | Welders | Electric | 36 | N/A | | | 126 | 132 | 102 | | | | | | | | | | | | | | | | | | | | | | | 4.2 |
| Trench Compactor | Plate Compactors | Diesel | 3 | Tier 4 | | | 126 | 132 | 102 | | | | | | | | | | | | | | | | | | | | | | | 4.2 |
| Tamping Rammer Compacter | Plate Compactors | Gas | 3 | Average | | | 126 | 132 | 102 | | | | | | | | | | | | | | | | | | | | | | | 4.2 |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Water Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | | 30 | 120 | 132 | 126 | 6 | | | | | | | | | | | | | | | | | | 109 | 3.8 |
| Tack Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | | 30 | 120 | 132 | 126 | 6 | | | | | | | | | | | | | | | | | | | 3.8 |
| Asphalt Paver | Pavers | Diesel | 148 | Tier 4 | | | | | 30 | 120 | 132 | 126 | 6 | | | | | | | | | | | | | | | | | | | 3.8 |
| Tandem Roller | Rollers | Diesel | 48 | Tier 4 | | | | | 30 | 120 | 132 | 126 | 6 | | | | | | | | | | | | | | | | | | | 3.8 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Air Compressors | Air Compressors | Diesel | 37 | Average | 42 | 38 | 42 | 44 | 21 | 20 | 22 | 21 | | | | | 40 | 38 | 44 | 44 | 20 | 21 | 22 | 21 | | | | | | | | 0.9 |
| Dumpers/Tenders | Dumpers/Tenders | Diesel | 16 | Average | 126 | 114 | 126 | 132 | | | | | | | | | 120 | 114 | 132 | 132 | | | | | | | | | | | | 1.7 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | 42 | 22 | 21 | 21 | 21 | 19 | 22 | 19 | 19 | 23 | | 1.0 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | 168 | 152 | 168 | 176 | 126 | 120 | 132 | 126 | 126 | 132 | 108 | 132 | 280 | 266 | 28 | 176 | 120 | 126 | 132 | 126 | 126 | 126 | 114 | 132 | 114 | 114 | 138 | | 6.5 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | 126 | 114 | 126 | 132 | | | | | | | | | 120 | 114 | 132 | 132 | | | | | | | | | | | | 586 | 1.7 |
| Pumps | Pumps | Diesel | 11 | Average | 168 | 152 | 168 | 176 | | | | | | | | | 160 | 152 | 176 | 176 | | | | | | | | | | | | | 2.3 |
| Aerial Lifts | Aerial Lifts | Diesel | 63 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | 42 | 22 | 21 | 21 | 21 | 19 | 22 | 19 | 19 | 23 | | 1.0 |
| Cement Pump Truck | Off-Highway Trucks | Diesel | 350 | Average | | | | | 48 | | | | | | | | | | | | 40 | | | | | | | | | | | | 0.2 |

Note: CalEEMod default values were used as project-specific hoursepower data were not available. Assumed diesel engine to be conservative when fuel type is unknown.

## Alt D_Construction Off-Road Equipment Activity (Total Hours per Month)

| Equipment Type | CalEEMod Equipment Type | Fuel Type | Horsepower | Engine Tier | 2025 | | | | | | | | | | | | 2026 | | | | | | | | | | | | 2027 | | | Duration (day) | Average Hours per day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Excavators | Excavators | Diesel | 130 | Tier 4 | | | | | | | | | | | | | | | | | | | | | | | 176 | 152 | 40 | | 64 | 5.8 |
| Air Compressors | Air Compressors | Diesel | 37 | Average | | | | | | | | | | | | | | | | | | | | | | | 88 | 38 | 20 | | | 2.3 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | | | | | | | | | | | | | | | | | | | | | | | | | 40 | | | 0.6 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | | | | | | | | | | | | | | | | | | 44 | | | | | 0.7 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | | | | | | | | | | | | | | | | | | | | | | | 132 | 114 | 60 | | | 4.8 |
| Pumps | Pumps | Diesel | 11 | Average | | | | | | | | | | | | | | | | | | | | | | | 176 | 152 | | | | 5.1 |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drill and Mini Excavator | Excavators | Diesel | 24 | Tier 4 | 16 | 304 | 336 | 32 | | | | | | | | | | | | | | | | | | | | | | | 86 | 8.0 |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | 16 | 304 | 336 | 32 | | | | | | | | | | | | | | | | | | | | | | | | 8.0 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | | 120 | 168 | 48 | | | | | | | | | | | | | | | | | | | | | | | 63 | 5.3 |
| Pumps for Dewatering | Pumps | Diesel | 11 | Average | | 120 | 168 | 64 | | | | | | | | | | | | | | | | | | | | | | | | 5.6 |
| Welding Machine | Welders | Electric | 36 | N/A | | | 126 | 48 | | | | | | | | | | | | | | | | | | | | | | | | 2.8 |
| Trench Compactor | Plate Compactors | Diesel | 3 | Tier 4 | | | 126 | 48 | | | | | | | | | | | | | | | | | | | | | | | | 2.8 |
| Tamping Rammer Compacter | Plate Compactors | Gas | 3 | Average | | | 126 | 48 | | | | | | | | | | | | | | | | | | | | | | | | 2.8 |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Water Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | 78 | 126 | 54 | | | | | | | | | | | | | | | | | | | | | 65 | 4.0 |
| Tack Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | 78 | 126 | 54 | | | | | | | | | | | | | | | | | | | | | | 4.0 |
| Asphalt Paver | Pavers | Diesel | 148 | Tier 4 | | | | 78 | 126 | 54 | | | | | | | | | | | | | | | | | | | | | | 4.0 |
| Tandem Roller | Rollers | Diesel | 48 | Tier 4 | | | | 78 | 126 | 54 | | | | | | | | | | | | | | | | | | | | | | 4.0 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Air Compressors | Air Compressors | Diesel | 37 | Average | 42 | 38 | 42 | 44 | 21 | 20 | 22 | 21 | | | | | 40 | 38 | 44 | 44 | 20 | 21 | 22 | 21 | | | | | | | | 0.9 | |
| Dumpers/Tenders | Dumpers/Tenders | Diesel | 16 | Average | 126 | 114 | 126 | 132 | | | | | | | | | 120 | 114 | 132 | 132 | | | | | | | | | | | | 1.7 | |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | 42 | 22 | 21 | 21 | 21 | 19 | 22 | 19 | 19 | 23 | 1.0 | |
| Generator Sets | Generator Sets | Diesel | 14 | Average | 168 | 152 | 168 | 176 | 126 | 120 | 132 | 126 | 126 | 132 | 108 | 132 | 280 | 266 | 308 | 176 | 120 | 126 | 132 | 126 | 126 | 126 | 114 | 132 | 114 | 114 | 138 | 6.9 | |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | 126 | 114 | 126 | 132 | | | | | | | | | 120 | 114 | 132 | 132 | | | | | | | | | | | | 1.7 | |
| Pumps | Pumps | Diesel | 11 | Average | 168 | 152 | 168 | 176 | | | | | | | | | 160 | 152 | 176 | 176 | | | | | | | | | | | | 2.3 | |
| Aerial Lifts | Aerial Lifts | Diesel | 63 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | 42 | 22 | 21 | 21 | 21 | 19 | 22 | 19 | 19 | 23 | 1.0 | |
| Cement Pump Truck | Off-Highway Trucks | Diesel | 350 | Average | | | | | 48 | | | | | | | | | | | | 40 | | | | | | | | | | | 0.2 | |

Note: CalEEMod default values were used as project-specific hoursepower data were not available. Assumed diesel engine to be conservative when fuel type is unknown.

## Alt E_Construction Off-Road Equipment Activity (Total Hours per Month)

| Equipment Type | CalEEMod Equipment Type | Fuel Type | Horsepower | Engine Tier | 2025 | | | | | | | | | | | | 2026 | | | | | | | | | | | | 2027 | | | Duration (day) | Average Hours per day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Excavators | Excavators | Diesel | 130 | Tier 4 | | | | | | | | | | | | | | | | | | | | | | | 176 | 152 | 40 | | 64 | 5.8 |
| Air Compressors | Air Compressors | Diesel | 37 | Average | | | | | | | | | | | | | | | | | | | | | | | 88 | 38 | 20 | | | 2.3 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | | | | | | | | | | | | | | | | | | | | | | | | | 40 | | | 0.6 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | | | | | | | | | | | | | | | | | | 44 | | | | | 0.7 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | | | | | | | | | | | | | | | | | | | | | | | 132 | 114 | 60 | | | 4.8 |
| Pumps | Pumps | Diesel | 11 | Average | | | | | | | | | | | | | | | | | | | | | | | 176 | 152 | | | | 5.1 |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drill and Mini Excavator | Excavators | Diesel | 24 | Tier 4 | 16 | 304 | 304 | | | | | | | | | | | | | | | | | | | | | | | | | 64 | 9.8 |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | 16 | 304 | 304 | | | | | | | | | | | | | | | | | | | | | | | | | | 9.8 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bigger Excavator | Excavators | Diesel | 130 | Tier 4 | | 120 | 168 | 24 | | | | | | | | | | | | | | | | | | | | | | | | | 5.0 |
| Pumps for Dewatering | Pumps | Diesel | 11 | Average | | 120 | 168 | 64 | | | | | | | | | | | | | | | | | | | | | | | | | 5.6 |
| Welding Machine | Welders | Electric | 36 | N/A | | | 126 | 48 | | | | | | | | | | | | | | | | | | | | | | | | 63 | 2.8 |
| Trench Compactor | Plate Compactors | Diesel | 3 | Tier 4 | | | 126 | 48 | | | | | | | | | | | | | | | | | | | | | | | | | 2.8 |
| Tamping Rammer Compacter | Plate Compactors | Gas | 3 | Average | | | 126 | 48 | | | | | | | | | | | | | | | | | | | | | | | | | 2.8 |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Water Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | 78 | 126 | 30 | | | | | | | | | | | | | | | | | | | | | | | 3.6 |
| Tack Truck | Off-Highway Trucks | Diesel | 185 | Tier 4 | | | | 78 | 126 | 30 | | | | | | | | | | | | | | | | | | | | | | 65 | 3.6 |
| Asphalt Paver | Pavers | Diesel | 148 | Tier 4 | | | | 78 | 126 | 30 | | | | | | | | | | | | | | | | | | | | | | | 3.6 |
| Tandem Roller | Rollers | Diesel | 48 | Tier 4 | | | | 78 | 126 | 30 | | | | | | | | | | | | | | | | | | | | | | | 3.6 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Air Compressors | Air Compressors | Diesel | 37 | Average | 42 | 38 | 42 | 44 | 21 | 20 | 22 | 21 | | | | | 40 | 38 | 44 | 44 | 20 | 21 | 22 | 21 | | | | | | | | | 0.9 |
| Dumpers/Tenders | Dumpers/Tenders | Diesel | 16 | Average | 126 | 114 | 126 | 132 | | | | | | | | | 120 | 114 | 132 | 132 | | | | | | | | | | | | | 1.7 |
| Forklifts | Forklifts | Diesel | 82 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | 42 | 22 | 21 | 21 | 21 | 19 | 22 | 19 | 19 | 23 | | 1.0 |
| Generator Sets | Generator Sets | Diesel | 14 | Average | 168 | 152 | 168 | 176 | 126 | 120 | 132 | 126 | 126 | 132 | 108 | 132 | 280 | 266 | 308 | 176 | 120 | 126 | 132 | 126 | 126 | 126 | 114 | 132 | 114 | 114 | 138 | 586 | 6.9 |
| Plate Compactors | Plate Compactors | Diesel | 8 | Average | 126 | 114 | 126 | 132 | | | | | | | | | 120 | 114 | 132 | 132 | | | | | | | | | | | | | 1.7 |
| Pumps | Pumps | Diesel | 11 | Average | 168 | 152 | 168 | 176 | | | | | | | | | 160 | 152 | 176 | 176 | | | | | | | | | | | | | 2.3 |
| Aerial Lifts | Aerial Lifts | Diesel | 63 | Average | | | | | | 40 | 44 | 42 | 42 | 44 | 36 | 44 | 20 | 19 | 2 | | | 42 | 22 | 21 | 21 | 21 | 19 | 22 | 19 | 19 | 23 | | 1.0 |
| Cement Pump Truck | Off-Highway Trucks | Diesel | 350 | Average | | | | | 48 | | | | | | | | | | | | 40 | | | | | | | | | | | | 0.2 |

Note: CalEEMod default values were used as project-specific hoursepower data were not available. Assumed diesel engine to be conservative when fuel type is unknown.

## Alt A_Construction Vehicle Trip Activity (Total Round Trips per Month)

| Vehicle Trip Activity | Travel Distance (Round Trip Miles) | Travel Destination | Fleet Mix (percentage) | | | | 2025 | | | | | | | | | | | | 2026 | | | | | Duration (day) | Average One-Way Trips per day | Average VMT per day | Trip Type | Trip Type - Average One-Way Trips per day | Average One-Way Trip Length (miles) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LDA | LHD | MHD | HHD | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | | | | | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Worker Commute Trips - demo | 23.4 | | 100% | | | | | | | | | | | | | | | | | | 132 | 132 | 66 | 65 | 10.15 | 118.80 | Worker Commute | 10.15 | 11.70 |
| Soil Import Truck Trips for Existing Pump Station | 6 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | | | | | | | | | | | | | | | 6 | | | 0.18 | 0.55 | Hauling | 0.68 | 5.91 |
| Demolition Haul Trips Soil from Excavation of Ex. Pump Station | 14 | Redwood Landfill | | | | 100% | | | | | | | | | | | | | | | 16 | | | | 0.49 | 3.45 | | | |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pavement Removal | 14 | Redwood Landfill | | | | 100% | 2 | 16 | | | | | | | | | | | | | | | | 43 | 0.84 | 5.86 | Hauling | 0.84 | 7.00 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Demolition Haul Trips Soil from Trench | 14 | Redwood Landfill | | | | 100% | | 5 | 13 | 9 | | | | | | | | | | | | | | 63 | 0.86 | 6.00 | Hauling | 2.57 | 7.67 |
| Demolition Haul Trips Agreggate Base | 14 | Redwood Landfill | | | | 100% | | 3 | 9 | 6 | | | | | | | | | | | | | | | 0.57 | 4.00 | | | |
| Soil Import Truck Trips for pit zone | 6 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | 3 | 9 | 6 | | | | | | | | | | | | | | | 0.57 | 1.71 | | | |
| Agregate Base Trucks Trips - Import | 28 | Dutra Materials | | | | 100% | | 3 | 9 | 6 | | | | | | | | | | | | | | | 0.57 | 8.00 | | | |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asphalt Trucks Trips - Import | 52 | Vulcan Materials Company 885 Lake Herman Rd | | | | 100% | | | | 14 | 8 | | | | | | | | | | | | | 44 | 1.00 | 26.00 | Hauling | 1.00 | 26.00 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Worker Commute Trips - other | 23.4 | | 100% | | | | 50 | 190 | 210 | 222 | 126 | 120 | 132 | 126 | 126 | 132 | 108 | 132 | 120 | 114 | | | | 325 | 11.74 | 137.38 | Worker Commute | 11.74 | 11.70 |
| Vendor Trips | 16.8 | | | | 50% | 50% | | | 3 | 3 | 3 | 9 | 9 | 7 | 3 | | | | | | | | | | 0.23 | 1.91 | Vendor | 0.23 | 8.40 |
| Concrete Trucks Trips | 52 | Crown Hill Ready Mix 650 Green Island Rd | | | | 100% | | 3 | 3 | | 42 | | | | | | | | | | | | | | 0.30 | 7.68 | Hauling | 0.46 | 19.16 |
| Demolition Haul Trips for excavation of new pump station | 14 | Redwood Landfill | | | | 100% | 27 | | | | | | | | | | | | | | | | | | 0.17 | 1.16 | | | |

Notes: Worker commute trips between January 2025 to February 2026 and March 2026 to May 2026 are included in the new pump station construction phase and the existing pump station demolition phase, respectively. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase.

## Alt B_Construction Vehicle Trip Activity (Total Round Trips per Month)

| Vehicle Trip Activity | Travel Distance (Round Trip Miles) | Travel Destination | Fleet Mix (percentage) | | | | 2025 | | | | | | | | | | | | 2026 | | | | | Duration (day) | Average One-Way Trips per day | Average VMT per day | Trip Type | Trip Type - Average One-Way Trips per day | Average One-Way Trip Length (miles) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LDA | LHD | MHD | HHD | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | | | | | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Worker Commute Trips - demo | 23.4 | | 100% | | | | | | | | | | | | | | | | | | 132 | 132 | 66 | | 10.15 | 118.80 | Worker Commute | 10.15 | 11.70 |
| Demolition Haul Trips for Excavation of Ex. Pump Station | 18 | Redwood Landfill | | | | 100% | | | | | | | | | | | | | | | 16 | | | 65 | 0.49 | 4.43 | Hauling | 0.68 | 8.18 |
| Soil Import Truck Trips for Existing Pump Station | 12 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | | | | | | | | | | | | | | | 6 | | | 0.18 | 1.11 | | | |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pavement Removal | 18 | Redwood Landfill | | | | 100% | 2 | 38 | 36 | | | | | | | | | | | | | | | 64 | 2.38 | 21.38 | Hauling | 2.38 | 9.00 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Demolition Haul Trips Soil from Trench | 18 | Redwood Landfill | | | | 100% | | | 20 | 61 | 33 | | | | | | | | | | | | | 65 | 3.51 | 31.57 | Hauling | 10.52 | 9.22 |
| Demolition Haul Trips Agreggate Base | 18 | Redwood Landfill | | | | 100% | | | 13 | 41 | 22 | | | | | | | | | | | | | | 2.34 | 21.05 | | | |
| Soil Import Truck Trips for pit zone | 12 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | | 13 | 41 | 22 | | | | | | | | | | | | | | 2.34 | 14.03 | | | |
| Agregate Base Trucks Trips - Import | 26 | Dutra Materials | | | | 100% | | | 13 | 41 | 22 | | | | | | | | | | | | | | 2.34 | 30.40 | | | |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asphalt Trucks Trips - Import | 52 | Vulcan Materials Company 885 Lake Herman Rd | | | | 100% | | | | | | 4 | 44 | 28 | | | | | | | | | | 65 | 2.34 | 60.80 | Hauling | 2.34 | 26.00 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Worker Commute Trips | 23.4 | | 100% | | | | 50 | 190 | 210 | 220 | 210 | 212 | 276 | 222 | 126 | 132 | 108 | 132 | 120 | 114 | | | | 325 | 14.29 | 167.18 | Worker Commute | 14.29 | 11.70 |
| Vendor Trips | 16.8 | | | | 50% | 50% | | | 20 | 3 | 3 | 9 | 9 | 7 | 3 | | | | | | | | | | 0.33 | 2.79 | Vendor | 0.33 | 8.40 |
| Concrete Trucks Trips | 52 | Crown Hill Ready Mix 650 Green Island Rd | | | | 100% | | | 4 | 3 | | 42 | | | | | | | | | | | | | 0.30 | 7.84 | Hauling | 0.47 | 19.96 |
| Demolition Haul Trips for excavation of new pump station | 18 | Redwood Landfill | | | | 100% | 27 | | | | | | | | | | | | | | | | | | 0.17 | 1.50 | | | |

Notes: Worker commute trips between January 2025 to February 2026 and March 2026 to May 2026 are included in the new pump station construction phase and the existing pump station demolition phase, respectively. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase.

## Alt C_Construction Vehicle Trip Activity (Total Round Trips per Month)

| Vehicle Trip Activity | Travel Distance (Round Trip Miles) | Travel Destination | Fleet Mix (percentage) | | | | 2025 | | | | | | | | | | | | 2026 | | | | | | | | | | | | 2027 | | | Duration (day) | Average One-Way Trips per day | Average VMT per day | Trip Type | Trip Type - Average One-Way Trips per day | Average One-Way Trip Length (miles) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LDA | LHD | MHD | HHD | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | | | | | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Demolition Haul Trips for Excavation of Ex. Pump Station | 20 | Redwood Landfill | | | | 100% | | | | | | | | | | | | | | | | | | | | | | | 16 | | | | 64 | 0.50 | 5.00 | Hauling | 0.69 | 9.18 |
| Soil Import Truck Trips for Existing Pump Station | 14 | Marin/Sonoma 8120 Binford Rd | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | | | | 0.19 | 1.31 | | | |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pavement Removal | 20 | Redwood Landfill | | | | | 2 | 38 | 42 | 44 | 12 | | | | | | | | | | | | | | | | | | | | | | | 108 | 2.56 | 25.56 | Hauling | 2.56 | 10.00 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Demolition Haul Trips Soil from Trench | 20 | Redwood Landfill | | | | 100% | | 45 | 63 | 66 | 30 | | | | | | | | | | | | | | | | | | | | | | | | 4.80 | 48.00 | | | | |
| Demolition Haul Trips Agreggate Base | 20 | Redwood Landfill | | | | 100% | | 30 | 42 | 44 | 22 | | | | | | | | | | | | | | | | | | | | | | | 85 | 3.25 | 32.47 | Hauling | 14.54 | 9.78 |
| Soil Import Truck Trips for pit zone | 14 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | 30 | 42 | 44 | 22 | | | | | | | | | | | | | | | | | | | | | | | | 3.25 | 22.73 | | | | |
| Agregate Base Trucks Trips - Import | 24 | Dutra Materials | | | | 100% | | 30 | 42 | 44 | 22 | | | | | | | | | | | | | | | | | | | | | | | | 3.25 | 38.96 | | | | |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asphalt Trucks Trips - Import | 54 | Vulcan Materials Company 885 Lake Herman Rd | | | | 100% | | | | | 10 | 40 | 44 | 42 | 2 | | | | | | | | | | | | | | | | | | | | 109 | 2.53 | 68.37 | Hauling | 2.53 | 27.00 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Worker Commute Trips | 23.4 | | 100% | | | | 50 | 190 | 210 | 220 | 204 | 240 | 264 | 252 | 132 | 132 | 108 | 132 | 160 | 114 | 132 | 132 | 120 | 126 | 132 | 126 | 126 | 126 | 114 | 132 | 114 | 114 | 66 | | 13.54 | 158.45 | Worker Commute | 13.54 | 11.70 |
| Vendor Trips | 16.8 | | | | 50% | 50% | | | 36 | 3 | 3 | 9 | 9 | 6 | 3 | | | | | | | 3 | 3 | 14 | 5 | 3 | | | | | | | | 586 | 0.33 | 2.78 | Vendor | 0.33 | 8.40 |
| Concrete Trucks Trips | 54 | Crown Hill Ready Mix 650 Green Island Rd | | | | 100% | | 7 | 7 | | 37 | | | | | | | | | | | | 33 | | | | | | | | | | | | 0.29 | 7.74 | Hauling | 0.42 | 21.61 |
| Demolition Haul Trips for excavation of new pump station | 20 | Redwood Landfill | | | | 100% | 22 | | | | | | | | | | | | 17 | | | | | | | | | | | | | | | | 0.13 | 1.33 | | | |

Notes: Worker commute trips are included in the new pump station construction phase. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase.

## Alt D_Construction Vehicle Trip Activity (Total Round Trips per Month)

| Vehicle Trip Activity | Travel Distance (Round Trip Miles) | Custom Travel Destination | Fleet Mix (percentage) | | | | 2025 | | | | | | | | | | | | 2026 | | | | | | | | | | | | 2027 | | | Duration (day) | Average One-Way Trips per day | Average VMT per day | Trip Type | Trip Type - Average One-Way Trips per day | Average One-Way Trip Length (miles) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LDA | LHD | MHD | HHD | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | | | | | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Demolition Haul Trips for Excavation of Ex. Pump Station | 20 | Redwood Landfill | | | | 100% | | | | | | | | | | | | | | | | | | | | | | | 16 | | | | 64 | 0.50 | 5.00 | Hauling | 0.69 | 9.18 |
| Soil Import Truck Trips for Existing Pump Station | 14 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | | | | | | | | | | | | | | | | | | | | | | | 6 | | | | 0.19 | 1.31 | | | |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pavement Removal | 20 | Redwood Landfill | | | | 100% | 2 | 38 | 42 | 4 | | | | | | | | | | | | | | | | | | | | | | | | 86 | 2.00 | 20.00 | Hauling | 2.00 | 10.00 |
| Demolition Haul Trips Soil from Trench | 20 | Redwood Landfill | | | | 100% | | 45 | 63 | 18 | | | | | | | | | | | | | | | | | | | | | | | | 63 | 4.00 | 40.00 | Hauling | 12.19 | 9.78 |
| Demolition Haul Trips Aggregate Base | 20 | Redwood Landfill | | | | 100% | | 30 | 42 | 14 | | | | | | | | | | | | | | | | | | | | | | | | | 2.73 | 27.30 | | | |
| Soil Import Truck Trips for pit zone | 14 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | 30 | 42 | 14 | | | | | | | | | | | | | | | | | | | | | | | | | 2.73 | 19.11 | | | |
| Aggregate Base Trucks Trips - Import | 24 | Dutra Materials | | | | 100% | | 30 | 42 | 14 | | | | | | | | | | | | | | | | | | | | | | | | | 2.73 | 32.76 | | | |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asphalt Trucks Trips - Import | 56 | Vulcan Materials Company 885 Lake Herman Rd | | | | 100% | | | | 26 | 42 | 18 | | | | | | | | | | | | | | | | | | | | | | | 65 | 2.65 | 74.09 | Hauling | 2.65 | 28.00 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Worker Commute Trips | 23.4 | | 100% | | | | 50 | 190 | 210 | 246 | 252 | 174 | 132 | 126 | 126 | 132 | 108 | 132 | 160 | 114 | 132 | 132 | 120 | 126 | 132 | 126 | 126 | 126 | 114 | 132 | 114 | 114 | 66 | 586 | 12.67 | 148.23 | Worker Commute | 12.67 | 11.70 |
| Vendor Trips | 16.8 | | | | 50% | 50% | | | 20 | 3 | 3 | 8 | 9 | 6 | 3 | | | | | | | 3 | 3 | 14 | 5 | 3 | | | | | | | | | 0.27 | 2.29 | Vendor | 0.27 | 8.40 |
| Concrete Trucks Trips | 52 | Crown Hill Ready Mix 650 Green Island Rd | | | | 100% | | 4 | 4 | | 37 | | | | | | | | | | | | 33 | | | | | | | | | | | | 0.27 | 6.92 | Hauling | 0.40 | 20.67 |
| Demolition Haul Trips for excavation of new pump station | 20 | Redwood Landfill | | | | 100% | 22 | | | | | | | | | | | | 17 | | | | | | | | | | | | | | | | 0.13 | 1.33 | | | |

Notes: Worker commute trips are included in the new pump station construction phase. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase.

## Alt E_Construction Vehicle Trip Activity (Total Round Trips per Month)

| Vehicle Trip Activity | Travel Distance (Round Trip Miles) | Travel Destination | Fleet Mix (percentage) | | | | 2025 | | | | | | | | | | | | 2026 | | | | | | | | | | | | 2027 | | | Duration (day) | Average One-Way Trips per day | Average VMT per day | Trip Type | Trip Type - Average One-Way Trips per day | Average One-Way Trip Length (miles) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LDA | LHD | MHD | HHD | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | | | | | | |
| **Existing Pump Station Removal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Demolition Haul Trips for Excavation of Ex. Pump Station | 20 | Redwood Landfill | | | | 100% | | | | | | | | | | | | | | | | | | | | | | | | 16 | | | | 64 | 0.50 | 5.00 | Hauling | 0.69 | 9.18 |
| Soil Import Truck Trips for Existing Pump Station | 14 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | | | | | | | | | | | | | | | | | | | | | | | | 6 | | | | 0.19 | 1.31 | | | |
| **Pavement Removal For new pipe** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pavement Removal | 20 | Redwood Landfill | | | | 100% | 2 | 38 | 38 | | | | | | | | | | | | | | | | | | | | | | | | | 64 | 2.44 | 24.38 | Hauling | 2.44 | 10.00 |
| **Trench Excavation and Pipe Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Demolition Haul Trips Soil from Trench | 20 | Redwood Landfill | | | | 100% | | 45 | 63 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | 3.71 | 37.14 | | | |
| Demolition Haul Trips Aggregate Base | 20 | Redwood Landfill | | | | 100% | | 30 | 42 | 6 | | | | | | | | | | | | | | | | | | | | | | | | 63 | 2.48 | 24.76 | Hauling | 11.14 | 9.78 |
| Soil Import Truck Trips for pit zone | 14 | Marin/Sonoma 8120 Binford Rd | | | | 100% | | 30 | 42 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | 2.48 | 17.33 | | | |
| Aggregate Base Trucks Trips - Import | 24 | Dutra Materials | | | | 100% | | 30 | 42 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | 2.48 | 29.71 | | | |
| **Asphalt Pavement of Road** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Asphalt Trucks Trips - Import | 56 | Vulcan Materials Company 885 Lake Herman Rd | | | | 100% | | | | 26 | 42 | 10 | | | | | | | | | | | | | | | | | | | | | | | 65 | 2.40 | 67.20 | Hauling | 2.40 | 28.00 |
| **New Pump Station Construction** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Worker Commute Trips | 23.4 | | 100% | | | | 50 | 190 | 210 | 246 | 252 | 150 | 132 | 126 | 126 | 132 | 108 | 132 | 160 | 114 | 132 | 132 | 120 | 126 | 132 | 126 | 126 | 126 | 114 | 132 | 114 | 114 | 66 | | 12.59 | 147.27 | Worker Commute | 12.59 | 11.70 |
| Vendor Trips | 16.8 | | | | 50% | 50% | | | 20 | 3 | 3 | 8 | 9 | 6 | 3 | | | | | | | 3 | 3 | 14 | 5 | 3 | | | | | | | | | 0.27 | 2.29 | Vendor | 0.27 | 8.40 |
| Concrete Trucks Trips | 52 | Crown Hill Ready Mix 650 Green Island Rd | | | | 100% | | 4 | 4 | | 37 | | | | | | | | | | | | 33 | | | | | | | | | | | 586 | 0.27 | 6.92 | Hauling | 0.40 | 20.67 |
| Demolition Haul Trips for excavation of new pump station | 20 | Redwood Landfill | | | | 100% | 22 | | | | | | | | | | | | 17 | | | | | | | | | | | | | | | | 0.13 | 1.33 | | | |

Notes: Worker commute trips are included in the new pump station construction phase. In addition, concrete truck trips and vendor trips are included in the new pump station construction phase.

**Summary of ISCST3 Model Parameters, Assumptions, and Results for DPM and PM2.5 Emissions from Construction of Alternative A (Worst-Case Scenario)**

| ISCST3 Model Parameters and Assumptions | | | |
|---|---|---|---|
| **Source Type** | **Units** | **Value** | **Notes** |
| **Area Source: Off-Road Equipment Exhaust (DPM)** | | | |
| Average Hours/Work Day | hours/day | 10.3 | Monday to Friday: 7 am to 6 pm; Saturday: 10 am to 5 pm |
| DPM Emission Rate - New pump station construction and pipe improvements | gram/second | 0.00060 | Exhaust PM10 from off-road construction equipment |
| DPM Emission Rate - Demolition of Existing Pump Station | gram/second | 0.00013 | Exhaust PM10 from off-road construction equipment |
| Release Height | meters | 5.0 | SMAQMD, 2015 |
| Initial Vertical Dimension | meters | 1.4 | USEPA, 2022 |
| **Area Source: On-Site Fugitive PM2.5** | | | |
| Fugitive PM2.5 Emission Rate - New pump station construction and pipe improvements | gram/second | 0.000001 | Fugitive PM2.5 from on-site construction activities. |
| Fugitive PM2.5 Emission Rate - Demolition of Existing Pump Station | gram/second | 0.00001 | Fugitive PM2.5 from on-site construction activities. |
| Release Height | meters | 0.0 | SMAQMD, 2015 |
| Initial Vertical Dimension | meters | 1.0 | SMAQMD, 2015 |
| **ISCST3 Model Results** | | | |
| **Sensitive Receptor** | **Pollutant** | **Annual Average Concentration** | **Notes** |
| MEIR | DPM ($\mu g/m^3$) | 0.0475 | Nearest residential receptor |
| | PM2.5 ($\mu g/m^3$) | 0.0436 | |
| MEIS | DPM ($\mu g/m^3$) | 0.0117 | Nearest student receptor |
| | PM2.5 ($\mu g/m^3$) | 0.0109 | |

Notes:

DPM = diesel particulate matter

$PM_{10}$ = particulate matter with aerodynamic resistance diameters equal to or less than 10 microns

$PM_{2.5}$ = particulate matter with aerodynamic resistance diameters equal to or less than 2.5 microns

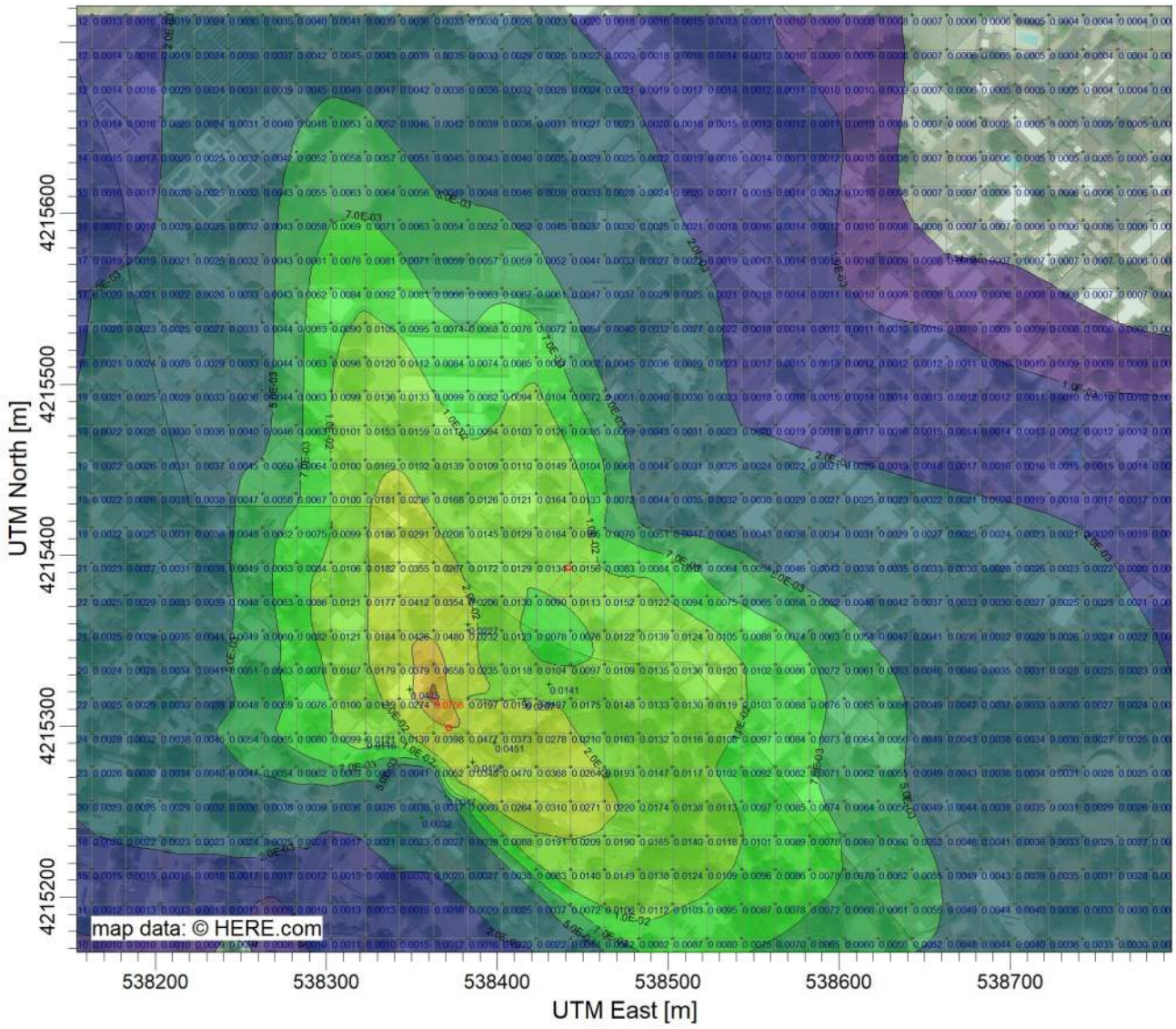
$\mu g/m^3$ = micrograms per cubic meter

Sacramento Metropolitan Air Quality Management District (SMAQMD), 2015. *Guide to Air Quality Assessment in Sacramento County* . June.

U.S. Environmental Protection Agency (USEPA), 2022. User's Guide for the AMS/EPA Regulatory Model (AERMOD).

