

**Alternative 1: East Side Small Gated Notch
Fugitive Dust Emissions - Material Handling (Truck Loading/Unloading)**

Equation (AP-42, Chapter 13.2.4):

$$E = k(0.0032) \frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}}$$

where:

- E = emission factor, pound per ton
- k = particle size multiplier
- U = mean wind speed, miles per hour
- M = material moisture content, %

Average Wind Speed 8.59 mph

Source: MesoWest, Station KSMF (Sacramento International Airport), 2015 data. Site accessed October 27, 2016. mesowest.utah.edu.

k values

PM10 0.35
PM2.5 0.053

Material Moisture Content (%)

Spoils 12 Source: CalEEMod 2016.3.1 User's Guide; default values
Limestone 2.1 Source: AP-42, Table 13.2.4-1; various limestone products
Demolition 2 Source: CalEEMod 2016.3.1 User's Guide; default values

Table K-118. Material Handling Emissions (Alternative 1)

| Activity | Total Daily | | Total Daily | | Type | PM10 EF, PM2.5 EF, | | PM10, PM2.5, | | PM10, PM2.5, | |
|---------------------------------------|-------------------|----------------------|--------------------|-----------------------|------------|--------------------|----------|--------------|------------|--------------|-------------|
| | Output, cy/day | Quantity, cy/year | Output, ton/day | Quantity, ton/year | | lb/ton | lb/ton | lbs/day | lbs/day | tpy | tpy |
| 02 - Relocations | | | | | | | | | | | |
| Fremont Weir Demo | 40 | 450 | 50 | 563 | Demolition | 2.26E-03 | 3.43E-04 | 0.1 | 0.0 | 0.00 | 0.00 |
| 09 - Channels and Canals | | | | | | | | | | | |
| Excavation/Grading (Dry Conditions) | 3,500 | 118,960 | 4,375 | 148,700 | Spoils | 1.84E-04 | 2.79E-05 | 0.6 | 0.1 | 0.01 | 0.00 |
| Earthen Backfill | 1,000 | 8,950 | 1,250 | 11,188 | Spoils | 1.84E-04 | 2.79E-05 | 0.2 | 0.0 | 0.00 | 0.00 |
| Riprap - Class 2 | n/a | n/a | 1,000 | 8,950 | Limestone | 2.11E-03 | 3.20E-04 | 1.6 | 0.2 | 0.01 | 0.00 |
| Riprap - Class 3 | n/a | n/a | 1,000 | 24,940 | Limestone | 2.11E-03 | 3.20E-04 | 1.6 | 0.2 | 0.02 | 0.00 |
| RSP Bedding Material | n/a | n/a | 1,000 | 9,420 | Limestone | 2.11E-03 | 3.20E-04 | 1.6 | 0.2 | 0.01 | 0.00 |
| 09 - Channels and Canals Total | 4,500 | 127,910 | 8,625 | 203,198 | | | | 5.8 | 0.9 | 0.05 | 0.01 |

Source: HDR. 2016. Draft Technical Memorandum: Constructability and Construction Considerations. Yolo Bypass Salmonid Habitat Restoration & Fish Passage Project - 10% Design. August 31.

Appendix K1
Air Quality Emission Calculations

Note:

Emissions assume that standard construction practice of watering is used.

Fremont weir demolition emissions assume that there is an additional "drop" from the mechanical dismemberment of the structure; method is consistent with CalEEMod 2016.3.1.

No emissions assumed to occur with wet excavation activities because spoils would be waterlogged.

Density

1.25 tons per cubic yard

Note: CalEEMod assumes haul trucks can handle 20 tons or 16 cy.

Number of Drops

2 drops per truck *(one drop at borrow site and one drop at dam site)*

Dust Control

61% reduction from watering at least 3 times per day

Source: CalEEMod

Conversion

2,000 pounds per ton

**Alternative 1: East Side Small Gated Notch
Fugitive Dust Emissions - Grading**

Equations (AP-42, Chapter 11.9):

$$TSP = 0.040(5)^{2.5} \quad \text{and} \quad PM_{10} = 0.051(5)^{2.0}$$

where:

S = mean vehicle speed, miles per hour

Scaling Factors

PM10 0.60 (multiply the 15-micron equation by this fraction to determine emissions)
PM2.5 0.031 (multiply the TSP equation by this fraction to determine emissions)

Emission Factors

PM10 1.54 lb/VMT
PM2.5 0.17 lb/VMT

Mileage Calculation (CalEEMod 2016.3.1 User's Guide, Appendix A):

$$VMT = As/Wb \times 43,560 \left(\frac{sqft}{acre} \right) / S, 280 \left(\frac{ft}{mile} \right)$$

Table K-119. Maximum Daily Disturbed Area

| Equipment Type | Acres/8hr-day |
|---------------------|---------------|
| Crawler Tractors | 0.5 |
| Graders | 0.5 |
| Rubber Tired Dozers | 0.5 |
| Scrapers | 1 |

Table K-120. Grading Emissions (Alternative 1)

| Activity | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Crew/ Equipment Quantity | Estimated Duration, Days | Graded Acres per Day | Total Graded Area (As) | VMT per year | PM10, lb/day | PM2.5, lb/day | PM10, tpy | PM2.5, tpy |
|------------------------------------|---------------------------------------------------|------------------|-----------------------------|--------------------------|--------------------------|----------------------|------------------------|--------------|--------------|---------------|--------------|----------------|
| 02 - Relocations | | | | | | | | | | | | |
| Levee O&M Road Regrading (6" AB) | 12' Blade Grader | Graders | 1 | 1 | 4 | 0.5 | 2.0 | 1.4 | 0.207 | 0.022 | 0.00041 | 0.00004 |
| | 4000 gallon Water Truck | n/a - onroad | 1 | 1 | 4 | -- | -- | -- | -- | -- | -- | -- |
| | Pickup Truck Conventional | n/a - onroad | 1 | 1 | 4 | -- | -- | -- | -- | -- | -- | -- |
| | 16 CY 3 Axle Dump Truck | n/a - onroad | 5 | 1 | 4 | -- | -- | -- | -- | -- | -- | -- |
| | Levee O&M Road Regrading (6" AB) Total | | | | | | 0.5 | 2.0 | 1.4 | 0.207 | 0.022 | 0.00041 |
| 09 - Channels and Canals | | | | | | | | | | | | |
| Clearing and Grubbing | 1.5 CY Front End Loader Crawler | Crawler Tractors | 1 | 2 | 16 | 1.0 | 16.0 | 11.0 | 0.4 | 0.0 | 0.0 | 0.0 |
| | Trailer Mounted Brush Chipper | Shredders | 1 | 2 | 16 | -- | -- | -- | -- | -- | -- | -- |
| | Chainsaw | Chainsaws | 1 | 2 | 16 | -- | -- | -- | -- | -- | -- | -- |
| | 4000 gallon Water Truck | n/a - onroad | 1 | 2 | 16 | -- | -- | -- | -- | -- | -- | -- |
| | Pickup Truck Conventional | n/a - onroad | 6 | 2 | 16 | -- | -- | -- | -- | -- | -- | -- |
| | 16 CY 3 Axle Dump Truck | n/a - onroad | 1 | 2 | 16 | -- | -- | -- | -- | -- | -- | -- |
| Clearing and Grubbing Total | | | | | | 1.0 | 16.0 | 11.0 | 0.4 | 0.0 | 0.0 | 0.0 |

Table K-120. Grading Emissions (Alternative 1)

| Activity | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Crew/ Equipment Quantity | Estimated Duration, Days | Graded Acres per Day | Total Graded Area (As) | VMT per year | PM10, lb/day | PM2.5, lb/day | PM10, tpy | PM2.5, tpy |
|--------------------------------------------------|----------------------------------------------------------|--------------------------|-----------------------------|--------------------------|--------------------------|----------------------|------------------------|--------------|--------------|---------------|------------|------------|
| Excavation/Grading (Dry Conditions) | 300 HP Dozer | Rubber Tired Dozers | 1 | 1 | 34 | 0.5 | 17.0 | 11.7 | 0.2 | 0.0 | 0.0 | 0.0 |
| | 21 CY Scrapers | Scrapers | 4 | 1 | 34 | 4.0 | 136.0 | 93.5 | 1.7 | 0.2 | 0.0 | 0.0 |
| | 12' Blade Grader | Graders | 1 | 1 | 34 | 0.5 | 17.0 | 11.7 | 0.2 | 0.0 | 0.0 | 0.0 |
| | 4000 gallon Water Truck | n/a - onroad | 1 | 1 | 34 | -- | -- | -- | -- | -- | -- | -- |
| | Pickup Truck Conventional | n/a - onroad | 7 | 1 | 34 | -- | -- | -- | -- | -- | -- | -- |
| Excavation/Grading (Dry Conditions) Total | | | | | | 5.0 | 170.0 | 116.9 | 2.1 | 0.2 | 0.0 | 0.0 |
| Earthen Backfill | 300 HP Dozer | Rubber Tired Dozers | 1 | 1 | 9 | 0.5 | 4.5 | 3.1 | 0.2 | 0.0 | 0.0 | 0.0 |
| | 4000 gallon Water Truck | n/a - onroad | 1 | 1 | 9 | -- | -- | -- | -- | -- | -- | -- |
| | 10 TN Smooth Roller | Rollers | 1 | 1 | 9 | -- | -- | -- | -- | -- | -- | -- |
| | Pickup Truck Conventional | n/a - onroad | 3 | 1 | 9 | -- | -- | -- | -- | -- | -- | -- |
| Earthen Backfill Total | | | | | | 0.5 | 4.5 | 3.1 | 0.2 | 0.0 | 0.0 | 0.0 |
| 11 - Levees and Floodwalls | | | | | | | | | | | | |
| Soil Cement Bentonite Cutoff Wall | 4.5 CY Hydraulic Excavator | Excavators | 1 | 1 | 13 | -- | -- | -- | -- | -- | -- | -- |
| | 300 HP Dozer | Rubber Tired Dozers | 1 | 1 | 13 | 0.5 | 6.5 | 4.5 | 0.2 | 0.0 | 0.0 | 0.0 |
| | 2.5 CY Hydraulic Excavator | Excavators | 1 | 1 | 13 | -- | -- | -- | -- | -- | -- | -- |
| | 16 CY 3 Axle Dump Truck | n/a - onroad | 1 | 1 | 13 | -- | -- | -- | -- | -- | -- | -- |
| | Flash Mixer | Cement and Mortar Mixers | 1 | 1 | 13 | -- | -- | -- | -- | -- | -- | -- |
| | Slurry Pump | Pumps | 1 | 1 | 13 | -- | -- | -- | -- | -- | -- | -- |
| | Pickup Truck Conventional | n/a - onroad | 5 | 1 | 13 | -- | -- | -- | -- | -- | -- | -- |
| Soil Cement Bentonite Cutoff Wall Total | | | | | | 0.5 | 6.5 | 4.5 | 0.2 | 0.0 | 0.0 | 0.0 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | |
| CMU Building and Earthwork Pad Constructi | 165 HP Dozer | Rubber Tired Dozers | 1 | 1 | 30 | 0.5 | 15.0 | 10.3 | 0.2 | 0.0 | 0.0 | 0.0 |
| | Scraper | Scrapers | 1 | 1 | 30 | 1.0 | 30.0 | 20.6 | 0.4 | 0.0 | 0.0 | 0.0 |
| | Motor Grader | Graders | 1 | 1 | 30 | 0.5 | 15.0 | 10.3 | 0.2 | 0.0 | 0.0 | 0.0 |
| | Compactor | Rollers | 1 | 1 | 30 | -- | -- | -- | -- | -- | -- | -- |
| | 4000 gallon Water Truck | n/a - onroad | 1 | 1 | 30 | -- | -- | -- | -- | -- | -- | -- |
| | 10 TN Smooth Roller | Rollers | 1 | 1 | 30 | -- | -- | -- | -- | -- | -- | -- |
| | Pickup Truck Conventional | n/a - onroad | 7 | 1 | 30 | -- | -- | -- | -- | -- | -- | -- |
| | Concrete Pump Boom Truck Mounted | Pumps | 1 | 1 | 30 | -- | -- | -- | -- | -- | -- | -- |
| | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 1 | 30 | -- | -- | -- | -- | -- | -- | -- |
| | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 1 | 30 | -- | -- | -- | -- | -- | -- | -- |
| | Concrete Mixer Truck | n/a - onroad | 1 | 1 | 30 | -- | -- | -- | -- | -- | -- | -- |
| | CMU Building and Earthwork Pad Construction Total | | | | | | 2.0 | 60.0 | 41.3 | 0.8 | 0.1 | 0.0 |