PROJECT TITLE: Lynwood Pump Station

**Lynwood Pump Station**
**Offroad Construction Equipment Exhaust**




PLOT FILE OF PERIOD VALUES FOR SOURCE GROUP: ALL ug/m^3

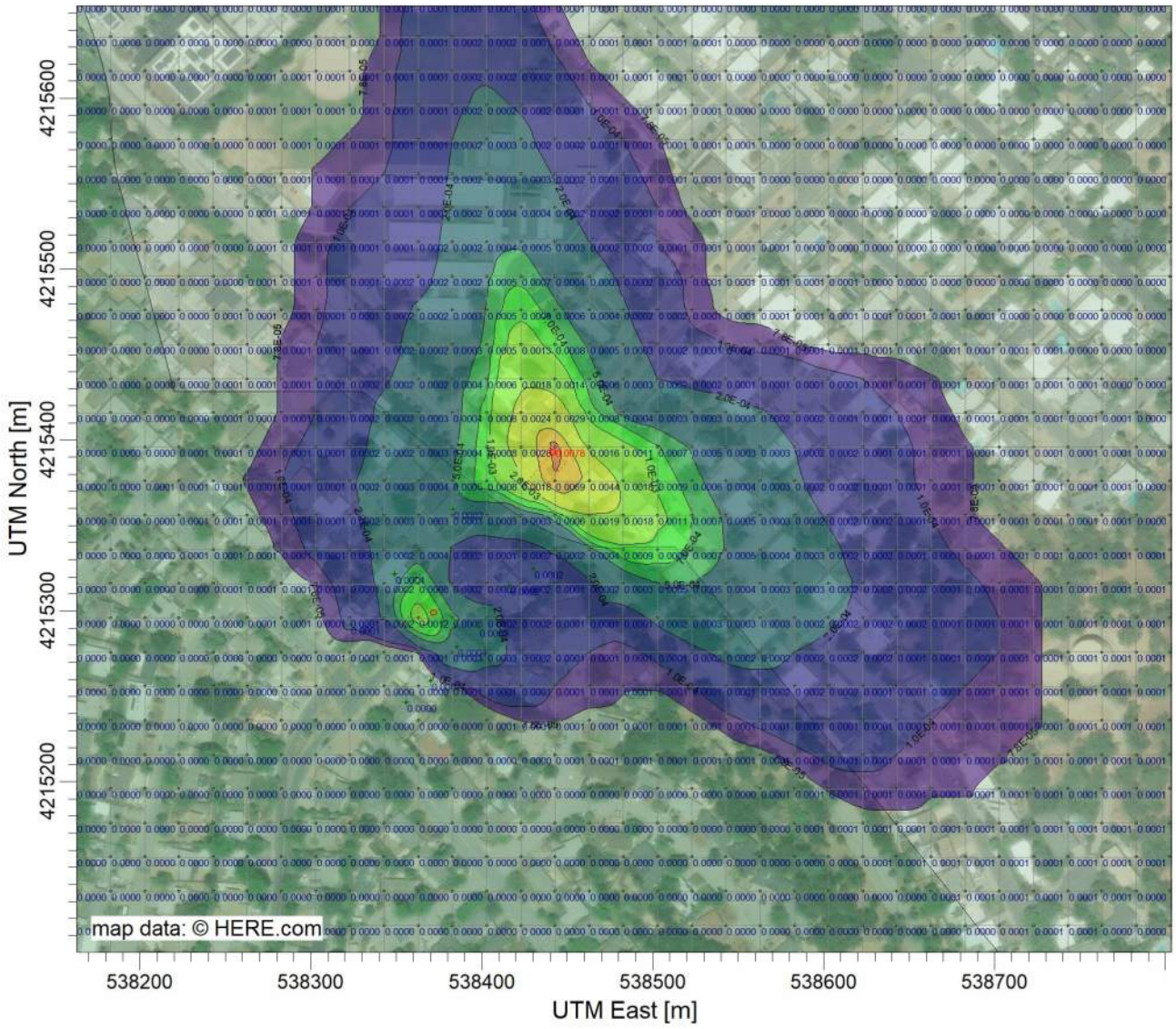
Max: 7.6E-02 [ug/m^3] at (538362.81, 4215316.00)

7.5E-04 1.0E-03 2.0E-03 5.0E-03 7.0E-03 1.0E-02 2.0E-02 5.0E-02 7.0E-02 7.6E-02

| | | | |
|---|---|---|---|
| COMMENTS: | SOURCES: **2** | COMPANY NAME: Baseline Env **Baseline Environmental Consulting** | |
| | RECEPTORS: **1234** | | |
| | OUTPUT TYPE: **Concentration** | SCALE: 1:4,025 0 0.1 km | |
| | MAX: **7.6E-02 ug/m^3** | | PROJECT NO.:21214-14 **21202-14** |

PROJECT TITLE: Lynwood Pump Station

**Lynwood Pump Station**
**Onsite Construction Fugitive PM2.5**




PLOT FILE OF PERIOD VALUES FOR SOURCE GROUP: ALL ug/m^3

Max: 7.8E-03 [ug/m^3] at (538442.81, 4215396.00)

7.8E-05 1.0E-04 2.0E-04 5.0E-04 7.0E-04 1.0E-03 2.0E-03 5.0E-03 7.0E-03 7.8E-03

| | | | |
|---|---|---|---|
| COMMENTS: | SOURCES: **2** | COMPANY NAME: Baseline Env **Baseline Environmental Consulting** | |
| | RECEPTORS: **1234** | | |
| | OUTPUT TYPE: **Concentration** | SCALE: 1:4,025 0 0.1 km | |
| | MAX: **7.8E-03 ug/m^3** | | PROJECT NO.:21214-14 **21202-14** |

**Summary of Health Risk Assessment for DPM Emissions during Construction of Alternative A (Worst-Case Scenario)**

| Health Risk Assessment Parameters and Results | | | | |
|---|---|---|---|---|
| **Inhalation Cancer Risk Assessment for DPM** | **Units** | **0-2 Years Old Infant (MEIR)** | **2-16 Years Old Student (MEIS)** | **Notes** |
| DPM Concentration (C) | $\mu g/m^3$ | 0.048 | 0.012 | AERMOD Annual Average |
| Daily Breathing Rate (DBR) | L/kg-day | 1090 | 520 | BAAQMD, 2023 |
| Inhalation absorption factor (A) | unitless | 1.0 | 1.0 | OEHHA, 2015 |
| Exposure Frequency (EF) | unitless | 0.96 | 0.68 | MEIR: 350 days/365 days, MEIS: 250 days/365 days in a year (OEHHA, 2015) |
| Dose Conversion Factor ($CF_D$) | $mg\text{-}m^3/\mu g\text{-}L$ | 0.000001 | 0.000001 | Conversion of µg to mg and L to $m^3$ |
| Dose (D) | mg/kg/day | 0.000050 | 0.000004 | $C*DBR*A*EF*CF_D$ (OEHHA, 2015) |
| Cancer Potency Factor (CPF) | $(mg/kg/day)^{-1}$ | 1.1 | 1.1 | Inhalation CPF for Diesel exhaust, OEHHA, 2015 |
| Age Sensitivity Factor (ASF) | unitless | 10 | 3 | OEHHA, 2015 |
| Annual Exposure Duration (ED) | years | 1.4 | 1.4 | Based on total construction period of 17 months |
| Averaging Time (AT) | years | 70 | 70 | 70 years for residents (OEHHA, 2015) |
| Fraction of time at home (FAH) | unitless | 0.85 | -- | OEHHA, 2015 |
| Worker Adjustment Factor (WAF) | unitless | -- | 2.71 | Assumes the average emissions occur 10.3 hours/day, 6 days per week |
| Cancer Risk Conversion Factor (CF) | $m^3/L$ | 1000000 | 1000000 | Chances per million (OEHHA, 2015) |
| Cancer Risk | per million | 9.4 | 0.8 | MEIR: D*CPF*ASF*ED/AT*FAH*CF*IF<br>MEIS, MEIW, Recreational Receptor: D*CPF*ASF*ED/AT*WAF*CF*IF |
| **Hazard Index for DPM** | **Units** | **MEIR** | **MEIS** | **Notes** |
| Chronic REL | $\mu g/m^3$ | 5.0 | 5.0 | OEHHA, 2015 |
| Chronic Hazard Index for DPM | unitless | 0.01 | 0.002 | HI=C/REL (OEHHA, 2015) |

Notes:

DPM = diesel particulate matter

REL = reference exposure level

$\mu g/m^3$ = micrograms per cubic meter

L/kg-day = liters per kilogram-day

$m^3/L$ = cubic meters per liter

$(mg/kg/day)^{-1}$ = 1/milligrams per kilograms per day

MEIR = maximum exposed individual resident

MEIW = maximum exposed individual worker

Office of Environmental Health Hazard Assessment (OEHHA), 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. February.*

Cohn,K., Lau, V., and Sinder, B., 2022. *Measurement Study to Evaluate Controls for Reducing In-Home Pollutant Exposures at Homes Near High Trafficked Roadways* .

# Screening Report

## Area of Interest (AOI) Information

Area : 3,324,428.22 ft²

Jan 8 2024 5:56:45 Pacific Standard Time

## Summary

| Name | Count | Area(ft²) | Length(ft) |
|---|---|---|---|
| Permitted Stationary Sources | 0 | N/A | N/A |

NOTE: A larger buffer than 1000 feet may be warranted depending on proximity to significant sources.

**Step 1: Enter Facility Data**

| | |
|---|---|
| Plant Name | Alternative A |
| Plant No. | Site 1 |

Note: This tool can only be used for permitted facilities that are not gas stations.

**Step 2: Estimate Distance**

| | |
|---|---|
| What is the distance (m) from the facility boundary to the MEI? | 10 |

**Step 3: Enter Emissions Data**

**Step 4: Specify Source Type**

| | |
|---|---|
| Does facility have only diesel backup generators? | yes |

Note: Default generic distance multiplier used if source is not a generator.

**Step 5: Record the Estimates**

| | | |
|---|---|---|
| Cancer Risk | 9.987 | per 1,000,000 |
| Chronic Hazard | 0.003 | |
| PM2.5 Concentration | 0.008 | µg/m³ |

| Chemical Name | CAS No. (dashes removed) | Emission (lb/day) | Cancer (# / 1,000,000) | Chronic (index) | Concentration (µg/m3) |
|---|---|---|---|---|---|
| Fine Particulate Matter (PM2.5) | | 4.00E-03 | | | 0.01 |
| 1,1,1-Trichloroethane | 71556 | | | | |
| 1,1,2,2-Tetrachloroethane | 79345 | | | | |
| 1,1,2-Trichloroethane | 79005 | | | | |
| 1,1-Dichloroethane | 75343 | | | | |
| 1,1-Dichloroethylene | 75354 | | | | |
| 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin | 3268879 | | | | |
| 1,2,3,4,6,7,8,9-Octachlorodibenzofuran | 39001020 | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | 35822469 | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | 67562394 | | | | |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | 55673897 | | | | |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | 39227286 | | | | |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | 70648269 | | | | |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | 57653857 | | | | |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | 57117449 | | | | |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | 19408743 | | | | |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | 72918219 | | | | |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | 40321764 | | | | |
| 1,2,3,7,8-Pentachlorodibenzofuran | 57117416 | | | | |
| 1,2-Dibromo-3-chloropropane | 96128 | | | | |
| 1,2-Dibromoethane | 106934 | | | | |
| 1,2-Dichloroethane | 107062 | | | | |
| 1,2-Epoxybutane | 106887 | | | | |
| 1,3-Butadiene | 106990 | | | | |
| 1,3-Propane sultone | 1120714 | | | | |
| 1,4-Dichlorobenzene | 106467 | | | | |
| 1,4-Dioxane | 123911 | | | | |
| 1,6-Dinitropyrene | 42397648 | | | | |
| 1,6-Hexamethylene Diisocyanate (monomer) | 822060 | | | | |
| 1,8-Dinitropyrene | 42397659 | | | | |
| 1-Nitropyrene | 5522430 | | | | |
| 2',3,4,4',5-PeCB | 65510443 | | | | |
| 2,3',4,4',5,5'-HxCB | 52663726 | | | | |
| 2,3',4,4',5-PeCB | 31508006 | | | | |
| 2,3,3',4,4',5'-HxCB | 69782907 | | | | |
| 2,3,3',4,4',5,5'-HpCB | 39635319 | | | | |
| 2,3,3',4,4',5-HxCB | 38380084 | | | | |
| 2,3,3',4,4'-PeCB | 32598144 | | | | |
| 2,3,4,4',5-PeCB | 74472370 | | | | |
| 2,3,4,6,7,8-hexachlorodibenzofuran | 60851345 | | | | |
| 2,3,4,7,8-Pentachlorodibenzofuran | 57117314 | | | | |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin and related compo | 1746016 | | | | |
| 2,3,7,8-Tetrachlorodibenzofuran | 51207319 | | | | |
| 2,4,6-Trichlorophenol | 88062 | | | | |
| 2,4-Diaminoanisole | 615054 | | | | |
| 2,4-Diaminotoluene | 95807 | | | | |
| 2,4-Dinitrotoluene | 121142 | | | | |
| 2-Aminoanthraquinone | 117793 | | | | |
| 2-Nitrofluorene | 607578 | | | | |
| 3,3',4,4',5,5'-HxCB | 32774166 | | | | |
| 3,3',4,4',5-PeCB | 57465288 | | | | |
| 3,3',4,4'-TCB | 32598133 | | | | |
| 3,3-Dichlorobenzidine | 91941 | | | | |
| 3,4,4'5-TCB | 70362504 | | | | |
| 3-Methylcholanthrene | 56495 | | | | |
| 4,4-Methylene bis(2-chloroaniline) | 101144 | | | | |
| 4,4-Methylenedianiline | 101779 | | | | |
| 4-Chloro-ortho-phenylenediamine | 95830 | | | | |
| 4-Dimethylaminoazobenzene | 60117 | | | | |
| 4-Nitropyrene | 57835924 | | | | |
| 5-Methylchrysene | 3697243 | | | | |
| 5-Nitroacenaphthene | 602879 | | | | |
| 6-Nitrochrysene | 7496028 | | | | |
| 7,12-Dimethylbenz(a)anthracene | 57976 | | | | |
| 7H-dibenzo(c,g)carbazole | 194592 | | | | |
| Acetaldehyde | 75070 | | | | |
| Acetamide | 60355 | | | | |
| Acrolein | 107028 | | | | |
| Acrylamide | 79061 | | | | |
| Acrylic Acid | 79107 | | | | |
| Acrylonitrile | 107131 | | | | |
| Allyl chloride | 107051 | | | | |
| Ammonia | 7664417 | | | | |
| Aniline | 62533 | | | | |
| Arsenic | 7440382 | | | | |
| Arsine | 7784421 | | | | |
| Asbestos [1/(100 PCM fibers/m^3)]^-1 | 1332214 | | | | |
| Benz(a)anthracene | 56553 | | | | |
| Benzene | 71432 | | | | |
| Benzidine | 92875 | | | | |
| Benzo(a)pyrene | 50328 | | | | |
| Benzo(b)fluoranthene | 205992 | | | | |
| Benzo(j)fluoranthene | 205823 | | | | |
| Benzo(k)fluoranthene | 207089 | | | | |
| Benzyl Chloride | 100447 | | | | |
| Beryllium | 7440417 | | | | |
| Bis(2-chloroethyl) Ether | 111444 | | | | |
| Bis(2-chloromethyl) Ether | 542881 | | | | |
| Cadmium | 7440439 | | | | |
| Caprolactam | 105602 | | | | |
| Carbon Disulfide | 75150 | | | | |
| Carbon Monoxide | 630080 | | | | |
| Carbon Tetrachloride | 56235 | | | | |
| Carbonyl Sulfide | 463581 | | | | |
| Chlorinated paraffins (Avg. chain length C12; approx. 60 | 108171262 | | | | |
| Chlorine | 7782505 | | | | |
| Chlorine Dioxide | 10049044 | | | | |
| Chlorite | 7758192 | | | | |
| Chlorobenzene | 108907 | | | | |
| Chlorodibromomethane | 124481 | | | | |
| Chloroethane (Ethyl Chloride) | 75003 | | | | |
| Chloroform | 67663 | | | | |
| Chloropicrin | 76062 | | | | |
| Chromic Trioxide | 1333820 | | | | |
| Chromium-hexavalent | 18540299 | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Barium chromate | 10294403 | | | | | | |
| | Calcium chromate | 13765190 | | | | | | |
| | Lead chromate | 7758976 | | | | | | |
| | Sodium dichromate | 10588019 | | | | | | |
| | Strontium chromate | 7789062 | | | | | | |
| | Zinc chromate | 13530659 | | | | | | |
| | CHROMIC TRIOXIDE (as chromic acid mist) | 1333820 | | | | | | |
| | Chrysene | 218019 | | | | | | |
| | Cobalt | 7440484 | | | | | | |
| | Copper | 7440508 | | | | | | |
| | Copper and Copper Compounds | 7440508 | | | | | | |
| | Cresol Mixtures | 1319773 | | | | | | |
| | Cupferron | 135206 | | | | | | |
| | Cyanide | 57125 | | | | | | |
| | Di(2-ethylhexyl)phthalate | 117817 | | | | | | |
| | Dibenz(a-h)acridine | 226368 | | | | | | |
| | Dibenz(a-h)anthracene | 53703 | | | | | | |
| | Dibenz(a-j)acridine | 224420 | | | | | | |
| | Dibenzo(a-e)pyrene | 192654 | | | | | | |
| | Dibenzo(a-h)pyrene | 189640 | | | | | | |
| | Dibenzo(a-i)pyrene | 189559 | | | | | | |
| | Dibenzo(a-l)pyrene | 191300 | | | | | | |
| | Diesel Exhaust Particulate | 85105 | 7.10E-03 | 9.99E+00 | 2.68E-03 | | | |
| | Diethanolamine | 111422 | | | | | | |
| | Dimethylformamide | 68122 | | | | | | |
| | Direct Black 38 (Technical Grade) | 1937377 | | | | | | |
| | Direct Blue 6 (Technical Grade) | 2602462 | | | | | | |
| | Direct Brown 95 (Technical Grade) | 16071866 | | | | | | |
| | Epichlorohydrin | 106898 | | | | | | |
| | Ethylbenzene | 100414 | | | | | | |
| | Ethylene Glycol | 107211 | | | | | | |
| | Ethylene Glycol Monobutyl Ether | 111762 | | | | | | |
| | Ethylene Glycol Monoethyl Ether | 110805 | | | | | | |
| | Ethylene Glycol Monoethyl Ether Acetate | 111159 | | | | | | |
| | Ethylene Glycol Monomethyl Ether | 109864 | | | | | | |
| | Ethylene Glycol Monomethyl Ether Acetate | 110496 | | | | | | |
| | Ethylene Oxide | 75218 | | | | | | |
| | Ethylene Thiourea | 96457 | | | | | | |
| | Fluorides | 1101 | | | | | | |
| | Formaldehyde (gas) | 50000 | | | | | | |
| | Glutaraldehyde | 111308 | | | | | | |
| | Hexachlorobenzene | 118741 | | | | | | |
| | Hexachlorocyclohexane (Technical Grade) | 608731 | | | | | | |
| | Hexachlorocyclohexane- Alpha Isomer | 319846 | | | | | | |
| | Hexachlorocyclohexane- Beta Isomer | 319857 | | | | | | |
| | Hexachlorocyclohexane- Gamma Isomer | 58899 | | | | | | |
| | Hydrazine | 302012 | | | | | | |
| | | | | | | | | |
| | Hydrogen Chloride | 7647010 | | | | | | |
| | Hydrogen Cyanide | 74908 | | | | | | |
| | Hydrogen Fluoride | 7664393 | | | | | | |
| | Hydrogen Selenide | 7783075 | | | | | | |
| | Hydrogen Sulfide | 7783064 | | | | | | |
| | Indeno(1-2-3-c-d)pyrene | 193395 | | | | | | |
| | Isophorone | 78591 | | | | | | |
| | Isopropyl Alcohol | 67630 | | | | | | |
| | Lead Acetate | 301042 | | | | | | |
| | Lead and Lead Compounds | 7439921 | | | | | | |
| | Lead Phosphate | 7446277 | | | | | | |
| | Lead Subacetate | 1335326 | | | | | | |
| | m-CRESOL | 108394 | | | | | | |
| | m-XYLENE | 108383 | | | | | | |
| | Maleic Anhydride | 108316 | | | | | | |
| | Manganese & Manganese Compounds | 7439965 | | | | | | |
| | Mercury (Inorganic) | 7439976 | | | | | | |
| | Mercuric chloride | 7487947 | | | | | | |
| | Methanol | 67561 | | | | | | |
| | Methyl Bromide | 74839 | | | | | | |
| | Methyl Ethyl Ketone | 78933 | | | | | | |
| | Methyl Isocyanate | 624839 | | | | | | |
| | Methyl Tertiary Butyl Ether | 1634044 | | | | | | |
| | Methylene Chloride (Dichloromethane) | 75092 | | | | | | |
| | Methylene Diphenyl Isocyanate (MDI) | 101688 | | | | | | |
| | Michlers Ketone | 90948 | | | | | | |
| | n-Hexane | 110543 | | | | | | |
| | n-Nitroso-n-methylethylamine | 10595956 | | | | | | |
| | n-Nitrosodi-n-Butylamine | 924163 | | | | | | |
| | n-Nitrosodi-n-Propylamine | 621647 | | | | | | |
| | n-Nitrosodiethylamine | 55185 | | | | | | |
| | n-Nitrosodimethylamine | 62759 | | | | | | |
| | n-Nitrosodiphenylamine | 86306 | | | | | | |
| | n-Nitrosomorpholine | 59892 | | | | | | |
| | n-Nitrosopiperidine | 100754 | | | | | | |
| | n-Nitrosopyrrolidine | 930552 | | | | | | |
| | Naphthalene | 91203 | | | | | | |
| | Nickel and Nickel Compounds | 7440020 | | | | | | |
| | Nickel acetate | 373024 | | | | | | |
| | Nickel carbonate | 3333673 | | | | | | |
| | Nickel carbonyl | 13463393 | | | | | | |
| | Nickel hydroxide | 12054487 | | | | | | |
| | Nickelocene | 1271289 | | | | | | |
| | Nickel Oxide | 1313991 | | | | | | |
| | Nickel Refinery Dust | 1146 | | | | | | |
| | Nickel Subsulfide | 12035722 | | | | | | |
| | Nitric Acid | 7697372 | | | | | | |
| | Nitrogen Dioxide | 10102440 | | | | | | |
| | o-CRESOL | 95487 | | | | | | |
| | o-XYLENE | 95476 | | | | | | |
| | Oleum | 8014957 | | | | | | |
| | Ozone | 10028156 | | | | | | |
| | p-Chloro-o-toluidine | 95692 | | | | | | |
| | p-Cresidine | 120718 | | | | | | |
| | p-CRESOL | 106445 | | | | | | |
| | p-Nitrosodiphenylamine | 156105 | | | | | | |
| | p-XYLENE | 106423 | | | | | | |
| | Pentachlorophenol | 87865 | | | | | | |
| | Perchloroethylene | 127184 | | | | | | |
| | Phenol | 108952 | | | | | | |
| | Phosgene | 75445 | | | | | | |
| | Phosphine | 7803512 | | | | | | |
| | Phosphoric Acid | 7664382 | | | | | | |
| | Phthalic Anhydride | 85449 | | | | | | |
| | Polychlorinated Biphenyls | 1336363 | | | | | | |
| | Potassium Bromate | 7758012 | | | | | | |
| | Propylene | 115071 | | | | | | |
| | Propylene Glycol Monomethyl Ether | 107982 | | | | | | |
| | Propylene oxide | 75569 | | | | | | |
| | Selenium | 7782492 | | | | | | |
| | Selenium sulfide | 7446346 | | | | | | |
| | Silica (crystalline, respirable) | 7631869 | | | | | | |
| | Sodium hydroxide | 1310732 | | | | | | |
| | Styrene | 100425 | | | | | | |
| | Sulfates | 9960 | | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Sulfur Dioxide | 7446095 | | | | |
| Sulfuric Acid | 7664939 | | | | |
| Sulfur Trioxide | 7446719 | | | | |
| Tertiary-butyl acetate | 540885 | | | | |
| Tetrachloroethylene | 127184 | | | | |
| Thioacetamide | 62555 | | | | |
| Toluene | 108883 | | | | |
| Toluene Diisocyanates | 26471625 | | | | |
| Toluene Diisocyanates (2,4 and 2, 6) | 584849 | | | | |
| Toluene Diisocyanates (2,4 and 2, 6) | 91087 | | | | |
| Trichloroethylene | 79016 | | | | |
| Triethylamine | 121448 | | | | |
| Urethane | 51796 | | | | |
| Vanadium pentoxide | 1314621 | | | | |
| Vinyl acetate | 108054 | | | | |
| Vinyl chloride | 75014 | | | | |
| Xylenes (technical mixture of m, o, p-isomers) | 1330207 | | | | |
| Vanadium | 7440622 | | | | |
| | | **TOTAL UNADJUSTED Risk Values** | **9.987** | **0.003** | **0.008** |

# APPENDIX D. BIOLOGICAL RESOURCES TECHNICAL REPORT

# Biological Resources Technical Report

## Lynwood Pump Station Replacement

Novato, Marin County, California


**Prepared for:**

North Marin Water District
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Novato, CA 94945

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**Prepared by:**

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January 2024

WRA#320289

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## List of Appendices

## List of Acronyms

| | |
|---|---|
| **BGEPA** | Bald and Golden Eagle Protection Act |
| **Caltrans** | California Department of Transportation |
| **CCR** | California Code of Regulations |
| **CDFW** | California Department of Fish and Wildlife |
| **CESA** | California Endangered Species Act |
| **CEQA** | California Environmental Quality Act |
| **CFGC** | California Fish and Game Code |
| **CFP** | California Fully Protected Species |
| **CFR** | Code of Federal Regulations |
| **CNDDB** | California Natural Diversity Database |
| **CNPS** | California Native Plant Society |
| **Corps** | U.S. Army Corps of Engineers |
| **CPRC** | California Public Resources Code |
| **CSRL** | California Soils Resource Lab |
| **CWA** | Clean Water Act |
| **District** | North Marin Water District |
| **EFH** | Essential Fish Habitat |
| **ESA** | Federal Endangered Species Act |
| **Inventory** | California Native Plant Society Rare Plant Inventory |
| **Magnuson-Stevens Act** | Magnuson-Stevens Fishery Conservation & Management Act |
| **MBTA** | Migratory Bird Treaty Act |
| **MM** | Mitigation Measure |
| **NCCP** | Natural Community Conservation Plan |
| **NETR** | National Environmental Title Research |
| **NOAA** | National Oceanic and Atmospheric Administration |
| **NMFS** | National Marine Fisheries Service |
| **NPPA** | California Native Plant Protection Act |
| **NRCS** | Natural Resource Conservation Service |
| **NWI** | National Wetland Inventory |
| **OHWM** | Ordinary High Water Mark |
| **Rank** | California Rare Plant Ranks |
| **RHA** | Rivers and Harbors Act |
| **RWQCB** | Regional Water Quality Control Board |
| **SFEI** | San Francisco Estuary Institute |
| **SSC** | Species of Special Concern |
| **SWRCB** | State Water Resource Control Board |
| **TOB** | Top of Bank |
| **USC** | U.S. Code |
| **USDA** | U.S. Department of Agriculture |
| **USFWS** | U.S. Fish and Wildlife Service |
| **USGS** | U.S. Geological Survey |
| **WBWG** | Western Bat Working Group |
| **WRA** | WRA, Inc. |

# 1.0 INTRODUCTION

This Biological Resources Technical Report evaluates existing biological resources, potential impacts, and mitigation measures (if required) for the Lynwood Pump Station Replacement Project located in Novato, Marin County, CA (Appendix A – Figure 1). The proposed project (Project) involves replacing the existing Lynwood pump station (PS) with either one or two new pump stations at a different location to continue to provide reliable potable water service to the North Marin Water District's (District) existing customers and in order to meet demands associated with the anticipated future growth within the service area.

The analysis provided in this report considers five potential sites on which the proposed project would be located, all of which are within the City of Novato (City) (Figure 1). Each potential site would be an alternative location for a proposed new PS to replace the existing Lynwood PS and are all analyzed in the IS/MND at the same level of detail. These sites are located as follows:

- Sunset Parkway Site (Site 1): Within the Sunset Parkway median between Monte Maria Avenue and Cambridge Street
- Ignacio Boulevard Site (Site 2): Within an open space area south of the intersection of Ignacio Boulevard and Palmer Drive
- Bolling Drive Site (Site 3): Within an open space area northeast of the intersection of Bolling Drive and Bolling Circle. A pump station built at the Bolling Drive site requires construction of a parallel pump station at the Ignacio Boulevard site.
- Main Gate Road Site (Site 4): Within a public property situated along the south side of Main Gate Road between its intersection with Nave Drive and C Street. The site is situated in an open space area adjacent to the northeastern corner of a parking lot covered with solar canopies. A pump station built at the Main Gate Road Site (Site 4) requires construction of a parallel pump station at the Ignacio Boulevard site.
- C Street Site (Site 5): Within a baseball field situated northeast of the intersection of C Street and Main Gate Road. A pump station built at the C Street (Site 5) requires construction of a parallel pump station at the Ignacio Boulevard site.

The analysis provided herein also evaluates the potential impacts associated with the demolition of the existing Lynwood PS, which is located on Sunset Parkway between Lynwood Drive and South Novato Boulevard (Existing PS Site), and potential temporary impacts associated with staging areas. The Existing PS Site, five alternative projects sites, and the associated staging areas are referred to collectively as the Study Area.

## 1.1 Overview and Purpose

This Biological Resources Technical Report provides an assessment of biological resources within the Study Area and the immediate vicinity. The purpose of the assessment is to develop and gather information on sensitive land cover types and special-status plant and wildlife species to support an evaluation of the Project under the California Environmental Quality Act (CEQA). This report describes the results of the site visits which assessed the Study Area for (1) the presence of sensitive land cover types, special-status plant species, and special-status wildlife species, and (2) the potential for the Study Area to support special-status plant and wildlife species. Based on the results of the site assessment, potential impacts to sensitive land cover types and special-status species resulting from the proposed project were evaluated. If the project has the

potential to result in significant impacts to biological resources, measures to avoid, minimize, or mitigate for those significant impacts are described.

This assessment is based on the information available at the time of the study and the on-site conditions that were observed on the dates the Study Area was visited. Conclusions are based on currently available information used in combination with the professional judgement of the biologists completing this study.

## 1.2 Project Description

The District has decided to move forward with the replacement of the Lynwood PS at a different location. Five potential alternative solutions for replacing the existing Lynwood PS have been identified as described above. Each alternative would involve either a new PS at one of the sites or two new PS at a combination of the sites. This report considers the environmental impacts of each proposed alternative for the replacement of the existing Lynwood PS at the same level of detail. In order to provide a conservative analysis of the potential impacts of the proposed project, this report analyzes impacts associated with the "worst-case scenario," and therefore assumes demolition of the existing PS will be included as part of the project.

A detailed description of each alternative is provided in the sections that follow. Each new PS would include a pump station building and parking. The analysis also considers that an emergency generator may be installed at each site, but the District may choose not to install an emergency generator as part of the final design effort. The footprint for pipe improvements assumes a ten-foot-wide T trench.

Construction equipment would be stored in designated staging areas, which are shown in Figures 2 through 6. The staging area on Sunset Parkway would be used for any project work at the Sunset Parkway Site or the Existing PS Site. Separate staging areas are identified for the four other sites on Ignacio Boulevard, Bolling Drive, Main Gate Road Site, and C Street Site.

### 1.2.1 Alternative A

Alternative A would include one new PS with four pumps located at the Sunset Parkway Site (Site 1). This PS would match the existing PS but would include one additional pump to meet future demands. The Sunset Parkway Site is located approximately 330 feet southwest of the Existing PS Site. This alternative was chosen because the existing PS location provides the ability to meet demands to the north and south of the existing facility location, which is especially critical during peak demand periods (F&L 2023). The proposed PS footprint is approximately 2,000 square feet (SF) and proposed pipe improvements footprint is approximately 9,000 SF.

### 1.2.2 Alternative B

Alternative B would include one new PS with four pumps located at the Ignacio Boulevard Site (Site 2). The Ignacio Boulevard Site is located approximately 1.3 miles south of the Existing PS Site. This alternative was chosen because, by relocating the PS away from the existing PS, the new PS could meet future peak demands throughout Primary Zone 2 and would also improve the District's ability to deliver water to the Pacheco Valley Tank (F&L 2023). The proposed PS footprint is approximately 2,000 SF and proposed pipe improvements footprint is approximately 37,500 SF.

### 1.2.3 Alternative C

Alternative C would include the construction of two new PS, one at the Ignacio Boulevard Site (Site 2) and one at the Bolling Drive Site (Site 3). The new PS at the Ignacio Boulevard Site would include three pumps and the new PS at Bolling Drive Site would include two pumps. This alternative was developed to include both replacement of the Lynwood PS near the Existing PS Site and to add a third PS at a location within or in the vicinity of the southern portion of Primary Zone 2 that would improve the District's ability to fill the Pacheco Valley Tank (F&L 2023) while also meeting future demands. The proposed PS footprint at the Ignacio Boulevard Site is approximately 1,800 SF and proposed pipe improvements footprint is approximately 37,500 SF. The proposed PS footprint at the Bolling Drive Site is approximately 1,600 SF and proposed pipe improvements footprint is approximately 31,000 SF.

### 1.2.4 Alternative D

Alternative D would include the construction of two new PS, one at the Ignacio Boulevard Site (Site 2) with three pumps, and one at the Main Gate Road Site (Site 4) with two pumps. This alternative would fulfill the same objectives as Alternative C given that the Main Gate Road Site (Site 4) is located approximately 0.3 miles north of the Bolling Drive Site (Site 3). The proposed PS footprint at the Ignacio Boulevard Site is approximately 1,800 SF and proposed pipe improvements footprint is approximately 37,500 SF. The proposed PS footprint at the Main Gate Road Site is approximately 1,600 SF and the proposed pipe improvements footprint is approximately 4,700 SF.

### 1.2.5 Alternative E

Alternative E would include the construction of two new PS, one at the Ignacio Boulevard Site (Site 2) with three pumps, and one at the C Street Site (Site 5) with two pumps. This alternative would fulfill the same objectives as Alternative C given that the C Street Site is located approximately 0.3 miles north of the Bolling Drive Site (Site 3). The proposed PS footprint at the Ignacio Boulevard Site is approximately 1,800 SF and proposed pipe improvements footprint is approximately 37,500 SF. The proposed PS footprint at the C Street Site is approximately 1,600 SF and the proposed pipe improvements footprint is approximately 1,200 SF.

# 2.0 REGULATORY BACKGROUND

The following sections explain the regulatory context of the biological assessment, including applicable laws and regulations that were applied to the field investigations and analysis of potential project impacts.

## 2.1 Federal and State Regulatory Setting

### 2.1.1 Vegetation and Aquatic Communities

CEQA provides protections for particular vegetation types defined as sensitive by the California Department of Fish and Wildlife (CDFW) and aquatic features protected by laws and regulations administered by the U.S Army Corps of Engineers (Corps), State Water Resources Control Board (SWRCB), and Regional Water Quality Control Boards (RWQCB). The laws and regulations that provide protection for these resources are summarized below.

Sensitive Natural Communities: Sensitive natural communities include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" (CDFW 2024a) and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2024b). Natural communities are ranked 1 through 5 in the CNDDB based on NatureServe's (2024) methodology, with those communities ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (California Code of Regulations [CCR] Title 14, Div. 6, Chap. 3, Appendix G). In addition, this general class includes oak woodlands that are protected by local ordinances under the Oak Woodlands Protection Act and Section 21083.4 of California Public Resources Code (CPRC).

Waters of the United States, Including Wetlands: The Corps regulates “Waters of the United States” under Section 404 of the Clean Water Act (CWA). Waters of the United States are defined in the Code of Federal Regulations (CFR) as including the territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, such as tributaries, lakes and ponds, impoundments of waters of the U.S., and wetlands that are hydrologically connected with these navigable features (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Corps Manual; Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Unvegetated waters including lakes, rivers, and streams may also be subject to Section 404 jurisdiction and are characterized by an ordinary high water mark (OHWM) identified based on field indicators such as the lack of vegetation, sorting of sediments, and other indicators of flowing or standing water. The placement of fill material into Waters of the United States generally requires a permit from the Corps under Section 404 of the CWA.

The Corps also regulates construction in navigable waterways of the U.S. through Section 10 of the Rivers and Harbors Act (RHA) of 1899 (33 U.S. Code [USC] 403). Section 10 of the RHA requires Corps approval and a permit for excavation or fill, or alteration or modification of the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor

or refuge, or enclosure within the limits of any breakwater, or of the channel of any navigable water of the United States. Section 10 requirements apply only to navigable waters themselves, and are not applicable to tributaries, adjacent wetlands, and similar aquatic features not capable of supporting interstate commerce.

Waters of the State, Including Wetlands: The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The SWRCB and nine RWQCB protect waters within this broad regulatory scope through many different regulatory programs. Waters of the State in the context of a CEQA Biological Resources evaluation include wetlands and other surface waters protected by the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (SWRCB 2019). The SWRCB and RWQCB issue permits for the discharge of fill material into surface waters through the State Water Quality Certification Program, which fulfills requirements of Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Clean Water Act permit are also required to obtain a Water Quality Certification. If a project does not require a federal permit but does involve discharge of dredge or fill material into surface waters of the State, the SWRCB and RWQCB may issue a permit in the form of Waste Discharge Requirements.

Sections 1600-1616 of California Fish and Game Code: Streams and lakes, as habitat for fish and wildlife species, are regulated by CDFW under Sections 1600-1616 of California Fish and Game Code (CFGC). Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term "stream," which includes creeks and rivers, is defined in the CCR as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). The term "stream" can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994). Riparian vegetation has been defined as "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFG 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFW.

### 2.1.2 Special-status Species

Endangered and Threatened Plants, Fish, and Wildlife. Specific species of plants, fish, and wildlife species may be designated as threatened or endangered by the federal Endangered Species Act (ESA), or the California Endangered Species Act (CESA). Specific protections and permitting mechanisms for these species differ under each of these acts, and a species' designation under one law does not automatically provide protection under the other.

The ESA (16 USC 1531 et seq.) is implemented by the USFWS and the National Marine Fisheries Service (NMFS). The USFWS and NMFS maintain lists of endangered and threatened plant and animal species (referred to as "listed species"). "Proposed" or "candidate" species are those that are being considered for listing and are not protected until they are formally listed as threatened or endangered. Under the ESA, authorization must be obtained from the USFWS or NMFS prior to take of any listed species. "Take" under the ESA is defined as "harass, harm, pursue, hunt, shoot,

wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Take under the ESA includes direct injury or mortality to individuals, disruptions in normal behavioral patterns resulting from factors such as noise and visual disturbance and impacts to habitat for listed species. Actions that may result in take of an ESA-listed species may obtain a permit under ESA Section 10, or via the interagency consultation described in ESA Section 7. Federal-listed plant species are only protected when removal or destruction occurs on federal land; however, if a federal agency authorizes, funds, or carries out an action, that agency must insure through Section 7 consultation that the action is not likely to jeopardize the continued existence of the species.

The ESA also provides for designation of critical habitat, which are specific geographic areas containing physical or biological features "essential to the conservation of the species." Protections afforded to designated critical habitat apply only to actions that are funded, permitted, or carried out by federal agencies. Critical habitat designations do not affect activities by private landowners if there is no other federal agency involvement.

The CESA (CFGC 2050 et seq.) prohibits the take of any plant and animal species that the CFGC determines to be an endangered or threatened species in California. CESA regulations include take protection for threatened and endangered plants on private lands, as well as extending this protection to candidate species that are proposed for listing as threatened or endangered under CESA. The definition of a "take" under CESA ("hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") only applies to direct impact to individuals, and does not extend to habitat impacts or harassment. CDFW may issue an Incidental Take Permit under CESA to authorize take if it is incidental to otherwise lawful activity and if specific criteria are met. Take of these species is also authorized if the geographic area is covered by a Natural Community Conservation Plan (NCCP), as long as the NCCP covers that activity. CDFW may also authorize take for voluntary restoration projects through the Restoration Management Permit (RMP).

Fully Protected Species and Designated Rare Plant Species. This category includes specific plant and wildlife species that are designated in the CFGC as protected even if not listed under CESA or ESA. Fully Protected Species includes specific lists of birds, mammals, reptiles, amphibians, and fish designated in CFGC. Fully protected species may not be taken or possessed at any time. No licenses or permits may be issued for take of fully protected species, except for necessary scientific research and conservation purposes. The definition of "take" is the same under the California Fish and Game Code and the CESA. By law, CDFW may not issue an Incidental Take Permit for Fully Protected Species. Under the California Native Plant Protection Act (NPPA), CDFW has listed 64 "rare" or "endangered" plant species, and prevents "take," with few exceptions, of these species. CDFW may authorize take of species protected by the NPPA through the Incidental Take Permit process, or under a NCCP. CDFW may also authorize take for voluntary restoration projects through the Restoration Management Permit (RMP).

Special Protections for Nesting Birds and Bats. The federal Bald and Golden Eagle Protection Act provides relatively broad protections to both of North America's eagle species [bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*)] that in some regards are similar to those provided by the ESA. In addition to regulations for special-status species, most native birds in the United States, including non-status species, have baseline legal protections under the Migratory Bird Treaty Act of 1918 and CFGC, i.e., sections 3503, 3503.5 and 3513. Under these laws/codes, the intentional harm or collection of adult birds as well as the

intentional collection or destruction of active nests, eggs, and young is illegal. For bat species, the Western Bat Working Group (WBWG) designates conservation status for species of bats, and those with a high or medium-high priority are typically given special consideration under CEQA.