Blade Width

12 feet

Scraper Speed

7.1 mph (AP-42 default)

Conversions

43,560 square feet per acre
5,280 feet per mile
2,000 pounds per ton

Levee O&M Road Regrading (6" AB)
Clearing and Grubbing

Excavation/Grading (Dry Conditions)

CMU Building and Earthwork Pad Construction

Dust Control

61% reduction from watering at least 3 times per day
Source: CalEEMod

**Alternative 1: East Side Small Gated Notch
Fugitive Dust Emissions - Bulldozing**

Equations (AP-42, Chapter 11.9):

$$TSP = \frac{S.7(s)^{1.2}}{M^{1.3}} \quad \text{and} \quad PM1S = \frac{1.0(s)^{1.5}}{M^{1.4}}$$

where:

s = silt content 6.9 % (AP-42, Table 11.9-3, Overburden)
M = material moisture content 7.9 % (AP-42, Table 11.9-3, Overburden)

Scaling Factors

PM10 0.75 (multiply the 15-micron equation by this fraction to determine emissions)
PM2.5 0.105 (multiply the TSP equation by this fraction to determine emissions)

Emission Factors

PM10 0.75 lb/hr
PM2.5 0.41 lb/hr

Table K-121. Bulldozing Emissions (Alternative 1)

| Activity | Crew / Equipment | Equipment Quantity per Crew | Crew/ Equipment Quantity | Estimated Duration, Days | PM10, lb/day | PM2.5, lb/day | PM10, tpy | PM2.5, tpy |
|-----------------------------------------------|------------------|-----------------------------|--------------------------|--------------------------|--------------|---------------|-----------|------------|
| 09 - Channels and Canals | | | | | | | | |
| Excavation/Grading (Dry Conditions) | 300 HP Dozer | 1 | 1 | 34 | 2.35 | 1.29 | 0.04 | 0.02 |
| Earthen Backfill | 300 HP Dozer | 1 | 1 | 9 | 2.35 | 1.29 | 0.01 | 0.01 |
| 11 - Levees and Floodwalls | | | | | | | | |
| Soil Cement Bentonite Cutoff Wall | 300 HP Dozer | 1 | 1 | 13 | 2.35 | 1.29 | 0.02 | 0.01 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | |
| CMU Building and Earthwork Pad Construct | 165 HP Dozer | 1 | 1 | 30 | 2.35 | 1.29 | 0.04 | 0.02 |

Operating Schedule

8 hr/day

Conversion

2,000 pounds per ton

Dust Control

61% reduction from watering at least 3 times per day

Source: CalEEMod

**Alternative 1: East Side Small Gated Notch
Fugitive Dust Emissions - Unpaved Road Dust (Haul Roads)**

Equation (AP-42, Chapter 13.2.2):

$$E = k (s/12)^a (W/3)^b$$

where:

- E = size-specific emission factor (lb/VMT)
- s = surface material silt content (%)
- W = mean vehicle weight (tons)

Variables

| | |
|-----------|---------------------------|
| k (PM10) | 1.5 |
| k (PM2.5) | 0.15 |
| a | 0.9 |
| b | 0.45 |
| s, % | 4.3 (CalEEMod default) |
| W, tons | 180 loaded 74 unloaded |

Table K-122. Unpaved Road Dust Emission Factors (lb/VMT)

| Weight | PM10 | PM2.5 |
|----------|------|-------|
| Loaded | 3.76 | 0.38 |
| Unloaded | 2.52 | 0.25 |
| Average | 3.14 | 0.31 |

Table K-123. Unpaved Road Dust Emissions (Alternative 1)

| Activity | Total Daily Output | Total Quantity | Unit | Estimated Duration, Days | VMT per Day | VMT per Year | PM10, lb/day | PM2.5, lb/day | PM10, tpy | PM2.5, tpy |
|-------------------------------------------------------|--------------------|----------------|------|--------------------------|-------------|--------------|--------------|---------------|-----------|------------|
| 09 - Channels and Canals | | | | | | | | | | |
| Excavation (Wet Conditions) | 1,800 | 61,810 | CY | 35 | 92 | 3,092 | 112.7 | 11.3 | 1.9 | 0.2 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | |
| Excavation (Wet Conditions) | 1,800 | 6,130 | CY | 4 | 92 | 308 | 112.7 | 11.3 | 0.2 | 0.02 |

Notes:

Assumes payload of each truck is 100 tons.

Half of truck trips will be loaded and other half will be unloaded.

Only includes materials that will be transported to spoil site by dump trucks.

Distance to borrow area

2 miles (spoils site located within a 1-mile radius of the project access point(s); average of 1 mile travel distance from point of excavation)

Density

1.25 tons/cy

Note: CalEEMod assumes haul trucks can handle 20 tons or 16 cy.

Dust Control

61% reduction from watering at least 3 times per day

Source: CalEEMod

Mitigated Offroad Exhaust Emissions Summary

Table K-124. Maximum Daily Mitigated Offroad Construction Equipment Emissions (Alternative 1)

| Phase | ROG lbs/day | NOx lbs/day | CO lbs/day | SO2 lbs/day | PM10 lbs/day | PM2.5 lbs/day |
|------------------------------------------------------|----------------|----------------|---------------|----------------|-----------------|------------------|
| 02 - Relocations | 0.60 | 13.08 | 13.94 | 0.05 | 0.21 | 0.10 |
| 09 - Channels and Canals | 21.53 | 164.94 | 70.20 | 0.42 | 2.31 | 6.12 |
| 11 - Levees and Floodwalls | 0.72 | 5.20 | 16.10 | 0.07 | 0.18 | 3.84 |
| 15 - Floodway Control and Diversion Structures | 2.46 | 25.06 | 42.00 | 0.16 | 0.95 | 0.51 |
| 08 - Roads, Railroads, and Bridges | 1.06 | 7.95 | 21.15 | 0.10 | 0.32 | 0.19 |
| 19 - Buildings, Grounds, and Utilities | 1.30 | 11.64 | 34.58 | 0.11 | 0.46 | 0.26 |
| 20 -Permanent Operating Equipment | 0.46 | 2.23 | 10.60 | 0.03 | 0.22 | 1.27 |
| Peak Day Construction Exhaust Emissions Total | 23.20 | 179.64 | 110.17 | 0.55 | 3.02 | 6.42 |
| <i>Percent Reduction (Compared to Unmitigated)</i> | <i>-13%</i> | <i>-31%</i> | <i>-14%</i> | <i>-2%</i> | <i>-59%</i> | <i>0%</i> |

Notes:

Construction total will not add to the sum of each phase because not all tasks overlap on the same day.

Table K-125. Annual Mitigated Offroad Construction Equipment Emissions (Alternative 1)

| Phase | ROG tpy | NOx tpy | CO tpy | SO2 tpy | PM10 tpy | PM2.5 tpy | CO2e MT/yr |
|----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|-----------------|
| 02 - Relocations | 0.00 | 0.06 | 0.10 | 0.00 | 0.00 | 0.00 | 39.60 |
| 09 - Channels and Canals | 0.32 | 2.65 | 2.37 | 0.01 | 0.05 | 0.05 | 1,196.70 |
| 11 - Levees and Floodwalls | 0.01 | 0.04 | 0.11 | 0.00 | 0.00 | 0.04 | 46.71 |
| 15 - Floodway Control and Diversion Structures | 0.05 | 0.43 | 0.86 | 0.00 | 0.02 | 0.01 | 351.13 |
| 08 - Roads, Railroads, and Bridges | 0.00 | 0.02 | 0.04 | 0.00 | 0.00 | 0.00 | 16.38 |
| 19 - Buildings, Grounds, and Utilities | 0.01 | 0.12 | 0.45 | 0.00 | 0.00 | 0.00 | 132.51 |
| 20 -Permanent Operating Equipment | 0.01 | 0.04 | 0.16 | 0.00 | 0.00 | 0.00 | 44.78 |
| Annual Construction Exhaust Emissions Total | 0.40 | 3.36 | 4.09 | 0.02 | 0.08 | 0.11 | 1,827.82 |
| <i>Percent Reduction (Compared to Unmitigated)</i> | <i>-40%</i> | <i>-53%</i> | <i>-13%</i> | <i>-1%</i> | <i>-68%</i> | <i>-43%</i> | <i>-2%</i> |

Notes:

Total may not add exactly because of rounding.

Table K-126. ROG Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|---------------------------------|-------------------------------------|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------|-------------------|--------------|--------------------|--------------------------|-----------------------------------------------------------|-------------------------------------------------------|
| 02 - Relocations | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 2.0565 0.0255 1.3847 0.0000 | g/hr g/hp-hr g/hr g/hr |
| | | | | | | | | | | | | Mobilization and Demobilization Subtotal | |
| 2 | Fremont Weir Demo | 450 | CY | 3.5 CY Hydraulic Excavator 3.5 CY Front End Loader Wheel 0.8 CY Loader/Backhoe, Wheel 4000 gallon Water Truck 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Loaders Tractors/Loaders/Backhoes n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 1 6 | 359 164 97 MHDT HHDT LDT2 | 40 | 1 | 40 | 12 | 0.0226 0.0280 0.0311 2.0565 5.1968 1.3847 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr |
| | | | | | | | | | | | | Fremont Weir Demo Subtotal | |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Graders n/a - onroad n/a - onroad n/a - onroad | 1 1 1 5 | 187 MHDT LDT2 HHDT | 39,400 | 1 | 39,400 | 4 | 0.0246 2.0565 1.3847 5.1968 | g/hp-hr g/hr g/hr g/hr |
| | | | | | | | | | | | | Levee O&M Road Regrading (6" AB) Subtotal | |
| 4 | Temporary Electrical Power | 100 | LF | Flatbed Truck Pickup Truck Conventional | n/a - onroad n/a - onroad | 1 2 | MHDT LDT2 | 1,500 | 1 | 1,500 | 1 | 2.0565 1.3847 | g/hr g/hr |
| | | | | | | | | | | | | Temporary Electrical Power Subtotal | |
| | | | | | | | | | | | | 02 - Relocations Total | |
| 09 - Channels and Canals | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 2.0565 0.0255 1.3847 0.0000 | g/hr g/hp-hr g/hr g/hr |
| | | | | | | | | | | | | Mobilization and Demobilization Subtotal | |
| 6 | Clearing and Grubbing | 61 | ACR | 1.5 CY Front End Loader Crawler Trailer Mounted Brush Chipper Chainsaw 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Crawler Tractors Shredders Chainsaws n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 6 1 | 110 140 8 MHDT LDT2 HHDT | 2 | 2 | 4 | 16 | 0.0337 0.0754 72.5633 2.0565 1.3847 5.1968 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr |
| | | | | | | | | | | | | Clearing and Grubbing Subtotal | |
| 7 | Excavation (Wet Conditions) | 61,810 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 35 | 0.0226 0.0304 0.0280 5.1968 1.3847 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| | | | | | | | | | | | | Excavation (Wet Conditions) Subtotal | |
| 8 | Excavation/Grading (Dry Conditions) | 118,960 | CY | 300 HP Dozer 21 CY Scrapers 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional | Rubber Tired Dozers Scrapers Graders n/a - onroad n/a - onroad | 1 4 1 1 7 | 300 407 187 MHDT LDT2 | 3,500 | 1 | 3,500 | 34 | 0.0304 0.0282 0.0246 2.0565 1.3847 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| | | | | | | | | | | | | Excavation/Grading (Dry Conditions) Subtotal | |
| 9 | Earthen Backfill | 8,950 | CY | 300 HP Dozer 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional | Rubber Tired Dozers n/a - onroad Rollers n/a - onroad | 1 1 1 3 | 300 MHDT 157 LDT2 | 1,000 | 1 | 1,000 | 9 | 0.0304 2.0565 0.0178 1.3847 | g/hp-hr g/hr g/hp-hr g/hr |
| | | | | | | | | | | | | Earthen Backfill Subtotal | |