Essential Fish Habitat. The Magnuson-Stevens Fishery Conservation and Management Act provides for conservation and management of fishery resources in the U.S., administered by NMFS. This Act establishes a national program intended to prevent overfishing, rebuild overfished stocks, ensure conservation, and facilitate long-term protection through the establishment of Essential Fish Habitat (EFH). EFH consists of aquatic areas that contain habitat essential to the long-term survival and health of fisheries, which may include the water column, certain bottom types, vegetation (e.g., eelgrass (*Zostera* spp.)), or complex structures such as oyster beds. Any federal agency that authorizes, funds, or undertakes action that may adversely affect EFH is required to consult with NMFS.

Species of Special Concern, Movement Corridors, and Other Special-status Species under CEQA. A Species of Special Concern (SSC) is a species formally designated by the CDFW which meets one or more criteria related to a Federal ESA status (if it is not listed under CESA), including extirpation from California, documented population declines, or small population size within California and risk of declines. In addition, CDFW has developed a special animals list as "a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status." This list includes lists developed by other organizations, including for example, the Audubon Watch List Species, the Bureau of Land Management Sensitive Species, and USFWS Birds of Conservation Concern. Plant species on the California Native Plant Society (CNPS) Rare Plant Inventory (Inventory; CNPS 2024) with California Rare Plant Ranks (Rank) of 1 and 2, as well as some with a Rank of 3 or 4, are also considered special-status plant species and must be considered under CEQA. Some Rank 3 and Rank 4 species are typically only afforded protection under CEQA when such species are particularly unique to the locale (e.g., range limit, low abundance/low frequency, limited habitat) or are otherwise considered locally rare. Additionally, any species listed as sensitive within local plans, policies and ordinances are likewise considered sensitive. Movement and migratory corridors for native wildlife (including aquatic corridors) as well as wildlife nursery sites are given special consideration under CEQA.

## 2.2 Local Plans and Policies

City of Novato Tree Ordinance (Private Property)

The City of Novato Tree Ordinance defines a "tree" on private property as any native or non-native woody plant having a major trunk or trunk of a diameter of 6 inches or greater measured at 24 inches above grade, and a "heritage tree" is defined as any tree having a diameter of 24 inches or greater, measured at 24 inches above grade (Ord. No. 1576, § 2 [Exhibit A], 10-23-12). The alteration or removal of a heritage tree on any parcel or of one ore more tree on an undeveloped parcel is prohibited without a permit from the City of Novato (Ord. No. 1441 § 2(E); Ord. No. 1576, § 2 [Exhibit A], 10-23-2012).

City of Novato Tree Ordinance (Public Places)

The City of Novato Tree Ordinance defines a "tree" on or adjacent to public places as any woody perennial plant having a single main axis or stem commonly achieving ten feet in height and capable of shaping and pruning to develop a branch-free trunk at least nine feet in height, and a "shrub" is defined as any woody perennial plant, normally low, several stemmed, adaptable to shaping, trimming and pruning without injury within the area planted (Ord. No.

1576, § 2 [Exhibit A], 10-23-12). The trimming, alteration, or removal of and street tree or shrub is prohibited without approval from the City of Novato (Ord. No. 1441 § 2(E); Ord. No. 1576, § 2(E), 10-23-2012).

City of Novato Wetland Protection and Restoration

The City of Novato municipal code stipulates that any development shall be designed and constructed to avoid wetlands to the maximum extent feasible (Ord. No. 1576, § 2 [Exhibit A, amd.], 10-23-2012). Wetlands are defined as waters delineated by the Corps under the provisions of the CWA. Permit approval is required for any project within 50 feet of a wetland, requiring wetland protection measures, involving wetland/encroachment, or requiring wetland mitigation; and, for all wetland protection, restoration, enhancement, and/or mitigation projects (Ord. No. 1576, § 2 [Exhibit A, amd.], 10-23-2012).

City of Novato Waterways and Riparian Protection

The City of Novato municipal code stipulates that all lands adjoining or encompassing watercourses and their significant tributaries shall be subject to a Stream Protection Zone (Ord. No. 1576, § 2 [Exhibit A, amd.], 10-23-2012). These lands are shown on "ES- 1" within the General Plan. A Stream Protection Zone includes the streambed, stream banks, all riparian vegetation, and an upland buffer at least 50 feet wide measured from top of the channel bank. Proposed development, land uses *and* activities including any proposed development application, land division, use permit, grading or building permit for any excavation, fill, grading, or paving; removal or planting of vegetation; construction, alteration, or removal of any structure; or alteration of any embankment within the Stream *Protection* Zone requires Use Permit approval (Ord. No. 1576, § 2 [Exhibit A, amd.], 10-23-2012).

## 3.0 ASSESSMENT METHODOLOGY

On March 29 and December 13, 2023, WRA, Inc. (WRA) biologists visited the Study Area to map vegetation, aquatic features, and other land cover types; document plant and wildlife species present; and evaluate on-site habitat for the potential to support special-status species as defined by CEQA. Prior to the site visit, WRA biologists reviewed literature resources and performed database searches to assess the potential for sensitive land cover types and special-status species, including:

- Contemporary aerial photographs (Google Earth 2024)
- Historical aerial photographs (NETR 2024)
- National Wetlands Inventory (USFWS 2024a)
- California Aquatic Resources Inventory (SFEI 2024)
- CNDDB (CDFW 2024b)
- CNPS Inventory (CNPS 2024)
- Consortium of California Herbaria (CCH1 2024, CCH2 2024)
- USFWS Information for Planning and Consultation (USFWS 2024b)
- eBird Online Database (Cornell Lab of Ornithology 2024)
- California Bird Species of Special Concern in California (Shuford and Gardali 2008)

- California Amphibian and Reptile Species of Special Concern (Thomson et al. 2016)
- A Field Guide to Western Reptiles and Amphibians (Stebbins 2003)
- A Manual of California Vegetation, Online Edition (CNPS 2024)
- California Natural Community List (CDFW 2024a)
- Database searches (i.e., CNDDB, CNPS) for special-status species focused on the Novato and eight surrounding USGS 7.5-minute quadrangles.

Following the remote assessment, WRA biologists completed a field review over the course of 2 days to document: (1) land cover types (e.g., vegetation communities, aquatic resources), (2) existing conditions and to determine if such provide suitable habitat for any special-status plant or wildlife species, (3) if and what type of aquatic land cover types (e.g., wetlands) are present, and (4) if special-status species are present.

## 3.1 Vegetation Communities and Other Land Cover Types

During the site visit, WRA evaluated the species composition and area occupied by distinct vegetation communities, aquatic communities, and other land cover types. Mapping of these classifications utilized a combination of aerial imagery and ground surveys. In most instances, communities are characterized and mapped based on distinct shifts in plant assemblage (vegetation) and follow the California Natural Community List (CDFW 2024a) and A Manual of California Vegetation, Online Edition (CNPS 2024). These resources cannot anticipate every component of every potential vegetation assemblage in California, and so in some cases, it is necessary to identify other appropriate vegetative classifications based on best professional judgment of WRA biologists. When undescribed variants are used, it is noted in the description. Vegetation alliances (natural communities) with a CDFW Rank of 1 through 3 (globally critically imperiled [S1/G1], imperiled [S2/G2], or vulnerable [S3/G3]) (CDFW 2024a), were evaluated as sensitive as part of this evaluation.

The Study Area was reviewed for the presence of wetlands and other aquatic resources according to the methods described in the Corps Manual (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West* ( Corps 2008). The presence of riparian habitat was evaluated based on woody plant species meeting the definition of riparian provided in *A Field Guide to Lake and Streambed Alteration Agreements, Section 1600-1607, California Fish and Game Code* (CDFG 1994) and based on best professional judgement of biologists completing the field surveys.

## 3.2 Special-status Species

### 3.2.1 General Assessment

Potential occurrence of special-status species in the Study Area was evaluated by first determining which special-status species occur in the vicinity of the Study Area through a literature and database review as described above. Presence of suitable habitat for special-status species was evaluated during the site visits based on physical and biological conditions in the Study Area as well as the professional expertise of the investigating biologists. The potential for each special-status species to occur in the Study Area was then determined according to the following criteria:

- **No Potential.** Habitat on and adjacent to the Study Area is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Unlikely.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the Study Area is unsuitable or of very poor quality. The species is not likely to be found in the Study Area.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the Study Area is unsuitable. The species has a moderate probability of being found in the Study Area.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the Study Area is highly suitable. The species has a high probability of being found in the Study Area.
- **Present.** Species is observed on the Study Area or has been recorded (i.e., CNDDB, other reports) in the Study Area in the recent past.

If a more thorough assessment was deemed necessary, a targeted or protocol-level assessment or survey was conducted or recommended as a future study. If a special-status species was observed during the site visits, its presence was recorded and discussed below in Section 5.2. If designated critical habitat is present for a species, the extent of critical habitat present and an evaluation of critical habitat elements is provided as part of the species discussions below.

## 3.3 Wildlife Corridors and Native Wildlife Nursery Sites

To account for potential impacts to wildlife movement/migratory corridors, biologists reviewed maps from the California Essential Connectivity Project (CalTrans 2010), and habitat connectivity data available through the CDFW Biogeographic Information and Observation System (CDFW 2024). Additionally, aerial imagery (Google Earth 2024) for the local area was referenced to assess if local core habitat areas were present within, or connected to the Study Area. This assessment was refined based on observations of on-site physical and/or biological conditions, including topographic and vegetative factors that can facilitate wildlife movement, as well as on-site and off-site barriers to connectivity.

The potential presence of native wildlife nursery sites is evaluated as part of the site visits and discussion of individual wildlife species below. Examples of native wildlife nursery sites include nesting sites for native bird species (particularly colonial nesting sites), marine mammal pupping sites, and colonial roosting sites for other species (such as for monarch butterfly [*Danaus plexippus*]).

# 4.0 ECOLOGICAL SETTING

The Study Area is located in Novato, and includes all areas potentially affected by the Project. Additional details of the local setting are below.

## 4.1 Soils and Topography

The overall topography of the Study Area is flat with elevations ranging from approximately 10-100 feet above sea level. According to SoilWeb (CSRL 2024) and Web Soil Survey (USDA 2024), the Study Area is underlain by two soil mapping units: Xerorthents-Urban land complex, 0 to 9 percent slope and Saurin-Urban land-Bonnydoon complex, 30 to 50 percent slope. Neither soil mapping unit is considered hydric (USDA 2024). The parent soil series of all the Study Area's mapping units are summarized below.

Xerorthents: Xerorthents occur on valley floors covered in fill from cut or fill soils at various depths with various drainage. This mapping unit is used for homesites, urban, and recreational development (CSRL 2024).

Urban Land: Urban land consists of areas covered by roads, driveways, houses, parking lots and other structures. The underlain soil is similar to xerorthents (CSRL 2024).

Saurin Series: This series consists of moderately deep clay loam, formed in material derived from sandstone and shale in uplands. This series is well drained with slow to very rapid runoff and moderate permeability. This soil series is used for rangeland, watershed, and wildlife habitat. Typical vegetation is annual grassland (CSRL 2024).

Bonnydoon Series: This series consists of shallow loam formed in material weathered from sandstone and shale in uplands. This series is somewhat excessively drained with medium to rapid runoff and moderate permeability. Typical land use includes rangeland, wildlife habitat, and some homesites. Typical vegetation includes annual grassland (CSRL 2024).

## 4.2 Climate and Hydrology

The Study Area is located in the inland region of Marin County. The average monthly maximum temperature in the area is 70 degrees Fahrenheit, while the average monthly minimum temperature is 48 degrees Fahrenheit. Predominantly, precipitation falls as rainfall between November and March with an annual average precipitation of 36 inches.

The local watershed is Miller Creek-Frontal San Pablo Bay Estuaries (HUC 12: 180500020607) and the regional watershed is San Pablo Bay (HUC 8: 18050002). The Study Area is located in the western portion of the San Pablo Bay watershed. There are no blue-line streams in the Study Area (USGS 2018) nor are there aquatic resources identified in the California Aquatic Resources Inventory (CARI) or National Wetland Inventory (NWI) (SFEI 2017, USFWS 2024). There are blue-line streams located adjacent to Sites 2 and 4. Detailed descriptions of aquatic resources are provided in Section 5.1 below.

## 4.3 Land Use

The majority of the Study Area is developed. Developed areas include landscaping and hardscaping (sidewalks, pavement, and the existing pump station). Detailed land cover type

descriptions are included in Section 5.1 below, and all observed plant species are included in Appendix B. Surrounding land uses include residential and commercial development, urban parks, and open space (Google Earth 2024).

# 5.0 ASSESSMENT RESULTS

## 5.1 Vegetation Communities and Other Land Cover

WRA observed two land cover types within the Study Area: developed/landscaped and ruderal herbaceous. Land cover types within the Study Area are illustrated in Appendix A – Figure 2. There are no sensitive communities within the Study Area. For a full list of species observed during the site visits, see Appendix B.

**Table 1: Vegetation Communities and Other Land Cover Types**

| COMMUNITY / LAND COVERS | SENSITIVE STATUS | RARITY RANKING | ACRES WITHIN STUDY AREA |
|---|---|---|---|
| **TERRESTRIAL / COMMUNITY LAND COVER** | | | |
| Developed/ Landscaped | Non-sensitive | None | 0.63 acres |
| Ruderal herbaceous | Non-sensitive | None | 0.17 acres |

### 5.1.1 Terrestrial Land Cover

Developed/ Landscaped Area (no vegetation alliance). CDFW Rank: None. The majority of the Study Area is developed and includes landscaping, sidewalks, pavement, and the existing structures. The developed areas total 0.63 acres in the Study Area. The vegetation composition varied from site to site. Herbaceous vegetation included Crane's bill geranium (*Geranium molle*), burclover (*Medicago polymorpha*), slim oat (*Avena barbata),* bristly ox-tongue *(Helminthotheca echioides)* and stinkwort (*Dittrichia graveolens*). Landscaping trees included olive (*Olea sp.),* mulberry (*Morus* sp.), valley oak (*Quercus lobata*), and Siberian elm (*Ulmus parvifolia*). Several landscaped areas included wood chips.

Ruderal herbaceous (no vegetation alliance). CDFW Rank: None: Within the Study Area, this community is located in a relatively flat area, contains a very low diversity of native species, and is surrounded by the existing paved roads, sidewalks, and landscaping. The ruderal herbaceous areas total 0.17 acres in the Study Area. Dominant herbs include greater periwinkle (*Vinca major*), fennel (*Foeniculum vulgare*), bur clover, slim oat, *and* bristly ox-tongue.

### 5.1.2 Aquatic Resources

No seasonal wetlands were observed within the Study Area. Site 2 and Site 4 are located within 50 feet of riparian vegetation associated with Arroyo San Jose and Pacheco Creek, respectively.

## 5.2 Special-status Species

### 5.2.1 Special-status Plants

No special-status plants have been documented on or adjacent to the Study Area (CDFW 2024). Species observed within the Study Area during the March 29 and December 13, 2023 site visits are listed in Appendix B. Based upon a review of the resource databases listed in Section 3.0, 105 special-status plant species have been documented in the vicinity of the Study Area. Appendix C summarizes the potential for each of these species to occur within the Study Area.

Of the 105 special-status species, all are considered unlikely, or have no potential, to occur in the Study Area for one or more of the following reasons:

- Hydrologic conditions (e.g., tidal, riverine) necessary to support the special-status plant species are not present in the Study Area;
- Edaphic (soil) conditions (e.g., volcanic tuff, serpentine) necessary to support the special-status plant species are not present in the Study Area;
- Topographic conditions (e.g., north-facing slope, montane) necessary to support the special-status plant species are not present in the Study Area;
- Unique pH conditions (e.g., alkali scalds, acidic bogs) necessary to support the special-status plant species are not present in the Study Area;
- Associated natural communities (e.g., interior chaparral, tidal marsh) necessary to support the special-status plant species are not present in the Study Area;
- The Study Area is geographically isolated (e.g. below elevation, coastal environ) from the documented range of the special-status plant species;
- The historical landscape and/or habitat(s) of the Study Area were not suitable habitat prior to land/type conversion (e.g., reclaimed shoreline) to support the special-status plant species;
- Land use history and contemporary management (e.g., grading, development) has degraded the localized habitat necessary to support the special-status plant species.

### 5.2.2 Special-status Wildlife

No special-status wildlife species have been documented on or adjacent to the Study Area (CDFW 2024). Species observed within the Study Area during the March 29 and December 13, 2023 site visits are listed in Appendix B. Based upon a review of the resource databases listed in Section 3.0, 54 special-status wildlife species have been documented in the vicinity of the Study Area. Appendix C summarizes the potential for each of these species to occur within the Study Area. Of the 54 special-status species, all are considered unlikely, or have no potential, to occur in the Study Area based on a lack of habitat features.

Features not found within the Study Area that are required to support special-status wildlife species include:

- Vernal pools
- Perennial aquatic habitat (e.g. streams, rivers or ponds)
- Tidal marsh areas
- Old growth redwood or fir forest
- Open grassland
- Sandy beaches or alkaline flats
- Presence of specific host plants
- Caves, mine shafts, or abandoned buildings

The absence of such habitat features eliminates components critical to the survival or movement of special-status species found in the vicinity. Given the Study Area's relative proximity to sensitive habitats on the San Francisco Bay, many species documented nearby are additionally obligates to marine or tidal marsh habitats which are not present on or in the immediate vicinity of the Study Area.

## 5.3 Wildlife Corridors and Native Wildlife Nursery Sites

No native wildlife nursery sites are present in the Study Area.

Wildlife movement between suitable habitat areas can occur via open space areas lacking substantial barriers. The terms "landscape linkage" and "wildlife corridor" are often used when referring to these areas. The key to a functioning corridor or linkage is that it connects two larger habitat blocks, also referred to as core habitat areas (Soulé and Terbough 1999; Beier and Loe 1992). It is useful to think of a "landscape linkage" as being valuable in a regional planning context, a broad scale mapping of natural habitat that functions to join two larger habitat blocks. The term "wildlife corridor" is useful in the context of smaller, local area planning, where wildlife movement may be facilitated by specific local biological habitats or passages and/or may be restricted by barriers to movement. Above all, wildlife corridors must link two areas of core habitat and should not direct wildlife to developed areas or areas that are otherwise void of core habitat (Hilty et al. 2019).

The Study Area is not within a designated wildlife corridor (CalTrans 2010). The sites are generally located within a larger tract of developed land within the City of Novato. Riparian areas and stream channels adjacent to Site 2 and Site 4 may facilitate movement of resident wildlife species at a local scale. However, the Study Area itself is set back from riparian habitat and is immediately bordered by roadways, residential development, and commercial development, which likely creates a barrier for wildlife with limited crossing opportunities.

# 6.0 ANALYTICAL METHODOLOGY AND SIGNIFICANCE THRESHOLD CRITERIA

Pursuant to Appendix G, Section IV of the State CEQA Guidelines, a project would have a significant impact on biological resources if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or U.S. Fish and Wildlife Service;
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or U.S. Fish and Wildlife Service;
3. 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
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and/or,
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

These thresholds were utilized in completing the analysis of potential project impacts for CEQA purposes. For the purposes of this analysis, a "substantial adverse effect" is generally interpreted to mean that a potential impact could directly or indirectly affect the resiliency or presence of a local biological community or species population. Potential impacts to natural processes that support biological communities and special-status species populations that can produce similar effects are also considered potentially significant. Impacts to individuals of a species or small areas of existing biological communities may be considered less than significant if those impacts are speculative, beneficial, de minimis, and/or would not affect the resiliency of a local population.

# 7.0 IMPACTS AND MITIGATION EVALUATION

Using the CEQA analysis methodology outlined in Section 6.2 above, the following section describes potential significant impacts to sensitive resources within the Project Area as well as suggested mitigation measures which are expected to reduce impacts to less than significant.

## 7.1 Special-status Species

This section analyzes the Project's potential impacts and mitigation for special-status species in reference to the significance threshold outlined in CEQA Appendix G, Part IV (a):

> *Does the project have the potential to 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 CDFW or U.S. Fish and Wildlife Service?*

Potential impacts and mitigation for potentially significant impacts are discussed below.

Nesting Birds

Special-status bird species are unlikely to nest within the Study Area. However, common birds protected under the MBTA and CFGC may nest within trees or on the ground within the Study Area. Impacts to nesting birds or their eggs and young would be considered a potentially significant impact.

> **Potential Impact BIO-1:** Potential impacts to nesting bird species from the proposed Project include disturbance to nesting birds and possibly death of adults and/or young. Impacts to nesting birds from the proposed Project would be potentially significant.

To reduce potential impacts to nesting bird species to a less-than-significant level, the following measure will be implemented:

> **Mitigation Measure BIO-1:** If Project activities must be conducted during the nesting season (February 15 and September 1), a pre-construction nesting bird survey will be conducted by a qualified biologist no more than 7 days prior to vegetation removal or initial ground disturbance. The survey will include the Study Area and within a minimum 500 feet of all Project areas to identify the location and status of any nests that could potentially be affected either directly or indirectly by Project activities.
>
> If active nests of native nesting bird species are located during the preconstruction nesting bird survey, a work exclusion zone will be established around each nest by the qualified biologist. Established exclusion zones will remain in place until all young in the nest have fledged or the nest otherwise becomes inactive (e.g., due to predation). Suggested buffer zone distances differ depending on species, location, baseline conditions, and placement of nest and shall be determined in the field by a qualified biologist.

Implementation of this mitigation measure will reduce potential impacts to nesting birds to a level that is less than significant pursuant to CEQA.

## 7.2 Sensitive Natural Communities and Land Cover Types

This section addresses the question:

*b) Does the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or U.S. Fish and Wildlife Service;*

No sensitive natural communities were observed within the Study Area.

Site 2 and Site 4 are located within 50 feet of riparian vegetation associated with Arroyo San Jose and Pacheco Creek, respectively. No impacts to riparian vegetation are anticipated if the staging areas are not located under dripline of riparian vegetation. The Project will have no impacts to sensitive natural communities.

## 7.3 Aquatic Resources

This section analyzes the Project's potential impacts and mitigation for wetlands and other areas presumed or determined to be within the jurisdiction of the Corps or BCDC in reference to the significance threshold outlined in CEQA Appendix G, Part IV (c):

*c) Does the Project have the potential to have a substantial adverse effect on state or federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;*

No aquatic resources were observed within the Study Area. All adjacent streams will be avoided by the project. The Project will have no impacts to aquatic resources.

## 7.4 Wildlife Corridors and Native Wildlife Nursery Sites

This section analyzes the Project's potential impacts and mitigation for habitat corridors and linkages in reference to the significance threshold outlined in CEQA Appendix G, Part IV (d):

*d) Does the Project have the potential to 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;*

The Study Area does not serve as a migration corridor. The Project will have no impacts to wildlife corridors.

## 7.5 Local Policies and Ordinances

This section analyzes the Project's potential impacts and mitigation based on conflicts with local policies and ordinances in reference to the significance threshold outlined in CEQA Appendix G, Part IV (e):

*e) Does the Project have the potential to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;*

A limited amount of tree removal may be required for the Project, as needed for construction. Some of the trees removed may be protected by local ordinances.

Upland areas within 50 feet of streambanks or riparian vegetation is subject to a Stream Protection Zone per the City of Novato Waterways and Riparian Protection Ordinance. Site 2 and Site 4 are located within 50 feet of riparian vegetation (Arroyo San Jose and Pacheco Creek, respectively). The District is not required to comply with the City of Novato Ordinances. As such, there is no potential conflict with these local ordinances and there is no impact due to tree removal or proposed development within the Stream Protection Zone.

## 7.6 Habitat Conservation Plans

This section analyzes the Project's potential impacts and mitigation based on conflicts with any adopted local, regional, and state habitat conservation plans in reference to the significance threshold outlined in CEQA Appendix G, Part IV (f):

> *f) Does the Project have the potential to conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.*

The proposed project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No such plan exists applicable to the Study Area. No impact will occur.

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# APPENDIX A. FIGURES

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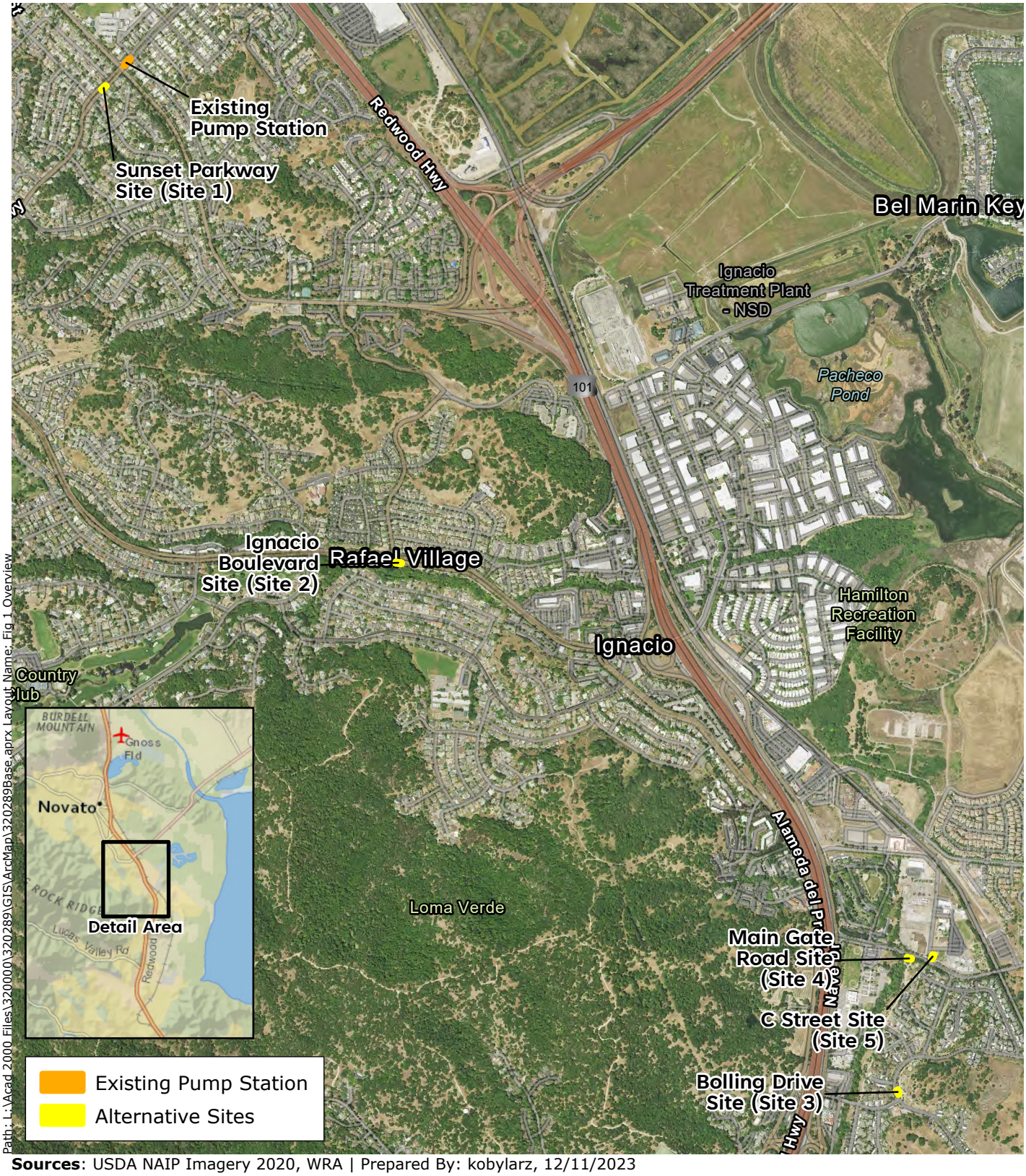



**Sources**: USDA NAIP Imagery 2020, WRA | Prepared By: kobylarz, 12/11/2023

# Figure 1. Project Regional Location Map

North Marin Water District
Lynwood Pump Station Replacement
Novato, California

0 0.25 0.5 Miles

N

wra Environmental Consultants


**Sources**: USDA NAIP Imagery 2020, WRA | Prepared By: kobylarz, 1/4/2024

# Figure 2. Land Cover Types within the Project Site and Staging Areas: Sunset Parkway Site (Site 1)

North Marin Water District
Lynwood Pump Station Replacement
Novato, California

0 50 100 Feet

N

wra Environmental Consultants


**Sources**: USDA NAIP Imagery 2020, WRA | Prepared By: kobylarz, 1/4/2024

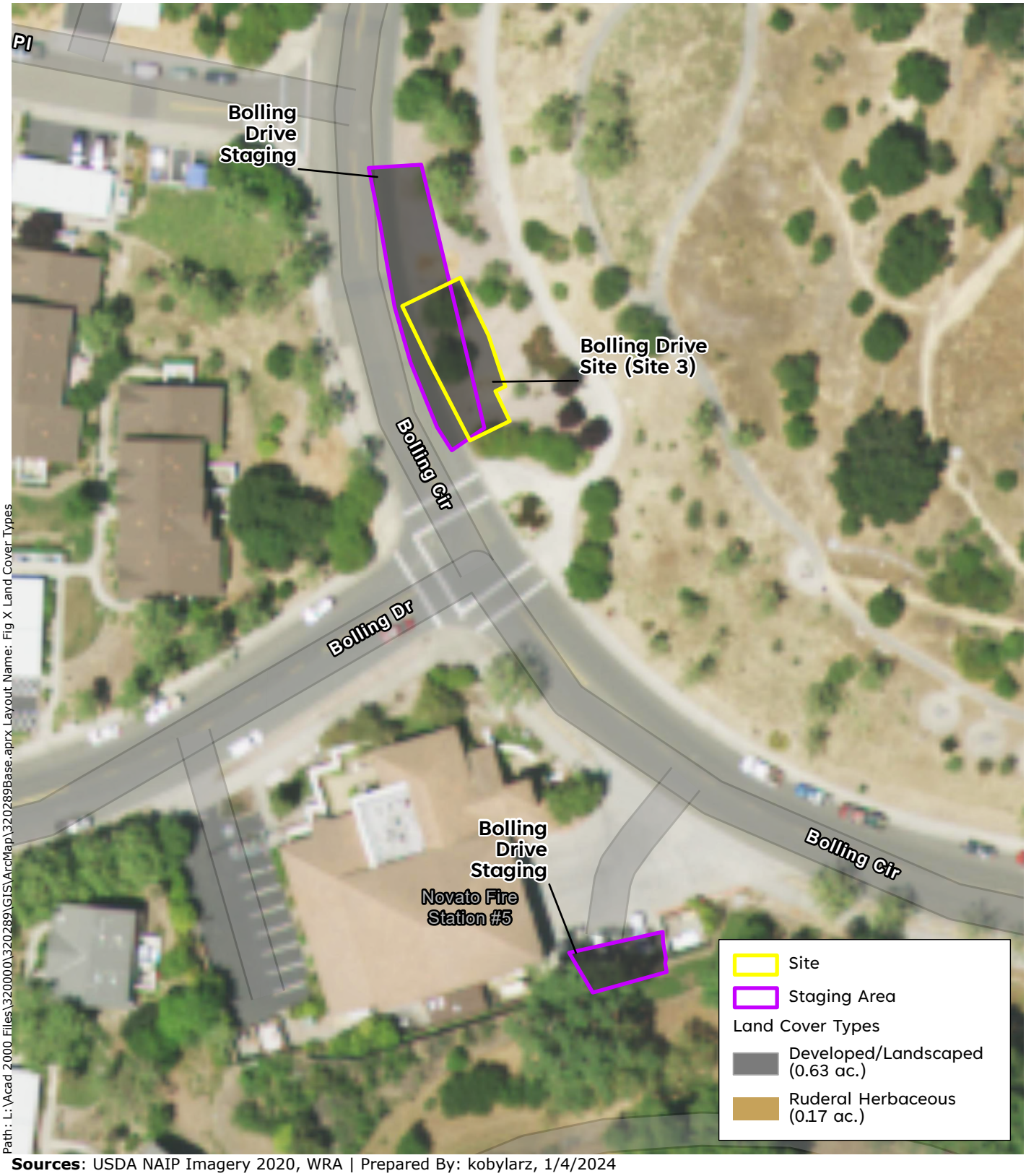
# Figure 3. Land Cover Types within the Project Site and Staging Areas: Ignacio Boulevard Site (Site 2)

North Marin Water District
Lynwood Pump Station Replacement
Novato, California

0 50 100 Feet

N

wra Environmental Consultants




**Sources**: USDA NAIP Imagery 2020, WRA | Prepared By: kobylarz, 1/4/2024

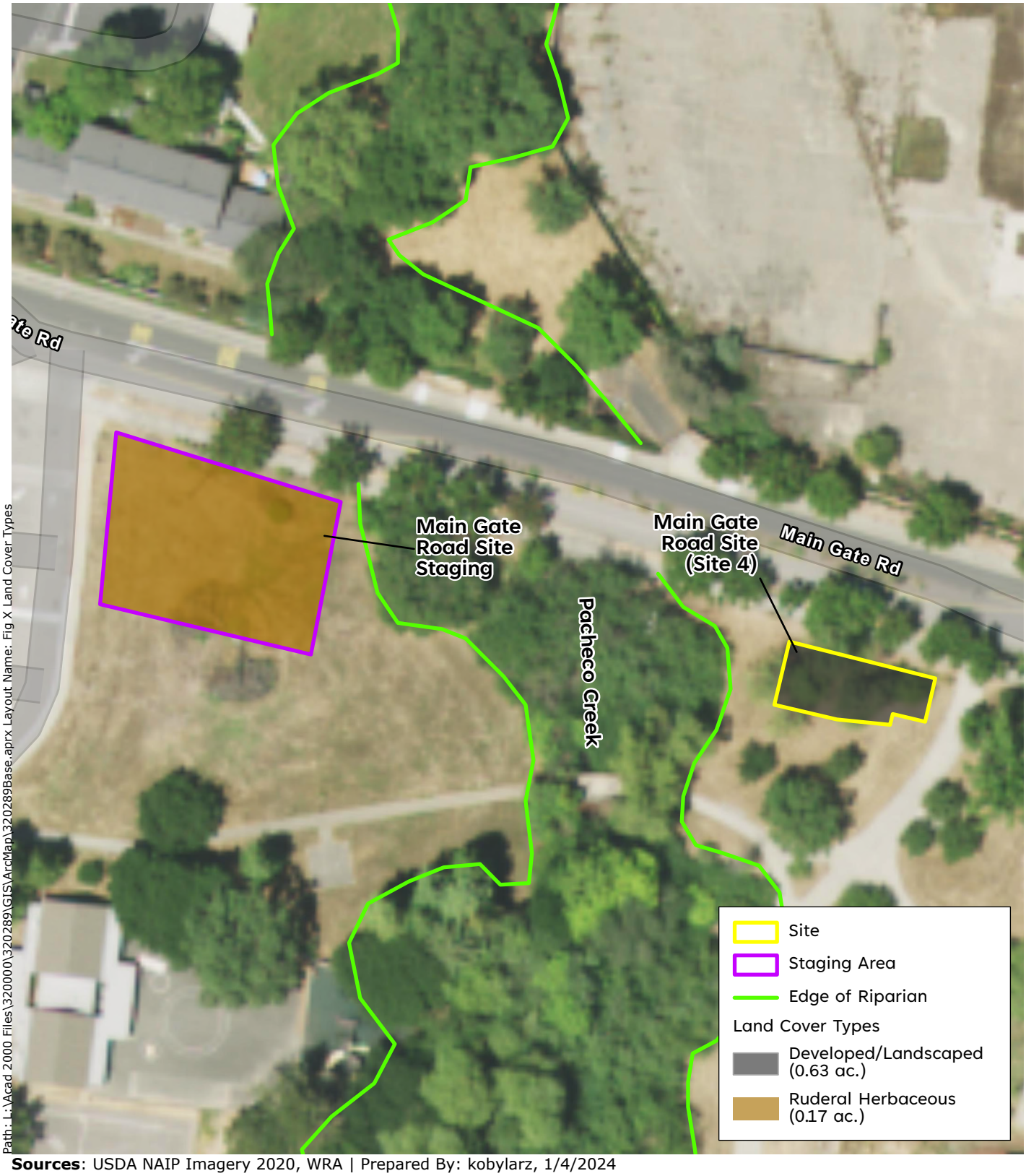
# Figure 4. Land Cover Types within the Project Site and Staging Areas: Bolling Drive Site (Site 3)

North Marin Water District
Lynwood Pump Station Replacement
Novato, California

0 50 100 Feet

N

wra Environmental Consultants




**Sources**: USDA NAIP Imagery 2020, WRA | Prepared By: kobylarz, 1/4/2024

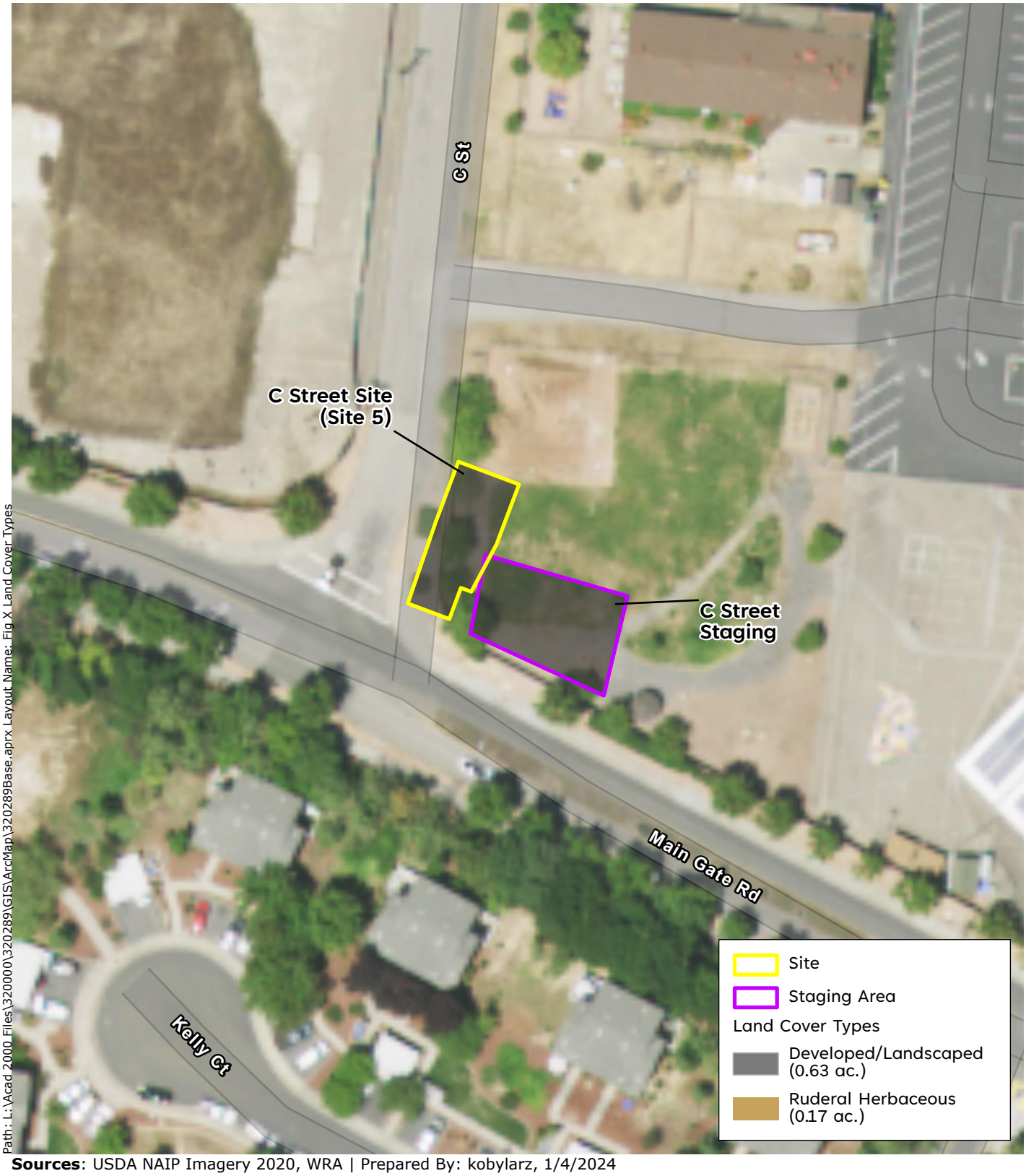
# Figure 5. Land Cover Types within the Project Site and Staging Areas: Main Gate Road Site (Site 4)