Table K-126. ROG Exhaust Emissions from Offroad Co

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------------------------------|----------------------------------------|-----------------------------------------------|------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | 0.04 -- 0.05 -- 0.02 -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- |
| | | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2 | Fremont Weir Demo | -- | 0.14 0.08 0.05 0.04 0.09 0.15 | 0.14 -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | |
| | | -- | 0.55 | 0.55 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 4 | Temporary Electrical Power | 0.04 -- 0.05 -- 0.09 | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | -- -- -- -- -- | |
| | | 0.19 | 0.55 | 0.55 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | 0.04 -- 0.05 -- 0.02 -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- | 0.04 -- 0.05 -- 0.02 -- -- -- | |
| | | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.11 | |
| 6 | Clearing and Grubbing | -- | 0.13 0.37 20.48 0.07 0.29 0.18 | 0.13 -- -- -- -- -- -- -- -- -- -- -- | 0.13 -- -- -- -- -- -- -- -- -- -- -- | 0.13 -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | -- -- -- -- -- -- -- -- -- -- -- -- | |
| | | -- | 21.53 | 21.53 | 21.53 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | -- | -- | -- | -- | -- | -- | -- | |
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| | | -- | -- | -- | -- | -- | 1.65 | 1.65 | 1.65 | 1.65 | 1.65 | 1.65 | 1.65 | -- | -- | -- | -- | -- | -- | -- | |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 1.26 | 1.26 | 1.26 | 1.26 | 1.26 | 1.26 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9 | Earthen Backfill | -- | -- | -- | -- | 0.16 | 0.16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.07 | 0.07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.32 | 0.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |

Table K-126. ROG Exhaust Emissions from Offroad Co

| # | Activity | | | | | | | | | Annual Emissions, tpy |
|---------------------------------|-------------------------------------|-------|-------|--------|--------|--------|-------------|-------------|---------------|-----------------------|
| | | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.04 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.05 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.11 | 0.0001 | |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0009 | |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0033 | |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | 0.08 | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.04 | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.46 | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | 0.60 | -- | 0.0012 | |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 | |
| | | -- | -- | -- | -- | -- | -- | 0.60 | 0.11 | 0.0047 |
| 09 - Channels and Canals | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 | |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | -- | 0.0010 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0030 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.1638 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0023 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0015 | |
| | | -- | -- | -- | -- | -- | -- | -- | 0.1722 | |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | 0.0030 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0056 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0028 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0144 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0030 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0289 | |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | 0.0027 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0138 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0014 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0029 | |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0214 | |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0014 | |

Table K-126. ROG Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------------|-------------------|--------------|--------------------|--------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|
| 10 | Riprap - Class 2 | 24,940 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 1 | 1,000 | 25 | 0.0226 0.0241 5.1968 1.3847 | g/hp-hr g/hp-hr g/hr g/hr |
| Riprap - Class 2 Subtotal | | | | | | | | | | | | | |
| 11 | Riprap - Class 3 | 9,420 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 1 | 1,000 | 10 | 0.0226 0.0241 5.1968 1.3847 | g/hp-hr g/hp-hr g/hr g/hr |
| Riprap - Class 3 Subtotal | | | | | | | | | | | | | |
| 12 | RSP Bedding Material | 36,150 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 5 23 | 257 300 LDT2 HHDT | 1,000 | 2 | 2,000 | 19 | 0.0226 0.0241 1.3847 5.1968 | g/hp-hr g/hp-hr g/hr g/hr |
| RSP Bedding Material Subtotal | | | | | | | | | | | | | |
| 13 | Erosion Control Seeding | 31 | ACR | 0.8 CY Front End Loader Wheel Pickup Truck Conventional | Tractors/Loaders/Backhoes n/a - onroad | 1 4 | 97 LDT2 | 2 | 1 | 2 | 16 | 0.0311 1.3847 | g/hp-hr g/hr |
| Erosion Control Seeding Subtotal | | | | | | | | | | | | | |
| 09 - Channels and Canals Total | | | | | | | | | | | | | |
| 11 - Levees and Floodwalls | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 2.0565 0.0255 1.3847 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 15 | Soil Cement Bentonite Cutoff Wall | 84,480 | SF | 4.5 CY Hydraulic Excavator 300 HP Dozer 2.5 CY Hydraulic Excavator 16 CY 3 Axle Dump Truck Flash Mixer Slurry Pump Pickup Truck Conventional | Excavators Rubber Tired Dozers Excavators n/a - onroad Cement and Mortar Mixers Pumps n/a - onroad | 1 1 1 1 1 1 5 | 429 300 257 HHDT 9 84 LDT2 | 7,000 | 1 | 7,000 | 13 | 0.0226 0.0304 0.0226 5.1968 0.3702 0.0818 1.3847 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr |
| Soil Cement Bentonite Cutoff Wall Subtotal | | | | | | | | | | | | | |
| 11 - Levees and Floodwalls Total | | | | | | | | | | | | | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 2.0565 0.0255 1.3847 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | 21,000 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 18 | 2.0565 0.0266 1.3847 | g/hr g/hp-hr g/hr |
| Construction Site Dewatering (Temporary Cofferdam) Subtotal | | | | | | | | | | | | | |
| 18 | Construction Site Dewatering (Pumping) | - | - | 6" Dia. Pump Engine Drive Pickup Truck Conventional | Pumps n/a - onroad | 1 3 | 84 LDT2 | - | 1 | 1 | 120 | 0.0818 1.3847 | g/hp-hr g/hr |
| Construction Site Dewatering (Pumping) Subtotal | | | | | | | | | | | | | |
| 19 | Excavation (Wet Conditions) | 6,130 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 4 | 0.0226 0.0304 0.0280 5.1968 1.3847 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | |

Table K-126. ROG Exhaust Emissions from Offroad Co

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------|----------------------------------------------------|----------------------------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | -- | -- |
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| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 | -- | -- |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 | 0.20 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.13 | 0.13 | -- | -- |
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| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.56 | 2.56 | -- | -- |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.41 | 0.41 | 0.41 | 0.41 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.25 | 0.25 | 0.25 | 0.25 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.24 | 0.24 | 0.24 | 0.24 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.22 | 4.22 | 4.22 | 4.22 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.12 | 5.12 | 5.12 | 5.12 | -- | -- | -- | -- |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.11 | 21.53 | 21.53 | 21.53 | 1.26 | 1.58 | 3.23 | 2.91 | 2.91 | 2.91 | 1.65 | 1.65 | 5.12 | 7.69 | 7.69 | 7.69 | 5.12 | 5.12 | 0.11 | -- |
| 11 - Levees and Floodwalls | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.05 | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- |
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| | | -- | -- | -- | -- | -- | -- | -- | 0.04 | 0.07 | 0.07 | 0.07 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 | Soil Cement Bentonite Cutoff Wall | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.17 | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.16 | 0.16 | 0.16 | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 | 0.09 | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.12 | -- | -- | -- | -- | -- | -- | 0.65 | 0.65 | 0.65 | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.12 | -- | -- | -- | -- | 0.04 | 0.72 | 0.72 | 0.72 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | -- | -- | -- | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.10 | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.15 | 0.15 | 0.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.29 | 0.29 | 0.29 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18 | Construction Site Dewatering (Pumping) | -- | -- | -- | -- | -- | -- | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 |
| | | -- | -- | -- | -- | -- | -- | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| | | -- | -- | -- | -- | -- | -- | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 |
| 19 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.82 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 1.65 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-126. ROG Exhaust Emissions from Offroad Co

| # | Activity | Date | | | | | | | | Annual Emissions, tpy |
|-------------------------------------------------------|----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-----------------------|
| | | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0026 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0264 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0015 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0320 | |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0010 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0105 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0128 | |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | 0.0039 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0024 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0023 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0401 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0487 | |
| 13 | Erosion Control Seeding | -- | 0.05 | 0.05 | 0.05 | -- | -- | -- | -- | 0.0004 |
| | | -- | 0.10 | 0.10 | 0.10 | -- | -- | -- | -- | 0.0008 |
| | | -- | 0.15 | 0.15 | 0.15 | -- | -- | -- | -- | 0.0012 |
| | | -- | 0.15 | 0.15 | 0.15 | -- | -- | -- | 0.3188 | |
| 11 - Levees and Floodwalls | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 | |
| 15 | Soil Cement Bentonite Cutoff Wall | -- | -- | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0010 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.12 | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | 0.12 | 0.0054 | |
| | | -- | -- | -- | -- | -- | -- | 0.12 | 0.0055 | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | |
| 16 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.04 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.05 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.11 | 0.0001 | |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0026 | |
| 18 | Construction Site Dewatering (Pumping) | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | -- | -- | 0.0073 |
| | | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | 0.0044 |
| | | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | -- | -- | 0.0117 |
| 19 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0033 | |

Table K-126. ROG Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|-------------------|--------------|--------------------|--------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|
| 20 | Sheet Pile Wall | 7,790 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 7 | 2.0565 0.0266 1.3847 | g/hr g/hp-hr g/hr |
| Sheet Pile Wall Subtotal | | | | | | | | | | | | | |
| 21 | Headworks Structure Concrete Piles | 5,040 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 28 | 0.0158 0.0266 0.0818 2.0565 0.0311 0.0352 1.3847 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr |
| Headworks Structure Concrete Piles Subtotal | | | | | | | | | | | | | |
| 22 | Headworks Structure | 3,080 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 3 | 180 | 18 | 0.0818 0.2845 2.0565 1.3847 | g/hp-hr g/hp-hr g/hr g/hr |
| Headworks Structure Subtotal | | | | | | | | | | | | | |
| 23 | Headworks Channel Transition | 1,330 | CY | 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Plate Compactors n/a - onroad n/a - onroad | 1 2 6 | 8 MHDT LDT2 | 70 | 2 | 140 | 10 | 0.2845 2.0565 1.3847 | g/hp-hr g/hr g/hr |
| Headworks Channel Transition Subtotal | | | | | | | | | | | | | |
| 24 | Hinged Bottom Gates | 3 | EA | 90 TN Truck-mounted Hydraulic Crane Haul Truck Oversize Transport Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 1 4 | 450 HHDT LDT2 | 0.2 | 1 | 0.2 | 15 | 0.0158 5.1968 1.3847 | g/hp-hr g/hr g/hr |
| Hinged Bottom Gates Subtotal | | | | | | | | | | | | | |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | | | | | | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 2.0565 0.0255 1.3847 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 26 | Pedestrian Bridge Concrete Piles | 320 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 2 | 0.0158 0.0266 0.0818 2.0565 0.0311 0.0352 1.3847 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr |
| Pedestrian Bridge Concrete Piles Subtotal | | | | | | | | | | | | | |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | 24 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 1 | 0.0818 0.2845 2.0565 1.3847 | g/hp-hr g/hp-hr g/hr g/hr |
| Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | | | | | | | | | | | | | |
| 28 | Pedestrian Bridge Span Installation | 1,040 | SF | 90 TN Truck-mounted Hydraulic Crane Flatbed Truck Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 2 5 | 450 MHDT LDT2 | 390 | 1 | 390 | 3 | 0.0158 2.0565 1.3847 | g/hp-hr g/hr g/hr |
| Pedestrian Bridge Span Installation Subtotal | | | | | | | | | | | | | |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | | | | | | |

Table K-126. ROG Exhaust Emissions from Offroad Co

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------|----------------------------------------------------|----------------------------------|--------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug |
| 20 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | 0.15 | 0.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | 0.29 | 0.29 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 21 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | -- | -- | -- | -- | -- | -- | -- | |
| 22 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.36 | 0.36 | -- | -- | -- | -- | 0.36 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.12 | 0.12 | -- | -- | -- | -- | 0.12 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.22 | 0.22 | -- | -- | -- | -- | 0.22 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.51 | 0.51 | -- | -- | -- | -- | 0.51 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.21 | 1.21 | -- | -- | -- | -- | 1.21 | -- | |
| 23 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.08 | 0.08 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.15 | 0.15 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.29 | 0.29 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.52 | 0.52 | -- | -- | -- | -- | |
| 24 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | 0.11 | 0.29 | 0.29 | 0.29 | 1.84 | 1.54 | 1.54 | 1.25 | 1.25 | 2.46 | 1.41 | 0.19 | 0.71 | 0.71 | 0.19 | 1.41 | 0.19 | 0.19 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | 0.04 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.05 | -- | -- | -- | 0.05 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | 0.02 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.11 | -- | -- | -- | 0.11 | -- | |
| 26 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.08 | -- | -- | -- | 0.08 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 | -- | -- | -- | 0.10 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.12 | -- | -- | -- | 0.12 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.11 | -- | -- | -- | 0.11 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.05 | -- | -- | -- | 0.05 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.39 | -- | -- | -- | 0.39 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 | -- | -- | -- | 0.20 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.06 | -- | -- | -- | 1.06 | -- | |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.12 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.07 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.17 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.40 | -- | -- | -- | 0.40 | -- | |
| 28 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.13 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.07 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.12 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.32 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.11 | 1.06 | 0.40 | 0.32 | 0.11 | -- | -- |