North Marin Water District
Lynwood Pump Station Replacement
Novato, California

0 50 100 Feet

N

wra Environmental Consultants




Path: L:\Acad 2000 Files\320000\320289\GIS\ArcMap\320289Base.aprx Layout Name: Fig X Land Cover Types

**Sources**: USDA NAIP Imagery 2020, WRA | Prepared By: kobylarz, 1/4/2024

# Figure 6. Land Cover Types within the Project Site and Staging Areas: C Street Site (Site 5)

North Marin Water District
Lynwood Pump Station Replacement
Novato, California

wra Environmental Consultants

# APPENDIX B. SPECIES OBSERVED IN AND AROUND THE STUDY AREA

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Appendix B. Plant species observed in the Study Area on March 29 and December 13, 2023

| SCIENTIFIC NAME | COMMON NAME | LIFE FORM | ORIGIN | RARE STATUS[1] | INVASIVE STATUS[2] | WETLAND INDICATOR[3] |
|---|---|---|---|---|---|---|
| *Achillea millefolium* | Common yarrow | Native | perennial herb | - | - | FACU |
| *Avena barbata* | Slim oat | non-native (invasive) | annual, perennial grass | - | Moderate | - |
| *Arctostaphylos sp.* | manzanita | Native | Shrub | - | - | - |
| *Baccharis pilularis* | Coyote brush | native | shrub | - | - | - |
| *Bromus diandrus* | Ripgut brome | non-native (invasive) | annual grass | - | Moderate | - |
| *Bromus hordeaceus* | Soft chess | non-native (invasive) | annual grass | - | Limited | FACU |
| *Centaurea solstitialis* | Yellow starthistle | non-native (invasive) | annual herb | - | High | - |
| *Cercis occidentalis* | western redbud | native | tree, shrub | - | - | - |
| *Cirsium vulgare* | Bull thistle | non-native (invasive) | perennial herb | - | Moderate | FACU |
| *Cortaderia jubata* | Andean pampas grass | non-native (invasive) | perennial grass | - | High | FACU |
| *Cotoneaster sp.* | Cotoneaster | non-native (invasive) | shrub | - | - | - |
| *Dittrichia graveolens* | Stinkwort | non-native (invasive) | annual herb | - | Moderate | - |
| *Erodium botrys* | broadleaf filaree | non-native | annual herb | - | - | FACU |
| *Erodium cicutarium* | Red stemmed filaree | non-native (invasive) | annual herb | - | Limited | - |
| *Festuca perennis* | Italian rye grass | non-native (invasive) | annual, perennial grass | - | Moderate | FAC |
| *Foeniculum vulgare* | Fennel | non-native (invasive) | perennial herb | - | High | - |
| *Galium aparine* | Cleavers | native | annual herb | - | - | FACU |
| *Geranium dissectum* | Wild geranium | non-native (invasive) | annual herb | - | Limited | - |
| *Geranium molle* | Crane's bill geranium | non-native | annual, perennial herb | - | - | - |
| *Hedera helix* | English ivy | non-native (invasive) | vine, shrub | - | High | FACU |
| *Helminthotheca echioides* | Bristly ox-tongue | non-native (invasive) | annual, perennial herb | - | Limited | FAC |
| *Hirschfeldia incana* | Short-podded mustard | non-native (invasive) | perennial herb | - | Moderate | - |
| *Hypochaeris radicata* | Hairy cats ear | non-native (invasive) | perennial herb | - | Moderate | FACU |
| *Juniperus* sp. | Juniper | - | shrub | - | - | - |
| *Lagerstroemia indica* | Crepe myrtle | Non-native | Tree | - | - | - |
| *Lactuca serriola* | Prickly lettuce | non-native | annual herb | - | - | FACU |

| SCIENTIFIC NAME | COMMON NAME | LIFE FORM | ORIGIN | RARE STATUS[1] | INVASIVE STATUS[2] | WETLAND INDICATOR[3] |
|---|---|---|---|---|---|---|
| *Ligustrum lucidum* | Glossy privet | non-native (invasive) | tree, shrub | - | Limited | - |
| *Lotus corniculatus* | bird's foot trefoil | non-native | perennial herb | - | - | FAC |
| *Madia* sp. | Tarweed | - | - | - | - | - |
| *Malva* sp. | Mallow | Non-native | Annual herb | - | - | - |
| *Medicago polymorpha* | Bur clover | non-native (invasive) | annual herb | - | Limited | FACU |
| *Morus alba* | Mulberry | Non-native | tree | - | - | - |
| *Olea europeaea* | Olive | Non-native | tree | - | - | - |
| *Oxalis pes-caprae* | Bermuda buttercup | non-native (invasive) | perennial herb | - | Moderate | - |
| *Paspalum dilatatum* | Dallis grass | non-native | perennial grass | - | - | FAC |
| *Platanus x hispanica* | Lodon plane trees | Non-native | Tree | - | - | - |
| *Platanus racemosa* | California sycamore | native | tree | - | - | FAC |
| *Plantago lanceolata* | Ribwort | non-native (invasive) | perennial herb | - | Limited | FAC |
| *Pseudognaphalium luteoalbum* | Jersey cudweed | non-native | annual herb | - | - | FAC |
| *Quercus agrifolia* | Coast live oak | native | tree | - | - | - |
| *Quercus lobata* | Valley oak | native | tree | - | - | FACU |
| *Rhamnus alaternus* | Italian buckthorn | non-native | shrub | - | Watch | FACU |
| *Ribes sanguineum* | flowering currant | native | shrub | - | - | UPL |
| *Rosmarinus officinalis* | Rosemary | non-native | shrub | - | - | - |
| *Rubus armeniacus* | Himalayan blackberry | non-native (invasive) | shrub | - | High | FAC |
| *Rumex crispus* | Curly dock | non-native (invasive) | perennial herb | - | Limited | FAC |
| *Senecio vulgaris* | Common groundsel | non-native | annual herb | - | - | FACU |
| *Solanum* sp. | Wild nightshade | Non-native | Annual herb | - | - | - |
| *Sonchus oleraceus* | Common sow thistle | non-native | annual herb | - | - | UPL |
| *Taraxacum officinale* | Red seeded dandelion | non-native | perennial herb | - | - | FACU |
| *Tulbaghia violacea* | Society garlic | non-native | Perennial herb | - | - | - |
| *Ulmus parvifolia* | Siberian elm | non-native | tree | - | - | UPL |

| SCIENTIFIC NAME | COMMON NAME | LIFE FORM | ORIGIN | RARE STATUS[1] | INVASIVE STATUS[2] | WETLAND INDICATOR[3] |
|---|---|---|---|---|---|---|
| *Vinca major* | Greater periwinkle | non-native (invasive) | perennial herb | - | Moderate | FACU |
| *Washingtonia robusta* | Mexican fan palm | non-native (invasive) | tree | - | Moderate | FACW |

All species identified using the *Jepson Manual, 2nd Edition* (Baldwin et al. 2012), *The Jepson Flora Project* (eFlora 2024), and *Marin Flora* (Howell et al. 2007); nomenclature follows *The Jepson Flora Project* (eFlora 2024) unless otherwise noted

Sp.: “species”, intended to indicate that the observer was confident in the identity of the genus but uncertain which species
Cf.: “*confer*” or “compared with”, intended to indicate a species appeared to the observer to be specific, but was not identified based on diagnostic characters

[1]Rare Status: The CNPS Inventory of Rare and Endangered Plants (CNPS 2024a)

| | |
|---|---|
| FE: | Federal Endangered |
| FT: | Federal Threatened |
| SE: | State Endangered |
| ST: | State Threatened |
| SR: | State Rare |
| CRPR 1A: | Plants presumed extirpated in California and either rare or extinct elsewhere |
| CRPR 1B: | Plants rare, threatened, or endangered in California and elsewhere |
| CRPR 2A: | Plants presumed extirpated in California, but more common elsewhere |
| CRPR 2B: | Plants rare, threatened, or endangered in California, but more common elsewhere |
| CRPR 3: | Plants about which we need more information – a review list |
| CRPR 4: | Plants of limited distribution – a watch list |

[2]Invasive Status: California Invasive Plant Inventory (Cal-IPC 2006)

| | |
|---|---|
| High: | Severe ecological impacts; high rates of dispersal and establishment; most are widely distributed ecologically. |
| Moderate: | Substantial and apparent ecological impacts; moderate-high rates of dispersal, establishment dependent on disturbance; limited moderate distribution ecologically |
| Limited: | Minor or not well documented ecological impacts; low-moderate rate of invasiveness; limited distribution ecologically |
| Assessed: | Assessed by Cal-IPC and determined to not be an existing current threat |

[3]Wetland Status: National List of Plant Species that Occur in Wetlands, Arid West Region (Corps 2020)

| | |
|---|---|
| OBL: | Almost always a hydrophyte, rarely in uplands |
| FACW: | Usually a hydrophyte, but occasionally found in uplands |
| FAC: | Commonly either a hydrophyte or non-hydrophyte |
| FACU: | Occasionally a hydrophyte, but usually found in uplands |
| UPL: | Rarely a hydrophyte, almost always in uplands |
| NL: | Rarely a hydrophyte, almost always in uplands |
| NI: | No information; not factored during wetland delineation |

# APPENDIX C. SPECIAL-STATUS SPECIES POTENTIAL TABLE

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Appendix C. Potential for Special-status Species to Occur in the Study Area. List compiled from the CDFW BIOS database (CDFW 2023a), USFWS IPaC Report (USFWS 2023), and CNPS Electronic Inventory (CNPS 2023a) searches. The Novato, Petaluma, Petaluma River, Sears Point, San Geronimo, Petaluma Point, Bolinas, San Rafael, and San Quentin USGS 7.5' quadrangles were included in the search.

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| **PLANTS** | | | | |
| Franciscan onion<br>*Allium peninsulare var. franciscanum* | Rank 1B.2 | Cismontane woodland, valley and foothill grassland. Elevation ranges from 170 to 1000 feet (52 to 305 meters). Blooms (Apr)May-Jun. | **No Potential.** The Study Area does not contain woodland or grassland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| Sonoma alopecurus<br>*Alopecurus aequalis var. sonomensis* | FE, Rank 1B.1 | Marshes and swamps (freshwater), riparian scrub. Elevation ranges from 15 to 1200 feet (5 to 365 meters). Blooms May-Jul. | **No Potential.** The Study Area does not contain marsh, swamp or riparian scrub habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| Napa false indigo<br>*Amorpha californica var. napensis* | Rank 1B.2 | Broadleafed upland forest (openings), chaparral, cismontane woodland. Elevation ranges from 165 to 6560 feet (50 to 2000 meters). Blooms Apr-Jul. | **No Potential.** The Study Area does not contain forest or woodland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| bent-flowered fiddleneck<br>*Amsinckia lunaris* | Rank 1B.2 | Cismontane woodland, coastal bluff scrub, valley and foothill grassland. Elevation ranges from 10 to 1640 feet (3 to 500 meters). Blooms Mar-Jun. | **No Potential.** The Study Area does not contain Cismontane woodland, coastal bluff scrub, valley or foothill grassland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| coast rockcress<br>*Arabis blepharophylla* | Rank 4.3 | Broadleafed upland forest, coastal bluff scrub, coastal prairie, coastal scrub. Elevation ranges from 10 to 3610 feet (3 to 1100 meters). Blooms Feb-May. | **No Potential.** The Study Area does not contain forest or scrub habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| Mt. Tamalpais manzanita<br>*Arctostaphylos montana ssp. montana* | Rank 1B.3 | Chaparral, valley and foothill grassland. Elevation ranges from 525 to 2495 feet (160 to 760 meters). Blooms Feb-Apr. | **No Potential.** The Study Area does not contain chaparral or gassland to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| Marin manzanita<br>*Arctostaphylos virgata* | Rank 1B.2 | Broadleafed upland forest, chaparral, closed-cone coniferous forest, north coast coniferous forest. Elevation ranges from 195 to 2295 feet (60 to 700 meters). Blooms Jan-Mar. | **No Potential.** The Study Area does not contain chaparral or coniferous forest to support this species. | **Not Present.** No further actions are recommended for this species. |
| Carlotta Hall's lace fern<br>*Aspidotis carlotta-halliae* | Rank 4.2 | Chaparral, cismontane woodland. Elevation ranges from 330 to 4595 feet (100 to 1400 meters). Blooms Jan-Dec. | **No Potential.** The Study Area does not contain chaparral or cismontane woodland to support this species. | **Not Present.** No further actions are recommended for this species. |
| Brewer's milk-vetch<br>*Astragalus breweri* | Rank 4.2 | Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland (openings, often gravelly). Elevation ranges from 295 to 2395 feet (90 to 730 meters). Blooms Apr-Jun. | **No Potential.** The Study Area does not contain chaparral, meadows and seeps, grassland, or cismontane woodland to support this species. | **Not Present.** No further actions are recommended for this species. |
| coastal marsh milk-vetch<br>*Astragalus pycnostachyus var. pycnostachyus* | Rank 1B.2 | Coastal dunes (mesic), coastal scrub, marshes and swamps (coastal salt, streamsides). Elevation ranges from 0 to 180 feet (0 to 55 meters). Blooms (Apr)Jun-Oct. | **No Potential.** The Study Area does not contain Coastal dunes (mesic), coastal scrub, marshes or swamps to support this species. | **Not Present.** No further actions are recommended for this species. |
| alkali milk-vetch<br>*Astragalus tener var. tener* | Rank 1B.2 | Playas, valley and foothill grassland (adobe clay), vernal pools. Elevation ranges from 5 to 195 feet (1 to 60 meters). Blooms Mar-Jun. | **No Potential.** The Study Area does not contain playas, valley and foothill grassland, or vernal pools to support this species. | **Not Present.** No further actions are recommended for this species. |
| Sonoma sunshine<br>*Blennosperma bakeri* | FE, SE, Rank 1B.1 | Valley and foothill grassland (mesic), vernal pools. Elevation ranges from 35 to 360 feet (10 to 110 meters). Blooms Mar-May. | **No Potential.** The Study Area does not contain valley and foothill grassland or vernal pools to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| Thurber's reed grass<br>*Calamagrostis crassiglumis* | Rank 2B.1 | Coastal scrub (mesic), marshes and swamps (freshwater). Elevation ranges from 35 to 195 feet (10 to 60 meters). Blooms May-Aug. | **No Potential.** The Study Area does not contain coastal scrub, or freshwater marshes and swamps to support this species. | **Not Present.** No further actions are recommended for this species. |
| serpentine reed grass<br>*Calamagrostis ophitidis* | Rank 4.3 | Chaparral (openings, often north-facing slopes), lower montane coniferous forest, meadows and seeps, valley and foothill grassland. Elevation ranges from 295 to 3495 feet (90 to 1065 meters). Blooms Apr-Jul. | **No Potential.** The Study Area does not contain chaparral, lower montane coniferous forest, meadows and seeps, or valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| Brewer's calandrinia<br>*Calandrinia breweri* | Rank 4.2 | Chaparral, coastal scrub. Elevation ranges from 35 to 4005 feet (10 to 1220 meters). Blooms (Jan)Mar-Jun. | **No Potential.** The Study Area does not contain chaparral or coastal scrub to support this species. | **Not Present.** No further actions are recommended for this species. |
| Tiburon mariposa-lily<br>*Calochortus tiburonensis* | FT, ST, Rank 1B.1 | Valley and foothill grassland (serpentine). Elevation ranges from 165 to 490 feet (50 to 150 meters). Blooms Mar-Jun. | **No Potential.** The Study Area does not contain valley and foothill grassland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| Oakland star-tulip<br>*Calochortus umbellatus* | Rank 4.2 | Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 330 to 2295 feet (100 to 700 meters). Blooms Mar-May. | **No Potential.** The Study Area does not broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, or valley and foothill grassland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| pink star-tulip<br>*Calochortus uniflorus* | Rank 4.2 | Coastal prairie, coastal scrub, meadows and seeps, north coast coniferous forest. Elevation ranges from 35 to 3510 feet (10 to 1070 meters). Blooms Apr-Jun. | **No Potential.** The Study Area does not contain coastal prairie, coastal scrub, meadows and seeps, or north coast coniferous forest habitat to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| Mt. Saint Helena morning-glory<br>*Calystegia collina ssp. oxyphylla* | Rank 4.2 | Chaparral, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 915 to 3315 feet (279 to 1010 meters). Blooms Apr-Jun. | **No Potential.** The Study Area does not contain chaparral, lower montane coniferous forest, or valley and foothill grassland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| seaside bittercress<br>*Cardamine angulata* | Rank 2B.2 | Lower montane coniferous forest, north coast coniferous forest. Elevation ranges from 50 to 3000 feet (15 to 915 meters). Blooms (Jan)Mar-Jul. | **No Potential.** The Study Area does not contain lower montane coniferous forest, or north coast coniferous forest to support this species. | **Not Present.** No further actions are recommended for this species. |
| Lyngbye's sedge<br>*Carex lyngbyei* | Rank 2B.2 | Marshes and swamps (brackish, freshwater). Elevation ranges from 0 to 35 feet (0 to 10 meters). Blooms Apr-Aug. | **No Potential.** The Study Area does not contain marshes or swamps to support this species. | **Not Present.** No further actions are recommended for this species. |
| Tiburon paintbrush<br>*Castilleja affinis var. neglecta* | FE, ST, Rank 1B.2 | Valley and foothill grassland (serpentine). Elevation ranges from 195 to 1310 feet (60 to 400 meters). Blooms Apr-Jun. | **No Potential.** The Study Area does not contain valley and foothill grassland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| johnny-nip<br>*Castilleja ambigua var. ambigua* | Rank 4.2 | Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal pools (margins). Elevation ranges from 0 to 1425 feet (0 to 435 meters). Blooms Mar-Aug. | **No Potential.** The Study Area does not contain coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, or vernal pools to support this species. | **Not Present.** No further actions are recommended for this species. |
| Nicasio ceanothus<br>*Ceanothus decornutus* | Rank 1B.2 | Chaparral (maritime). Elevation ranges from 770 to 950 feet (235 to 290 meters). Blooms Mar-May. | **No Potential.** The Study Area does not contain chaparral to support this species. | **Not Present.** No further actions are recommended for this species. |
| glory brush<br>*Ceanothus gloriosus var. exaltatus* | Rank 4.3 | Chaparral. Elevation ranges from 100 to 2000 feet (30 to 610 meters). Blooms Mar-Jun(Aug). | **No Potential.** The Study Area does not contain chaparral to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| Point Reyes ceanothus<br>*Ceanothus gloriosus var. gloriosus* | Rank 4.3 | Closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal scrub. Elevation ranges from 15 to 1705 feet (5 to 520 meters). Blooms Mar-May. | **No Potential.** The Study Area does not contain closed-cone coniferous forest, coastal bluff scrub, coastal dunes, or coastal scrub to support this species. | **Not Present.** No further actions are recommended for this species. |
| Mason's ceanothus<br>*Ceanothus masonii* | SR, Rank 1B.2 | Chaparral (openings, rocky, serpentine). Elevation ranges from 755 to 1640 feet (230 to 500 meters). Blooms Mar-Apr. | **No Potential.** The Study Area does not contain chaparral to support this species. | **Not Present.** No further actions are recommended for this species. |
| Kern ceanothus<br>*Ceanothus pinetorum* | Rank 4.3 | Lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest. Elevation ranges from 3410 to 9005 feet (1040 to 2745 meters). Blooms May-Jul. | **No Potential.** The Study Area does not contain coniferous forest to support this species. | **Not Present.** No further actions are recommended for this species. |
| pappose tarplant<br>*Centromadia parryi ssp. parryi* | Rank 1B.2 | Chaparral, coastal prairie, marshes and swamps (coastal salt), meadows and seeps, valley and foothill grassland (vernally mesic). Elevation ranges from 0 to 1380 feet (0 to 420 meters). Blooms May-Nov. | **No Potential.** The Study Area does not contain chaparral, coastal prairie, marshes and swamps (coastal salt), meadows and seeps, or valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| Point Reyes salty bird's-beak<br>*Chloropyron maritimum ssp. palustre* | Rank 1B.2 | Marshes and swamps (coastal salt). Elevation ranges from 0 to 35 feet (0 to 10 meters). Blooms Jun-Oct. | **No Potential.** The Study Area does not contain coastal marshes and swamps to support this species. | **Not Present.** No further actions are recommended for this species. |
| soft salty bird's-beak<br>*Chloropyron molle ssp. molle* | FE, SR, Rank 1B.2 | Marshes and swamps (coastal salt). Elevation ranges from 0 to 10 feet (0 to 3 meters). Blooms Jun-Nov. | **No Potential.** The Study Area does not contain coastal marshes and swamps to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| San Francisco Bay spineflower *Chorizanthe cuspidata var. cuspidata* | Rank 1B.2 | Coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub. Elevation ranges from 10 to 705 feet (3 to 215 meters). Blooms Apr-Jul(Aug). | **No Potential.** The Study Area does not contain coastal bluff scrub, coastal dunes, coastal prairie, or coastal scrub to support this species. | **Not Present.** No further actions are recommended for this species. |
| Sonoma spineflower *Chorizanthe valida* | FE, SE, Rank 1B.1 | Coastal prairie (sandy). Elevation ranges from 35 to 1000 feet (10 to 305 meters). Blooms Jun-Aug. | **No Potential.** The Study Area does not contain coastal prarie to support this species. | **Not Present.** No further actions are recommended for this species. |
| Mt. Tamalpais thistle *Cirsium hydrophilum var. vaseyi* | Rank 1B.2 | Broadleafed upland forest, chaparral, meadows and seeps. Elevation ranges from 785 to 2035 feet (240 to 620 meters). Blooms May-Aug. | **No Potential.** The Study Area does not contain broadleafed upland forest, chaparral, or meadows and seeps. to support this species. | **Not Present.** No further actions are recommended for this species. |
| seaside cistanthe *Cistanthe maritima* | Rank 4.2 | Coastal bluff scrub, coastal scrub, valley and foothill grassland. Elevation ranges from 15 to 985 feet (5 to 300 meters). Blooms (Feb)Mar-Jun(Aug). | **No Potential.** The Study Area does not contain coastal bluff scrub, coastal scrub, valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| round-headed collinsia *Collinsia corymbosa* | Rank 1B.2 | Coastal dunes. Elevation ranges from 0 to 65 feet (0 to 20 meters). Blooms Apr-Jun. | **No Potential.** The Study Area does not contain coastal dunes to support this species. | **Not Present.** No further actions are recommended for this species. |
| serpentine collomia *Collomia diversifolia* | Rank 4.3 | Chaparral, cismontane woodland. Elevation ranges from 655 to 1970 feet (200 to 600 meters). Blooms May-Jun. | **No Potential.** The Study Area does not contain chaparral or cismontane woodland to support this species. | **Not Present.** No further actions are recommended for this species. |
| California lady's-slipper *Cypripedium californicum* | Rank 4.2 | Bogs and fens, lower montane coniferous forest. Elevation ranges from 100 to 9025 feet (30 to 2750 meters). Blooms Apr-Aug(Sep). | **No Potential.** The Study Area does not contain bogs and fens or lower montane coniferous forest to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| Baker's larkspur<br>*Delphinium bakeri* | FE, SE, Rank 1B.1 | Broadleafed upland forest, coastal scrub, valley and foothill grassland. Elevation ranges from 260 to 1000 feet (80 to 305 meters). Blooms Mar-May. | **No Potential.** The Study Area does not contain broadleafed upland forest, coastal scrub, or valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| golden larkspur<br>*Delphinium luteum* | FE, SR, Rank 1B.1 | Chaparral, coastal prairie, coastal scrub. Elevation ranges from 0 to 330 feet (0 to 100 meters). Blooms Mar-May. | **No Potential.** The Study Area does not chaparral, coastal prairie, or coastal scrub to support this species. | **Not Present.** No further actions are recommended for this species. |
| silverskin lichen<br>*Dermatocarpon meiophyllizum* | Rank 2B.3 | Coastal prairie, lower montane coniferous forest, north coast coniferous forest, subalpine coniferous forest, upper montane coniferous forest. Elevation ranges from 970 to 11465 feet (295 to 3495 meters). Blooms . | **No Potential.** The Study Area does not contain prairie or forest habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| western dichondra<br>*Dichondra occidentalis* | Rank 4.2 | Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Elevation ranges from 165 to 1640 feet (50 to 500 meters). Blooms (Jan)Mar-Jul. | **No Potential.** The Study Area does not contain chaparral, cismontane woodland, coastal scrub, valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| western leatherwood<br>*Dirca occidentalis* | Rank 1B.2 | Broadleafed upland forest, chaparral, cismontane woodland, closed-cone coniferous forest, north coast coniferous forest, riparian forest, riparian woodland. Elevation ranges from 80 to 1395 feet (25 to 425 meters). Blooms Jan-Mar(Apr). | **No Potential.** The Study Area does not contain forest or riparian woodland to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| dwarf downingia<br>*Downingia pusilla* | Rank 2B.2 | Valley and foothill grassland (mesic), vernal pools. Elevation ranges from 5 to 1460 feet (1 to 445 meters). Blooms Mar-May. | **No Potential.** The Study Area does not contain valley and foothill grassland or vernal pools to support this species. | **Not Present.** No further actions are recommended for this species. |
| small spikerush<br>*Eleocharis parvula* | Rank 4.3 | Marshes and swamps. Elevation ranges from 5 to 9910 feet (1 to 3020 meters). Blooms (Apr)Jun-Aug(Sep). | **No Potential.** The Study Area does not contain Marshes and swamps to support this species. | **Not Present.** No further actions are recommended for this species. |
| California bottle-brush grass<br>*Elymus californicus* | Rank 4.3 | Broadleafed upland forest, cismontane woodland, north coast coniferous forest, riparian woodland. Elevation ranges from 50 to 1540 feet (15 to 470 meters). Blooms May-Aug(Nov). | **No Potential.** The Study Area does not contain forest or riparian woodland to support this species. | **Not Present.** No further actions are recommended for this species. |
| Koch's cord moss<br>*Entosthodon kochii* | Rank 1B.3 | Cismontane woodland (soil). Elevation ranges from 590 to 3280 feet (180 to 1000 meters). Blooms . | **No Potential.** The Study Area does not contain woodland to support this species. | **Not Present.** No further actions are recommended for this species. |
| streamside daisy<br>*Erigeron biolettii* | Rank 3 | Broadleafed upland forest, cismontane woodland, north coast coniferous forest. Elevation ranges from 100 to 3610 feet (30 to 1100 meters). Blooms Jun-Oct. | **No Potential.** The Study Area does not contain forest or riparian woodland to support this species. | **Not Present.** No further actions are recommended for this species. |
| Tiburon buckwheat<br>*Eriogonum luteolum var. caninum* | Rank 1B.2 | Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Elevation ranges from 0 to 2295 feet (0 to 700 meters). Blooms May-Sep. | **No Potential.** The Study Area does not contain chaparral, cismontane woodland, coastal prairie, or valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| San Francisco wallflower<br>*Erysimum franciscanum* | Rank 4.2 | Chaparral, coastal dunes, coastal scrub, valley and foothill grassland. Elevation ranges from 0 to 1805 feet (0 to 550 meters). Blooms Mar-Jun. | **No Potential.** The Study Area does not contain chaparral, coastal dunes, coastal scrub, or valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| bare monkeyflower<br>*Erythranthe nudata* | Rank 4.3 | Chaparral, cismontane woodland. Elevation ranges from 655 to 2295 feet (200 to 700 meters). Blooms May-Jun. | **No Potential.** The Study Area does not contain chaparral or cismontane woodland to support this species. | **Not Present.** No further actions are recommended for this species. |
| minute pocket moss<br>*Fissidens pauperculus* | Rank 1B.2 | North coast coniferous forest (damp coastal soil). Elevation ranges from 35 to 3360 feet (10 to 1024 meters). Blooms . | **No Potential.** The Study Area does not contain coniferous forest to support this species. | **Not Present.** No further actions are recommended for this species. |
| Marin checker lily<br>*Fritillaria lanceolata var. tristulis* | Rank 1B.1 | Coastal bluff scrub, coastal prairie, coastal scrub. Elevation ranges from 50 to 490 feet (15 to 150 meters). Blooms Feb-May. | **No Potential.** The Study Area does not contain coastal bluff scrub, coastal prairie, or coastal scrub to support this species. | **Not Present.** No further actions are recommended for this species. |
| fragrant fritillary<br>*Fritillaria liliacea* | Rank 1B.2 | Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 10 to 1345 feet (3 to 410 meters). Blooms Feb-Apr. | **No Potential.** The Study Area does not contain cismontane woodland, coastal prairie, coastal scrub, or valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| blue coast gilia<br>*Gilia capitata ssp. chamissonis* | Rank 1B.1 | Coastal dunes, coastal scrub. Elevation ranges from 5 to 655 feet (2 to 200 meters). Blooms Apr-Jul. | **No Potential.** The Study Area does not contain chaparral or cismontane woodland to support this species. | **Not Present.** No further actions are recommended for this species. |
| woolly-headed gilia<br>*Gilia capitata ssp. tomentosa* | Rank 1B.1 | Coastal bluff scrub, valley and foothill grassland. Elevation ranges from 35 to 720 feet (10 to 220 meters). Blooms May-Jul. | **No Potential.** The Study Area does not contain coastal dunes or coastal scrub to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| dark-eyed gilia<br>*Gilia millefoliata* | Rank 1B.2 | Coastal dunes. Elevation ranges from 5 to 100 feet (2 to 30 meters). Blooms Apr-Jul. | **No Potential.** The Study Area does not contain coastal dunes to support this species. | **Not Present.** No further actions are recommended for this species. |
| San Francisco gumplant<br>*Grindelia hirsutula var. maritima* | Rank 3.2 | Coastal bluff scrub, coastal scrub, valley and foothill grassland. Elevation ranges from 50 to 1310 feet (15 to 400 meters). Blooms Jun-Sep. | **No Potential.** The Study Area does not contain coastal scrub or foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| Diablo helianthella<br>*Helianthella castanea* | Rank 1B.2 | Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Elevation ranges from 195 to 4265 feet (60 to 1300 meters). Blooms Mar-Jun. | **No Potential.** The Study Area does not contain broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, or valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| congested-headed hayfield *tarplant*<br>*Hemizonia congesta ssp. congesta* | Rank 1B.2 | Valley and foothill grassland. Elevation ranges from 65 to 1835 feet (20 to 560 meters). Blooms Apr-Nov. | **No Potential.** The Study Area does not contain valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| Marin western flax<br>*Hesperolinon congestum* | FT, ST, Rank 1B.1 | Chaparral, valley and foothill grassland. Elevation ranges from 15 to 1215 feet (5 to 370 meters). Blooms Apr-Jul. | **No Potential.** The Study Area does not contain chaparral or valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| Santa Cruz tarplant<br>*Holocarpha macradenia* | FT, SE, Rank 1B.1 | Coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 35 to 720 feet (10 to 220 meters). Blooms Jun-Oct. | **No Potential.** The Study Area does not contain coastal prairie, coastal scrub, or valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| thin-lobed horkelia<br>*Horkelia tenuiloba* | Rank 1B.2 | Broadleafed upland forest, chaparral, valley and foothill grassland. Elevation ranges from 165 to 1640 feet (50 to 500 meters). Blooms May-Jul(Aug). | **No Potential.** The Study Area does not broadleafed upland forest, chaparral, or valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| harlequin lotus<br>*Hosackia gracilis* | Rank 4.2 | Broadleafed upland forest, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, meadows and seeps, north coast coniferous forest, valley and foothill grassland. Elevation ranges from 0 to 2295 feet (0 to 700 meters). Blooms Mar-Jul. | **No Potential.** The Study Area does not contain broadleafed upland forest, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, meadows and seeps, north coast coniferous forest, or valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| coast iris<br>*Iris longipetala* | Rank 4.2 | Coastal prairie, lower montane coniferous forest, meadows and seeps. Elevation ranges from 0 to 1970 feet (0 to 600 meters). Blooms Mar-May(Jun). | **No Potential.** The Study Area does not contain coastal prairie, lower montane coniferous forest, or meadows and seeps to support this species. | **Not Present.** No further actions are recommended for this species. |
| southwestern spiny rush<br>*Juncus acutus ssp. leopoldii* | Rank 4.2 | Coastal dunes (mesic), coastal scrub, marshes and swamps (coastal salt), meadows and seeps (alkaline seeps). Elevation ranges from 10 to 2955 feet (3 to 900 meters). Blooms (Mar)May-Jun. | **No Potential.** The Study Area does not contain coastal dunes, coastal scrub, marshes and swamps, or meadows and seeps to support this species. | **Not Present.** No further actions are recommended for this species. |
| small groundcone<br>*Kopsiopsis hookeri* | Rank 2B.3 | Lower montane coniferous forest, north coast coniferous forest, upper montane coniferous forest. Elevation ranges from 295 to 2905 feet (90 to 885 meters). Blooms Apr-Aug. | **No Potential.** The Study Area does not contain forest habitat to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| Contra Costa goldfields<br>*Lasthenia conjugens* | FE, Rank 1B.1 | Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools. Elevation ranges from 0 to 1540 feet (0 to 470 meters). Blooms Mar-Jun. | **No Potential.** The Study Area does not cismontane woodland, playas (alkaline), valley and foothill grassland, or vernal pools to support this species. | **Not Present.** No further actions are recommended for this species. |
| bristly leptosiphon<br>*Leptosiphon aureus* | Rank 4.2 | Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Elevation ranges from 180 to 4920 feet (55 to 1500 meters). Blooms Apr-Jul. | **No Potential.** The Study Area does not contain chaparral, cismontane woodland, coastal prairie, or valley and foothill grassland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| large-flowered leptosiphon<br>*Leptosiphon grandiflorus* | Rank 4.2 | Cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 15 to 4005 feet (5 to 1220 meters). Blooms Apr-Aug. | **No Potential.** The Study Area does not contain cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub, or valley and foothill grassland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| woolly-headed lessingia<br>*Lessingia hololeuca* | Rank 3 | Broadleafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Elevation ranges from 50 to 1000 feet (15 to 305 meters). Blooms Jun-Oct. | **No Potential.** The Study Area does not contain broadleafed upland forest, coastal scrub, lower montane coniferous forest, or valley and foothill grassland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| Tamalpais lessingia<br>*Lessingia micradenia var. micradenia* | Rank 1B.2 | Chaparral, valley and foothill grassland. Elevation ranges from 330 to 1640 feet (100 to 500 meters). Blooms (Jun)Jul-Oct. | **No Potential.** The Study Area does not contain chaparral or valley and foothill grassland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| Pitkin Marsh lily<br>*Lilium pardalinum ssp. pitkinense* | FE, SE, Rank 1B.1 | Cismontane woodland, marshes and swamps (freshwater), meadows and seeps. Elevation ranges from 115 to 215 feet (35 to 65 meters). Blooms Jun-Jul. | **No Potential.** The Study Area does not contain cismontane woodland, marshes and swamps, or meadows and seeps habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| Mt. Diablo cottonweed<br>*Micropus amphibolus* | Rank 3.2 | Broadleafed upland forest, chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 150 to 2705 feet (45 to 825 meters). Blooms Mar-May. | **No Potential.** The Study Area does not contain broadleafed upland forest, chaparral, cismontane woodland, or valley and foothill grassland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| marsh microseris<br>*Microseris paludosa* | Rank 1B.2 | Cismontane woodland, closed-cone coniferous forest, coastal scrub, valley and foothill grassland. Elevation ranges from 15 to 1165 feet (5 to 355 meters). Blooms Apr-Jun(Jul). | **No Potential.** The Study Area does not contain cismontane woodland, closed-cone coniferous forest, coastal scrub, or valley and foothill grassland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| elongate copper moss<br>*Mielichhoferia elongata* | Rank 4.3 | Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, subalpine coniferous forest. Elevation ranges from 0 to 6430 feet (0 to 1960 meters). Blooms . | **No Potential.** The Study Area does not contain broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, or subalpine coniferous forest habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| cotula navarretia<br>*Navarretia cotulifolia* | Rank 4.2 | Chaparral, cismontane woodland, valley and foothill grassland. Elevation ranges from 15 to 6005 feet (4 to 1830 meters). Blooms May-Jun. | **No Potential.** The Study Area does not contain chaparral, cismontane woodland, or valley and foothill grassland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| Baker's navarretia<br>*Navarretia leucocephala ssp. bakeri* | Rank 1B.1 | Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools. Elevation ranges from 15 to 5710 feet (5 to 1740 meters). Blooms Apr-Jul. | **No Potential.** The Study Area does not contain cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, or vernal pool habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| Marin County navarretia<br>*Navarretia rosulata* | Rank 1B.2 | Chaparral, closed-cone coniferous forest. Elevation ranges from 655 to 2085 feet (200 to 635 meters). Blooms May-Jul. | **No Potential.** The Study Area does not contain chaparral or forest habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| white-rayed pentachaeta<br>*Pentachaeta bellidiflora* | FE, SE, Rank 1B.1 | Cismontane woodland, valley and foothill grassland (often serpentine). Elevation ranges from 115 to 2035 feet (35 to 620 meters). Blooms Mar-May. | **No Potential.** The Study Area does not contain cismontane woodland or valley and foothill grassland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| Gairdner's yampah<br>*Perideridia gairdneri ssp. gairdneri* | Rank 4.2 | Broadleafed upland forest, chaparral, coastal prairie, valley and foothill grassland, vernal pools. Elevation ranges from 0 to 2000 feet (0 to 610 meters). Blooms Jun-Oct. | **No Potential.** The Study Area does not contain broadleafed upland forest, chaparral, coastal prairie, valley and foothill grassland, or vernal pool habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| Michael's rein orchid<br>*Piperia michaelii* | Rank 4.2 | Chaparral, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal scrub, lower montane coniferous forest. Elevation ranges from 10 to 3000 feet (3 to 915 meters). Blooms Apr-Aug. | **No Potential.** The Study Area does not contain chaparral, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal scrub, or lower montane coniferous forest habitat to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| hairless popcornflower<br>*Plagiobothrys glaber* | Rank 1A | Marshes and swamps (coastal salt), meadows and seeps (alkaline). Elevation ranges from 50 to 590 feet (15 to 180 meters). Blooms Mar-May. | **No Potential.** The Study Area does not marshes and swamps or meadows and seeps to support this species. | **Not Present.** No further actions are recommended for this species. |
| Petaluma popcornflower<br>*Plagiobothrys mollis var. vestitus* | Rank 1A | Marshes and swamps (coastal salt), valley and foothill grassland (mesic). Elevation ranges from 35 to 165 feet (10 to 50 meters). Blooms Jun-Jul. | **No Potential.** The Study Area does not contain marshes and swamps or valley and foothill grassland habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| North Coast semaphore grass<br>*Pleuropogon hooverianus* | ST, Rank 1B.1 | Broadleafed upland forest, meadows and seeps, north coast coniferous forest. Elevation ranges from 35 to 2200 feet (10 to 671 meters). Blooms Apr-Jun. | **No Potential.** The Study Area does not contain forest or meadows and seeps to support this species. | **Not Present.** No further actions are recommended for this species. |
| nodding semaphore grass<br>*Pleuropogon refractus* | Rank 4.2 | Lower montane coniferous forest, meadows and seeps, north coast coniferous forest, riparian forest. Elevation ranges from 0 to 5250 feet (0 to 1600 meters). Blooms (Feb-Mar)Apr-Aug. | **No Potential.** The Study Area does not contain lower montane coniferous forest, meadows and seeps, north coast coniferous forest, or riparian forest habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| Marin knotweed<br>*Polygonum marinense* | Rank 3.1 | Marshes and swamps (brackish, coastal salt). Elevation ranges from 0 to 35 feet (0 to 10 meters). Blooms (Apr)May-Aug(Oct). | **No Potential.** The Study Area does not contain marshes and swamps to support this species. | **Not Present.** No further actions are recommended for this species. |
| Tamalpais oak<br>*Quercus parvula var. tamalpaisensis* | Rank 1B.3 | Lower montane coniferous forest. Elevation ranges from 330 to 2460 feet (100 to 750 meters). Blooms Mar-Apr. | **No Potential.** The Study Area does not contain coniferous forest to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| Lobb's aquatic buttercup<br>*Ranunculus lobbii* | Rank 4.2 | Cismontane woodland, north coast coniferous forest, valley and foothill grassland, vernal pools. Elevation ranges from 50 to 1540 feet (15 to 470 meters). Blooms Feb-May. | **No Potential.** The Study Area does not contain cismontane woodland, north coast coniferous forest, valley and foothill grassland, or vernal pools to support this species. | **Not Present.** No further actions are recommended for this species. |
| Sanford's arrowhead<br>*Sagittaria sanfordii* | Rank 1B.2 | Marshes and swamps (shallow freshwater). Elevation ranges from 0 to 2135 feet (0 to 650 meters). Blooms May-Oct(Nov). | **No Potential.** The Study Area does not contain marshes and swamps to support this species. | **Not Present.** No further actions are recommended for this species. |
| Point Reyes checkerbloom<br>*Sidalcea calycosa ssp. rhizomata* | Rank 1B.2 | Marshes and swamps (freshwater, near coast). Elevation ranges from 10 to 245 feet (3 to 75 meters). Blooms Apr-Sep. | **No Potential.** The Study Area does not contain marshes and swamps to support this species. | **Not Present.** No further actions are recommended for this species. |
| Marin checkerbloom<br>*Sidalcea hickmanii ssp. viridis* | Rank 1B.1 | Chaparral (serpentine). Elevation ranges from 165 to 1410 feet (50 to 430 meters). Blooms May-Jun. | **No Potential.** The Study Area does not contain chaparral to support this species. | **Not Present.** No further actions are recommended for this species. |
| long-styled sand-spurrey<br>*Spergularia macrotheca var. longistyla* | Rank 1B.2 | Marshes and swamps, meadows and seeps. Elevation ranges from 0 to 835 feet (0 to 255 meters). Blooms Feb-May. | **No Potential.** The Study Area does not contain marshes and swamps or meadows and seeps to support this species. | **Not Present.** No further actions are recommended for this species. |
| Santa Cruz microseris<br>*Stebbinsoseris decipiens* | Rank 1B.2 | Broadleafed upland forest, chaparral, closed-cone coniferous forest, coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 35 to 1640 feet (10 to 500 meters). Blooms Apr-May. | **No Potential.** The Study Area does not contain broadleafed upland forest, chaparral, closed-cone coniferous forest, coastal prairie, coastal scrub, or valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| Mount Burdell jewelflower<br>*Streptanthus anomalus* | Rank 1B.1 | Cismontane woodland (openings). Elevation ranges from 165 to 490 feet (50 to 150 meters). Blooms May-Jun. | **No Potential.** The Study Area does not contain cismontane woodland to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| Tamalpais jewelflower<br>*Streptanthus batrachopus* | Rank 1B.3 | Chaparral, closed-cone coniferous forest. Elevation ranges from 1000 to 2135 feet (305 to 650 meters). Blooms Apr-Jul. | **No Potential.** The Study Area does not contain chaparral or closed-cone coniferous forest to support this species. | **Not Present.** No further actions are recommended for this species. |
| Tiburon jewelflower<br>*Streptanthus glandulosus ssp. niger* | FE, SE, Rank 1B.1 | Valley and foothill grassland (serpentine). Elevation ranges from 100 to 490 feet (30 to 150 meters). Blooms May-Jun. | **No Potential.** The Study Area does not contain valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| Mt. Tamalpais bristly jewelflower<br>*Streptanthus glandulosus ssp. pulchellus* | Rank 1B.2 | Chaparral, valley and foothill grassland. Elevation ranges from 490 to 2625 feet (150 to 800 meters). Blooms May-Jul(Aug). | **No Potential.** The Study Area does not contain chaparral or valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| Suisun Marsh aster<br>*Symphyotrichum lentum* | Rank 1B.2 | Marshes and swamps (brackish, freshwater). Elevation ranges from 0 to 10 feet (0 to 3 meters). Blooms (Apr)May-Nov. | **No Potential.** The Study Area does not contain marshes and swamps to support this species. | **Not Present.** No further actions are recommended for this species. |
| marsh zigadenus<br>*Toxicoscordion fontanum* | Rank 4.2 | Chaparral, cismontane woodland, lower montane coniferous forest, marshes and swamps, meadows and seeps. Elevation ranges from 50 to 3280 feet (15 to 1000 meters). Blooms Apr-Jul. | **No Potential.** The Study Area does not contain chaparral, cismontane woodland, lower montane coniferous forest, marshes and swamps, or meadows and seeps. to support this species. | **Not Present.** No further actions are recommended for this species. |
| two-fork clover<br>*Trifolium amoenum* | FE, Rank 1B.1 | Coastal bluff scrub, valley and foothill grassland (sometimes serpentine). Elevation ranges from 15 to 1360 feet (5 to 415 meters). Blooms Apr-Jun. | **No Potential.** The Study Area does not contain coastal bluff scrub or valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |

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|---|---|---|---|---|
| saline clover<br>*Trifolium hydrophilum* | Rank 1B.2 | Marshes and swamps, valley and foothill grassland (mesic, alkaline), vernal pools. Elevation ranges from 0 to 985 feet (0 to 300 meters). Blooms Apr-Jun. | **No Potential.** The Study Area does not contain marshes and swamps, valley and foothill grassland (mesic, alkaline), or vernal pools to support this species. | **Not Present.** No further actions are recommended for this species. |
| Pacific Grove clover<br>*Trifolium polyodon* | SR, Rank 1B.1 | Closed-cone coniferous forest, coastal prairie, meadows and seeps, valley and foothill grassland. Elevation ranges from 15 to 1395 feet (5 to 425 meters). Blooms Apr-Jun(Jul). | **No Potential.** The Study Area does not contain closed-cone coniferous forest, coastal prairie, meadows and seeps, or valley and foothill grassland to support this species. | **Not Present.** No further actions are recommended for this species. |
| coastal triquetrella<br>*Triquetrella californica* | Rank 1B.2 | Coastal bluff scrub, coastal scrub. Elevation ranges from 35 to 330 feet (10 to 100 meters). Blooms . | **No Potential.** The Study Area does not contain coastal bluff scrub or coastal scrub to support this species. | **Not Present.** No further actions are recommended for this species. |
| oval-leaved viburnum<br>*Viburnum ellipticum* | Rank 2B.3 | Chaparral, cismontane woodland, lower montane coniferous forest. Elevation ranges from 705 to 4595 feet (215 to 1400 meters). Blooms May-Jun. | **No Potential.** The Study Area does not contain chaparral, cismontane woodland, or lower montane coniferous forest to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| **WILDLIFES** | | | | |
| **Mammals** | | | | |
| *Antrozous pallidus*<br>pallid bat | SSC,<br>WBWG<br>High | Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, forages along river channels. Roost sites include crevices in rocky outcrops and cliffs, caves, mines, trees and various manmade structures such as bridges, barns, and buildings (including occupied buildings). Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites. | **Unlikely.** The Study Area does not contain woodland, forest, or other suitable habitat or roosting substrate to support this species. | **Presumed Absent.** No further actions are recommended for this species. |
| *Aplodontia rufa phaea*<br>Point Reyes mountain beaver | SSC | Known from the coastal areas of Point Reyes. Located in north-facing slopes of hills and gullies with seeps and springs nearby. Areas typically overgrown with vegetation such as sword fern (*Polystichum munitum*) and thimbleberry (*Rubus parviflorus*). | **No Potential. A**ll known populations are on the west side of Inverness Ridge (CDFW 2023). | **Not Present.** No further actions are recommended for this species. |
| *Corynorhinus townsendii townsendii*<br>Townsend's western big-eared bat | SSC,<br>WBWG<br>High | Humid coastal regions of northern and central California. Roost in limestone caves, lava tubes, mines, buildings etc. Will only roost in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to disturbance | **Unlikely.** No caves, mines, or buildings or similar structures are present in the Study Area. | **Presumed Absent.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| hoary bat<br>*Lasiurus cinereus* | WBWG Medium | Prefers open forested habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. | **Unlikely.** The Study Area lacks large, broad-leaved riparian trees of the type typically used for roosting (maples, sycamores, etc.). | **Presumed Absent.** No further actions are recommended for this species. |
| San Pablo vole<br>*Microtus californicus sanpabloensis* | SSC | Saltmarshes of San Pablo Creek, on the south shore of San Pablo Bay. Constructs burrow in soft soil. Feeds on grasses, sedges and herbs. Forms a network of runways leading from the burrow. | **No Potential.** The Study Area does not contain saltmarsh habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| salt marsh harvest mouse<br>*Reithrodontomys raviventris* | FE, SE, CFP | Endemic to emergent salt and brackish wetlands of the San Francisco Bay Estuary. Pickleweed marshes are primary habitat; also occurs in various other wetland communities with dense vegetation. Does not burrow, builds loosely organized nests. Requires higher areas for dryland refugia during high tides. | **No Potential.** The Study Area does not contain saltmarsh habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| Suisun shrew<br>*Sorex ornatus sinuosus* | SSC | Tidal marshes of the northern shores of San Pablo and Suisun Bays. Require dense low-lying cover and driftweed and other litter above the mean hightide line for nesting and foraging. | **No Potential.** The Study Area does not contain saltmarsh habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| salt-marsh wandering shrew<br>*Sorex vagrans halicoetes* | SSC | Salt marshes of the south arm of San Francisco Bay. Medium high marsh 6 to 8 feet above sea level where abundant driftwood is scattered among *Salicornia*. | **No Potential.** The Study Area does not contain saltmarsh habitat to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| American badger<br>*Taxidea taxus* | SSC | Most abundant in drier open stages of most shrub, woodland, and herbaceous vegetation types. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents. | **No Potential.** The Study Area is primarily developed or landscaped and is surrounded by development. The Study Area lacks open areas with herbaceous vegetation, and no burrows characteristic of this species or other indicators of presence were observed during the site visit. | **Not Present.** No further actions are recommended for this species. |
| **Birds** | | | | |
| tricolored blackbird<br>*Agelaius tricolor* | ST, SSC | Nearly endemic to California, where it is most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets. Also uses flooded agricultural fields. Abundant insect prey near breeding areas essential. | **No Potential.** The Study Area does not provide vegetated ponds or emergent marsh suitable for nesting. | **Not Present.** No further actions are recommended for this species. |
| grasshopper sparrow<br>*Ammodramus savannarum* | SSC | Summer resident. Breeds in open grasslands in lowlands and foothills, generally with low- to moderate-height grasses and scattered shrubs. Well-hidden nests are placed on the ground. | **No Potential.** The Study Area lacks large expanses of open grassland. | **Not Present.** No further actions are recommended for this species. |
| golden eagle<br>*Aquila chrysaetos* | BGEPA, CFP | Occurs year-round in rolling foothills, mountain areas, sage-juniper flats, and deserts. Cliff-walled canyons provide nesting habitat in most parts of range; also nests in large trees, usually within otherwise open areas. | **No Potential.** The Study Area does not provide large cliffs or typical large trees for nesting. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| great egret<br>*Ardea alba* | no status (breeding sites protected by CDFW) | Year-round resident. Nests colonially or semi-colonially, usually in trees, occasionally on the ground or elevated platforms. Breeding sites usually in close proximity to foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates. | **Unlikely.** The Study Area is not within close proximity to documented Marin County breeding sites as per Shuford (1993); no indication of nesting (e.g., old stick nests) or presence observed during site visit. | **Presumed Absent.** No further actions are recommended for this species. |
| great blue heron<br>*Ardea herodias* | non-status (breeding sites protected by CDFW) | Year-round resident. Nests colonially or semi-colonially in tall trees and cliffs, also sequestered terrestrial substrates. Breeding sites usually in close proximity to foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates. | **Unlikely.** The Study Area is not within close proximity to documented Marin County breeding sites as per Shuford (1993); no indication of nesting (e.g., old stick nests) or presence observed during site visit. | **Presumed Absent.** No further actions are recommended for this species. |
| short-eared owl<br>*Asio flammeus* | SSC | Occurs year-round, but primarily as a winter visitor; breeding very restricted in most of California. Found in open, treeless areas (e.g., marshes, grasslands) with elevated sites for foraging perches and dense herbaceous vegetation for roosting and nesting. Preys mostly on small mammals, particularly voles. | **No Potential.** The Study Area does not provide marshland, expanses of grassland, or similar open habitats suitable for wintering. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| long-eared owl<br>*Asio otus* | SSC | Occurs year-round in California. Nests in trees in a variety of woodland habitats, including oak and riparian, as well as tree groves. Requires adjacent open land with rodents for foraging, and the presence of old nests of larger birds (hawks, crows, magpies) for breeding. | **No Potential.** The Study Area does not provide suitable woodland or riparian habitat. | **Not Present.** No further actions are recommended for this species. |
| burrowing owl<br>*Athene cunicularia* | SSC | Year-round resident and winter visitor. Occurs in open, dry grasslands and scrub habitats with low-growing vegetation, perches, and abundant mammal burrows. Preys upon insects and small vertebrates. Nests and roosts in old mammal burrows, most commonly those of ground squirrels. | **Unlikely.** The Study Area lacks expanses of open habitat, and ground squirrel burrows for refuge; breeding distribution in Marin County restricted to eastern Baylands. | **Presumed Absent.** No further actions are recommended for this species. |
| Swainson's hawk<br>*Buteo swainsoni* | ST, BCC | Summer resident in California's Central Valley and limited portions of the southern California interior. Nests in tree groves and isolated trees in riparian and agricultural areas, including near buildings. Forages in grasslands and scrub habitats as well as agricultural fields, especially alfalfa. Preys on arthropods year-round as well as smaller vertebrates during the breeding season. | **Unlikely.** The Study Area does not provide nesting or foraging habitat for this species. | **Presumed Absent.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| western snowy plover<br>*Charadrius alexandrines nivosus* | FT, SSC | Federal listing applies only to the Pacific coastal population. Year-round resident and winter visitor. Occurs on sandy beaches, salt pond levees, and the shores of large alkali lakes. Nests on the ground, requiring sandy, gravelly or friable soils. | **No Potential.** The Study Area does not contain zoned beaches, open mudflats, or other suitable barren habitat near water. | **Not Present.** No further actions are recommended for this species. |
| northern harrier<br>*Circus cyaneus* | SSC | Year-round resident and winter visitor. Found in open habitats including grasslands, prairies, marshes and agricultural areas. Nests on the ground in dense vegetation, typically near water or otherwise moist areas. Preys on small vertebrates. | **No Potential.** The Study Area is within this species' local nesting range (Shuford 1993), but areas of open grassland are small in area and adjacent to development. | **Not Present.** No further actions are recommended for this species. |
| black swift<br>*Cypseloides niger* | SSC | Summer resident with a fragmented breeding distribution; most occupied areas in California either montane or coastal. Breeds in small colonies on cliffs behind or adjacent to waterfalls, in deep canyons, and sea-bluffs above surf. Forages aerially over wide areas. No modern nesting records in Napa County. | **No Potential.** The Study Area does not contain waterfalls; there are no modern breeding records for Marin County (Shuford 1993). May occur in the vicinity occasionally during migration. | **Not Present.** No further actions are recommended for this species. |
| snowy egret<br>*Egretta thula* | no status (breeding sites protected by CDFW) | Year-round resident. Nests colonially, usually in trees, at times in sequestered beds of dense emergent vegetation (e.g., tules). Rookery sites usually situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes. | **Unlikely.** The Study Area is not within close proximity to documented Marin County breeding sites as per Shuford (1993); no indication of nesting (e.g., old stick nests) or presence observed during site visit. | **Presumed Absent.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| white-tailed kite<br>*Elanus leucurus* | CFP | Year-round resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, woodlands, marshes and agricultural areas. Nests in trees, of which the type and setting are highly variable. Preys on small mammals and other vertebrates. | **Unlikely.** The Study Area does not contain grassland or woodland to support this species. This species may occasionally fly through the Study Area. | **Presumed Absent.** No further actions are recommended for this species. |
| San Francisco (saltmarsh) common yellowthroat<br>*Geothlypis trichas sinuosa* | SSC | Resident of the San Francisco Bay region, in both fresh and salt marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting. | **No Potential.** No marsh or dense vegetation is present within the Study Area. | **Not Present.** No further actions are recommended for this species. |
| bald eagle<br>*Haliaeetus leucocephalus* | BGEPA, SE, CFP | Occurs year-round in California, but primarily a winter visitor; breeding population is growing. Nests in large trees in the vicinity of larger lakes, reservoirs, and rivers. Wintering habitat somewhat more variable but usually features large concentrations of waterfowl or fish. | **No Potential.** No typical nest trees are present in the Study Area nor was any indication of presence observed (e.g., large stick nests) during site visits. | **Not Present.** No further actions are recommended for this species. |
| yellow-breasted chat<br>*Icteria virens* | SSC | Summer resident, occurring in riparian areas with an open canopy, very dense understory, and trees for song perches. Nests in thickets of willow (*Salix* ssp.), blackberry (*Rubus* spp.), and California grape (*Vitis californicus*). | **Unlikely.** The Study Area does not contain stands of dense riparian understory favored by this species for nesting. There are no recent observations in the vicinity (eBIrd 2023). | **Presumed Absent.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| loggerhead shrike<br>*Lanius ludovicianus* | SSC | Year-round resident in open woodland, grasslands, savannah, and scrub. Prefers areas with sparse shrubs, trees, posts, and other suitable perches for foraging. Preys upon large insects and small vertebrates. Nests are well-concealed in densely-foliaged shrubs or trees. | **Unlikely.** The Study Area does not provide suitable open habitat to support this species. | **Presumed Absent.** No further actions are recommended for this species. |
| California black rail<br>*Laterallus jamaicensis coturniculus* | ST, CFP | Year-round resident in marshes (saline to freshwater) with dense vegetation within four inches of the ground. Prefers larger, undisturbed marshes that have an extensive upper zone and are close to a major water source. Extremely secretive and cryptic. | **No Potential.** The Study Area lacks extensive tidal or brackish marsh. | **Not Present.** No further actions are recommended for this species. |
| Alameda song sparrow<br>*Melospiza melodia pusillula* | BCC, SSC | Year-round resident of salt marshes bordering the south arm of San Francisco Bay. Inhabits primarily pickleweed marshes; nests placed in marsh vegetation, typically shrubs such as gumplant. | **No Potential.** The Study Area lacks salt marsh. | **Not Present.** No further actions are recommended for this species. |
| San Pablo song sparrow<br>*Melospiza melodia samuelis* | SSC | Year-round resident of tidal marshes along the north side of San Francisco and San Pablo Bays. Typical habitat is dominated by halophytic wetland plants, including with shrubs in the upper marsh zone (favored for nesting). May forage in areas adjacent to marshes. | **No Potential.** The Study Area contains no tidal or brackish marsh. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| black-crowned night heron<br>*Nycticorax nycticorax* | no status (breeding sites protected by CDFW) | Year-round resident. Nests colonially, usually in trees but also in patches of emergent vegetation. Rookery sites are often on islands and usually located adjacent to foraging areas: margins of lakes and bays. | **Unlikely.** The Study Area is not within close proximity to documented Marin County breeding sites as per Shuford (1993); no indication of nesting (e.g., old stick nests) or presence observed during site visit. | **Presumed Absent.** No further actions are recommended for this species. |
| Bryant's savannah sparrow<br>*Passerculus sandwichensis alaudinus* | SSC | Year-round resident associated with the coastal fog belt, primarily between Humboldt and northern Monterey Counties. Occupies low tidally influenced habitats and adjacent areas, including grasslands. Also uses drier, more upland coastal grasslands. Nests near the ground in taller vegetation, including along levees and canals. | **Unlikely.** The Study Area lacks large expanses of open grassland or upper tidal marsh areas. | **Presumed Absent.** No further actions are recommended for this species. |
| California Ridgway's (clapper) rail<br>*Rallus obsoletus obsoletus* | FE, SE, CFP | Year-round resident in tidal marshes of the San Francisco Bay estuary. Requires tidal sloughs and intertidal mud flats for foraging, and dense marsh vegetation for nesting and cover. Typical habitat features abundant growth of cordgrass and pickleweed. Feeds primarily on mollusks and crustaceans. | **No Potential.** The Study Area does not contain tidal or brackish marsh and it outside of this species' local range. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| bank swallow<br>*Riparia riparia* | ST | Summer resident in riparian and other lowland habitats near rivers, lakes and the ocean in northern California. Nests colonially in excavated burrows on vertical cliffs and bank cuts (natural and manmade) with fine-textured soils. Historical nesting range in southern and central areas of California has been eliminated by habitat loss. Currently known to breed in Siskiyou, Shasta, and Lassen Cos., portions of the north coast, and along Sacramento River from Shasta Co. south to Yolo Co. | **No Potential.** The Study Area does not contain cliff or bank cuts to support this species. | **Not Present.** No further actions are recommended for this species. |
| California least tern<br>*Sternula antillarum browni* | FE, SE, CFP | Summer resident along the coast from San Francisco Bay south to northern Baja California; inland breeding also very rarely occurs. Nests colonially on barren or sparsely vegetated areas with sandy or gravelly substrates near water, including beaches, islands, and gravel bars. In San Francisco Bay, has also nested on salt pond margins. | **No Potential.** The Study Area does not contain barren or gravelly substrate to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| northern spotted owl<br>*Strix occidentalis caurina* | FT, ST, SSC | Year-round resident in dense, structurally complex forests, primarily those with stands of mature conifers. In Napa County, uses both coniferous and mixed (coniferous-hardwood) forests. Nests on platform-like substrates in the forest canopy, including in tree cavities. Preys on mammals. | **No Potential.** The Study Area does not contain forest habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| **Reptiles and Amphibians** | | | | |
| California tiger salamander<br>*Ambystoma californiense* | FE/FT, ST, RP | Populations in Santa Barbara and Sonoma counties currently listed as endangered; threatened in remainder of range. Inhabits grassland, oak woodland, and open ruderal habitats. Adults are fossorial and utilize mammal burrows and other subterranean refugia. Breeding occurs in vernal pools and other seasonal water features. | **No Potential.** The Study Area does not contain vernal pools or other seasonal water features to support breeding, and is not within dispersal distance of documented breeding occurrences. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| California giant salamander<br>*Dicamptodon ensatus* | SSC | Occurs in the north-central Coast Ranges. Moist coniferous and mixed forests are typical habitat; also uses woodland and chaparral. Adults are terrestrial and fossorial, breeding in cold, permanent or semi-permanent streams. Larvae usually remain aquatic for over a year. | **No Potential.** The Study Area does not contain stream habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| western pond turtle<br>*Emys marmorata* | SSC | A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying. | **Unlikely.** The Study Area does not provide aquatic habitat or suitable upland habitat to support this species. | **Presumed Absent.** No further recommendations for this species. |
| foothill yellow-legged frog<br>*Rana boylii* | SSC | Found in or near rocky streams in a variety of habitats; highly aquatic. Prefers partially-sunlit, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on invertebrates (aquatic and terrestrial). | **No Potential.** The Study Area does not provide aquatic habitat to support this species. | **Not Present.** No further recommendations for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| California red-legged frog<br>*Rana draytonii* | FT, SSC | Lowlands and foothills in or near permanent or semi-permanent sources of deep water with dense emergent and/or overhanging riparian vegetation. Favors perennial to intermittent ponds, marshes, and stream pools. Requires 11 to 20 weeks of continuous inundation for larval development. Disperses through upland habitats during and after rains. | **Unlikely.** The Study Area does not provide aquatic habitat or suitable upland habitat to support this species. | **Presumed Absent.** No further recommendations for this species. |
| red-bellied newt<br>*Taricha rivularis* | SSC | Inhabits coastal forests from southern Sonoma County northward, with an isolated population in Santa Clara County. Redwood forest provides typical habitat, though other forest types (e.g., hardwood) are also occupied. Adults are terrestrial and fossorial. Breeding occurs in streams, usually with relatively strong flow. | **Unlikely.** The Study Area does not provide forested habitat or aquatic habitat to support this species. | **Presumed Absent.** No further recommendations for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| **Fishes** | | | | |
| green sturgeon<br>*Acipenser medirostris* | FT, SSC | Spawns in the Sacramento River and Klamath Rivers, at temperatures between 8 and 14 degrees Celsius. Preferred spawning substrate is large cobble, but can range from clean sand to bedrock. | **No Potential.** The Study Area does not contain aquatic habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| tidewater goby<br>*Eucyclogobius newberryi* | FE, SSC | Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches. Requires fairly still but not stagnant water and high oxygen levels. | **No Potential.** The Study Area does not contain aquatic habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| southern coastal roach<br>*Hesperoleucus venustus subditus* | SSC | Southern Coastal Roach are restricted to the drainages of Tomales Bay/northern SF Bay in the north and Monterey Bay in the south. There are no records of Roach being present in watersheds between these two systems (Baumsteiger and Moyle 2019). | **No Potential.** The Study Area does not contain aquatic habitat to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| coho salmon – central CA coast ESU<br>*Oncorhynchus kisutch* | FE, SE | Occurs in inland and coastal rivers, and marine waters. Requires beds of loose, silt-free, coarse gravel for spawning. Also requires riparian cover to contribute to cool, well-aerated water. Federal listing applies to populations between Punta Gorda and San Lorenzo River. State listing applies populations south of San Francisco Bay only. | **No Potential.** The Study Area does not contain aquatic habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| steelhead - central CA coast DPS<br>*Oncorhynchus mykiss irideus* | FT | Occurs from the Russian River south to Soquel Creek and Pajaro River. Also in San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean. | **No Potential.** The Study Area does not contain aquatic habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| Sacramento splittail<br>*Pogonichthys macrolepidotus* | SSC, RP | Formerly endemic to the lakes and rivers of the Central Valley, but now confined to the Sacramento Delta, Suisun Bay and associated marshes. Occurs in slow-moving river sections and dead-end sloughs. Requires flooded vegetation for spawning and foraging for young. A freshwater species, but tolerant of moderate salinity (10-18 parts per thousand). | **No Potential.** The Study Area does not contain aquatic habitat to support this species. | **Not Present.** No further actions are recommended for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| longfin smelt<br>*Spirinchus thaleichthys* | FC, ST, SSC | Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15 to 30 ppt, but can be found in completely freshwater to almost pure seawater. | **No Potential.** The Study Area does not contain aquatic habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| eulachon – Southern DPS<br>*Thaleichthys pacificus* | FT, SSC | Found in Klamath River, Mad River, Redwood Creek and in small numbers in Smith River and Humboldt Bay tributaries. Spawn in lower reaches of coastal rivers with moderate water velocities and bottom of pea-sized gravel, sand and woody debris. | **No Potential.** The Study Area does not contain aquatic habitat to support this species. | **Not Present.** No further actions are recommended for this species. |
| **Invertebrates** | | | | |
| Crotch bumblebee<br>*Bombus crotchii* | SC | Range largely restricted to California, favoring grassland and scrub habitats. Typical of bumble bees, nests are usually constructed underground. | **Unlikely.** The Study Area is primarily developed or landscaped and does not provide suitable nesting or foraging habitat for this species. | **Presumed Absent.** No further recommendations for this species. |

| SPECIES | STATUS* | HABITAT REQUIREMENTS | POTENTIAL TO OCCUR IN THE STUDY AREA | RESULTS AND RECOMMENDATIONS |
|---|---|---|---|---|
| western bumblebee<br>*Bombus occidentalis* | SC | Formerly common throughout much of western North America; populations from southern British Columbia to central California have nearly disappeared (Xerces 2015). Occurs in a wide variety of habitat types. Nests are constructed annually in pre-existing cavities, usually on the ground (e.g., mammal burrows). Many plants are visited and pollinated. | **Unlikely.** This species is historically known from the vicinity historically, with a CNDDB occurrence from 1962 located within 2 miles of the Study Area (CDFW 2023). However, this species is currently considered extirpated from the region (Xerces Society (2018). | **Presumed Absent.** No further recommendations for this species. |
| monarch butterfly<br>*Danaus plexippus* | FC, roosting sites protected by CDFW | Winter roost sites along the coast from Baja California north to Mendocino County. Roosts are wind-protected tree groves, typically of eucalyptus (*Eucalyptus* spp.), Monterey cypress (*Hesperocyparis macrocarpa*), and Monterey pine (*Pinus radiata*). | **Unlikely.** Non-native tree species typically used for winter roosting are not present. There are no nearby documented winter roosts (CDFW 2023). | **Presumed Absent.** No further recommendations for this species. |
| California freshwater shrimp<br>*Syncaris pacifica* | FE, SE | Endemic to Marin, Napa, and Sonoma counties. Found in low elevation, low gradient streams where riparian cover is moderate to heavy. Shallow pools away from main stream flow. Winter: undercut banks with exposed roots. Summer: leafy branches touching water. | **No Potential.** The Study Area does not contain aquatic habitat to support this species. | **Not Present.** No further actions are recommended for this species. |

***Key to status codes:**

| | |
|---|---|
| FC | Federal Candidate for Listing |
| FE | Federal Endangered |
| BGEPA | Bald and Golden Eagle Protection Act Species |
| FT | Federal Threatened |
| SC (E/T) | State Candidate for Listing (Endangered/Threatened) |
| SE | State Endangered |
| CFP | California Fully Protected Animal |
| SR | State Rare |
| SSC | State Species of Special Concern |
| ST | State Threatened |
| CRPR 1A | CNPS CRPR 1A: Plants presumed extinct in California |
| CRPR 1B | CNPS CRPR 1B: Plants rare, threatened or endangered in California and elsewhere |
| CRPR 2A | CNPS CRPR 2A: Plants presumed extirpated in California, but more common elsewhere |
| CRPR 2B | CNPS CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere |
| CRPR 3 | CNPS CRPR 3: Plants about which CNPS needs more information (a review list) |
| CRPR 4 | CNPS CRPR 4: Plants of limited distribution (a watch list) |
| WBWG | Western Bat Working Group High or Medium-high Priority Species |

**Potential to Occur:**

No Potential: Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

Unlikely: Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

Moderate Potential: Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

High Potential: All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

**Results and Recommendations:**

Present: Species was observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.

Assumed Present: Species is assumed to be present on-site based on the presence of key habitat components.

Assumed Present without Impact: Species assumed present; however, project activities will not have an impact on the species.

Presumed Absent: Species is presumed to not be present due to a lack of key habitat components.

Not Present: Species is considered not present due to a clear lack of any suitable habitat and/or local range limitations.

Not Observed: Species was not observed during dedicated/formal surveys.

Presence Unknown: Species has the potential to be present, but no dedicated surveys to determine absence/presence were performed.

Presence Unknown, No Impact: Species has the potential to be present; however, project activities will not have an impact on the species.

# APPENDIX E. ARBORIST REPORT

# Lynwood Pump Station Replacement

## Tree Survey Report

Novato, Marin County, California


**Prepared for:**

North Marin Water District
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Novato, CA 94945

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**Prepared by:**

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January 2024

WRA#320289

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| | |
|---|---|
| **Hope Kingma** | Principal in Charge |
| **Geoff Reilly** | Project Manager |
| **Scott Yarger** | ISA-Certified Arborist |
| **Neal Jander** | GIS Analyst |

## List of Acronyms

| | |
|---|---|
| **PS** | Pump Station |
| **WRA** | WRA, Inc. |

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# 1.0 INTRODUCTION

On December 13, 2023 WRA, Inc. (WRA) conducted a tree survey at the five potential sites of the North Marin Water District (NMWD/District) Lynwood Pump Station Replacement Project (project). The District is considering five potential alternatives for the project located in the City of Novato, Marin County, California (Sites 1 through 5 and associated staging areas, collectively "Study Area"). The survey was conducted by ISA-Certified Arborist, Scott Yarger (ISA #WE-9300A) for the purpose of identifying and documenting the presence of all trees as defined by Chapter XVII, Trees and Shrubs of the Novato Municipal Code (Tree Ordinances) within the Study Area. The survey was conducted to assess and quantify potential impacts to trees associated with the project.

GPS locations for all the surveyed trees within the Study Area and information regarding the species, size in diameter, estimated crown radius, estimated height, and health, condition, and structure ratings were collected and are included in this report. A table with all the relevant information pertaining to surveyed trees is provided in Appendix A. A tree survey location map is provided in Appendix B. Representative photographs are provided in Appendix C.

## 1.1 Study Area Description

The Study Area includes five potential alternative sites (Sites 1 through 5, the existing pump station, and staging areas) for replacing the existing Lynwood Pump Station (PS) throughout southern Novato. Site 1 is located along Sunset Parkway in the vicinity of South Novato Boulevard and Lynwood Drive. The proposed Site 1 is located approximately 330 feet southwest of the Existing PS site, just west of the intersection of Sunset Parkway and Monte Maria Ave, while the staging area is located just east of the intersection of Sunset Parkway and Greenwood Drive. These sites are in median 'islands' within the road.

Site 2 is located south of Ignacio Boulevard across from Palmer Drive approximately 1.3 miles south of the existing PS site. Site 2 is located to the north of Arroyo San Jose Creek, and is separated from the riparian area by an existing developed pedestrian path.

Site 3 is located along Bolling Drive in the Hamilton neighborhood in a landscaped slope in a public park area. Sites 4 and 5, along with their proposed staging areas are also located in the Hamilton neighborhood along Main Gate Road and C Street, respectively. Site 4 is located in a landscaped park adjacent to Pacheco Creek and associated riparian habitat. Site 5 is located on the Novato Charter School property adjacent to the ballfield.

## 1.2 Project Description

The District has decided to move forward with the replacement of the Lynwood PS at a different location. Five potential alternative solutions for replacing the existing Lynwood PS have been identified as described below. Each alternative would involve either a new PS at one of the sites or two new PS at a combination of the sites.

A detailed description of each alternative is provided in the sections following. Each new PS would include a pump station building and parking. The analysis also considers that an emergency generator may be installed at each site, but the District may choose not to install an

emergency generator as part of the final design effort. The footprint for pipe improvements assumes a ten-foot-wide T trench.

Construction equipment would be stored in designated staging areas. The staging area on Sunset Parkway would be used for any project work at the Sunset Parkway Site (Site 1) or the Existing PS Site. Separate staging areas are identified for the four other sites on Ignacio Boulevard (Site 2), Bolling Drive (Site 3), Main Gate Road Site (Site 4), and C Street Site (Site 5).

### 1.2.1 Alternative A

Alternative A would include one new PS with four pumps located at the Sunset Parkway Site (Site 1). This PS would match the existing PS but would include one additional pump to meet future demands. The Sunset Parkway Site is located approximately 330 feet southwest of the Existing PS Site.

### 1.2.2 Alternative B

Alternative B would include one new PS with four pumps located at the Ignacio Boulevard Site (Site 2). The Ignacio Boulevard Site is located approximately 1.3 miles south of the Existing PS Site. The proposed PS footprint is approximately 2,000 SF and proposed pipe improvements footprint is approximately 37,500 SF.

### 1.2.3 Alternative C

Alternative C would include the construction of two new PS, one at the Ignacio Boulevard Site (Site 2) and one at the Bolling Drive Site (Site 3). The new PS at the Ignacio Boulevard Site would include three pumps and the new PS at Bolling Drive Site would include two pumps. The proposed PS footprint at the Ignacio Boulevard Site is approximately 1,800 SF and proposed pipe improvements footprint is approximately 37,500 SF. The proposed PS footprint at the Bolling Drive Site is approximately 1,600 SF and proposed pipe improvements footprint is approximately 31,000 SF.

### 1.2.4 Alternative D

Alternative D would include the construction of two new PS, one at the Ignacio Boulevard Site (Site 2) with three pumps, and one at the Main Gate Road Site (Site 4) with two pumps. This alternative would fulfill the same objectives as Alternative C given that the Main Gate Road Site (Site 4) is located approximately 0.3 miles north of the Bolling Drive Site (Site 3). The proposed PS footprint at the Ignacio Boulevard Site is approximately 1,800 SF and proposed pipe improvements footprint is approximately 37,500 SF. The proposed PS footprint at the Main Gate Road Site is approximately 1,600 SF and the proposed pipe improvements footprint is approximately 4,700 SF.

### 1.2.5 Alternative E

Alternative E would include the construction of two new PS, one at the Ignacio Boulevard Site (Site 2) with three pumps, and one at the C Street Site (Site 5) with two pumps. This alternative would fulfill the same objectives as Alternative C given that the C Street Site is located approximately 0.3 miles north of the Bolling Drive Site (Site 3). The proposed PS footprint at the Ignacio Boulevard Site is approximately 1,800 SF and proposed pipe improvements footprint is approximately 37,500 SF. The proposed PS footprint at the C Street Site is approximately 1,600 SF and the proposed pipe improvements footprint is approximately 1,200 SF.

## 1.3 Regulatory Background

### 1.3.1 City of Novato Tree Ordinances

With the exception of encroachment permits, the District is not subject to the City of Novato's Code of Ordinances. Nonetheless, the City recognizes the aesthetic, environmental, and economic benefits mature trees provide to the citizens of the City. Chapter XVII, "Trees and Shrubs", of the City's Code of Ordinances regulates the removal of certain types of trees on public and private properties within City limits. The municipal code includes protections for trees on private property and City-owned or controlled places, described below.