Table K-126. ROG Exhaust Emissions from Offroad Co

| # | Activity | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions, tpy |
|-------------------------------------------|----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|---------------|-----------------------|
| | | | | | | | | | | |
| 20 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0010 |
| 21 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | 0.0012 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0015 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0017 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0015 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0055 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0027 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0148 | |
| 22 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | 0.0033 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0020 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0046 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0109 | |
| 23 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0015 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0026 | |
| 24 | Hinged Bottom Gates | -- | 0.13 | 0.13 | 0.13 | 0.13 | -- | -- | -- | 0.0009 |
| | | -- | 0.09 | 0.09 | 0.09 | 0.09 | -- | -- | -- | 0.0007 |
| | | -- | 0.10 | 0.10 | 0.10 | 0.10 | -- | -- | -- | 0.0007 |
| -- | -- | 0.31 | 0.31 | 0.31 | 0.31 | -- | -- | -- | 0.0024 | |
| -- | 0.19 | 0.51 | 0.51 | 0.51 | 0.51 | 0.19 | 0.11 | -- | 0.0493 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | |
| 25 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 26 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0011 | |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 | |
| 28 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0018 | |

Table K-126. ROG Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|-----------------------------------------------|---------------------------------------------|----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------|-------------------|--------------|--------------------|--------------------------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 2.0565 0.0255 1.3847 0.0000 | g/hr g/hp-hr g/hr g/hr |
| | | | | | | | | | | | | Mobilization and Demobilization Subtotal | |
| 30 | CMU Building and Earthwork Pad Construction | 1 | EA | 165 HP Dozer Scraper Motor Grader Compactor 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Extended Boom Pallet Loader Concrete Mixer Truck | Rubber Tired Dozers Scrapers Graders Rollers n/a - onroad Rollers n/a - onroad Pumps Plate Compactors Rough Terrain Forklifts n/a - onroad | 1 1 1 1 1 1 7 1 1 1 1 | 165 367 187 80 MHDT 157 LDT2 84 8 100 MHDT | - | 1 | 1 | 30 | 0.0328 0.0282 0.0246 0.0259 2.0565 0.0178 1.3847 0.0818 0.2845 0.0255 2.0565 | g/hp-hr g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hp-hr g/hp-hr g/hr |
| | | | | | | | | | | | | CMU Building and Earthwork Pad Construction Subtotal | |
| 31 | Concrete Duct Banc | 190 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 4 | 0.0818 0.2845 2.0565 1.3847 | g/hp-hr g/hp-hr g/hr g/hr |
| | | | | | | | | | | | | Concrete Duct Banc Subtotal | |
| | | | | | | | | | | | | 19 - Buildings, Grounds, and Utilities Total | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 2.0565 0.0255 1.3847 0.0000 | g/hr g/hp-hr g/hr g/hr |
| | | | | | | | | | | | | Mobilization and Demobilization Subtotal | |
| 33 | Mechanical Hydraulic Cylinders & Housing | - | - | Extended Boom Pallet Loader Pickup Truck Conventional | Rough Terrain Forklifts n/a - onroad | 1 3 | 100 LDT2 | - | 1 | 1 | 30 | 0.0255 1.3847 | g/hp-hr g/hr |
| | | | | | | | | | | | | Mechanical Hydraulic Cylinders & Housing Subtotal | |
| 34 | CMU Building Mechanical Equipment | - | - | Extended Boom Pallet Loader Pickup Truck Conventional | Rough Terrain Forklifts n/a - onroad | 1 3 | 100 LDT2 | - | 1 | 1 | 30 | 0.0255 1.3847 | g/hp-hr g/hr |
| | | | | | | | | | | | | CMU Building Mechanical Equipment Subtotal | |
| 35 | Electrical Control Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 1.3847 | g/hr |
| | | | | | | | | | | | | Electrical Control Equipment CMU Building Subtotal | |
| 36 | Electrical Power Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 1.3847 | g/hr |
| | | | | | | | | | | | | Electrical Power Equipment CMU Building Subtotal | |
| 37 | Communication Equipment | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 12 | 1.3847 | g/hr |
| | | | | | | | | | | | | Communication Equipment Subtotal | |
| | | | | | | | | | | | | 20 -Permanent Operating Equipment Total | |
| GRAND TOTAL | | | | | | | | | | | | | |

Table K-126. ROG Exhaust Emissions from Offroad Co

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------|---------------------------------------------|----------------------------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | 0.04 | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.05 | -- | -- | -- | -- | -- | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.02 | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.11 | -- | -- | -- | -- | -- | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30 | CMU Building and Earthwork Pad Construction | -- | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31 | Concrete Duct Banc | -- | -- | -- | -- | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.40 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.11 | 0.90 | 0.90 | 0.90 | 1.30 | 0.90 | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 33 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 35 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 36 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 37 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| GRAND TOTAL | | 0.40 | 22.98 | 23.20 | 22.71 | 2.85 | 2.76 | 5.18 | 4.48 | 5.16 | 4.88 | 3.62 | 4.15 | 6.53 | 7.99 | 9.46 | 8.80 | 5.64 | 6.64 | 0.30 | 0.19 |

Table K-126. ROG Exhaust Emissions from Offroad Co

| # | Activity | | | | | | | | | Annual Emissions, tpy | |
|-----------------------------------------------|---------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|---------------|
| | | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 30 | CMU Building and Earthwork Pad Construction | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0014 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0027 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0012 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0026 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0018 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0134 |
| 31 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0143 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | 0.04 | -- | -- | -- | -- | -- | 0.04 | -- | -- | 0.0000 |
| | | 0.05 | -- | -- | -- | -- | -- | 0.05 | -- | -- | 0.0000 |
| | | 0.02 | -- | -- | -- | -- | -- | 0.02 | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.11 | -- | -- | -- | -- | -- | 0.11 | -- | -- | 0.0001 |
| 33 | Mechanical Hydraulic Cylinders & Housing | -- | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | 0.0007 |
| | | -- | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | 0.0011 |
| | | -- | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | -- | -- | 0.0018 |
| 34 | CMU Building Mechanical Equipment | -- | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | 0.0007 |
| | | -- | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | 0.0011 |
| | | -- | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | -- | -- | 0.0018 |
| 35 | Electrical Control Equipment CMU Building | -- | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | 0.0011 |
| | | -- | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | 0.0011 |
| 36 | Electrical Power Equipment CMU Building | -- | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | 0.0011 |
| | | -- | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | 0.0011 |
| 37 | Communication Equipment | -- | -- | -- | -- | 0.07 | 0.07 | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | 0.07 | 0.07 | -- | -- | -- | 0.0004 |
| | | 0.11 | 0.38 | 0.38 | 0.38 | 0.46 | 0.46 | 0.11 | -- | -- | 0.0063 |
| GRAND TOTAL | | 0.30 | 1.04 | 1.04 | 1.04 | 0.97 | 0.65 | 0.93 | 0.11 | -- | 0.4007 |

Table K-127. NOx Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|---------------------------------|-------------------------------------|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------|-------------------|--------------|--------------------|--------------------------|-------------------------------------------------------------|-------------------------------------------------------|----------------------------------|
| 02 - Relocations | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 62.8403 0.5411 1.2324 0.0000 | g/hr g/hp-hr g/hr g/hr | 1.11 0.95 0.02 -- |
| | | | | | | | | | | | | | Mobilization and Demobilization Subtotal | 2.08 |
| 2 | Fremont Weir Demo | 450 | CY | 3.5 CY Hydraulic Excavator 3.5 CY Front End Loader Wheel 0.8 CY Loader/Backhoe, Wheel 4000 gallon Water Truck 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Loaders Tractors/Loaders/Backhoes n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 1 6 | 359 164 97 MHDT HHDT LDT2 | 40 | 1 | 40 | 12 | 0.1016 0.0989 0.5090 62.8403 131.5280 1.2324 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr | -- -- -- -- -- -- |
| | | | | | | | | | | | | | Fremont Weir Demo Subtotal | -- |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Graders n/a - onroad n/a - onroad n/a - onroad | 1 1 1 5 | 187 MHDT LDT2 HHDT | 39,400 | 1 | 39,400 | 4 | 0.1067 62.8403 1.2324 131.5280 | g/hp-hr g/hr g/hr g/hr | -- -- -- -- |
| | | | | | | | | | | | | | Levee O&M Road Regrading (6" AB) Subtotal | -- |
| 4 | Temporary Electrical Power | 100 | LF | Flatbed Truck Pickup Truck Conventional | n/a - onroad n/a - onroad | 1 2 | MHDT LDT2 | 1,500 | 1 | 1,500 | 1 | 62.8403 1.2324 | g/hr g/hr | 1.11 0.04 |
| | | | | | | | | | | | | | Temporary Electrical Power Subtotal | 1.15 |
| | | | | | | | | | | | | | 02 - Relocations Total | 3.24 |
| 09 - Channels and Canals | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 62.8403 0.5411 1.2324 0.0000 | g/hr g/hp-hr g/hr g/hr | 1.11 0.95 0.02 -- |
| | | | | | | | | | | | | | Mobilization and Demobilization Subtotal | 2.08 |
| 6 | Clearing and Grubbing | 61 | ACR | 1.5 CY Front End Loader Crawler Trailer Mounted Brush Chipper Chainsaw 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Crawler Tractors Shredders Chainsaws n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 6 1 | 110 140 8 MHDT LDT2 HHDT | 2 | 2 | 4 | 16 | 0.5867 0.7727 1.2873 62.8403 1.2324 131.5280 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr | -- -- -- -- -- -- |
| | | | | | | | | | | | | | Clearing and Grubbing Subtotal | -- |
| 7 | Excavation (Wet Conditions) | 61,810 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 35 | 0.1016 0.1077 0.0989 131.5280 1.2324 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr | -- -- -- -- -- |
| | | | | | | | | | | | | | Excavation (Wet Conditions) Subtotal | -- |
| 8 | Excavation/Grading (Dry Conditions) | 118,960 | CY | 300 HP Dozer 21 CY Scrapers 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional | Rubber Tired Dozers Scrapers Graders n/a - onroad n/a - onroad | 1 4 1 1 7 | 300 407 187 MHDT LDT2 | 3,500 | 1 | 3,500 | 34 | 0.1077 0.1282 0.1067 62.8403 1.2324 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr | -- -- -- -- -- |
| | | | | | | | | | | | | | Excavation/Grading (Dry Conditions) Subtotal | -- |
| 9 | Earthen Backfill | 8,950 | CY | 300 HP Dozer 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional | Rubber Tired Dozers n/a - onroad Rollers n/a - onroad | 1 1 1 3 | 300 MHDT 157 LDT2 | 1,000 | 1 | 1,000 | 9 | 0.1077 62.8403 0.0977 1.2324 | g/hp-hr g/hr g/hp-hr g/hr | -- -- -- -- |
| | | | | | | | | | | | | | Earthen Backfill Subtotal | -- |

Table K-127. NOx Exhaust Emissions from Offroad Co

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------------------------------|----------------------------------|--------------|--------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|--------|--------|--------|-------|--------|-------------|--------|-------|-------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | 0.64 | 0.64 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.29 | 0.29 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.87 | 0.87 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 1.11 | 1.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 2.32 | 2.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.13 | 0.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 5.36 | 5.36 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 5.36 | 5.36 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.11 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.95 | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.08 | -- | -- | -- |
| 6 | Clearing and Grubbing | 2.28 | 2.28 | 2.28 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 3.82 | 3.82 | 3.82 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.36 | 0.36 | 0.36 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 2.22 | 2.22 | 2.22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.26 | 0.26 | 0.26 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 4.64 | 4.64 | 4.64 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 13.57 | 13.57 | 13.57 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | 1.14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 20.88 | 20.88 | 20.88 | 20.88 | 20.88 | 20.88 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 23.51 | 23.51 | 23.51 | 23.51 | 23.51 | 23.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 3.68 | 3.68 | 3.68 | 3.68 | 3.68 | 3.68 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 5.86 | 5.86 | 5.86 | 5.86 | 5.86 | 5.86 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 9 | Earthen Backfill | -- | -- | -- | -- | 0.57 | 0.57 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 1.11 | 1.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.27 | 0.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.07 | 0.07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 2.01 | 2.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-127. NOx Exhaust Emissions from Offroad Co

| # | Activity | | | | | | | Annual Emissions , tpy |
|---------------------------------|-------------------------------------|--------|--------|--------|-------|--------------|---------------|------------------------|
| | | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 1.11 | 0.0011 |
| | | -- | -- | -- | -- | -- | 0.95 | 0.0010 |
| | | -- | -- | -- | -- | -- | 0.02 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 2.08 | 0.0021 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | 0.0039 |
| | | -- | -- | -- | -- | -- | -- | 0.0017 |
| | | -- | -- | -- | -- | -- | -- | 0.0052 |
| | | -- | -- | -- | -- | -- | -- | 0.0066 |
| | | -- | -- | -- | -- | -- | -- | 0.0139 |
| | | -- | -- | -- | -- | -- | 0.0008 | |
| | | -- | -- | -- | -- | -- | 0.0322 | |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | 0.35 | -- | 0.0007 |
| | | -- | -- | -- | -- | 1.11 | -- | 0.0022 |
| | | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | 11.60 | -- | 0.0232 |
| | | -- | -- | -- | -- | 13.08 | -- | 0.0262 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | 13.08 | 2.08 | 0.0610 |
| 09 - Channels and Canals | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | 0.0010 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0021 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | 0.0182 |
| | | -- | -- | -- | -- | -- | -- | 0.0305 |
| | | -- | -- | -- | -- | -- | -- | 0.0029 |
| | | -- | -- | -- | -- | -- | -- | 0.0177 |
| | | -- | -- | -- | -- | -- | -- | 0.0021 |
| | | -- | -- | -- | -- | -- | 0.0371 | |
| | | -- | -- | -- | -- | -- | 0.1086 | |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.0135 |
| | | -- | -- | -- | -- | -- | -- | 0.0200 |
| | | -- | -- | -- | -- | -- | -- | 0.0100 |
| | | -- | -- | -- | -- | -- | -- | 0.3654 |
| | | -- | -- | -- | -- | -- | -- | 0.0027 |
| | | -- | -- | -- | -- | -- | 0.4114 | |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | 0.0097 |
| | | -- | -- | -- | -- | -- | -- | 0.0626 |
| | | -- | -- | -- | -- | -- | -- | 0.0060 |
| | | -- | -- | -- | -- | -- | -- | 0.0188 |
| | | -- | -- | -- | -- | -- | -- | 0.0026 |
| | | -- | -- | -- | -- | -- | 0.0997 | |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | 0.0026 |
| | | -- | -- | -- | -- | -- | -- | 0.0050 |
| | | -- | -- | -- | -- | -- | -- | 0.0012 |
| | | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | 0.0091 | |

Table K-127. NOx Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr | |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------|-------------------------|-------------------|--------------|--------------------|--------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------|-----------|----|
| 10 | Riprap - Class 2 | 24,940 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | HHDT LDT2 | 1,000 | 1 | 1,000 | 25 | 0.1016 0.1129 131.5280 1.2324 | g/hp-hr g/hp-hr g/hr g/hr | -- | |
| Riprap - Class 2 Subtotal | | | | | | | | | | | | | | -- | |
| 11 | Riprap - Class 3 | 9,420 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | HHDT LDT2 | 1,000 | 1 | 1,000 | 10 | 0.1016 0.1129 131.5280 1.2324 | g/hp-hr g/hp-hr g/hr g/hr | -- | |
| Riprap - Class 3 Subtotal | | | | | | | | | | | | | | -- | |
| 12 | RSP Bedding Material | 36,150 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 5 23 | LDT2 HHDT | 1,000 | 2 | 2,000 | 19 | 0.1016 0.1129 1.2324 131.5280 | g/hp-hr g/hp-hr g/hr g/hr | -- | |
| RSP Bedding Material Subtotal | | | | | | | | | | | | | | -- | |
| 13 | Erosion Control Seeding | 31 | ACR | 0.8 CY Front End Loader Wheel Pickup Truck Conventional | Tractors/Loaders/Backhoes n/a - onroad | 1 4 | 97 LDT2 | 2 | 1 | 2 | 16 | 0.5090 1.2324 | g/hp-hr g/hr | -- | |
| Erosion Control Seeding Subtotal | | | | | | | | | | | | | | -- | |
| 09 - Channels and Canals Total | | | | | | | | | | | | | | 28 | |
| 11 - Levees and Floodwalls | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT LDT2 n/a | - | 1 | 1 | 2 | 62.8403 0.5411 1.2324 0.0000 | g/hr g/hp-hr g/hr g/hr | -- | |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | -- | |
| 15 | Soil Cement Bentonite Cutoff Wall | 84,480 | SF | 4.5 CY Hydraulic Excavator 300 HP Dozer 2.5 CY Hydraulic Excavator 16 CY 3 Axle Dump Truck Flash Mixer Slurry Pump Pickup Truck Conventional | Excavators Rubber Tired Dozers Excavators n/a - onroad Cement and Mortar Mixers Pumps n/a - onroad | 1 1 1 1429 1300 1257 5 | HHDT 9 84 LDT2 | 7,000 | 1 | 7,000 | 13 | 0.1016 0.1077 0.1016 131.5280 2.3182 0.9989 1.2324 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr | -- | |
| Soil Cement Bentonite Cutoff Wall Subtotal | | | | | | | | | | | | | | -- | |
| 11 - Levees and Floodwalls Total | | | | | | | | | | | | | | | -- |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT LDT2 n/a | - | 1 | 1 | 2 | 62.8403 0.5411 1.2324 0.0000 | g/hr g/hp-hr g/hr g/hr | -- | |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | -- | |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | 21,000 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT LDT2 | 1,200 | 1 | 1,200 | 18 | 62.8403 0.1311 1.2324 | g/hr g/hp-hr g/hr | -- | |
| Construction Site Dewatering (Temporary Cofferdam) Subtotal | | | | | | | | | | | | | | -- | |
| 18 | Construction Site Dewatering (Pumping) | - | - | 6" Dia. Pump Engine Drive Pickup Truck Conventional | Pumps n/a - onroad | 1221 3 | 84 LDT2 | - | 1 | 1 | 120 | 0.9989 1.2324 | g/hp-hr g/hr | -- | |
| Construction Site Dewatering (Pumping) Subtotal | | | | | | | | | | | | | | -- | |
| 19 | Excavation (Wet Conditions) | 6,130 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9429 7300 | HHDT LDT2 | 1,800 | 1 | 1,800 | 4 | 0.1016 0.1077 0.0989 131.5280 1.2324 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr | -- | |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | | -- | |

Table K-127. NOx Exhaust Emissions from Offroad Co

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------|----------------------------------------------------|----------------------------------|--------------|--------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------|-------------|-------------|-------------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 53.35 | 53.35 | 53.35 | 53.35 | 53.35 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 54.98 | 54.98 | 54.98 | 54.98 | 54.98 | -- | -- | -- | -- |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.92 | 0.92 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.60 | 0.60 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 53.35 | 53.35 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.11 | 0.11 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 54.98 | 54.98 | -- | -- | -- | -- |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.84 | 1.84 | 1.84 | 1.84 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.19 | 1.19 | 1.19 | 1.19 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.22 | 0.22 | 0.22 | 0.22 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 106.71 | 106.71 | 106.71 | 106.71 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 109.96 | 109.96 | 109.96 | 109.96 | -- | -- | -- | -- | -- | -- |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.87 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.96 |
| | | 13.57 | 13.57 | 13.57 | 5.86 | 7.88 | 31.39 | 29.37 | 29.37 | 29.37 | 23.51 | 23.51 | 109.96 | 164.94 | 164.94 | 164.94 | 109.96 | 109.96 | 2.08 | -- | -- | 0.96 |
| 11 - Levees and Floodwalls | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 1.11 | -- | -- | -- | 1.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.95 | 0.95 | 0.95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 1.11 | 0.98 | 0.98 | 0.98 | 1.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 | Soil Cement Bentonite Cutoff Wall | -- | -- | -- | -- | -- | -- | -- | 0.77 | 0.77 | 0.77 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.57 | 0.57 | 0.57 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.46 | 0.46 | 0.46 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 2.32 | 2.32 | 2.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 1.48 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.11 | 0.11 | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 1.48 | -- | -- | -- | -- | -- | 4.23 | 4.23 | 4.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 1.48 | -- | -- | -- | -- | 1.11 | 5.20 | 5.20 | 5.20 | 1.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | -- | 1.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 2.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | -- | -- | 1.11 | 1.11 | 1.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.51 | 0.51 | 0.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.13 | 0.13 | 0.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 1.75 | 1.75 | 1.75 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18 | Construction Site Dewatering (Pumping) | -- | -- | -- | -- | -- | 1.48 | 1.48 | 1.48 | 1.48 | 1.48 | 1.48 | 1.48 | 1.48 | 1.48 | 1.48 | 1.48 | 1.48 | 1.48 | 1.48 | 1.48 | 1.48 |
| | | -- | -- | -- | -- | -- | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| | | -- | -- | -- | -- | -- | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 |
| 19 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | 0.77 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 1.14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.57 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 20.88 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 23.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-127. NOx Exhaust Emissions from Offroad Co

| # | Activity | 16-S ip | 23-S ip | 30-S ip | 7-Oct | 14-O t | 21-O t | Annual Emissions , tpy |
|-------------------------------------------------------|----------------------------------------------------|-------------|-------------|-------------|-------------|---------------|--------|------------------------|
| | | | | | | | | |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | 0.0115 |
| | | -- | -- | -- | -- | -- | -- | 0.0075 |
| | | -- | -- | -- | -- | -- | -- | 0.6669 |
| | | -- | -- | -- | -- | -- | -- | 0.0014 |
| | | -- | -- | -- | -- | -- | -- | 0.6873 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | 0.0046 |
| | | -- | -- | -- | -- | -- | -- | 0.0030 |
| | | -- | -- | -- | -- | -- | -- | 0.2668 |
| | | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | 0.2749 |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | 0.0175 |
| | | -- | -- | -- | -- | -- | -- | 0.0114 |
| | | -- | -- | -- | -- | -- | -- | 0.0021 |
| | | -- | -- | -- | -- | -- | -- | 1.0137 |
| | | -- | -- | -- | -- | -- | -- | 1.0446 |
| 13 | Erosion Control Seeding | 0.87 | 0.87 | -- | -- | -- | -- | 0.0070 |
| | | 0.09 | 0.09 | -- | -- | -- | -- | 0.0007 |
| | | 0.96 | 0.96 | -- | -- | -- | -- | 0.0077 |
| | | 0.96 | 0.96 | -- | -- | -- | -- | 2.6453 |
| 11 - Levees and Floodwalls | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | 0.0010 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0021 |
| 15 | Soil Cement Bentonite Cutoff Wall | -- | -- | -- | -- | -- | -- | 0.0050 |
| | | -- | -- | -- | -- | -- | -- | 0.0037 |
| | | -- | -- | -- | -- | -- | -- | 0.0030 |
| | | -- | -- | -- | -- | -- | -- | 0.0151 |
| | | -- | -- | -- | -- | -- | -- | 0.0024 |
| | | -- | -- | -- | -- | 1.48 | -- | 0.0096 |
| | | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | 1.48 | -- | 0.0395 |
| -- | -- | -- | -- | 1.48 | -- | 0.0416 | | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | |
| 16 | Mobilization and Demobilization | -- | -- | -- | -- | 1.11 | -- | 0.0011 |
| | | -- | -- | -- | -- | 0.95 | -- | 0.0010 |
| | | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 2.08 | -- | 0.0021 |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | -- | -- | -- | -- | -- | -- | 0.0100 |
| | | -- | -- | -- | -- | -- | -- | 0.0046 |
| | | -- | -- | -- | -- | -- | -- | 0.0012 |
| | | -- | -- | -- | -- | -- | -- | 0.0157 |
| 18 | Construction Site Dewatering (Pumping) | 1.48 | 1.48 | 1.48 | 1.48 | -- | -- | 0.0888 |
| | | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | 0.0039 |
| | | 1.55 | 1.55 | 1.55 | 1.55 | -- | -- | 0.0927 |
| 19 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.0015 |
| | | -- | -- | -- | -- | -- | -- | 0.0023 |
| | | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | 0.0418 |
| | | -- | -- | -- | -- | -- | -- | 0.0003 |
| -- | -- | -- | -- | -- | -- | 0.0470 | | |