City of Novato Tree Ordinance (Private Property)

The City Tree Ordinance defines a "tree" on private property as any native or non-native woody plant having a major trunk or trunk of a diameter of 6 inches or greater measured at 24 inches above grade, and a "heritage tree" is defined as any tree having a diameter of 24 inches or greater, measured at 24 inches above grade (Ord. No. 1576, § 2 [Exhibit A], 10-23-12). The alteration or removal of a heritage tree on any parcel or of one or more tree on an undeveloped parcel is prohibited without a permit from the City of Novato (Ord. No. 1441 § 2(E); Ord. No. 1576, § 2 [Exhibit A], 10-23-2012).

City of Novato Tree Ordinance (Public Places)

The City Tree Ordinance defines a "tree" on or adjacent to public places as any woody perennial plant having a single main axis or stem commonly achieving ten feet in height and capable of shaping and pruning to develop a branch-free trunk at least nine feet in height, and a "shrub" is defined as any woody perennial plant, normally low, several stemmed, adaptable to shaping, trimming and pruning without injury within the area planted (Ord. No. 1576, § 2 [Exhibit A], 10-23-12). The trimming, alteration, or removal of and street tree or shrub is prohibited without approval from the City of Novato (Ord. No. 1441 § 2(E); Ord. No. 1576, § 2(E), 10-23-2012).

The District is considered exempt from the City of Novato local ordinances, including the Tree Ordinances described above. However, the District intends to follow recommended tree protection and tree removal described in the Tree Ordinances, including tree replacement.

# 2.0 METHODS

On December 13, 2023, the Study Area was traversed on foot to inventory all trees as defined per the City of Novato Tree Ordinances. WRA's ISA-Certified Arborist surveyed the area and recorded relevant tree information for each surveyed tree including species, diameter, estimated crown radius, estimated height, and health, condition and structure ratings. The survey included all trees either within or directly outside of the Study Area boundaries with roots or branches encroaching into the Study Area.

## 2.1 Tree Inventory

Locations of trees within the Study Area were recorded using a handheld GPS unit with sub-meter accuracy. Each tree was given an aluminum tree tag with unique identification number and are included in Appendix A.

Diameter was calculated for surveyed trees by measuring the trunk diameter at 2 feet above grade following the City of Novato guidelines. Diameter for multi-trunked trees was calculated by measuring each individual trunk and calculating the sum total of trunk diameters. In cases where multi-trunked trees had more than five main trunks, only the five largest trunks were measured. In cases where an irregular buttress or bulge occurred at two feet above ground or diameter, measurements were taken above or below the irregular feature in order to best represent the size of the tree.

## 2.2 Tree Assessment

General notes on the condition of trees were taken, including health, structure, and overall condition. Assessment of the health, structure, and overall condition of each tree was conducted according to the narratives listed in Table 1.

**Table 1. Rating Narratives for Tree Assessment**

| | HEALTH | STRUCTURE | GENERAL CONDITION |
|---|---|---|---|
| **Good** | Tree is free from symptoms of disease and stress. | Tree is free from major structural defects. | Tree shows condition of foliage, bark, and overall structure characteristic of the species and lacking obvious defect, or disease. |
| **Fair** | Tree shows some symptoms of disease or stress including twig and small branch dieback, evidence of fungal / parasitic infection, thinning of crown, or poor leaf color. | Tree shows some structural defects in branches but overall structure is stable. | Tree shows condition of foliage, bark, and overall structure characteristic of the species with some evidence of stress, defect, or disease. |
| **Poor** | Tree shows symptoms of severe decline. | Tree shows structural failure of a major branch or co-dominant trunk. | Tree shows condition of foliage, bark, and overall structure uncharacteristic of the species with obvious evidence of stress, defect, or disease. |

## 2.3 Tree Impact Assessment and Recommendations

Potential impacts to all trees were analyzed by comparing tree survey data with the project's boundaries. Trees with trunks located within the project boundary were determined to likely be a removal. Trees with branches or root zones overhanging or encroaching into a site boundary were determined to be potentially impacted, and trees within a staging area were determined to be potentially avoided.

As described above, the District is considered exempt from the City's municipal ordinances, including the Tree Ordinances. However, adherence to tree protection measures and tree replacement specified in the Tree Ordinances is recommended. The tree impact assessment described in the results section below includes an analysis of maximum potential tree removals for each of the five Project Alternatives (A-E).

# 3.0 RESULTS

## 3.1 Tree Inventory

Twenty four trees were identified within the Study Area. A complete list of all surveyed trees surveyed is presented in Appendix A. The GPS locations of surveyed trees are shown in Appendix B. Of the 24 trees surveyed, 20 are considered City trees as they are located on City-owned or controlled properties, and four trees are located on Novato Charter School (private) property. Of the four private property trees, two are of ordinance-protected size, (i.e. greater than 6 inches diameter at 2 feet above grade), and two of those trees are of non-protected size.

Surveyed trees present within the Study Area included 11 species, three of which are locally native species, and the remaining 8 species are non-native ornamental or landscaping trees. Non-native tree species present included: olive (*Olea europeaea*), Mexican fan palm (*Washingtonia robusta*), mulberry (*Morus alba*), Chinese elm (*Ulmus parvifolia*), Siberian elm (*U. pumila*), London plane (*Platanus* x *hispanica*), Crepe myrtle (*Lagerstroemia indica*), and glossy privet (*Ligustrum lucidum*). Locally native tree species present included valley oak (*Quercus lobata*), coast live oak (*Q. agrifolia*), and California sycamore (*Platanus racemosa*), though all trees surveyed appeared to be planted and are maintained landscape trees.

Trees range in size from 4.3 inches to 20.9 inches in diameter (measured at 2 feet above ground). The largest tree surveyed was a 20.9-inch Siberian elm (tree #583).

## 3.2 Tree Assessment

The condition, health, and structure of trees inventoried during this assessment ranged from poor to good, with most trees ranking good in health, structure, and general condition. Trees ranking fair to poor in condition, health and structure included the Siberian elms (trees #580-583) located in Site 1, mulberries (trees #578-589) in Site 1 staging area, and one glossy privet (tree #599) located in Site 4. Trees ranking fair to poor in condition, health, and structure displayed maladies, and defects including: softwood and heartwood decay, minor to major scaffold branch failures, wood decay fungi, bark beetle exit holes, and v-shaped branch unions with included bark. The observed maladies and structural defects lead to the condition, health and structure rankings summarized in Table 2 below, and provided in Appendix A.

Table 2: Tree Assessment Results Summary

| CRITERIA ASSESSED/RATING | CONDITION | HEALTH | STRUCTURE |
|---|---|---|---|
| **Good** | 17 (71%) | 16 (67%) | 16 (66%) |
| **Fair** | 4 (17%) | 5 (21%) | 4 (17%) |
| **Poor** | 3 (12%) | 3 (12%) | 4 (17%) |

## 3.3 Tree Impact Assessment and Recommendations

A total of 14 surveyed trees have been identified as likely needing to be removed to accommodate the project based on comparison of project description and site boundaries and tree survey data collected during the surveys. As only one Alternative will be implemented, the maximum number of trees potentially requiring removal would range from zero (Alternative B) to six (Alternative D). An additional two trees are likely to require trimming due to their location outside of the site boundaries but with branches or root systems encroaching into the site. A summary of potentially removed trees per Project Alternative is provided below.

### 3.3.1 Alternative A

Alternative A would likely require removal of three Siberian elm trees (trees #580-582) located within the Site 1 boundary, and potential trimming of one Siberian elm (tree #583) located directly outside the of the Site 1 boundary. These trees are in fair to poor condition, exhibiting internal decay, and scaffold branch failures. This alternative would likely avoid four trees including one olive (tree #576), one Mexican fan palm (tree #577) located at the existing PS, and two mulberries located at the Site 1 staging area. All trees in the vicinity of Alternative A are City trees. Following the Tree Ordinances' replacement guidelines, tree replacement at a minimum 1 to 1 ratio is recommended for the removal of the three Siberian elm trees. Standard tree protection measures recommended for avoided trees are provided in Section 4.0 below.

### 3.3.2 Alternative B

Alternative B would not impact any trees at Site 2 as there are no trees situated within the Site 2 boundary or staging area. This alternative would likely avoid four trees including one olive (tree #576), one Mexican fan palm (tree #577) located at the existing PS, and two mulberries located at the Site 1 staging area.

### 3.3.3 Alternative C

Alternative C would likely require removal of three planted valley oak trees (trees #585-587) located within the Site 3 boundary, and potential trimming of one Crepe myrtle (tree #588) located directly outside the of the Site 3 boundary. The three valley oak trees likely to require removal are relatively small trees in good condition. All trees in the vicinity of Alternative C are City trees. Following the Tree Ordinances' replacement guidelines, tree replacement at a minimum 1 to 1 ratio is recommended for the removal of the three valley oak trees. Standard tree protection measures recommended for avoided trees are provided in Section 4.0 below. This alternative would likely avoid four trees including one olive (tree #576), one Mexican fan palm (tree #577) located at the existing PS, and two mulberries located at the Site 1 staging area.

### 3.3.4 Alternative D

Alternative D would likely require removal of six City trees including four California sycamore (*Platanus racemosa*)(tree #594-596 and #598), one London plane tree (*Platanus* x *hispanica*)(tree #597), and one glossy privet (*Ligustrum lucidum*)(tree #599). All trees in the vicinity of Alternative D are City trees. Following the Tree Ordinances' replacement guidelines, tree replacement at a minimum 1 to 1 ratio is recommended for the removal of the six City trees. Standard tree protection measures recommended for avoided trees are provided in Section 4.0 below. This alternative would likely avoid four trees including one olive (tree #576), one Mexican fan palm (tree #577) located at the existing PS, and two mulberries located at the Site 1 staging area.

### 3.3.5 Alternative E

Alternative E would likely require removal of one protected-size Chinese elm (tree #590), and one non-protected Chinese elm (tree #591) within the Site 5 boundary. Two additional Chinese elm trees (trees #592, 593) would likely be avoided as they are located on the edge of the Site 5 staging area. Following the Tree Ordinances' replacement guidelines, tree replacement at a minimum 1 to 1 ratio is recommended for the removal of the one protected-size tree potentially removed by this alternative. Standard tree protection measures recommended for avoided trees are provided in Section 4.0 below. This alternative would likely avoid four trees including one olive (tree #576), one Mexican fan palm (tree #577) located at the existing PS, and two mulberries located at the Site 1 staging area.

## 4.0 SUMMARY AND RECOMMENDATIONS

A total of 14 surveyed trees have been identified as potentially needing to be removed to accommodate the project based on comparison of project description and site boundaries and tree survey data collected during the surveys. As only one Alternative will be implemented, the maximum number of trees potentially requiring removal would range from zero (Alternative B) to six (Alternative D).

In order to avoid and minimize damage to existing trees which are designated for preservation and not proposed for direct impact by project activities, the following measures are recommended during construction:

- Trees removed by the project are recommended to be replaced at a minimum 1 to 1 ratio on the affected property. Tree species should be the same species as those removed or an alternative locally-native species such as valley oak (*Quercus lobata*) or coast live oak (*Q. agrifolia*)
- All construction activity (grading, filling, paving, landscaping etc.) should respect the root protection zone (RPZ) around all trees within the vicinity of grading that are selected for preservation. The RPZ should be a distance of 1.0 times the dripline radius measured from the trunk of the tree. Exception to this standard could be considered on a case-by-case basis, provided that it is demonstrated that an encroachment into the RPZ will not critically damage the root system or the health of the tree, and is authorized by an ISA Certified Arborist or comparable specialist.

- Temporary protective fencing shall be installed around the dripline of existing trees designated for preservation prior to commencement of any construction activity conducted within 25' of the tree canopy of a tree designated for preservation. The fence shall be clearly marked to prevent inadvertent encroachment by heavy machinery.
- If any trees require trimming and/or root pruning to accommodate construction, they shall be pruned to American National Standards Institute (ANSI) A300 standards for tree care practices.
- An ISA Certified Arborist or tree specialist shall be retained to perform any necessary pruning of trees during construction activity.
- If grading takes place within the RPZ of a preserved tree, roots should be exposed using the least injurious method possible, and selective root pruning is the preferred method of removal.
- Roots exposed, as a result of construction activities shall be covered with wet burlap to avoid desiccation, and should be buried as soon as practicable.
- Only an ISA Certified Arborist or tree specialist will make specific recommendations as to where any existing trees can safely tolerate some level of fill within the drip line.
- Construction materials shall be properly stored away from existing trees to avoid spillage or damage to trees.

## 5.0 REFERENCES

**Google Earth 2024** Google Earth. 2024. Aerial Photography 1993-2023.

# APPENDIX A. TREE SURVEY TABLE

Appendix A. North Marin Water District, Lynwood PS Replacement Project, Tree Survey, Novato, California, December 2023

| Tag ID | Species | Common Name | Multi-trunk | Total DBH (inches) | Ordinance Status | Potential Impact | Approximate Dripline Radius (feet) | Approximate Height (feet) | Condition | Health | Structure |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 576 | Olive | *Olea europeaea* | No | 9.0 | City Tree | Avoided | 8 | 11 | Good | Good | Good |
| 577 | Mexican fan palm | *Washingtonia robusta* | No | 13.5 | City Tree | Avoided | 4 | 6 | Good | Good | Good |
| 578 | Mulberry | *Morus alba* | No | 13.3 | City Tree | Avoided | 10 | 13 | Fair | Fair | Fair |
| 579 | Mulberry | *Morus alba* | No | 15.6 | City Tree | Avoided | 10 | 12 | Fair | Fair | Fair |
| 580 | Siberian elm | *Ulmus pumila* | No | 18.0 | City Tree | Removal | 15 | 20 | Poor | Poor | Poor |
| 581 | Siberian elm | *Ulmus pumila* | No | 17.9 | City Tree | Removal | 12 | 20 | Fair | Fair | Fair |
| 582 | Siberian elm | *Ulmus pumila* | No | 14.8 | City Tree | Removal | 9 | 12 | Poor | Poor | Poor |
| 583 | Siberian elm | *Ulmus pumila* | No | 20.9 | City Tree | Trimming | 12 | 20 | Poor | Poor | Poor |
| 584 | London plane | *Platanus x hispanica* | No | 10.9 | City Tree | Avoided | 15 | 25 | Good | Good | Good |
| 585 | Valley oak | *Quercus lobata* | No | 9.0 | City Tree | Removal | 15 | 25 | Good | Good | Good |
| 586 | Valley oak | *Quercus lobata* | No | 4.3 | City Tree | Removal | 3 | 8 | Good | Good | Good |
| 587 | Valley oak | *Quercus lobata* | No | 10.8 | City Tree | Removal | 15 | 25 | Good | Good | Good |
| 588 | Crepe myrtle | *Lagerstroemia indica* | Yes | 13.0 | City Tree | Trimming | 8 | 12 | Good | Good | Good |
| 589 | Coast live oak | *Quercus agrifolia* | No | 8.0 | City Tree | Avoided | 9 | 16 | Good | Good | Good |
| 590 | Chinese elm | *Ulmus parvifolia* | No | 7.0 | Protected Size | Removal | 9 | 15 | Good | Good | Good |
| 591 | Chinese elm | *Ulmus parvifolia* | No | 5.0 | Non-protected | Removal | 9 | 13 | Good | Fair | Fair |
| 592 | Chinese elm | *Ulmus parvifolia* | No | 8.9 | Protected Size | Avoided | 12 | 18 | Good | Good | Good |
| 593 | Chinese elm | *Ulmus parvifolia* | No | 4.9 | Non-protected | Avoided | 8 | 15 | Good | Good | Good |
| 594 | California sycamore | *Platanus racemosa* | No | 14.4 | City Tree | Removal | 18 | 35 | Good | Good | Good |
| 595 | California sycamore | *Platanus racemosa* | No | 13.0 | City Tree | Removal | 15 | 35 | Good | Good | Good |
| 596 | California sycamore | *Platanus racemosa* | No | 10.3 | City Tree | Removal | 12 | 30 | Good | Good | Good |
| 597 | London plane tree | *Platanus x hispanica* | No | 15.2 | City Tree | Removal | 20 | 35 | Good | Good | Good |
| 598 | California sycamore | *Platanus racemosa* | No | 17.0 | City Tree | Removal | 18 | 35 | Good | Good | Good |
| 599 | Glossy privet | *Ligustrum lucidum* | Yes | 19.0 | City Tree | Removal | 10 | 12 | Fair | Fair | Poor |

# APPENDIX B. TREE SURVEY MAP


Path: L:\Acad 2000 Files\320000\320289\GIS\ArcMap\320289Base_aprx Layout Name: FigX_Tree Survey Map

**Sources**: Marin County Imagery 2018, WRA | Prepared By: kobylarz, 1/4/2024

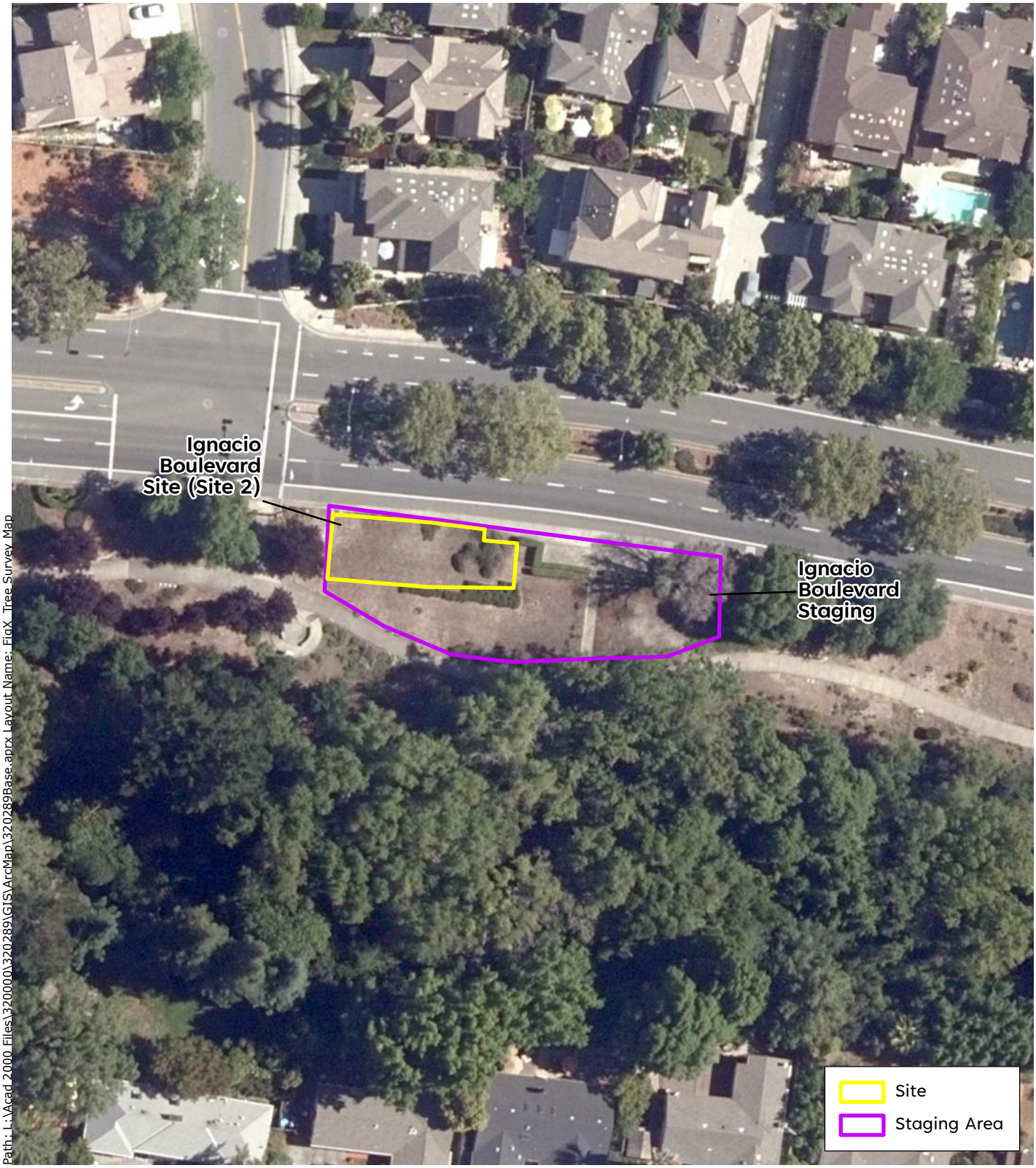
# Figure 1. Tree Survey Map
# Project Site and Staging Areas: Sunset Parkway Site (Site 1)

North Marin Water District
Lynwood Pump Station Replacement
Novato, California

N

0 50 100 Feet

wra Environmental Consultants




Path: L:\Acad 2000 Files\320000\320289\GIS\ArcMap\320289Base_aprx Layout Name: FigX_Tree Survey Map

**Sources**: Marin County Imagery 2018, WRA | Prepared By: kobylarz, 1/4/2024

# Figure 2. Tree Survey Map
# Project Site and Staging Areas: Ignacio Boulevard Site (Site 2)

North Marin Water District
Lynwood Pump Station Replacement
Novato, California

N

0 50 100 Feet

wra Environmental Consultants


Path: L:\Acad 2000 Files\320000\320289\GIS\ArcMap\320289Base.aprx Layout Name: FigX_Tree Survey Map

**Sources**: Marin County Imagery 2018, WRA | Prepared By: kobylarz, 1/4/2024

# Figure 3. Tree Survey Map
# Project Site and Staging Areas: Bolling Drive Site (Site 3)

North Marin Water District
Lynwood Pump Station Replacement
Novato, California

N

0 50 100 Feet

wra Environmental Consultants


Path: L:\Acad 2000 Files\320000\320289\GIS\ArcMap\320289Base.aprx Layout Name: FigX_Tree Survey Map

**Sources**: Marin County Imagery 2018, WRA | Prepared By: kobylarz, 1/4/2024

# Figure 4. Tree Survey Map
# Project Site and Staging Areas:
# Main Gate Road Site (Site 4)

North Marin Water District
Lynwood Pump Station Replacement
Novato, California

N

0 50 100 Feet

wra Environmental Consultants


**Sources**: Marin County Imagery 2018, WRA | Prepared By: kobylarz, 1/4/2024

# Figure 5. Tree Survey Map
# Project Site and Staging Areas:
# C Street Site (Site 5)

North Marin Water District
Lynwood Pump Station Replacement
Novato, California

N

0 50 100 Feet

wra Environmental Consultants

# APPENDIX C. REPRESENTATIVE PHOTOGRAPHS

Photograph 1. Photograph depicting three (3) Siberian elm City trees (trees #580-582) at Site 1. The trees are in fair to poor condition and would be removed under Alternative A.

Photograph 2. Photograph depicting Siberian elm tree #582 at Site 1. The tree in poor condition, exhibiting a large internal cavity affecting the tree's health, structure, and condition.

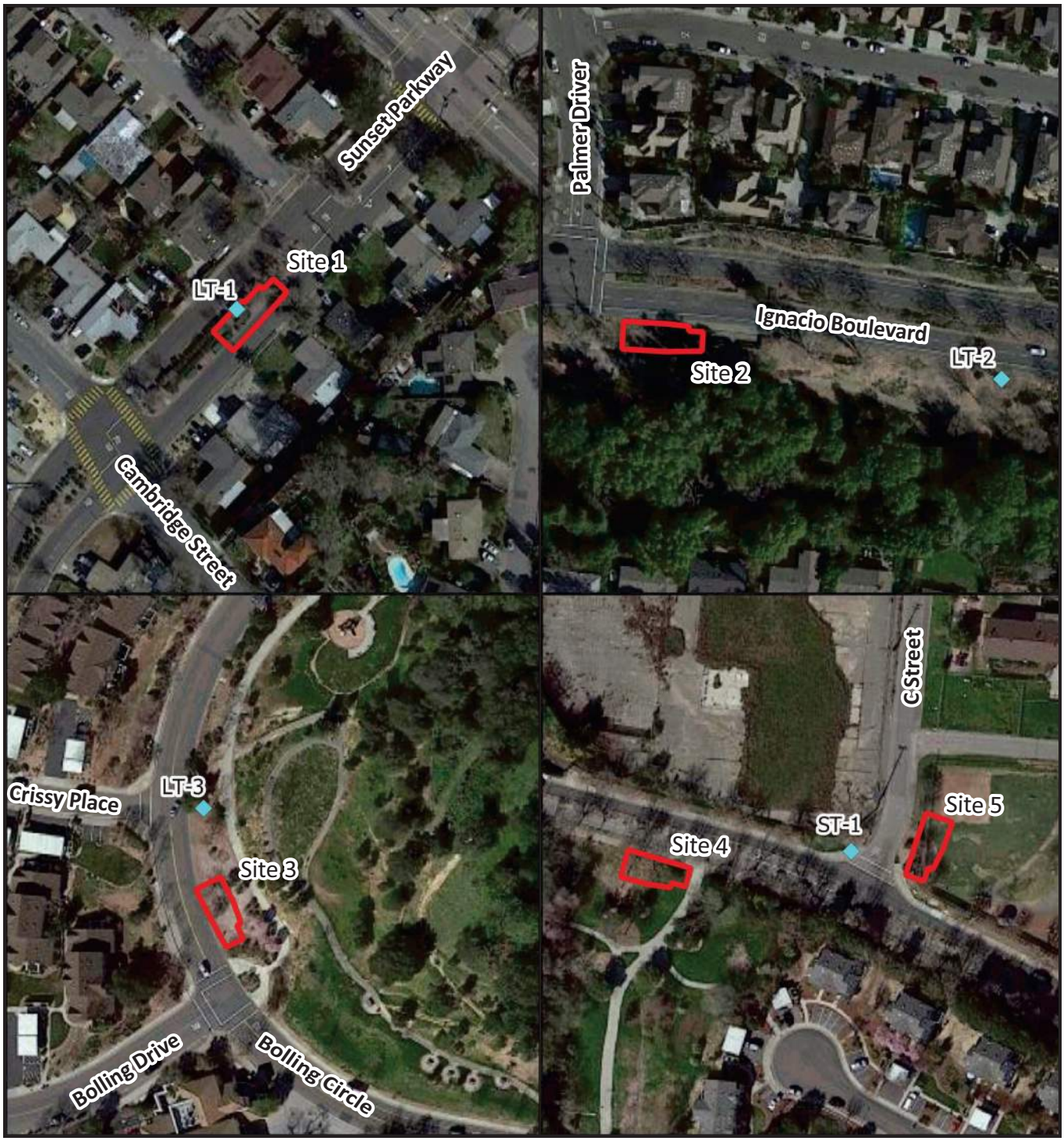
Photograph 3. Photograph depicting Site 2 and staging area, which does not contain any trees.

Photograph 4. Photograph depicting three small valley oak City trees (trees #585-587) at Site 3. These trees are in good condition, and would be removed under Alternative C.

Photograph 5. Photograph depicting two planted California sycamore City trees (trees #594, 596), and one London plane City tree (tree #597) at Site 4. These trees would be removed under Alternative D.

Photograph 6. Photograph depicting a non-protected size Chinese elm (tree #590) at Site 5. This tree would be removed under Alternative E.

# APPENDIX F. NOISE DATA




## Legend

- Noise Measurement Location
- Site Boundary

0 120 Feet

N

# Figure F1
# Noise Measurement Locations

BASELINE ENVIRONMENTAL CONSULTING

Site 1

# Measurement Report

## Report Summary

| | | | |
|---|---|---|---|
| Meter's File Name | LxT_Data.041.s | Computer's File Name | LxT_0006386-20231214 105133-LxT_Data.041.ldbin |
| Meter | LxT1 0006386 | | |
| Firmware | 2.404 | | |
| User | | Location | |
| Job Description | | | |
| Note | | | |
| Start Time | 2023-12-14 10:51:33 | Duration | 24:26:31.5 |
| End Time | 2023-12-15 11:18:04 | Run Time | 24:20:51.7 |
| | | Pause Time | 0:05:39.8 |

## Results

### Overall Metrics

| | | | |
|---|---|---|---|
| $LA_{eq}$ | 61.2 dB | | |
| LAE | 110.6 dB | SEA | 133.1 dB |
| EA | 12.8 mPa²h | | |
| EA8 | 4.2 mPa²h | | |
| EA40 | 21.1 mPa²h | | |
| $LAS_{peak}$ | 123.1 dB | 2023-12-15 11:11:20 | |
| $LAS_{max}$ | 93.5 dB | 2023-12-15 11:11:20 | |
| $LAS_{min}$ | 37.2 dB | 2023-12-15 01:27:24 | |
| $LA_{eq}$ | 61.2 dB | | |
| $LC_{eq}$ | 66.6 dB | $LC_{eq}$ - $LA_{eq}$ | 5.4 dB |
| $LAI_{eq}$ | 65.5 dB | $LAI_{eq}$ - $LA_{eq}$ | 4.3 dB |

### Exceedances

| | Count | Duration |
|---|---|---|
| LAS > 85.0 dB | 8 | 0:00:18.3 |
| LAS > 115.0 dB | 0 | 0:00:00.0 |
| LASpeak > 135.0 dB | 0 | 0:00:00.0 |
| LASpeak > 137.0 dB | 0 | 0:00:00.0 |
| LASpeak > 140.0 dB | 0 | 0:00:00.0 |

### Community Noise

| LDN | LDay | LNight |
|---|---|---|
| 63.0 dB | 62.9 dB | 0.0 dB |

| LDEN | LDay | LEve | LNight |
|---|---|---|---|
| 63.5 dB | 63.5 dB | 59.1 dB | 53.2 dB |

### Any Data

| | A | | C | | Z | |
|---|---|---|---|---|---|---|
| | Level | Time Stamp | Level | Time Stamp | Level | Time Stamp |
| $L_{eq}$ | 61.2 dB | | --- dB | | --- dB | |
| $Ls_{(max)}$ | 93.5 dB | 2023-12-15 11:11:20 | --- dB | | --- dB | |
| $LS_{(min)}$ | 37.2 dB | 2023-12-15 01:27:24 | --- dB | | --- dB | |
| $L_{Peak(max)}$ | 123.1 dB | 2023-12-15 11:11:20 | --- dB | | --- dB | |

### Overloads

| Count | Duration |
|---|---|
| 0 | 0:00:00.0 |

### Statistics

| | |
|---|---|
| LAS 5.0 | 67.6 dB |
| LAS 10.0 | 65.5 dB |
| LAS 33.3 | 56.4 dB |
| LAS 50.0 | 52.4 dB |
| LAS 66.6 | 49.1 dB |
| LAS 90.0 | 45.4 dB |

## Modified Results

### Overall Metrics

| | | | |
|---|---|---|---|
| $LA_{eq}$ | 60.9 dB | | |
| LAE | 110.3 dB | | |
| EA | 11.9 mPa²h | | |
| EA8 | 4.0 mPa²h | | |
| EA40 | 19.8 mPa²h | | |
| $LAS_{peak}$ | 123.1 dB | 2023-12-15 11:11:20 | |
| $LAS_{max}$ | 19.7 dB | 2023-12-15 11:11:20 | |
| $LAS_{min}$ | 15.7 dB | 2023-12-15 01:27:24 | |
| $LA_{eq}$ | 60.9 dB | | |
| $LC_{eq}$ | --- dB | $LC_{eq}$ - $LA_{eq}$ | --- dB |

### Community Noise

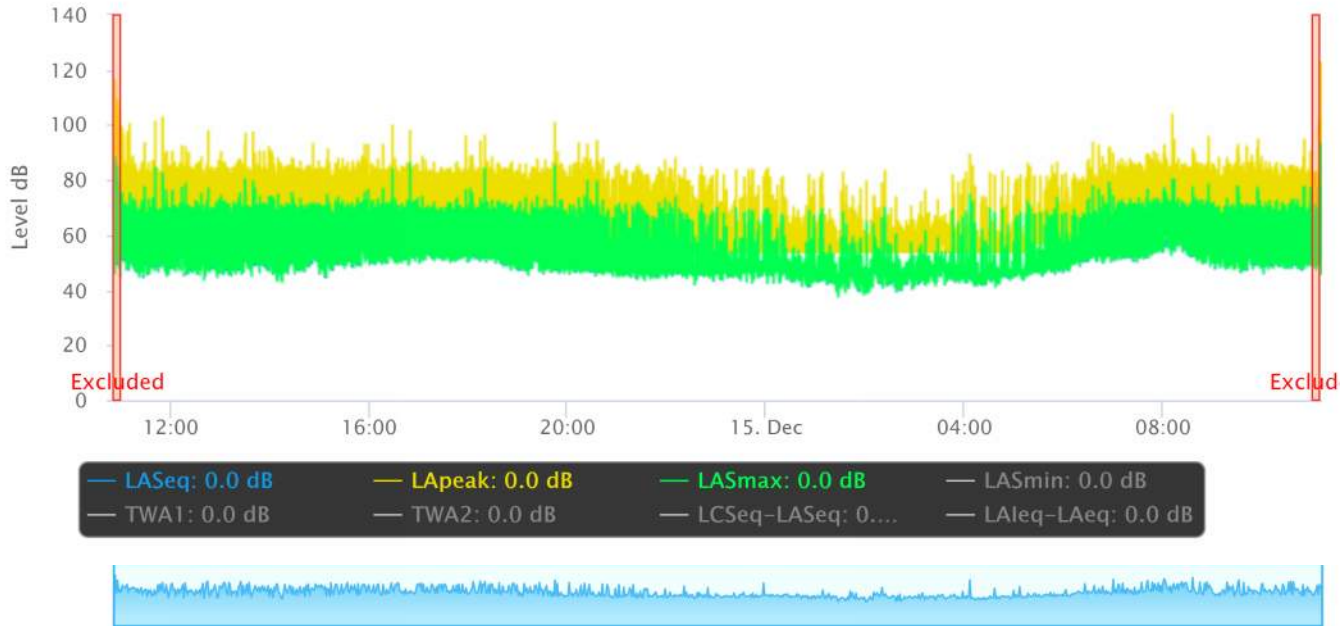
| LDN | LDay | LNight |
|---|---|---|
| 62.9 dB | 62.7 dB | 0.0 dB |

| LDEN | LDay | LEve | LNight |
|---|---|---|---|
| 63.3 dB | 63.3 dB | 59.1 dB | 53.2 dB |

### Any Data

| | A | | C | | Z | |
|---|---|---|---|---|---|---|
| | Level | Time Stamp | Level | Time Stamp | Level | Time Stamp |
| $L_{eq}$ | 17.8 dB | | --- dB | | --- dB | |
| $Ls_{(max)}$ | 19.7 dB | 2023-12-15 11:11:20 | --- dB | | --- dB | |
| $LS_{(min)}$ | 15.7 dB | 2023-12-15 01:27:24 | --- dB | | --- dB | |
| $L_{Peak(max)}$ | 20.9 dB | 2023-12-15 11:11:20 | --- dB | | --- dB | |

## Time History



Site 2

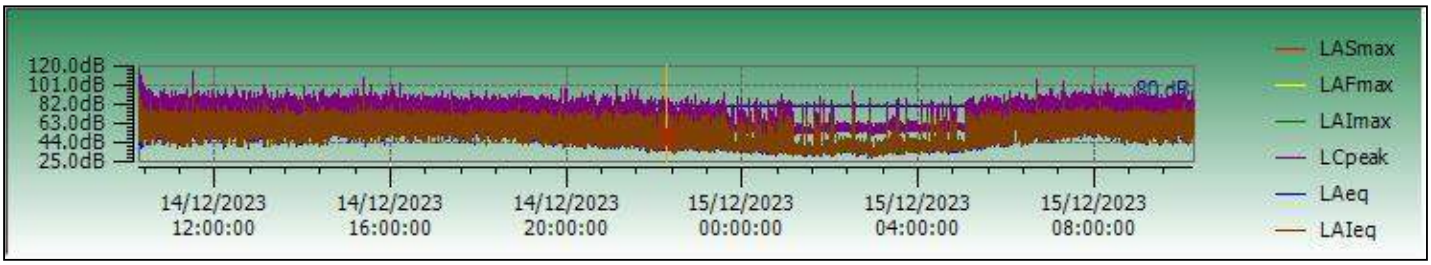
**Casella CEL Ltd.**

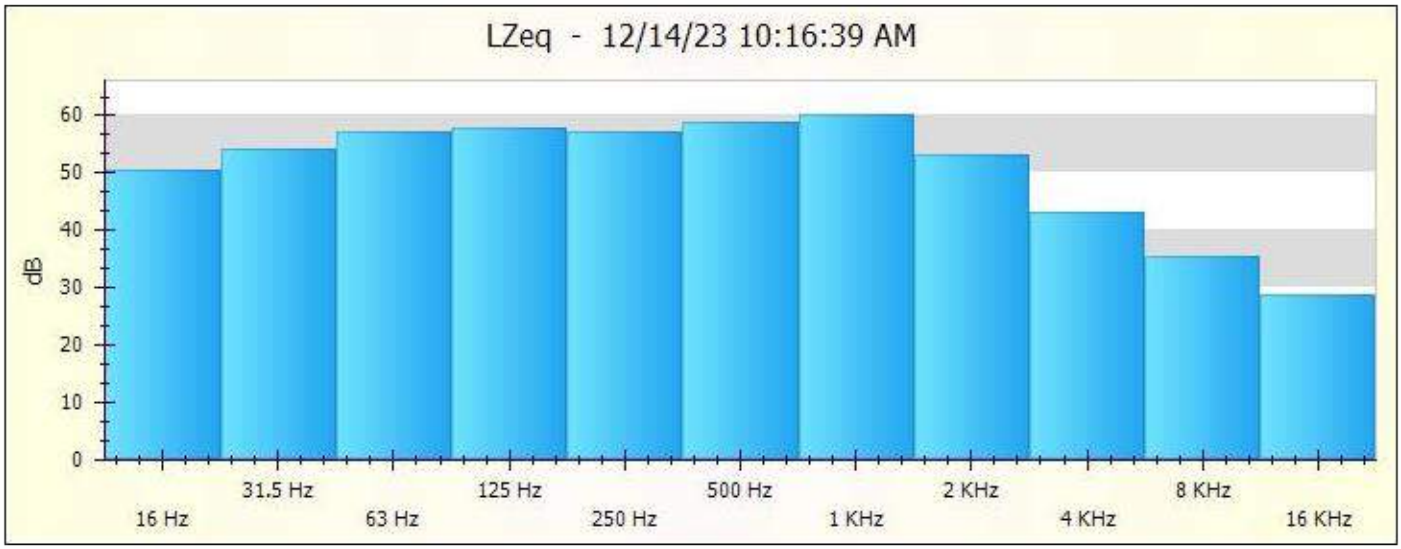
**Report On Lymwood Pump Alt-2**

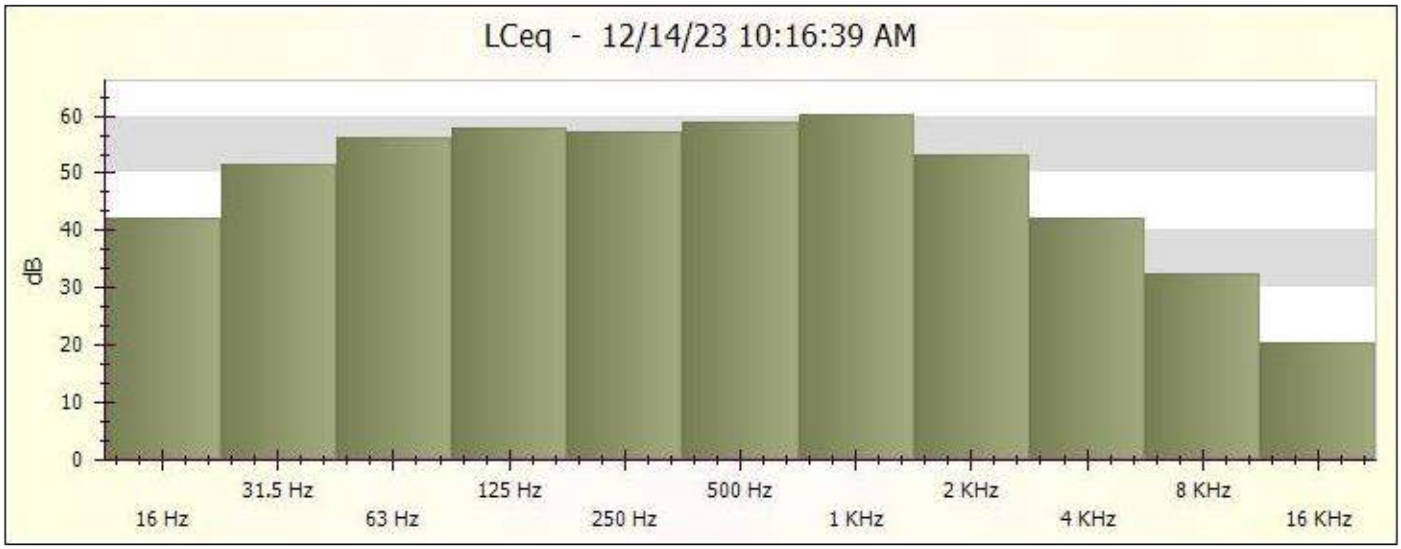
Report Sorted/Grouped By: Site(Ascending)

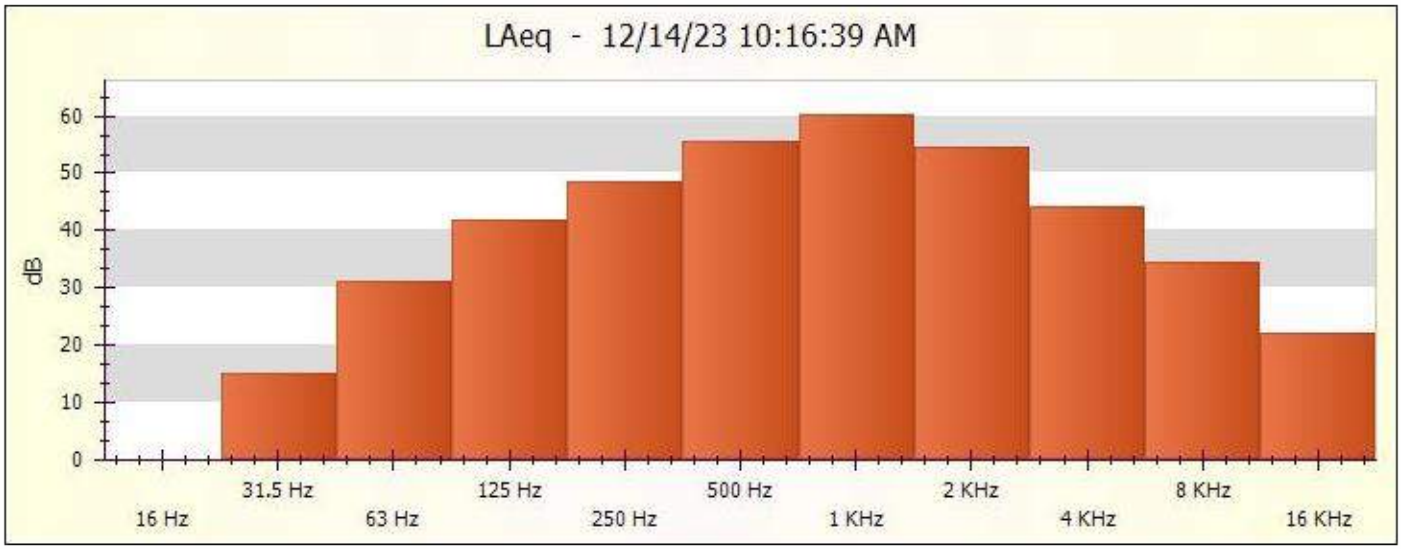
## Lymwood Pump Alt-2

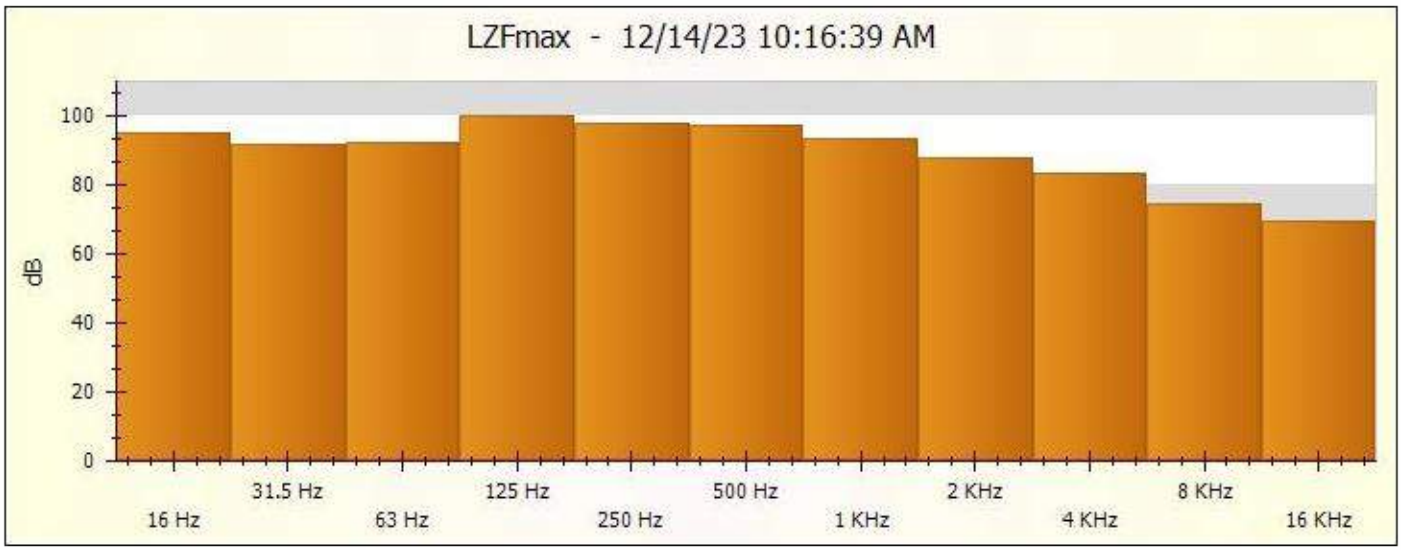
| | | | |
|---|---|---|---|
| **Instrument Model** | **CEL-633C** | | |
| Serial Number | 0499599 | LZeq | 66.4 dB |
| Run Number | 3 | LCeq | 65.9 dB |
| Site | Lymwood Pump Alt-2 | LCeq-LAeq | 3.3 dB |
| Location | Unallocated | LAleq | 64.5 dB |
| Person | Unallocated | LAE | 111.9 dB |
| Process | Unallocated | Response | Free Field |
| Start Date & Time | 12/14/23 10:16:39 AM | End Date & Time | 12/15/23 10:16:39 AM |
| Duration | 24:00:00 HH:MM:SS | Pause Duration | 00:00:00 HH:MM:SS |
| LAeq | 62.6 dB | Calibration (Before) Date | 12/12/23 4:05:04 PM |
| LCpeak with Time | 116.7 dB (12/14/23 10:17:27 AM) | Calibration (Before) SPL | 114 dB |
| Lepd(Projected) | 67.4 dB | Calibration (After) Date | |
| Lex8h(Projected) | 67.4 dB | Calibration Drift | 0.0 dB |
| LAFmax with Time | 96.3 dB (12/14/23 11:30:03 AM) | Overload | No |
| LAImax with Time | 97.2 dB (12/14/23 11:30:03 AM) | Battery Low | No |
| LAFmin with Time | 29 dB (12/14/23 2:51:38 AM) | Result | Cumulative |
| LAImin with Time | 29.3 dB (12/14/23 2:51:38 AM) | | |
| Notes | | | |

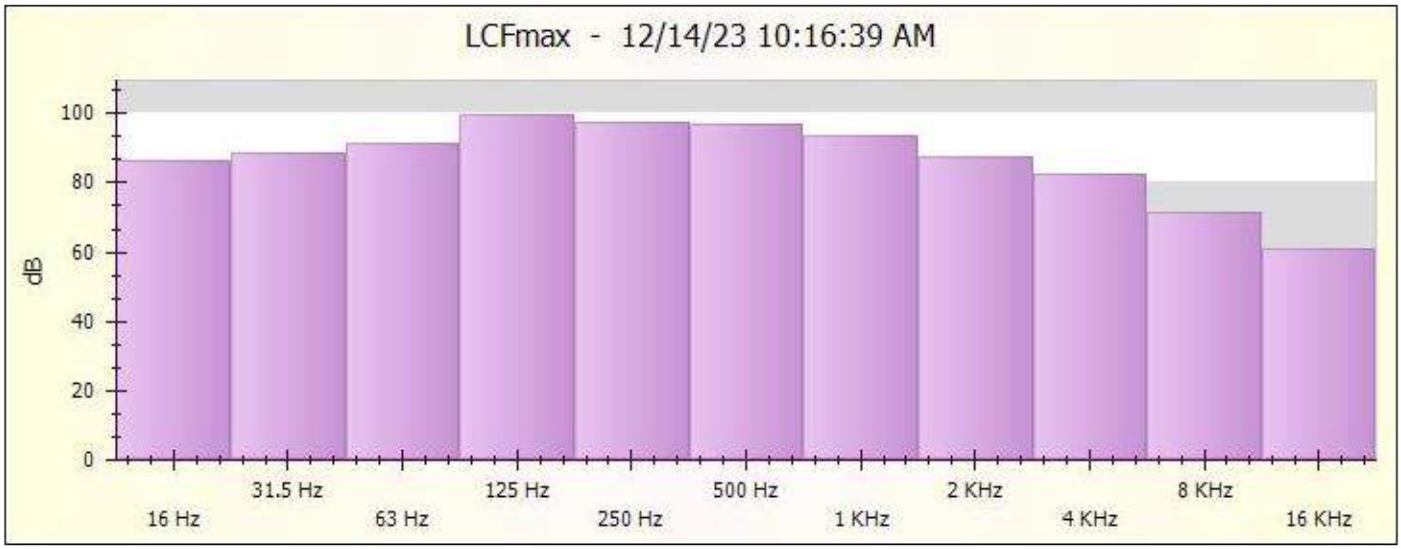


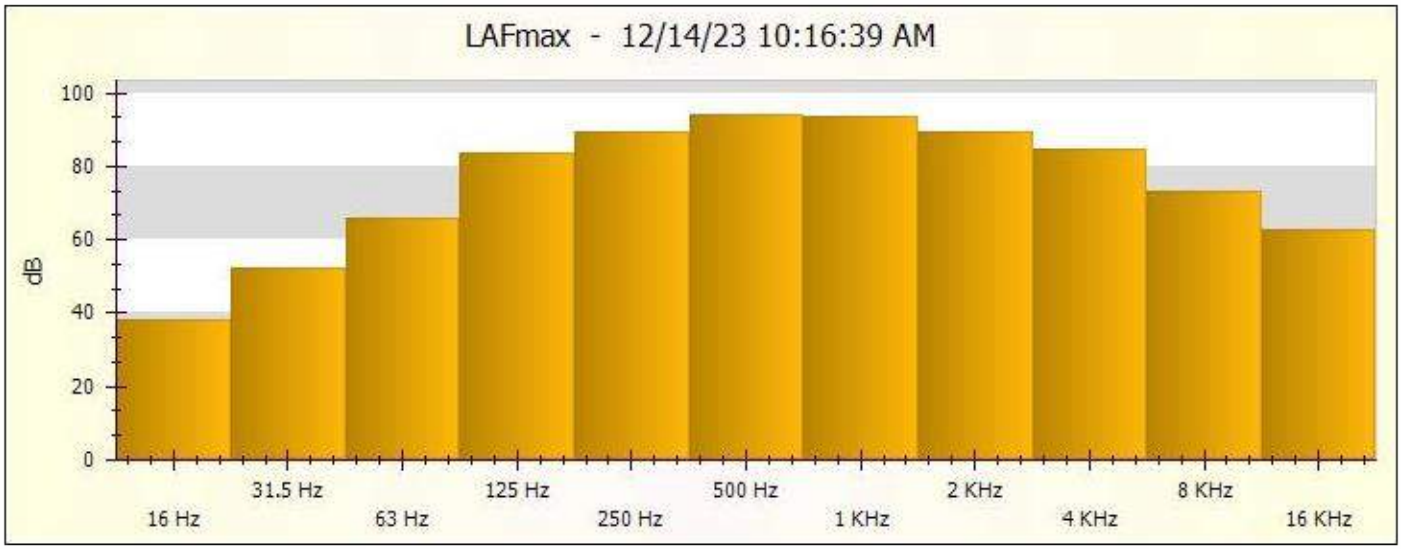




LCeq - 12/14/23 10:16:39 AM
dB
60
50
40
30
20
10
0
16 Hz
31.5 Hz
63 Hz
125 Hz
250 Hz
500 Hz
1 KHz
2 KHz
4 KHz
8 KHz
16 KHz


LAeq - 12/14/23 10:16:39 AM
dB
60
50
40
30
20
10
0
16 Hz
31.5 Hz
63 Hz
125 Hz
250 Hz
500 Hz
1 KHz
2 KHz
4 KHz
8 KHz
16 KHz


LZFmax - 12/14/23 10:16:39 AM
dB
100
80
60
40
20
0
16 Hz
31.5 Hz
63 Hz
125 Hz
250 Hz
500 Hz
1 KHz
2 KHz
4 KHz
8 KHz
16 KHz


LCFmax - 12/14/23 10:16:39 AM
dB
100
80
60
40
20
0
16 Hz
31.5 Hz
63 Hz
125 Hz
250 Hz
500 Hz
1 KHz
2 KHz
4 KHz
8 KHz
16 KHz


LAFmax - 12/14/23 10:16:39 AM
dB
100
80
60
40
20
0
16 Hz
31.5 Hz
63 Hz
125 Hz
250 Hz
500 Hz
1 KHz
2 KHz
4 KHz
8 KHz
16 KHz

Alternative B

| | |
|---|---|
| ID | b19d9490-113f-4eda-ae5f-f4df35683e8e |
| INSTRUMENTID | 741e80fa-f151-4d3b-8864-f844d9736996 |
| INSTRUMENTSERIESID | aa808e62-dd1b-4564-944b-e64ff2bcf7f2 |
| INSTRUMENTMODELID | b1w60o7d-227z-4aee-2323-71d79f830677 |
| BATTERYLOW | FALSE |
| DURATIONSEC | 86400 |
| ENDDATETIME | 12/15/2023 10:16 |
| NOTES | |
| OVERLOAD | FALSE |
| PAUSEDURATIONSEC | 0 |
| RESPONSE | 0 |
| RUNNO | 3 |
| SERIALNO | 0499599 |
| STARTDATETIME | 12/14/2023 10:16 |
| CALAFTERDATE | 1/1/2001 0:00 |
| CALBEFOREDATE | 12/12/2023 16:05 |
| CALBEFOREOFFSETDB | 8.8 |
| CALBEFORESPL | 114 |
| CALDRIFTDB | 0 |
| OCTAVECOUNT | 1 |
| PROFILECOUNT | 86400 |
| LAFMAX | 96.3 |
| LAFMAXTIME | 12/14/2023 11:30 |
| LAFMIN | 29 |
| LAFMINTIME | 12/14/2023 2:51 |
| LAIMAX | 97.2 |
| LAIMAXTIME | 12/14/2023 11:30 |
| LAIMIN | 29.3 |
| LAIMINTIME | 12/14/2023 2:51 |
| LASMAX | 92.1 |
| LASMAXTIME | 12/14/2023 11:30 |
| LASMIN | 29.6 |
| LASMINTIME | 12/14/2023 2:51 |
| LCFMAX | 102.7 |
| LCFMAXTIME | 12/14/2023 11:30 |
| LCFMIN | 40.4 |
| LCFMINTIME | 12/14/2023 2:58 |
| LCIMAX | 103.5 |
| LCIMAXTIME | 12/14/2023 11:30 |
| LCIMIN | 42.6 |
| LCIMINTIME | 12/14/2023 1:35 |
| LCSMAX | 99.3 |
| LCSMAXTIME | 12/14/2023 11:30 |
| LCSMIN | 42.2 |
| LCSMINTIME | 12/14/2023 1:35 |
| LZFMAX | 102.8 |
| LZFMAXTIME | 12/14/2023 11:30 |

| | |
|---|---|
| LZFMIN | 43.3 |
| LZFMINTIME | 12/14/2023 2:06 |
| LZIMAX | 103.6 |
| LZIMAXTIME | 12/14/2023 11:30 |
| LZIMIN | 46.3 |
| LZIMINTIME | 12/14/2023 1:35 |
| LZSMAX | 99.3 |
| LZSMAXTIME | 12/14/2023 11:30 |
| LZSMIN | 45.4 |
| LZSMINTIME | 12/14/2023 22:28 |
| LAPK | 117.1 |
| LAPKTIME | 12/14/2023 10:17 |
| LCPK | 116.7 |
| LCPKTIME | 12/14/2023 10:17 |
| LZPK | 117 |
| LZPKTIME | 12/14/2023 10:17 |
| LAE | 111.9 |
| LAEQ | 62.6 |
| LAEQT80 | 53 |
| LAFTM3 | 66.3 |
| LAFTM5 | 67.6 |
| LAIEQ | 64.5 |
| LAITM3 | 67.7 |
| LAITM5 | 68.9 |
| LCEQ | 65.9 |
| LCEQSUBLAEQ | 3.3 |
| LEPD | 67.4 |
| LEX8H | 67.4 |
| LZEQ | 66.4 |
| LAVGQ4 | 60.9 |
| LAVGTHRESHOLD | 0 |
| TWAQ4 | 60.9 |
| LAVGQ5 | 59.7 |
| TWAQ5 | 59.7 |
| CRITERIONTIMESEC | 28800 |
| LZF10 | 69.5 |
| LZF50 | 58.5 |
| LZF90 | 49 |
| LZF95 | 48 |
| LZFVAR | 47 |
| LCF10 | 69 |
| LCF50 | 57.5 |
| LCF90 | 46 |
| LCF95 | 45 |
| LCFVAR | 43.5 |
| LAF10 | 66.5 |
| LAF50 | 54 |

| | |
|---|---|
| LAF90 | 37 |
| LAF95 | 35 |
| LAFVAR | 32.5 |
| VARLN | 99 |
| LDN | 65.8 |
| LDEN | 66 |
| CNEL | 66.1 |
| DAYSTARTHR | 7 |
| EVENINGSTARTHR | 19 |
| NIGHTSTARTHR | 23 |
| DAYPENALTY | 0 |
| EVENINGPENALTY | 5 |
| NIGHTPENALTY | 10 |
| DOWNLOADSTATUS | FALSE |
| DELETED | FALSE |
| SITEID | Lymwood Pump Alt-2 |
| LOCATIONID | Unallocated |
| PERSONID | Unallocated |
| PROCESSID | Unallocated |
| RESULT | C |
| PERIODCOUNT | 1 |
| OVERLOADTIMESEC | 0 |
| LEPDVAL | 67.4 |
| LEX8HVAL | 67.4 |
| EVENTMARKERCOUNT | 0 |
| EVENTSUMMARYCOUNT | 1 |
| EVENTCOUNT | 0 |
| AUDIONOTES | FALSE |
| CALBEFORECHANGE | 3271.5 |
| CALBEFOREPOT | 22 |
| CALBEFOREGAIN | FALSE |
| CALBEFOREVALIDATION | TRUE |
| CALAFTERSPL | 0 |
| CALAFTERCHANGE | 0 |
| CALAFTEROFFSETDB | 0 |
| CALAFTERPOT | 0 |
| CALAFTERGAIN | FALSE |
| CALAFTERVALIDATION | FALSE |
| PERIODNOTESCOUNT | 0 |
| PROFILENOTESCOUNT | 0 |

Site 3

**Casella CEL Ltd.**

**Report On Lynwood Pump**

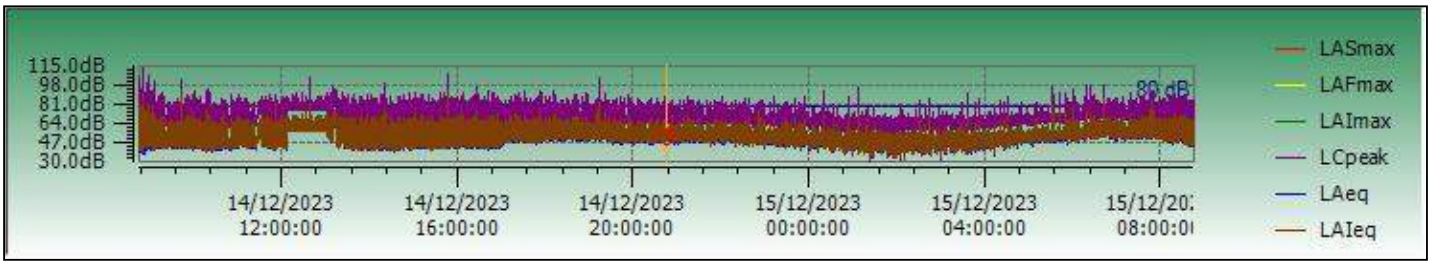
Report Sorted/Grouped By: Site(Ascending)

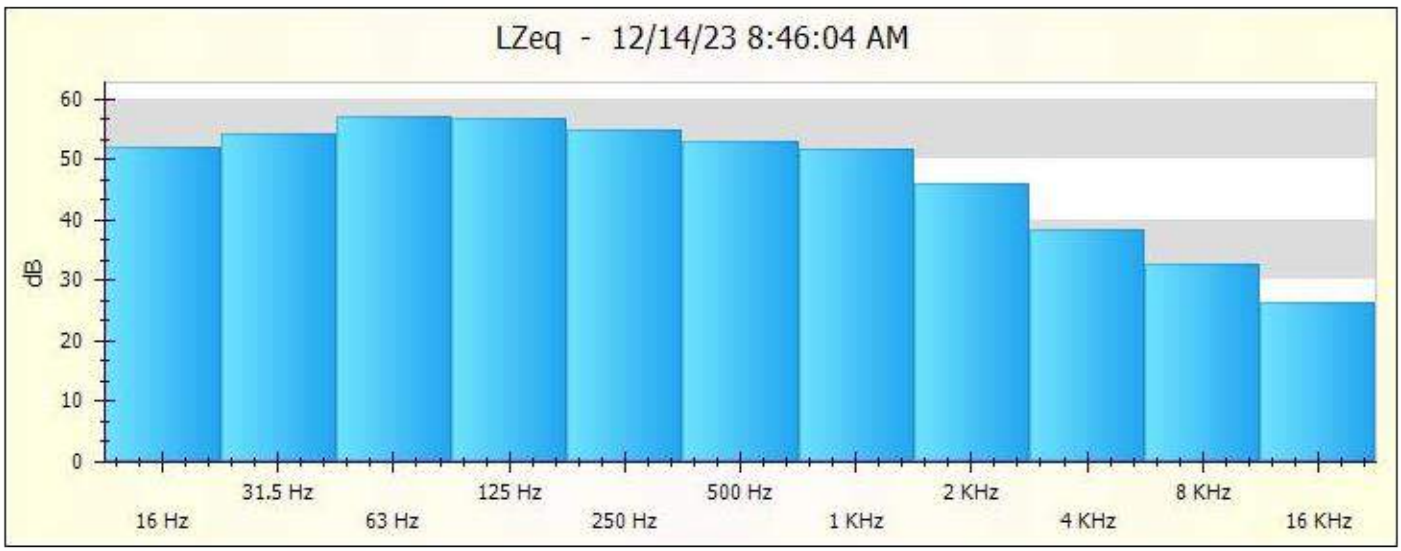
## Lynwood Pump

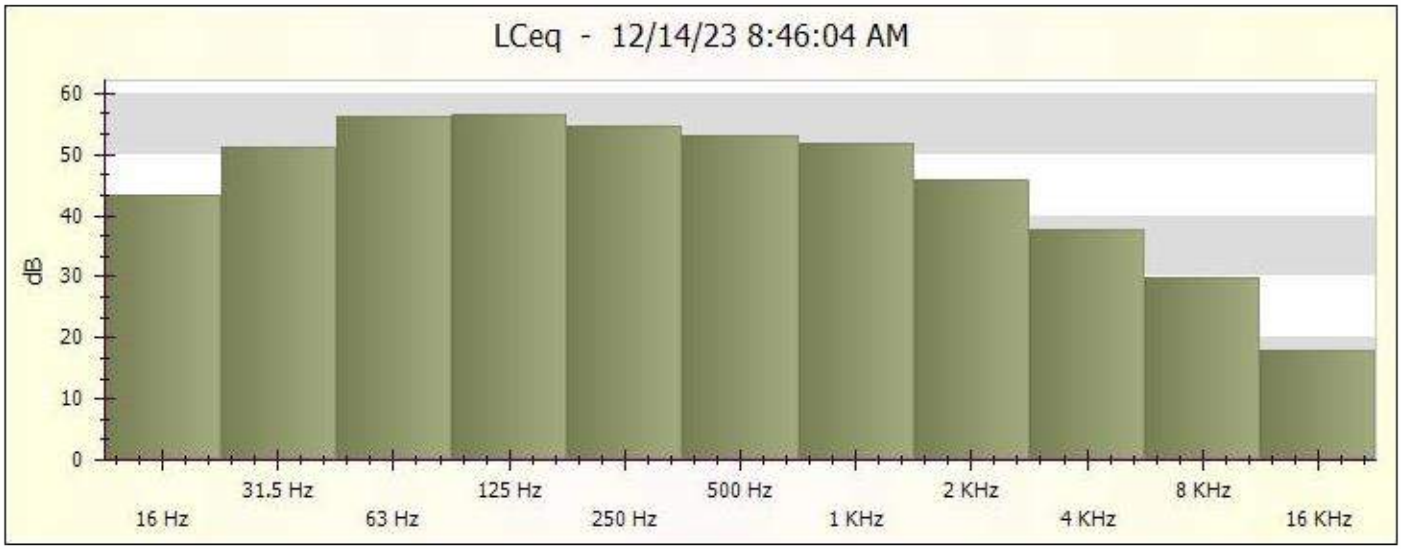
| | |
|---|---|
| **Instrument Model** | **CEL-633C** |

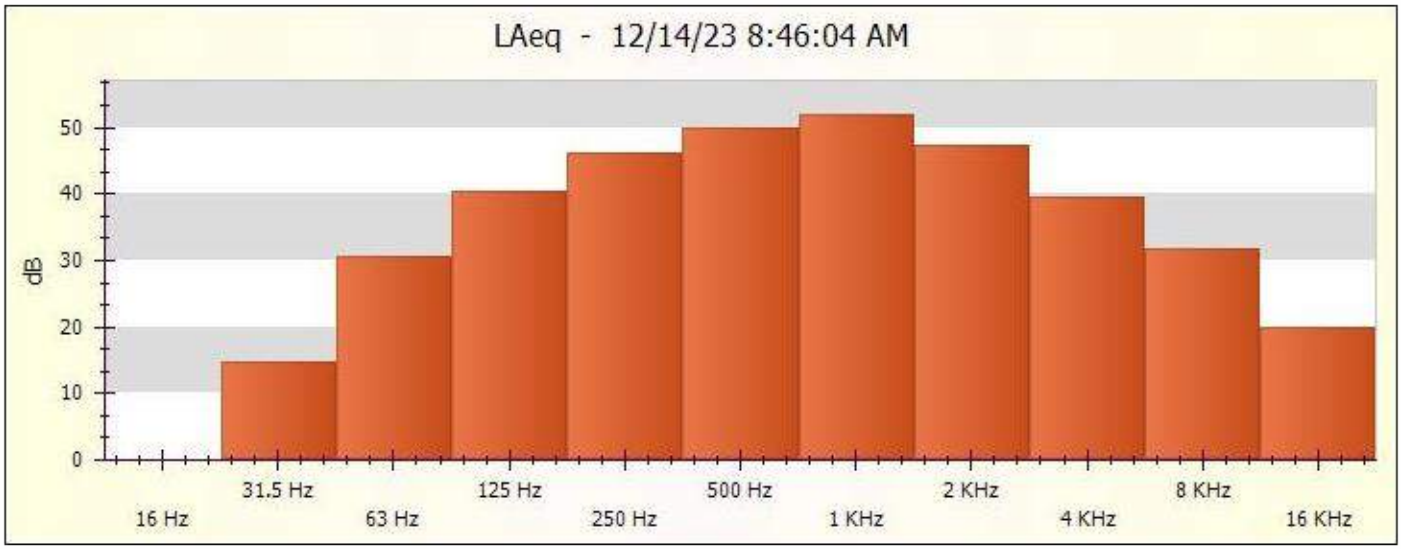
| | | | |
|---|---|---|---|
| Serial Number | 2511397 | LZeq | 63.5 dB |
| Run Number | 4 | LCeq | 62.4 dB |
| Site | Lynwood Pump | LCeq-LAeq | 6.7 dB |
| Location | Unallocated | LAleq | 58.2 dB |
| Person | Unallocated | LAE | 105.1 dB |
| Process | Unallocated | Response | Free Field |
| Start Date & Time | 12/14/23 8:46:04 AM | End Date & Time | 12/15/23 8:46:04 AM |
| Duration | 24:00:00 HH:MM:SS | Pause Duration | 00:00:00 HH:MM:SS |
| LAeq | 55.7 dB | Calibration (Before) Date | 12/14/23 8:16:40 AM |
| LCpeak with Time | 112.9 dB (12/14/23 8:52:02 AM) | Calibration (Before) SPL | 114 dB |
| Lepd(Projected) | 60.5 dB | Calibration (After) Date | |
| Lex8h(Projected) | 60.5 dB | Calibration Drift | 0.0 dB |
| LAFmax with Time | 94.1 dB (12/14/23 9:43:20 AM) | Overload | No |
| LAImax with Time | 94.6 dB (12/14/23 9:43:20 AM) | Battery Low | No |
| LAFmin with Time | 29.6 dB (12/14/23 1:24:44 AM) | Result | Cumulative |
| LAImin with Time | 30.1 dB (12/14/23 1:24:44 AM) | | |

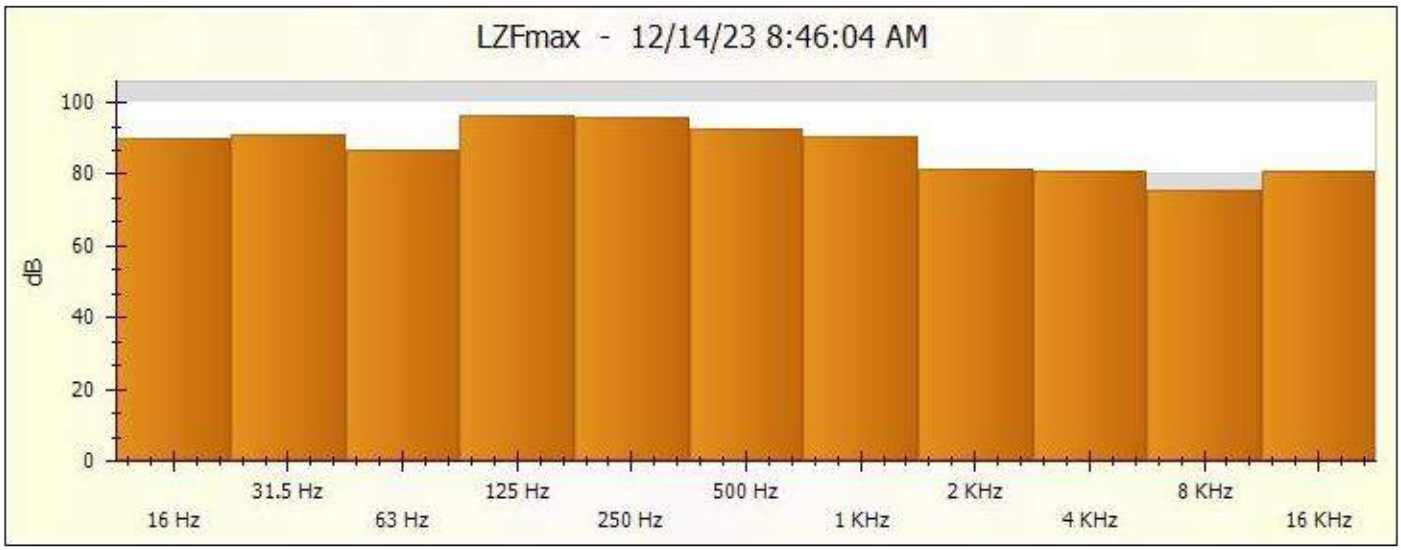
Notes

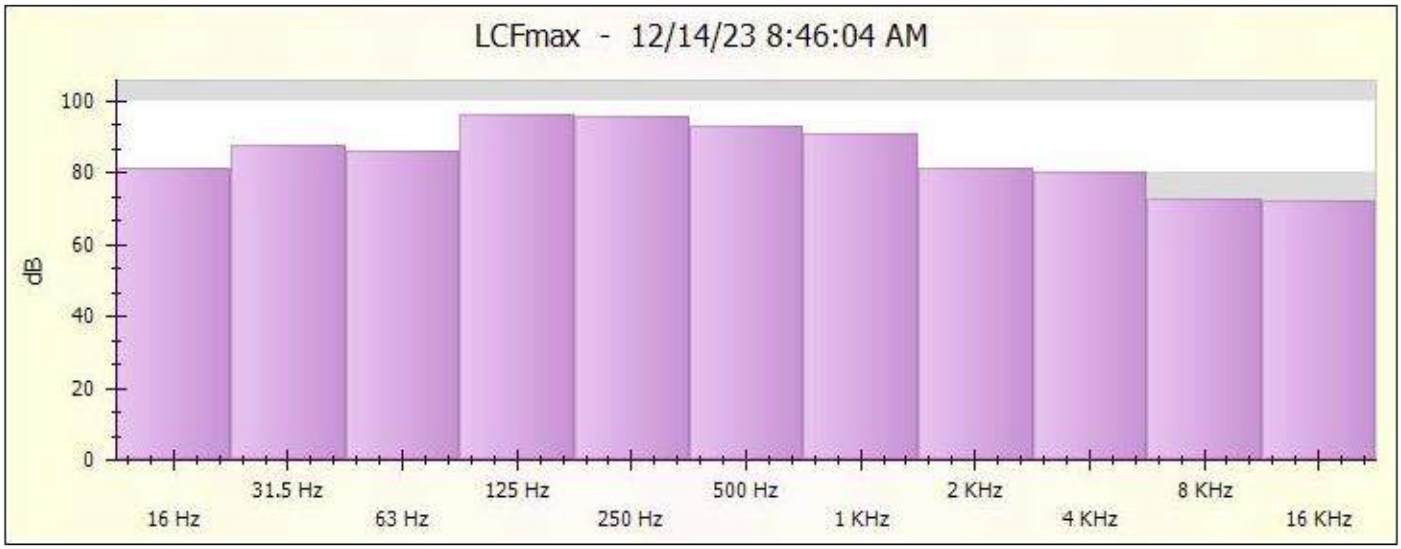


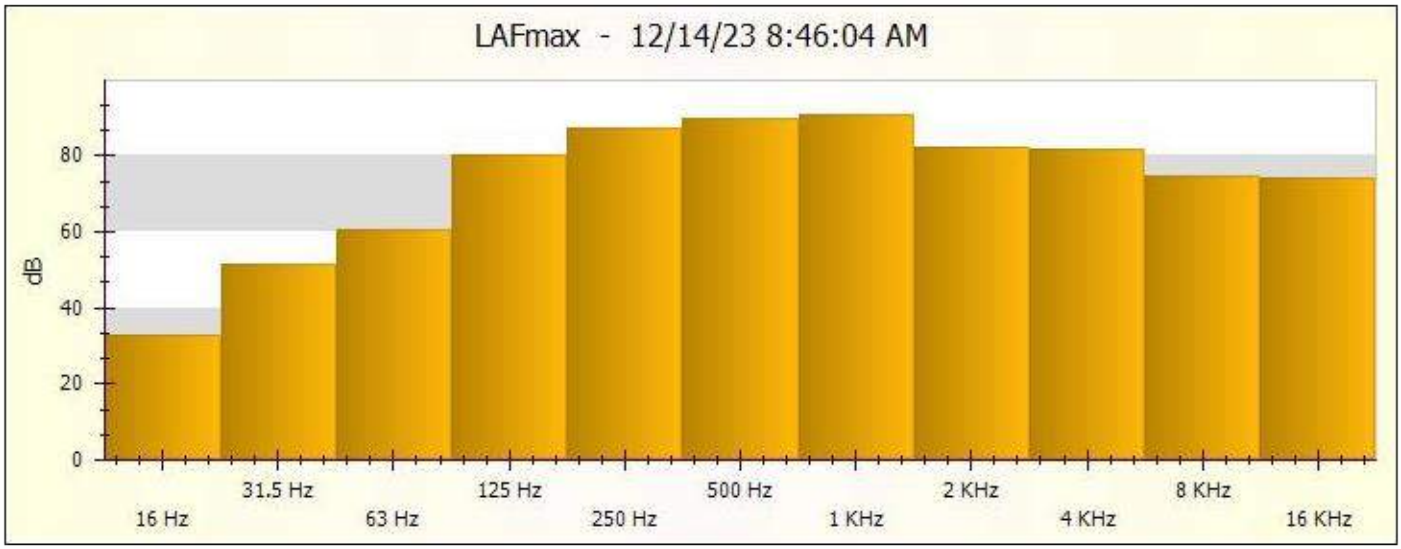




LCeq - 12/14/23 8:46:04 AM
dB
60
50
40
30
20
10
0
16 Hz
31.5 Hz
63 Hz
125 Hz
250 Hz
500 Hz
1 KHz
2 KHz
4 KHz
8 KHz
16 KHz


LAeq - 12/14/23 8:46:04 AM
dB
50
40
30
20
10
0
16 Hz
31.5 Hz
63 Hz
125 Hz
250 Hz
500 Hz
1 KHz
2 KHz
4 KHz
8 KHz
16 KHz


LZFmax - 12/14/23 8:46:04 AM
dB
100
80
60
40
20
0
16 Hz
31.5 Hz
63 Hz
125 Hz
250 Hz
500 Hz
1 KHz
2 KHz
4 KHz
8 KHz
16 KHz