Table K-127. NOx Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------|-------------------|--------------|--------------------|--------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------|
| 20 | Sheet Pile Wall | 7,790 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 7 | 62.8403 0.1311 1.2324 | g/hr g/hp-hr g/hr | -- -- -- |
| Sheet Pile Wall Subtotal | | | | | | | | | | | | | | -- |
| 21 | Headworks Structure Concrete Piles | 5,040 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 84 MHDT 97 LDT2 | 180 | 1 | 180 | 28 | 0.0772 0.1311 0.9989 62.8403 0.5090 0.1070 1.2324 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr | -- -- -- -- -- -- -- |
| Headworks Structure Concrete Piles Subtotal | | | | | | | | | | | | | | -- |
| 22 | Headworks Structure | 3,080 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 3 | 180 | 18 | 0.9989 1.7813 62.8403 1.2324 | g/hp-hr g/hp-hr g/hr g/hr | -- -- -- -- |
| Headworks Structure Subtotal | | | | | | | | | | | | | | -- |
| 23 | Headworks Channel Transition | 1,330 | CY | 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Plate Compactors n/a - onroad n/a - onroad | 1 2 6 | 8 MHDT LDT2 | 70 | 2 | 140 | 10 | 1.7813 62.8403 1.2324 | g/hp-hr g/hr g/hr | -- -- -- |
| Headworks Channel Transition Subtotal | | | | | | | | | | | | | | -- |
| 24 | Hinged Bottom Gates | 3 | EA | 90 TN Truck-mounted Hydraulic Crane Haul Truck Oversize Transport Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 1 4 | HHDT LDT2 | 0.2 | 1 | 0.2 | 15 | 0.0772 131.5280 1.2324 | g/hp-hr g/hr g/hr | -- -- -- |
| Hinged Bottom Gates Subtotal | | | | | | | | | | | | | | -- |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | | | | | | | -- |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT n/a LDT2 n/a | - | 1 | 1 | 2 | 62.8403 0.5411 1.2324 0.0000 | g/hr g/hp-hr g/hr g/hr | -- -- -- -- |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | -- |
| 26 | Pedestrian Bridge Concrete Piles | 320 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 84 MHDT 97 LDT2 | 180 | 1 | 180 | 2 | 0.0772 0.1311 0.9989 62.8403 0.5090 0.1070 1.2324 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr | -- -- -- -- -- -- -- |
| Pedestrian Bridge Concrete Piles Subtotal | | | | | | | | | | | | | | -- |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | 24 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 1 | 0.9989 1.7813 62.8403 1.2324 | g/hp-hr g/hp-hr g/hr g/hr | -- -- -- -- |
| Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | | | | | | | | | | | | | | -- |
| 28 | Pedestrian Bridge Span Installation | 1,040 | SF | 90 TN Truck-mounted Hydraulic Crane Flatbed Truck Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 2 5 | MHDT LDT2 | 390 | 1 | 390 | 3 | 0.0772 62.8403 1.2324 | g/hp-hr g/hr g/hr | -- -- -- |
| Pedestrian Bridge Span Installation Subtotal | | | | | | | | | | | | | | -- |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | | | | | | | -- |

Table K-127. NOx Exhaust Emissions from Offroad Co

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------|----------------------------------------------------|----------------------------------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 20 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | 1.11 | 1.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.51 | 0.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.13 | 0.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 1.75 | 1.75 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 21 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | 0.41 | 0.41 | 0.41 | 0.41 | 0.41 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 1.48 | 1.48 | 1.48 | 1.48 | 1.48 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 3.32 | 3.32 | 3.32 | 3.32 | 3.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 7.95 | 7.95 | 7.95 | 7.95 | 7.95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 22 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.44 | 4.44 | -- | -- | -- | -- | 4.44 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.75 | 0.75 | -- | -- | -- | -- | 0.75 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 6.65 | 6.65 | -- | -- | -- | -- | 6.65 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.46 | 0.46 | -- | -- | -- | -- | 0.46 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 12.30 | 12.30 | -- | -- | -- | -- | 12.30 | -- | -- | -- | |
| 23 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.50 | 0.50 | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.43 | 4.43 | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.26 | 0.26 | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.20 | 5.20 | -- | -- | -- | -- | -- | -- | |
| 24 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.61 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.32 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.02 | |
| | | -- | 2.08 | 1.75 | 1.75 | 1.75 | 25.06 | 11.25 | 11.25 | 9.50 | 9.50 | 21.80 | 13.85 | 1.55 | 6.74 | 6.74 | 1.55 | 13.85 | 1.55 | 1.55 | 1.55 | 4.56 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.11 | -- | -- | -- | 1.11 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.95 | -- | -- | -- | 0.95 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | 0.02 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.08 | -- | -- | -- | 2.08 | -- | -- | -- | |
| 26 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.41 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.51 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.48 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.32 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.87 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.18 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.17 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 7.95 | -- | -- | -- | -- | -- | -- | -- | |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.48 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.25 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.22 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.15 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.10 | -- | -- | -- | -- | -- | |
| 28 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.61 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.22 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.11 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.94 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.08 | 7.95 | 4.10 | 2.94 | 2.08 | -- | -- | -- | |

Table K-127. NOx Exhaust Emissions from Offroad Co

| # | Activity | | | | | | | Annual Emissions , tpy |
|-------------------------------------------|----------------------------------------------------|-------------|-------------|-------------|-------------|---------------|---------------|------------------------|
| | | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 20 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | 0.0039 |
| | | -- | -- | -- | -- | -- | -- | 0.0018 |
| | | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | 0.0061 |
| 21 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | 0.0057 |
| | | -- | -- | -- | -- | -- | -- | 0.0072 |
| | | -- | -- | -- | -- | -- | -- | 0.0207 |
| | | -- | -- | -- | -- | -- | -- | 0.0465 |
| | | -- | -- | -- | -- | -- | -- | 0.0122 |
| | | -- | -- | -- | -- | -- | -- | 0.0166 |
| | | -- | -- | -- | -- | -- | -- | 0.0024 |
| -- | -- | -- | -- | -- | -- | 0.1113 | | |
| 22 | Headworks Structure | -- | -- | -- | -- | -- | -- | 0.0400 |
| | | -- | -- | -- | -- | -- | -- | 0.0068 |
| | | -- | -- | -- | -- | -- | -- | 0.0598 |
| | | -- | -- | -- | -- | -- | -- | 0.0041 |
| -- | -- | -- | -- | -- | -- | 0.1107 | | |
| 23 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | 0.0025 |
| | | -- | -- | -- | -- | -- | -- | 0.0222 |
| | | -- | -- | -- | -- | -- | -- | 0.0013 |
| -- | -- | -- | -- | -- | -- | 0.0260 | | |
| 24 | Hinged Bottom Gates | 0.61 | 0.61 | 0.61 | -- | -- | -- | 0.0046 |
| | | 2.32 | 2.32 | 2.32 | -- | -- | -- | 0.0174 |
| | | 0.09 | 0.09 | 0.09 | -- | -- | -- | 0.0007 |
| | | 3.02 | 3.02 | 3.02 | -- | -- | -- | 0.0226 |
| -- | 4.56 | 4.56 | 4.56 | 1.55 | 2.08 | -- | 0.4344 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | |
| 25 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | 0.0010 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | 0.0021 | | |
| 26 | Pedestrian Bridge Concete Piles | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | 0.0015 |
| | | -- | -- | -- | -- | -- | -- | 0.0033 |
| | | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | 0.0012 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| -- | -- | -- | -- | -- | -- | 0.0080 | | |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| -- | -- | -- | -- | -- | -- | 0.0020 | | |
| 28 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | 0.0033 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| -- | -- | -- | -- | -- | -- | 0.0044 | | |
| -- | -- | -- | -- | -- | -- | 0.0165 | | |

Table K-127. NOx Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|-----------------------------------------------|---------------------------------------------|----------|------|--------------------------------------------------------------|-------------------------|-----------------------------|-----------|-------------------|--------------|--------------------|--------------------------|-----------------|---------|-------------|
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | - | - | Flatbed Truck | n/a - onroad | 1 | MHDT | - | 1 | 1 | 2 | 62.8403 | g/hr | 1.11 |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | | | | 0.5411 | g/hp-hr | 0.95 |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | - | | | | 1.2324 | g/hr | 0.02 |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | - | | | | 0.0000 | g/hr | -- |
| | | | | Mobilization and Demobilization Subtotal | | | | | | | | | | 2.08 |
| 30 | CMU Building and Earthwork Pad Construction | 1 | EA | 165 HP Dozer | Rubber Tired Dozers | 1 | 165 | - | 1 | 1 | 30 | 0.1098 | g/hp-hr | -- |
| | | | | Scraper | Scrapers | 1 | 367 | - | | | | 0.1282 | g/hp-hr | -- |
| | | | | Motor Grader | Graders | 1 | 187 | - | | | | 0.1067 | g/hp-hr | -- |
| | | | | Compactor | Rollers | 1 | 80 | - | | | | 0.5088 | g/hp-hr | -- |
| | | | | 4000 gallon Water Truck | n/a - onroad | 1 | MHDT | - | | | | 62.8403 | g/hr | -- |
| | | | | 10 TN Smooth Roller | Rollers | 1 | 157 | - | | | | 0.0977 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | - | | | | 1.2324 | g/hr | -- |
| | | | | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | - | | | | 0.9989 | g/hp-hr | -- |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | - | | | | 1.7813 | g/hp-hr | -- |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | | | | 0.5411 | g/hp-hr | -- |
| | | | | Concrete Mixer Truck | n/a - onroad | 1 | MHDT | - | | | | 62.8403 | g/hr | -- |
| | | | | CMU Building and Earthwork Pad Construction Subtotal | | | | | | | | | | -- |
| 31 | Concrete Duct Banc | 190 | CY | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | 60 | 1 | 60 | 4 | 0.9989 | g/hp-hr | -- |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | - | | | | 1.7813 | g/hp-hr | -- |
| | | | | Concrete Mixer Truck | n/a - onroad | 2 | MHDT | - | | | | 62.8403 | g/hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | - | | | | 1.2324 | g/hr | -- |
| | | | | Concrete Duct Banc Subtotal | | | | | | | | | | -- |
| | | | | 19 - Buildings, Grounds, and Utilities Total | | | | | | | | | | 2.08 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | - | - | Flatbed Truck | n/a - onroad | 1 | MHDT | - | 1 | 1 | 2 | 62.8403 | g/hr | -- |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | | | | 0.5411 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | - | | | | 1.2324 | g/hr | -- |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | - | | | | 0.0000 | g/hr | -- |
| | | | | Mobilization and Demobilization Subtotal | | | | | | | | | | -- |
| 33 | Mechanical Hydraulic Cylinders & Housing | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.5411 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | | | | 1.2324 | g/hr | -- |
| | | | | Mechanical Hydraulic Cylinders & Housing Subtotal | | | | | | | | | | -- |
| 34 | CMU Building Mechanical Equipment | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.5411 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | | | | 1.2324 | g/hr | -- |
| | | | | CMU Building Mechanical Equipment Subtotal | | | | | | | | | | -- |
| 35 | Electrical Control Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 1.2324 | g/hr | -- |
| | | | | Electrical Control Equipment CMU Building Subtotal | | | | | | | | | | -- |
| 36 | Electrical Power Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 1.2324 | g/hr | -- |
| | | | | Electrical Power Equipment CMU Building Subtotal | | | | | | | | | | -- |
| 37 | Communication Equipment | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 12 | 1.2324 | g/hr | -- |
| | | | | Communication Equipment Subtotal | | | | | | | | | | -- |
| | | | | 20 -Permanent Operating Equipment Total | | | | | | | | | | -- |
| GRAND TOTAL | | | | | | | | | | | | | | 7.40 |

Table K-127. NOx Exhaust Emissions from Offroad Co

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------|---------------------------------------------|----------------------------------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 1.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 2.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30 | CMU Building and Earthwork Pad Construction | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 1.48 | 1.48 | 1.48 | 1.48 | 1.48 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 1.11 | 1.11 | 1.11 | 1.11 | 1.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 7.54 | 7.54 | 7.54 | 7.54 | 7.54 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31 | Concrete Duct Banc | -- | -- | -- | 1.48 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 2.22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 4.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 7.54 | 7.54 | 7.54 | 11.64 | 7.54 | 2.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.11 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.95 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.08 | -- |
| 33 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.95 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.07 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.02 |
| 34 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.95 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.07 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.02 |
| 35 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.07 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.07 |
| 36 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.07 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.07 |
| 37 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.08 | 2.17 |
| GRAND TOTAL | | 26.47 | 30.04 | 22.87 | 19.26 | 17.17 | 58.53 | 41.73 | 45.83 | 44.08 | 38.21 | 46.42 | 123.81 | 168.57 | 179.64 | 175.78 | 114.44 | 125.89 | 3.63 | 1.55 | 3.63 | 7.69 |

Table K-127. NOx Exhaust Emissions from Offroad Co

| # | Activity | | | | | | | Annual Emissions , tpy |
|-----------------------------------------------|---------------------------------------------|-------------|-------------|-------------|-------------|--------------|-------------|------------------------|
| | | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | |
| 29 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | 0.0010 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0021 |
| 30 | CMU Building and Earthwork Pad Construction | -- | -- | -- | -- | -- | -- | 0.0048 |
| | | -- | -- | -- | -- | -- | -- | 0.0124 |
| | | -- | -- | -- | -- | -- | -- | 0.0053 |
| | | -- | -- | -- | -- | -- | -- | 0.0108 |
| | | -- | -- | -- | -- | -- | -- | 0.0166 |
| | | -- | -- | -- | -- | -- | -- | 0.0041 |
| | | -- | -- | -- | -- | -- | -- | 0.0023 |
| | | -- | -- | -- | -- | -- | -- | 0.0222 |
| | | -- | -- | -- | -- | -- | -- | 0.0038 |
| | | -- | -- | -- | -- | -- | -- | 0.0143 |
| | | -- | -- | -- | -- | -- | -- | 0.0166 |
| | | -- | -- | -- | -- | -- | -- | 0.1132 |
| 31 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | 0.0030 |
| | | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | 0.0044 |
| | | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | 0.0082 |
| | | -- | -- | -- | -- | -- | -- | 0.1234 |
| 20 -Permanent Operating Equipment | | | | | | | | |
| 32 | Mobilization and Demobilization | -- | -- | -- | -- | 1.11 | -- | 0.0011 |
| | | -- | -- | -- | -- | 0.95 | -- | 0.0010 |
| | | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 2.08 | -- | 0.0021 |
| 33 | Mechanical Hydraulic Cylinders & Housing | 0.95 | 0.95 | 0.95 | 0.95 | -- | -- | 0.0143 |
| | | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | 0.0010 |
| | | 1.02 | 1.02 | 1.02 | 1.02 | -- | -- | 0.0153 |
| 34 | CMU Building Mechanical Equipment | 0.95 | 0.95 | 0.95 | 0.95 | -- | -- | 0.0143 |
| | | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | 0.0010 |
| | | 1.02 | 1.02 | 1.02 | 1.02 | -- | -- | 0.0153 |
| 35 | Electrical Control Equipment CMU Building | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | 0.0010 |
| | | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | 0.0010 |
| 36 | Electrical Power Equipment CMU Building | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | 0.0010 |
| | | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | 0.0010 |
| 37 | Communication Equipment | -- | -- | 0.07 | 0.07 | -- | -- | 0.0004 |
| | | -- | -- | 0.07 | 0.07 | -- | -- | 0.0004 |
| | | 2.17 | 2.17 | 2.23 | 2.23 | 2.08 | -- | 0.0350 |
| GRAND TOTAL | | 7.69 | 7.69 | 6.80 | 3.78 | 18.73 | 2.08 | 3.3571 |

Table K-128. CO Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|---------------------------------|-------------------------------------|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------|-------------------|--------------|--------------------|--------------------------|---------------------------------------------------------------|-------------------------------------------------------|----------------------------------|
| 02 - Relocations | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 10.5648 2.0693 12.4711 0.0000 | g/hr g/hp-hr g/hr g/hr | 0.19 3.65 0.22 -- |
| | | | | | | | | | | | | | Mobilization and Demobilization Subtotal | 4.06 |
| 2 | Fremont Weir Demo | 450 | CY | 3.5 CY Hydraulic Excavator 3.5 CY Front End Loader Wheel 0.8 CY Loader/Backhoe, Wheel 4000 gallon Water Truck 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Loaders Tractors/Loaders/Backhoes n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 1 6 | 359 164 97 MHDT HHDT LDT2 | 40 | 1 | 40 | 12 | 0.5975 1.6565 1.9153 10.5648 33.0182 12.4711 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr | -- -- -- -- -- -- |
| | | | | | | | | | | | | | Fremont Weir Demo Subtotal | -- |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Graders n/a - onroad n/a - onroad n/a - onroad | 1 1 1 5 | 187 MHDT LDT2 HHDT | 39,400 | 1 | 39,400 | 4 | 0.6411 10.5648 12.4711 33.0182 | g/hp-hr g/hr g/hr g/hr | -- -- -- -- |
| | | | | | | | | | | | | | Levee O&M Road Regrading (6" AB) Subtotal | -- |
| 4 | Temporary Electrical Power | 100 | LF | Flatbed Truck Pickup Truck Conventional | n/a - onroad n/a - onroad | 1 2 | MHDT LDT2 | 1,500 | 1 | 1,500 | 1 | 10.5648 12.4711 | g/hr g/hr | 0.19 0.44 |
| | | | | | | | | | | | | | Temporary Electrical Power Subtotal | 0.63 |
| | | | | | | | | | | | | | 02 - Relocations Total | 4.68 |
| 09 - Channels and Canals | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 10.5648 2.0693 12.4711 0.0000 | g/hr g/hp-hr g/hr g/hr | 0.19 3.65 0.22 -- |
| | | | | | | | | | | | | | Mobilization and Demobilization Subtotal | 4.06 |
| 6 | Clearing and Grubbing | 61 | ACR | 1.5 CY Front End Loader Crawler Trailer Mounted Brush Chipper Chainsaw 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Crawler Tractors Shredders Chainsaws n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 6 1 | 110 140 8 MHDT LDT2 HHDT | 2 | 2 | 4 | 16 | 2.2674 1.1116 146.1724 10.5648 12.4711 33.0182 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr | -- -- -- -- -- -- |
| | | | | | | | | | | | | | Clearing and Grubbing Subtotal | -- |
| 7 | Excavation (Wet Conditions) | 61,810 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 35 | 0.5975 0.6274 1.6565 33.0182 12.4711 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr | -- -- -- -- -- |
| | | | | | | | | | | | | | Excavation (Wet Conditions) Subtotal | -- |
| 8 | Excavation/Grading (Dry Conditions) | 118,960 | CY | 300 HP Dozer 21 CY Scrapers 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional | Rubber Tired Dozers Scrapers Graders n/a - onroad n/a - onroad | 1 4 1 1 7 | 300 407 187 MHDT LDT2 | 3,500 | 1 | 3,500 | 34 | 0.6274 0.7376 0.6411 10.5648 12.4711 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr | -- -- -- -- -- |
| | | | | | | | | | | | | | Excavation/Grading (Dry Conditions) Subtotal | -- |
| 9 | Earthen Backfill | 8,950 | CY | 300 HP Dozer 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional | Rubber Tired Dozers n/a - onroad Rollers n/a - onroad | 1 1 1 3 | 300 MHDT 157 LDT2 | 1,000 | 1 | 1,000 | 9 | 0.6274 10.5648 1.6405 12.4711 | g/hp-hr g/hr g/hp-hr g/hr | -- -- -- -- |
| | | | | | | | | | | | | | Earthen Backfill Subtotal | -- |

Table K-128. CO Exhaust Emissions from Offroad Con

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------------------------------|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|--------|--------|--------|-------|--------|--------|-------------|-------|-------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | 3.78 | 3.78 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 4.79 | 4.79 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 3.28 | 3.28 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.19 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.58 | 0.58 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 1.32 | 1.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 13.94 | 13.94 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 13.94 | 13.94 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.19 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.65 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.22 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.06 | -- | -- |
| 6 | Clearing and Grubbing | 8.80 | 8.80 | 8.80 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 5.49 | 5.49 | 5.49 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 41.25 | 41.25 | 41.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.37 | 0.37 | 0.37 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 2.64 | 2.64 | 2.64 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 1.16 | 1.16 | 1.16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 59.71 | 59.71 | 59.71 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | 4.52 | 4.52 | 4.52 | 4.52 | 4.52 | 4.52 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 6.64 | 6.64 | 6.64 | 6.64 | 6.64 | 6.64 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 9.58 | 9.58 | 9.58 | 9.58 | 9.58 | 9.58 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 5.24 | 5.24 | 5.24 | 5.24 | 5.24 | 5.24 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 27.52 | 27.52 | 27.52 | 27.52 | 27.52 | 27.52 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | 3.32 | 3.32 | 3.32 | 3.32 | 3.32 | 3.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 21.18 | 21.18 | 21.18 | 21.18 | 21.18 | 21.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 2.11 | 2.11 | 2.11 | 2.11 | 2.11 | 2.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 28.34 | 28.34 | 28.34 | 28.34 | 28.34 | 28.34 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 9 | Earthen Backfill | -- | -- | -- | -- | 3.32 | 3.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.19 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 4.54 | 4.54 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.66 | 0.66 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 8.71 | 8.71 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-128. CO Exhaust Emissions from Offroad Con

| # | Activity | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions |
|---------------------------------|-------------------------------------|--------|--------|--------|-------|-------------|-------------|------------------|
| | | | | | | | | , tpy |
| 02 - Relocations | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.19 | 0.0002 |
| | | -- | -- | -- | -- | -- | 3.65 | 0.0036 |
| | | -- | -- | -- | -- | -- | 0.22 | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 4.06 | 0.0041 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | 0.0227 |
| | | -- | -- | -- | -- | -- | -- | 0.0287 |
| | | -- | -- | -- | -- | -- | -- | 0.0197 |
| | | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | 0.0035 |
| | | -- | -- | -- | -- | -- | 0.0079 | 0.0836 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | 2.11 | -- | 0.0042 |
| | | -- | -- | -- | -- | 0.19 | -- | 0.0004 |
| | | -- | -- | -- | -- | 0.22 | -- | 0.0004 |
| | | -- | -- | -- | -- | 2.91 | -- | 0.0058 |
| | | -- | -- | -- | -- | 5.43 | -- | 0.0109 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | 5.43 | 4.06 | 0.0989 |
| 09 - Channels and Canals | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0036 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0041 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | 0.0704 |
| | | -- | -- | -- | -- | -- | -- | 0.0439 |
| | | -- | -- | -- | -- | -- | -- | 0.3300 |
| | | -- | -- | -- | -- | -- | -- | 0.0030 |
| | | -- | -- | -- | -- | -- | -- | 0.0211 |
| | | -- | -- | -- | -- | -- | 0.0093 | 0.4777 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.0791 |
| | | -- | -- | -- | -- | -- | -- | 0.1162 |
| | | -- | -- | -- | -- | -- | -- | 0.1677 |
| | | -- | -- | -- | -- | -- | -- | 0.0917 |
| | | -- | -- | -- | -- | -- | -- | 0.0269 |
| | | -- | -- | -- | -- | -- | -- | 0.4816 |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | 0.0564 |
| | | -- | -- | -- | -- | -- | -- | 0.3601 |
| | | -- | -- | -- | -- | -- | -- | 0.0359 |
| | | -- | -- | -- | -- | -- | -- | 0.0032 |
| | | -- | -- | -- | -- | -- | -- | 0.0262 |
| | | -- | -- | -- | -- | -- | -- | 0.4818 |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | 0.0149 |
| | | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | 0.0204 |
| | | -- | -- | -- | -- | -- | -- | 0.0030 |
| | | -- | -- | -- | -- | -- | -- | 0.0392 |