LCFmax - 12/14/23 8:46:04 AM
dB
100
80
60
40
20
0
16 Hz
31.5 Hz
63 Hz
125 Hz
250 Hz
500 Hz
1 KHz
2 KHz
4 KHz
8 KHz
16 KHz


LAFmax - 12/14/23 8:46:04 AM
dB
80
60
40
20
0
16 Hz
31.5 Hz
63 Hz
125 Hz
250 Hz
500 Hz
1 KHz
2 KHz
4 KHz
8 KHz
16 KHz

Alternative C

| | |
|---|---|
| ID | a2ca9d7d-3041-445f-9f85-e401d6a6b732 |
| INSTRUMENTID | b92dbfe1-0e5b-43e9-aa6c-6f80b163cdea |
| INSTRUMENTSERIESID | aa808e62-dd1b-4564-944b-e64ff2bcf7f2 |
| INSTRUMENTMODELID | b1w60o7d-227z-4aee-2323-71d79f830677 |
| BATTERYLOW | FALSE |
| DURATIONSEC | 86400 |
| ENDDATETIME | 12/15/2023 8:46 |
| NOTES | |
| OVERLOAD | FALSE |
| PAUSEDURATIONSEC | 0 |
| RESPONSE | 0 |
| RUNNO | 4 |
| SERIALNO | 2511397 |
| STARTDATETIME | 12/14/2023 8:46 |
| CALAFTERDATE | 1/1/2001 0:00 |
| CALBEFOREDATE | 12/14/2023 8:16 |
| CALBEFOREOFFSETDB | 9.1 |
| CALBEFORESPL | 114 |
| CALDRIFTDB | 0 |
| OCTAVECOUNT | 1 |
| PROFILECOUNT | 86400 |
| LAFMAX | 94.1 |
| LAFMAXTIME | 12/14/2023 9:43 |
| LAFMIN | 29.6 |
| LAFMINTIME | 12/14/2023 1:24 |
| LAIMAX | 94.6 |
| LAIMAXTIME | 12/14/2023 9:43 |
| LAIMIN | 30.1 |
| LAIMINTIME | 12/14/2023 1:24 |
| LASMAX | 91 |
| LASMAXTIME | 12/14/2023 9:43 |
| LASMIN | 31.1 |
| LASMINTIME | 12/14/2023 2:11 |
| LCFMAX | 97.9 |
| LCFMAXTIME | 12/14/2023 15:48 |
| LCFMIN | 41.8 |
| LCFMINTIME | 12/14/2023 1:24 |
| LCIMAX | 98.5 |
| LCIMAXTIME | 12/14/2023 15:48 |
| LCIMIN | 44.2 |
| LCIMINTIME | 12/14/2023 1:24 |
| LCSMAX | 95.3 |
| LCSMAXTIME | 12/14/2023 15:48 |
| LCSMIN | 43.3 |
| LCSMINTIME | 12/14/2023 1:24 |
| LZFMAX | 98 |

| | |
|---|---|
| LZFMAXTIME | 12/14/2023 15:48 |
| LZFMIN | 45.8 |
| LZFMINTIME | 12/14/2023 1:57 |
| LZIMAX | 98.5 |
| LZIMAXTIME | 12/14/2023 15:48 |
| LZIMIN | 48.8 |
| LZIMINTIME | 12/14/2023 1:48 |
| LZSMAX | 95.4 |
| LZSMAXTIME | 12/14/2023 15:48 |
| LZSMIN | 47.3 |
| LZSMINTIME | 12/14/2023 1:24 |
| LAPK | 113.5 |
| LAPKTIME | 12/14/2023 8:52 |
| LCPK | 112.9 |
| LCPKTIME | 12/14/2023 8:52 |
| LZPK | 115.3 |
| LZPKTIME | 12/14/2023 8:52 |
| LAE | 105.1 |
| LAEQ | 55.7 |
| LAEQT80 | 47.2 |
| LAFTM3 | 59.4 |
| LAFTM5 | 60.7 |
| LAIEQ | 58.2 |
| LAITM3 | 61.2 |
| LAITM5 | 62.4 |
| LCEQ | 62.4 |
| LCEQSUBLAEQ | 6.7 |
| LEPD | 60.5 |
| LEX8H | 60.5 |
| LZEQ | 63.5 |
| LAVGQ4 | 53.9 |
| LAVGTHRESHOLD | 0 |
| TWAQ4 | 53.9 |
| LAVGQ5 | 53.1 |
| TWAQ5 | 53.1 |
| CRITERIONTIMESEC | 28800 |
| LZF10 | 66 |
| LZF50 | 58.5 |
| LZF90 | 54 |
| LZF95 | 52.5 |
| LZFVAR | 50.5 |
| LCF10 | 65 |
| LCF50 | 56 |
| LCF90 | 51.5 |
| LCF95 | 50 |
| LCFVAR | 47.5 |
| LAF10 | 57.5 |

| | | |
|---|---|---|
| LAF50 | | 50 |
| LAF90 | | 42.5 |
| LAF95 | | 41.5 |
| LAFVAR | | 39 |
| VARLN | | 99 |
| LDN | | 59.8 |
| LDEN | | 59.9 |
| CNEL | | 60.2 |
| DAYSTARTHR | | 7 |
| EVENINGSTARTHR | | 19 |
| NIGHTSTARTHR | | 23 |
| DAYPENALTY | | 0 |
| EVENINGPENALTY | | 5 |
| NIGHTPENALTY | | 10 |
| DOWNLOADSTATUS | FALSE | |
| DELETED | FALSE | |
| SITEID | Lynwood Pump | |
| LOCATIONID | Unallocated | |
| PERSONID | Unallocated | |
| PROCESSID | Unallocated | |
| RESULT | C | |
| PERIODCOUNT | | 1 |
| OVERLOADTIMESEC | | 0 |
| LEPDVAL | | 60.5 |
| LEX8HVAL | | 60.5 |
| EVENTMARKERCOUNT | | 0 |
| EVENTSUMMARYCOUNT | | 1 |
| EVENTCOUNT | | 0 |
| AUDIONOTES | FALSE | |
| CALBEFORECHANGE | | 2.5 |
| CALBEFOREPOT | | 25 |
| CALBEFOREGAIN | FALSE | |
| CALBEFOREVALIDATION | TRUE | |
| CALAFTERSPL | | 0 |
| CALAFTERCHANGE | | 0 |
| CALAFTEROFFSETDB | | 0 |
| CALAFTERPOT | | 0 |
| CALAFTERGAIN | FALSE | |
| CALAFTERVALIDATION | FALSE | |
| PERIODNOTESCOUNT | | 0 |
| PROFILENOTESCOUNT | | 0 |

Site 4 and Site 5

# Measurement Report

## Report Summary

| | | | |
|---|---|---|---|
| Meter's File Name | LxT_Data.039.s | Computer's File Name | LxT_0006386-20231214 091406-LxT_Data.039.ldbin |
| Meter | LxT1 0006386 | | |
| Firmware | 2.404 | | |
| User | | Location | |
| Job Description | | | |
| Note | | | |
| Start Time | 2023-12-14 09:14:06 | Duration | 0:15:25.8 |
| End Time | 2023-12-14 09:29:45 | Run Time | 0:15:14.7 |
| | | Pause Time | 0:00:11.1 |

## Results

### Overall Metrics

| | | | |
|---|---|---|---|
| $LA_{eq}$ | 63.4 dB | | |
| LAE | 93.0 dB | SEA | --- dB |
| EA | 221.8 µPa²h | | |
| EA8 | 7.0 mPa²h | | |
| EA40 | 34.9 mPa²h | | |
| $LAS_{peak}$ | 93.2 dB | 2023-12-14 09:22:48 | |
| $LAS_{max}$ | 77.4 dB | 2023-12-14 09:26:03 | |
| $LAS_{min}$ | 48.3 dB | 2023-12-14 09:24:51 | |
| $LA_{eq}$ | 63.4 dB | | |
| $LC_{eq}$ | 70.3 dB | $LC_{eq}$ - $LA_{eq}$ | 6.9 dB |
| $LAI_{eq}$ | 65.4 dB | $LAI_{eq}$ - $LA_{eq}$ | 2.0 dB |

### Exceedances

| | Count | Duration |
|---|---|---|
| LAS > 85.0 dB | 0 | 0:00:00.0 |
| LAS > 115.0 dB | 0 | 0:00:00.0 |
| LASpeak > 135.0 dB | 0 | 0:00:00.0 |
| LASpeak > 137.0 dB | 0 | 0:00:00.0 |
| LASpeak > 140.0 dB | 0 | 0:00:00.0 |

### Community Noise

| LDN | LDay | LNight |
|---|---|---|
| 63.4 dB | 63.4 dB | 0.0 dB |

| LDEN | LDay | LEve | LNight |
|---|---|---|---|
| 63.4 dB | 63.4 dB | --- dB | --- dB |

### Any Data

| | A | | C | | Z | |
|---|---|---|---|---|---|---|
| | Level | Time Stamp | Level | Time Stamp | Level | Time Stamp |
| $L_{eq}$ | 63.4 dB | | --- dB | | --- dB | |
| $Ls_{(max)}$ | 77.4 dB | 2023-12-14 09:26:03 | --- dB | | --- dB | |
| $LS_{(min)}$ | 48.3 dB | 2023-12-14 09:24:51 | --- dB | | --- dB | |
| $L_{Peak(max)}$ | 93.2 dB | 2023-12-14 09:22:48 | --- dB | | --- dB | |

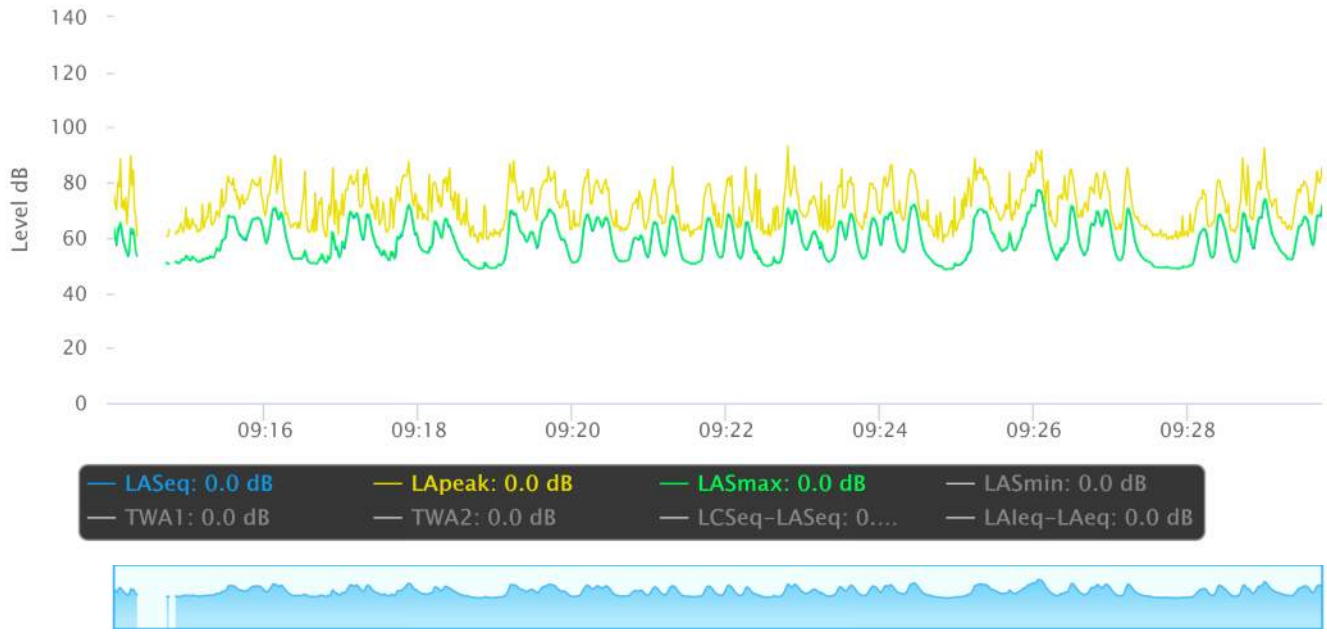
### Overloads

| Count | Duration |
|---|---|
| 0 | 0:00:00.0 |

### Statistics

| | |
|---|---|
| LAS 5.0 | 69.3 dB |
| LAS 10.0 | 67.8 dB |
| LAS 33.3 | 61.7 dB |
| LAS 50.0 | 57.6 dB |
| LAS 66.6 | 53.8 dB |
| LAS 90.0 | 50.5 dB |

## Time History



**Construction Noise Calculations - Alternative A (Site 1)**

| Construction Phase | Equipment Type[1] | USDOT Equipment Type[2] | No. Equipment[1] | Acoustical Usage Factor[2] | Maximum Noise Level @ 50 feet (Lmax)[3] | Typical Noise Level @ 50 feet ($dBA_1$) | Reference Distance ($D_1$) | Distance to Receptor ($D_2$) | Ground Absorption Constant (G) | Noise Level at Receptor ($dBA_2$) | Two Noisiest Equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unit: | % | dBA Lmax | dBA Leq | feet | feet | unitless | dBA Leq | dBA Leq |
| Existing Pump Station Removal | Excavators | Excavator | 1 | 40 | 85 | 81 | 50 | 42 | 0 | 83 | 85 |
| | Air Compressors | Compressor (air) | 1 | 40 | 80 | 76 | 50 | 42 | 0 | 78 | |
| | Plate Compactors | Compactor (ground) | 1 | 20 | 82 | 75 | 50 | 42 | 0 | 77 | |
| | Generator Sets | Generator (<25 KVA, VMS Signs) | 1 | 50 | 82 | 79 | 50 | 42 | 0 | 81 | |
| | Pumps | Pumps | 1 | 50 | 77 | 74 | 50 | 42 | 0 | 76 | |
| Pavement Removal for New Pipe | Excavators | Excavator | 2 | 40 | 85 | 81 | 50 | 40 | 0 | 83 | 86 |
| Trench Excavation and Pipe Construction | Excavators | Excavator | 1 | 40 | 85 | 81 | 50 | 40 | 0 | 83 | 84 |
| | Pumps | Pumps | 1 | 50 | 77 | 74 | 50 | 40 | 0 | 76 | |
| | Welders | Welder/Torch | 1 | 40 | 73 | 69 | 50 | 40 | 0 | 71 | |
| | Plate Compactors | Compactor (ground) | 1 | 20 | 82 | 75 | 50 | 40 | 0 | 77 | |
| Asphalt Pavement of Road | Off-Highway Trucks | Dump Truck | 2 | 40 | 84 | 80 | 50 | 40 | 0 | 82 | 86 |
| | Pavers | Paver | 1 | 50 | 85 | 82 | 50 | 40 | 0 | 84 | |
| | Rollers | Roller | 1 | 20 | 85 | 78 | 50 | 40 | 0 | 80 | |
| New Pump Station Construction | Air Compressors | Compressor (air) | 1 | 40 | 80 | 76 | 50 | 40 | 0 | 78 | 83 |
| | Dumpers/Tenders | Backhoe | 1 | 40 | 80 | 76 | 50 | 40 | 0 | 78 | |
| | Plate Compactors | Compactor (ground) | 1 | 20 | 82 | 75 | 50 | 40 | 0 | 77 | |
| | Aerial Lifts | Man Lift | 1 | 20 | 85 | 78 | 50 | 40 | 0 | 80 | |
| | Generator Sets | Generator (<25 KVA, VMS Signs) | 1 | 50 | 82 | 79 | 50 | 40 | 0 | 81 | |
| | Pumps | Pumps | 1 | 50 | 77 | 74 | 50 | 40 | 0 | 76 | |
| | Cement Pump Truck | Concrete Pump Truck | 1 | 20 | 82 | 75 | 50 | 40 | 0 | 77 | |

Notes: Distance to recepor ($D_2$) was determined based on the nearest noise senstive receptor for each construction phase.

Noise level at the receptor calculated based on the following equation:[4]

$dBA_2 = dBA_1 + 10 * \log_{10}(D_1/D_2)^{2+G}$

Where:

$dBA_2$ = Noise level at receptor

$dBA_1$ = Noise level at reference distance

$D_1$ = Reference distance

$D_2$ = Receptor distance

G = Ground absorption constant (0 for hard surface, 0.5 for soft surface)

Combined noise levels at receptor calculated for two noisiest equipment using decibel addition:

$L = 10 * \log_{10} (10^{(L_1/10)}+10^{(L_2/10)})$

L = Combined noise level

$L_1$ = Noise level for first noisiest piece of equipment

$L_2$ = Noise level for second noisiest piece of equipment

[1] The type of construction equipment is based on construction equipment list provided by the applicant.

[2] U.S. Department of Transportation, 2006. FHWA Highway Construction Noise Handbook, Table 9.1. August.

[3] Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment Manual, Table 7-1. September.

[4] California Department of Transportation, 1998. Technical Noise Supplement (TeNS). Equation N-2141.2. October.

**Construction Noise Calculations - Alternative B (Site 2)**

| Construction Phase | Equipment Type[1] | USDOT Equipment Type[2] | No. Equipment[1] | Acoustical Usage Factor[2] | Maximum Noise Level @ 50 feet (Lmax)[3] | Typical Noise Level @ 50 feet ($dBA_1$) | Reference Distance ($D_1$) | Distance to Receptor ($D_2$) | Ground Absorption Constant (G) | Noise Level at Receptor ($dBA_2$) | Two Noisiest Equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unit: | % | dBA Lmax | dBA Leq | feet | feet | unitless | dBA Leq | dBA Leq |
| Existing Pump Station Removal | Excavators | Excavator | 1 | 40 | 85 | 81 | 50 | 42 | 0 | 83 | 85 |
| | Air Compressors | Compressor (air) | 1 | 40 | 80 | 76 | 50 | 42 | 0 | 78 | |
| | Plate Compactors | Compactor (ground) | 1 | 20 | 82 | 75 | 50 | 42 | 0 | 77 | |
| | Generator Sets | Generator (<25 KVA, VMS Signs) | 1 | 50 | 82 | 79 | 50 | 42 | 0 | 81 | |
| | Pumps | Pumps | 1 | 50 | 77 | 74 | 50 | 42 | 0 | 76 | |
| Pavement Removal for New Pipe | Excavators | Excavator | 2 | 40 | 85 | 81 | 50 | 45 | 0 | 82 | 85 |
| Trench Excavation and Pipe Construction | Excavators | Excavator | 1 | 40 | 85 | 81 | 50 | 45 | 0 | 82 | 83 |
| | Pumps | Pumps | 1 | 50 | 77 | 74 | 50 | 45 | 0 | 75 | |
| | Welders | Welder/Torch | 1 | 40 | 73 | 69 | 50 | 45 | 0 | 70 | |
| | Plate Compactors | Compactor (ground) | 1 | 20 | 82 | 75 | 50 | 45 | 0 | 76 | |
| Asphalt Pavement of Road | Off-Highway Trucks | Dump Truck | 2 | 40 | 84 | 80 | 50 | 45 | 0 | 81 | 85 |
| | Pavers | Paver | 1 | 50 | 85 | 82 | 50 | 45 | 0 | 83 | |
| | Rollers | Roller | 1 | 20 | 85 | 78 | 50 | 45 | 0 | 79 | |
| New Pump Station Construction | Air Compressors | Compressor (air) | 1 | 40 | 80 | 76 | 50 | 140 | 0 | 67 | 73 |
| | Dumpers/Tenders | Backhoe | 1 | 40 | 80 | 76 | 50 | 140 | 0 | 67 | |
| | Plate Compactors | Compactor (ground) | 1 | 20 | 82 | 75 | 50 | 140 | 0 | 66 | |
| | Aerial Lifts | Man Lift | 1 | 20 | 85 | 78 | 50 | 140 | 0 | 69 | |
| | Generator Sets | Generator (<25 KVA, VMS Signs) | 1 | 50 | 82 | 79 | 50 | 140 | 0 | 70 | |
| | Pumps | Pumps | 1 | 50 | 77 | 74 | 50 | 140 | 0 | 65 | |
| | Cement Pump Truck | Concrete Pump Truck | 1 | 20 | 82 | 75 | 50 | 140 | 0 | 66 | |

Notes: Distance to recepor ($D_2$) was determined based on the nearest noise senstive receptor for each construction phase.

Noise level at the receptor calculated based on the following equation:[4]

$dBA_2 = dBA_1 + 10 * \log_{10}(D_1/D_2)^{2+G}$

Where:

$dBA_2$ = Noise level at receptor

$dBA_1$ = Noise level at reference distance

$D_1$ = Reference distance

$D_2$ = Receptor distance

G = Ground absorption constant (0 for hard surface, 0.5 for soft surface)

Combined noise levels at receptor calculated for two noisiest equipment using decibel addition:

$L = 10 * \log_{10} (10^{(L_1/10)}+10^{(L_2/10)})$

L = Combined noise level

$L_1$ = Noise level for first noisiest piece of equipment

$L_2$ = Noise level for second noisiest piece of equipment

[1] The type of construction equipment is based on construction equipment list provided by the applicant.

[2] U.S. Department of Transportation, 2006. FHWA Highway Construction Noise Handbook, Table 9.1. August.

[3] Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment Manual, Table 7-1. September.

[4] California Department of Transportation, 1998. Technical Noise Supplement (TeNS). Equation N-2141.2. October.

**Construction Noise Calculations - Alternative C (Site 3)**

| Construction Phase | Equipment Type[1] | USDOT Equipment Type[2] | No. Equipment[1] | Acoustical Usage Factor[2] | Maximum Noise Level @ 50 feet (Lmax)[3] | Typical Noise Level @ 50 feet ($dBA_1$) | Reference Distance ($D_1$) | Distance to Receptor ($D_2$) | Ground Absorption Constant (G) | Noise Level at Receptor ($dBA_2$) | Two Noisiest Equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unit: | % | dBA Lmax | dBA Leq | feet | feet | unitless | dBA Leq | dBA Leq |
| Existing Pump Station Removal | Excavators | Excavator | 1 | 40 | 85 | 81 | 50 | 42 | 0 | 83 | 85 |
| | Air Compressors | Compressor (air) | 1 | 40 | 80 | 76 | 50 | 42 | 0 | 78 | |
| | Plate Compactors | Compactor (ground) | 1 | 20 | 82 | 75 | 50 | 42 | 0 | 77 | |
| | Generator Sets | Generator (<25 KVA, VMS Signs) | 1 | 50 | 82 | 79 | 50 | 42 | 0 | 81 | |
| | Pumps | Pumps | 1 | 50 | 77 | 74 | 50 | 42 | 0 | 76 | |
| Pavement Removal for New Pipe | Excavators | Excavator | 2 | 40 | 85 | 81 | 50 | 40 | 0 | 83 | 86 |
| Trench Excavation and Pipe Construction | Excavators | Excavator | 1 | 40 | 85 | 81 | 50 | 40 | 0 | 83 | 84 |
| | Pumps | Pumps | 1 | 50 | 77 | 74 | 50 | 40 | 0 | 76 | |
| | Welders | Welder/Torch | 1 | 40 | 73 | 69 | 50 | 40 | 0 | 71 | |
| | Plate Compactors | Compactor (ground) | 1 | 20 | 82 | 75 | 50 | 40 | 0 | 77 | |
| Asphalt Pavement of Road | Off-Highway Trucks | Dump Truck | 2 | 40 | 84 | 80 | 50 | 40 | 0 | 82 | 86 |
| | Pavers | Paver | 1 | 50 | 85 | 82 | 50 | 40 | 0 | 84 | |
| | Rollers | Roller | 1 | 20 | 85 | 78 | 50 | 40 | 0 | 80 | |
| New Pump Station Construction | Air Compressors | Compressor (air) | 1 | 40 | 80 | 76 | 50 | 95 | 0 | 70 | 76 |
| | Dumpers/Tenders | Backhoe | 1 | 40 | 80 | 76 | 50 | 95 | 0 | 70 | |
| | Plate Compactors | Compactor (ground) | 1 | 20 | 82 | 75 | 50 | 95 | 0 | 69 | |
| | Aerial Lifts | Man Lift | 1 | 20 | 85 | 78 | 50 | 95 | 0 | 72 | |
| | Generator Sets | Generator (<25 KVA, VMS Signs) | 1 | 50 | 82 | 79 | 50 | 95 | 0 | 73 | |
| | Pumps | Pumps | 1 | 50 | 77 | 74 | 50 | 95 | 0 | 68 | |
| | Cement Pump Truck | Concrete Pump Truck | 1 | 20 | 82 | 75 | 50 | 95 | 0 | 69 | |

Notes: Distance to recepor ($D_2$) was determined based on the nearest noise senstive receptor for each construction phase.

Noise level at the receptor calculated based on the following equation:[4]

$dBA_2 = dBA_1 + 10 * \log_{10}(D_1/D_2)^{2+G}$

Where:

$dBA_2$ = Noise level at receptor

$dBA_1$ = Noise level at reference distance

$D_1$ = Reference distance

$D_2$ = Receptor distance

G = Ground absorption constant (0 for hard surface, 0.5 for soft surface)

Combined noise levels at receptor calculated for two noisiest equipment using decibel addition:

$L = 10 * \log_{10} (10^{(L_1/10)}+10^{(L_2/10)})$

L = Combined noise level

$L_1$ = Noise level for first noisiest piece of equipment

$L_2$ = Noise level for second noisiest piece of equipment

[1] The type of construction equipment is based on construction equipment list provided by the applicant.

[2] U.S. Department of Transportation, 2006. FHWA Highway Construction Noise Handbook, Table 9.1. August.

[3] Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment Manual, Table 7-1. September.

[4] California Department of Transportation, 1998. Technical Noise Supplement (TeNS). Equation N-2141.2. October.

**Construction Noise Calculations - Alternative D (Site 4)**

| Construction Phase | Equipment Type[1] | USDOT Equipment Type[2] | No. Equipment[1] | Acoustical Usage Factor[2] | Maximum Noise Level @ 50 feet (Lmax)[3] | Typical Noise Level @ 50 feet ($dBA_1$) | Reference Distance ($D_1$) | Distance to Receptor ($D_2$) | Ground Absorption Constant (G) | Noise Level at Receptor ($dBA_2$) | Two Noisiest Equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unit: | % | dBA Lmax | dBA Leq | feet | feet | unitless | dBA Leq | dBA Leq |
| Existing Pump Station Removal | Excavators | Excavator | 1 | 40 | 85 | 81 | 50 | 42 | 0 | 83 | 85 |
| | Air Compressors | Compressor (air) | 1 | 40 | 80 | 76 | 50 | 42 | 0 | 78 | |
| | Plate Compactors | Compactor (ground) | 1 | 20 | 82 | 75 | 50 | 42 | 0 | 77 | |
| | Generator Sets | Generator (<25 KVA, VMS Signs) | 1 | 50 | 82 | 79 | 50 | 42 | 0 | 81 | |
| | Pumps | Pumps | 1 | 50 | 77 | 74 | 50 | 42 | 0 | 76 | |
| Pavement Removal for New Pipe | Excavators | Excavator | 2 | 40 | 85 | 81 | 50 | 50 | 0 | 81 | 84 |
| Trench Excavation and Pipe Construction | Excavators | Excavator | 1 | 40 | 85 | 81 | 50 | 50 | 0 | 81 | 82 |
| | Pumps | Pumps | 1 | 50 | 77 | 74 | 50 | 50 | 0 | 74 | |
| | Welders | Welder/Torch | 1 | 40 | 73 | 69 | 50 | 50 | 0 | 69 | |
| | Plate Compactors | Compactor (ground) | 1 | 20 | 82 | 75 | 50 | 50 | 0 | 75 | |
| Asphalt Pavement of Road | Off-Highway Trucks | Dump Truck | 2 | 40 | 84 | 80 | 50 | 50 | 0 | 80 | 84 |
| | Pavers | Paver | 1 | 50 | 85 | 82 | 50 | 50 | 0 | 82 | |
| | Rollers | Roller | 1 | 20 | 85 | 78 | 50 | 50 | 0 | 78 | |
| New Pump Station Construction | Air Compressors | Compressor (air) | 1 | 40 | 80 | 76 | 50 | 155 | 0 | 66 | 72 |
| | Dumpers/Tenders | Backhoe | 1 | 40 | 80 | 76 | 50 | 155 | 0 | 66 | |
| | Plate Compactors | Compactor (ground) | 1 | 20 | 82 | 75 | 50 | 155 | 0 | 65 | |
| | Aerial Lifts | Man Lift | 1 | 20 | 85 | 78 | 50 | 155 | 0 | 68 | |
| | Generator Sets | Generator (<25 KVA, VMS Signs) | 1 | 50 | 82 | 79 | 50 | 155 | 0 | 69 | |
| | Pumps | Pumps | 1 | 50 | 77 | 74 | 50 | 155 | 0 | 64 | |
| | Cement Pump Truck | Concrete Pump Truck | 1 | 20 | 82 | 75 | 50 | 155 | 0 | 65 | |

Notes: Distance to recepor ($D_2$) was determined based on the nearest noise senstive receptor for each construction phase.

Noise level at the receptor calculated based on the following equation:[4]

$dBA_2 = dBA_1 + 10 * \log_{10}(D_1/D_2)^{2+G}$

Where:

$dBA_2$ = Noise level at receptor

$dBA_1$ = Noise level at reference distance

$D_1$ = Reference distance

$D_2$ = Receptor distance

G = Ground absorption constant (0 for hard surface, 0.5 for soft surface)

Combined noise levels at receptor calculated for two noisiest equipment using decibel addition:

$L = 10 * \log_{10} (10^{(L_1/10)}+10^{(L_2/10)})$

L = Combined noise level

$L_1$ = Noise level for first noisiest piece of equipment

$L_2$ = Noise level for second noisiest piece of equipment

[1] The type of construction equipment is based on construction equipment list provided by the applicant.

[2] U.S. Department of Transportation, 2006. FHWA Highway Construction Noise Handbook, Table 9.1. August.

[3] Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment Manual, Table 7-1. September.

[4] California Department of Transportation, 1998. Technical Noise Supplement (TeNS). Equation N-2141.2. October.

**Construction Noise Calculations - Alternative E (Site 5)**

| Construction Phase | Equipment Type[1] | USDOT Equipment Type[2] | No. Equipment[1] | Acoustical Usage Factor[2] | Maximum Noise Level @ 50 feet (Lmax)[3] | Typical Noise Level @ 50 feet ($dBA_1$) | Reference Distance ($D_1$) | Distance to Receptor ($D_2$) | Ground Absorption Constant (G) | Noise Level at Receptor ($dBA_2$) | Two Noisiest Equipment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unit: | % | dBA Lmax | dBA Leq | feet | feet | unitless | dBA Leq | dBA Leq |
| Existing Pump Station Removal | Excavators | Excavator | 1 | 40 | 85 | 81 | 50 | 42 | 0 | 83 | 85 |
| | Air Compressors | Compressor (air) | 1 | 40 | 80 | 76 | 50 | 42 | 0 | 78 | |
| | Plate Compactors | Compactor (ground) | 1 | 20 | 82 | 75 | 50 | 42 | 0 | 77 | |
| | Generator Sets | Generator (<25 KVA, VMS Signs) | 1 | 50 | 82 | 79 | 50 | 42 | 0 | 81 | |
| | Pumps | Pumps | 1 | 50 | 77 | 74 | 50 | 42 | 0 | 76 | |
| Pavement Removal for New Pipe | Excavators | Excavator | 2 | 40 | 85 | 81 | 50 | 105 | 0 | 75 | 78 |
| Trench Excavation and Pipe Construction | Excavators | Excavator | 1 | 40 | 85 | 81 | 50 | 105 | 0 | 75 | 76 |
| | Pumps | Pumps | 1 | 50 | 77 | 74 | 50 | 105 | 0 | 68 | |
| | Welders | Welder/Torch | 1 | 40 | 73 | 69 | 50 | 105 | 0 | 63 | |
| | Plate Compactors | Compactor (ground) | 1 | 20 | 82 | 75 | 50 | 105 | 0 | 69 | |
| Asphalt Pavement of Road | Off-Highway Trucks | Dump Truck | 2 | 40 | 84 | 80 | 50 | 105 | 0 | 74 | 78 |
| | Pavers | Paver | 1 | 50 | 85 | 82 | 50 | 105 | 0 | 76 | |
| | Rollers | Roller | 1 | 20 | 85 | 78 | 50 | 105 | 0 | 72 | |
| New Pump Station Construction | Air Compressors | Compressor (air) | 1 | 40 | 80 | 76 | 50 | 105 | 0 | 70 | 75 |
| | Dumpers/Tenders | Backhoe | 1 | 40 | 80 | 76 | 50 | 105 | 0 | 70 | |
| | Plate Compactors | Compactor (ground) | 1 | 20 | 82 | 75 | 50 | 105 | 0 | 69 | |
| | Aerial Lifts | Man Lift | 1 | 20 | 85 | 78 | 50 | 105 | 0 | 72 | |
| | Generator Sets | Generator (<25 KVA, VMS Signs) | 1 | 50 | 82 | 79 | 50 | 105 | 0 | 73 | |
| | Pumps | Pumps | 1 | 50 | 77 | 74 | 50 | 105 | 0 | 68 | |
| | Cement Pump Truck | Concrete Pump Truck | 1 | 20 | 82 | 75 | 50 | 105 | 0 | 69 | |

Notes: Distance to recepor ($D_2$) was determined based on the nearest noise senstive receptor for each construction phase.

Noise level at the receptor calculated based on the following equation:[4]

$dBA_2 = dBA_1 + 10 * \log_{10}(D_1/D_2)^{2+G}$

Where:

$dBA_2$ = Noise level at receptor

$dBA_1$ = Noise level at reference distance

$D_1$ = Reference distance

$D_2$ = Receptor distance

G = Ground absorption constant (0 for hard surface, 0.5 for soft surface)

Combined noise levels at receptor calculated for two noisiest equipment using decibel addition:

$L = 10 * \log_{10} (10^{(L_1/10)}+10^{(L_2/10)})$

L = Combined noise level

$L_1$ = Noise level for first noisiest piece of equipment

$L_2$ = Noise level for second noisiest piece of equipment

[1] The type of construction equipment is based on construction equipment list provided by the applicant.

[2] U.S. Department of Transportation, 2006. FHWA Highway Construction Noise Handbook, Table 9.1. August.

[3] Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment Manual, Table 7-1. September.

[4] California Department of Transportation, 1998. Technical Noise Supplement (TeNS). Equation N-2141.2. October.

## Operational Noise - Pump Station

| Site ID | No. Pumps | Pump Speed [1] | Pump Motor Power[1] | Estimated Noise Level per Pump @ 3.3 feet ($dB_1$) | Reference Distance ($D_1$) | Combined Noise Levels @ 3.3 feet | Distance to Receptor ($D_2$) | Ground Absorption Constant (G) | Noise Level at Receptor ($dB_2$) | Noise Reduction due to Building Structure | Adjusted Noise Level at Receptor ($dB_2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit: | (rpm) | (kW) | (dB) | (feet) | (dB) | (feet) | unitless | (dB) | (dB) | (dB) |
| Site 1 | 4 | 1800 | 93.2 | 94.3 | 3.3 | 100.3 | 40 | 0 | 79 | 20 | 59 |
| Site 2 | 4 | | | | | 100.3 | 140 | 0 | 68 | | 48 |
| Site 3 | 2 | | | | | 97.3 | 95 | 0 | 71 | | 51 |
| Site 4 | 2 | | | | | 97.3 | 155 | 0 | 67 | | 47 |
| Site 5 | 2 | | | | | 97.3 | 105 | 0 | 70 | | 50 |

Notes: Distance to recepor ($D_2$) was determined based on the nearest noise senstive receptor for each alternative site location.

Noise level (dB) at 3.3 feet(1 meter) from the pump calculated based on the following equation:[2]

$dB1 = C + 3\log10(kW)$

Where:

dB1 = Noise level at 3.3 feet (1 meter) from the pump

kW = Pump drive motor nameplate power

C = Constant. C is equal to 88.4 for pumps above 75 kW with 1600-1800 rpm

Combined noise levels calculated using decibel addition:

$L = 10 * \log_{10} (10^{(L_1/10)}+\ldots+10^{(L_n/10)})$

Where:

L = Combined noise level

$L_1$ = Noise level for source 1

$L_n$ = Noise level for source n

Noise level at the receptor calculated based on the following equation:[3]

$dB_2 = dB_1 + 10 * \log_{10}(D_1/D_2)^{2+G}$

Where:

$dB_2$ = Noise level at receptor

$dB_1$ = Noise level at reference distance

$D_1$ = Reference distance

$D_2$ = Receptor distance

G = Ground absorption constant (0 for hard surface, 0.5 for soft surface)

[1] Pump specifications were obtained Lynwood Pump Station Replacement Project Conceptual Drawing Page M6 dated 01/17/2023

[2] David A. Bies, Colin H. Hansen, Carl Q. Howard, and Kristy L. Hansen. Engineering Noise Control, Sixth Edition. Published August 8, 2023

[3] California Department of Transportation, 1998. Technical Noise Supplement (TeNS). Equation N-2141.2. October.

## Construction Vibration Calculations for Potential Disturbance

| Equipment[1] | Typical Vibration Level @ 25 Feet[2] ($RMS_1$) | Annoyance Vibration Threshold ($RMS_2$) | Reference Distance ($D_1$) | Buffer Distance to Annoyance Threshold ($D_2$) |
|---|---|---|---|---|
| Unit | VdB | VdB | feet | feet |
| Vibratory Roller | 94 | 83 | 25 | 58 |
| Loaded trucks | 86 | 83 | 25 | 31 |

Notes:

Buffer distance to vibration threshold for human annoyance calculated based on the following equation:[3]

$D_2 = D_1 * 10^{((RMS_1 - RMS_2) / 30)}$

Where:

$RMS_1$ = Vibration level at reference distance

$RMS_2$ = Vibration threshold for human disturbance

$D_1$ = Reference distance

$D_2$ = Buffer distance to vibration threshold for human annoyance

## Construction Vibration Calculations for Potential Building Damage

| Equipment[1] | Typical Vibration Level @ 25 Feet[2] ($PPV_1$) | Building Damage Vibration Threshold ($PPV_2$) | Reference Distance ($D_1$) | Buffer Distance to Damage Threshold ($D_2$) |
|---|---|---|---|---|
| Unit | in/sec | in/sec | feet | feet |
| Vibratory Roller (FTA, underfined tonnage) | 0.210 | 0.3 | 25 | 20 |
| Loaded trucks | 0.076 | 0.3 | 25 | 10 |

Notes:

Buffer distance to vibration threshold for building damage calculated based on the following equation:[3]

$D_2 = (PPV_1 / PPV_2)^{(1 / 1.5)} * D_1$

Where:

$PPV_1$ = Vibration level at reference distance

$PPV_2$ = Vibration threshold for building damage

$D_1$ = Reference distance

$D_2$ = Buffer distance to vibration threshold for building damage

[1] Project-specific construction list provided by the project applicant. Only equipment that generates substantial vibration is shown. for the project. Only equipment that generates substantial vibration is shown.

[2] Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment Manual, Table 7-4. September.

[3] Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment Manual, Equations 7-2 and 7-3. September.