Table K-128. CO Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------|-------------------|--------------|--------------------|--------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------|----------|
| 10 | Riprap - Class 2 | 24,940 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | HHDT LDT2 | 1,000 | 1 | 1,000 | 25 | 0.5975 0.6597 33.0182 12.4711 | g/hp-hr g/hp-hr g/hr g/hr | -- |
| Riprap - Class 2 Subtotal | | | | | | | | | | | | | | -- |
| 11 | Riprap - Class 3 | 9,420 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | HHDT LDT2 | 1,000 | 1 | 1,000 | 10 | 0.5975 0.6597 33.0182 12.4711 | g/hp-hr g/hp-hr g/hr g/hr | -- |
| Riprap - Class 3 Subtotal | | | | | | | | | | | | | | -- |
| 12 | RSP Bedding Material | 36,150 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 5 23 | LDT2 HHDT | 1,000 | 2 | 2,000 | 19 | 0.5975 0.6597 12.4711 33.0182 | g/hp-hr g/hp-hr g/hr g/hr | -- |
| RSP Bedding Material Subtotal | | | | | | | | | | | | | | -- |
| 13 | Erosion Control Seeding | 31 | ACR | 0.8 CY Front End Loader Wheel Pickup Truck Conventional | Tractors/Loaders/Backhoes n/a - onroad | 1 4 | 97 LDT2 | 2 | 1 | 2 | 16 | 1.9153 12.4711 | g/hp-hr g/hr | -- |
| Erosion Control Seeding Subtotal | | | | | | | | | | | | | | -- |
| 09 - Channels and Canals Total | | | | | | | | | | | | | | -- |
| 11 - Levees and Floodwalls | | | | | | | | | | | | | | 0 |
| 14 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT LDT2 n/a | - | 1 | 1 | 6 | 10.5648 2.0693 12.4711 0.0000 | g/hr g/hp-hr g/hr g/hr | -- |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | -- |
| 15 | Soil Cement Bentonite Cutoff Wall | 84,480 | SF | 4.5 CY Hydraulic Excavator 300 HP Dozer 2.5 CY Hydraulic Excavator 16 CY 3 Axle Dump Truck Flash Mixer Slurry Pump Pickup Truck Conventional | Excavators Rubber Tired Dozers Excavators n/a - onroad Cement and Mortar Mixers Pumps n/a - onroad | 1 1 1 14 1 1 5 | HHDT 9 84 LDT2 | 7,000 | 1 | 7,000 | 13 | 0.5975 0.6274 0.5975 33.0182 1.9417 2.3329 12.4711 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr | -- |
| Soil Cement Bentonite Cutoff Wall Subtotal | | | | | | | | | | | | | | -- |
| 11 - Levees and Floodwalls Total | | | | | | | | | | | | | | -- |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT LDT2 n/a | - | 1 | 1 | 2 | 10.5648 2.0693 12.4711 0.0000 | g/hr g/hp-hr g/hr g/hr | -- |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | -- |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | 21,000 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT LDT2 | 1,200 | 1 | 1,200 | 18 | 10.5648 0.7660 12.4711 | g/hr g/hp-hr g/hr | -- |
| Construction Site Dewatering (Temporary Cofferdam) Subtotal | | | | | | | | | | | | | | -- |
| 18 | Construction Site Dewatering (Pumping) | - | - | 6" Dia. Pump Engine Drive Pickup Truck Conventional | Pumps n/a - onroad | 1 3 | 84 LDT2 | - | 1 | 1 | 120 | 2.3329 12.4711 | g/hp-hr g/hr | -- |
| Construction Site Dewatering (Pumping) Subtotal | | | | | | | | | | | | | | -- |
| 19 | Excavation (Wet Conditions) | 6,130 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | HHDT LDT2 | 1,800 | 1 | 1,800 | 4 | 0.5975 0.6274 1.6565 33.0182 12.4711 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr | -- |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | | -- |

Table K-128. CO Exhaust Emissions from Offroad Con

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------|----------------------------------------------------|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.42 | 5.42 | 5.42 | 5.42 | 5.42 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.49 | 3.49 | 3.49 | 3.49 | 3.49 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 13.39 | 13.39 | 13.39 | 13.39 | 13.39 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.10 | 1.10 | 1.10 | 1.10 | 1.10 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 23.40 | 23.40 | 23.40 | 23.40 | 23.40 | -- | -- | -- | -- |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.42 | 5.42 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.49 | 3.49 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 13.39 | 13.39 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.10 | 1.10 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 23.40 | 23.40 | 23.40 | 23.40 | 23.40 | -- | -- | -- | -- |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 10.83 | 10.83 | 10.83 | 10.83 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 6.98 | 6.98 | 6.98 | 6.98 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.20 | 2.20 | 2.20 | 2.20 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 26.79 | 26.79 | 26.79 | 26.79 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 46.80 | 46.80 | 46.80 | 46.80 | -- | -- | -- | -- | -- | -- |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.28 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.88 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.16 |
| | | 59.71 | 59.71 | 59.71 | 28.34 | 37.05 | 64.57 | 55.86 | 55.86 | 55.86 | 27.52 | 27.52 | 46.80 | 70.20 | 70.20 | 70.20 | 46.80 | 46.80 | 4.06 | -- | -- | 4.16 |
| 11 - Levees and Floodwalls | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.19 | -- | -- | -- | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 3.65 | 3.65 | 3.65 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.22 | 0.22 | 0.22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.19 | 3.87 | 3.87 | 3.87 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 | Soil Cement Bentonite Cutoff Wall | -- | -- | -- | -- | -- | -- | -- | -- | 4.52 | 4.52 | 4.52 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 3.32 | 3.32 | 3.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 2.71 | 2.71 | 2.71 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.58 | 0.58 | 0.58 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 3.46 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 1.10 | 1.10 | 1.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 3.46 | -- | -- | -- | -- | -- | -- | 12.23 | 12.23 | 12.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 3.46 | -- | -- | -- | -- | 0.19 | 16.10 | 16.10 | 16.10 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | -- | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 3.65 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 4.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | -- | -- | 0.19 | 0.19 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 2.99 | 2.99 | 2.99 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 1.32 | 1.32 | 1.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 4.49 | 4.49 | 4.49 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18 | Construction Site Dewatering (Pumping) | -- | -- | -- | -- | -- | 3.46 | 3.46 | 3.46 | 3.46 | 3.46 | 3.46 | 3.46 | 3.46 | 3.46 | 3.46 | 3.46 | 3.46 | 3.46 | 3.46 | 3.46 | 3.46 |
| | | -- | -- | -- | -- | -- | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 |
| | | -- | -- | -- | -- | -- | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 |
| 19 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | 4.52 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 6.64 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 9.58 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 5.24 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 1.54 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 27.52 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-128. CO Exhaust Emissions from Offroad Con

| # | Activity | 16-S ip | 23-S ip | 30-S ip | 7-Oct | 14-O t | 21-O t | Annual Emissions |
|-------------------------------------------------------|----------------------------------------------------|-------------|-------------|-------------|-------------|---------------|---------------|------------------|
| | | | | | | | | , tpy |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | 0.0677 |
| | | -- | -- | -- | -- | -- | -- | 0.0436 |
| | | -- | -- | -- | -- | -- | -- | 0.1674 |
| | | -- | -- | -- | -- | -- | -- | 0.0137 |
| | | -- | -- | -- | -- | -- | -- | 0.2925 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | 0.0271 |
| | | -- | -- | -- | -- | -- | -- | 0.0175 |
| | | -- | -- | -- | -- | -- | -- | 0.0670 |
| | | -- | -- | -- | -- | -- | -- | 0.0055 |
| | | -- | -- | -- | -- | -- | -- | 0.1170 |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | 0.1029 |
| | | -- | -- | -- | -- | -- | -- | 0.0663 |
| | | -- | -- | -- | -- | -- | -- | 0.0209 |
| | | -- | -- | -- | -- | -- | -- | 0.2545 |
| | | -- | -- | -- | -- | -- | -- | 0.4446 |
| 13 | Erosion Control Seeding | 3.28 | 3.28 | -- | -- | -- | -- | 0.0262 |
| | | 0.88 | 0.88 | -- | -- | -- | -- | 0.0070 |
| | | 4.16 | 4.16 | -- | -- | -- | -- | 0.0333 |
| | | 4.16 | 4.16 | -- | -- | -- | -- | 2.3717 |
| 11 - Levees and Floodwalls | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0036 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0041 |
| 15 | Soil Cement Bentonite Cutoff Wall | -- | -- | -- | -- | -- | -- | 0.0294 |
| | | -- | -- | -- | -- | -- | -- | 0.0216 |
| | | -- | -- | -- | -- | -- | -- | 0.0176 |
| | | -- | -- | -- | -- | -- | -- | 0.0038 |
| | | -- | -- | -- | -- | -- | -- | 0.0020 |
| | | -- | -- | -- | -- | 3.46 | -- | 0.0225 |
| | | -- | -- | -- | -- | -- | -- | 0.0071 |
| -- | -- | -- | -- | -- | 3.46 | -- | 0.1040 | |
| -- | -- | -- | -- | -- | 3.46 | -- | 0.1080 | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | |
| 16 | Mobilization and Demobilization | -- | -- | -- | -- | 0.19 | -- | 0.0002 |
| | | -- | -- | -- | -- | 3.65 | -- | 0.0036 |
| | | -- | -- | -- | -- | 0.22 | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 4.06 | -- |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | -- | -- | -- | -- | -- | -- | 0.0017 |
| | | -- | -- | -- | -- | -- | -- | 0.0269 |
| | | -- | -- | -- | -- | -- | -- | 0.0119 |
| | | -- | -- | -- | -- | -- | -- | 0.0404 |
| 18 | Construction Site Dewatering (Pumping) | 3.46 | 3.46 | 3.46 | 3.46 | -- | -- | 0.2074 |
| | | 0.66 | 0.66 | 0.66 | 0.66 | -- | -- | 0.0396 |
| | | 4.12 | 4.12 | 4.12 | 4.12 | -- | -- | 0.2470 |
| 19 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.0090 |
| | | -- | -- | -- | -- | -- | -- | 0.0133 |
| | | -- | -- | -- | -- | -- | -- | 0.0192 |
| | | -- | -- | -- | -- | -- | -- | 0.0105 |
| | | -- | -- | -- | -- | -- | -- | 0.0031 |
| -- | -- | -- | -- | -- | -- | 0.0550 | | |

Table K-128. CO Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------------|-------------------|--------------|--------------------|--------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------|--------|
| 20 | Sheet Pile Wall | 7,790 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 7 | 10.5648 0.7660 12.4711 | g/hr g/hp-hr g/hr | -- |
| Sheet Pile Wall Subtotal | | | | | | | | | | | | | | -- |
| 21 | Headworks Structure Concrete Piles | 5,040 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 84 MHDT 97 LDT2 | 180 | 1 | 180 | 28 | 0.4386 0.7660 2.3329 10.5648 1.9153 0.6129 12.4711 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr | -- |
| Headworks Structure Concrete Piles Subtotal | | | | | | | | | | | | | | -- |
| 22 | Headworks Structure | 3,080 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 3 | 180 | 18 | 2.3329 1.4921 10.5648 12.4711 | g/hp-hr g/hp-hr g/hr g/hr | -- |
| Headworks Structure Subtotal | | | | | | | | | | | | | | -- |
| 23 | Headworks Channel Transition | 1,330 | CY | 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Plate Compactors n/a - onroad n/a - onroad | 1 2 6 | 8 MHDT LDT2 | 70 | 2 | 140 | 10 | 1.4921 10.5648 12.4711 | g/hp-hr g/hr g/hr | -- |
| Headworks Channel Transition Subtotal | | | | | | | | | | | | | | -- |
| 24 | Hinged Bottom Gates | 3 | EA | 90 TN Truck-mounted Hydraulic Crane Haul Truck Oversize Transport Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 1 4 | HHDT LDT2 | 0.2 | 1 | 0.2 | 15 | 0.4386 33.0182 12.4711 | g/hp-hr g/hr g/hr | -- |
| Hinged Bottom Gates Subtotal | | | | | | | | | | | | | | -- |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | | | | | | | -- |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT LDT2 n/a | - | 1 | 1 | 2 | 10.5648 2.0693 12.4711 0.0000 | g/hr g/hp-hr g/hr g/hr | -- |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | -- |
| 26 | Pedestrian Bridge Concrete Piles | 320 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 84 MHDT 97 LDT2 | 180 | 1 | 180 | 2 | 0.4386 0.7660 2.3329 10.5648 1.9153 0.6129 12.4711 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr | -- |
| Pedestrian Bridge Concrete Piles Subtotal | | | | | | | | | | | | | | -- |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | 24 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 1 | 2.3329 1.4921 10.5648 12.4711 | g/hp-hr g/hp-hr g/hr g/hr | -- |
| Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | | | | | | | | | | | | | | -- |
| 28 | Pedestrian Bridge Span Installation | 1,040 | SF | 90 TN Truck-mounted Hydraulic Crane Flatbed Truck Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 2 5 | MHDT LDT2 | 390 | 1 | 390 | 3 | 0.4386 10.5648 12.4711 | g/hp-hr g/hr g/hr | -- |
| Pedestrian Bridge Span Installation Subtotal | | | | | | | | | | | | | | -- |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | | | | | | | -- |

Table K-128. CO Exhaust Emissions from Offroad Con

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------|----------------------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 20 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | 0.19 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 2.99 | 2.99 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 1.32 | 1.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 4.49 | 4.49 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 21 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 2.99 | 2.99 | 2.99 | 2.99 | 2.99 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 3.46 | 3.46 | 3.46 | 3.46 | 3.46 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 3.28 | 3.28 | 3.28 | 3.28 | 3.28 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 6.79 | 6.79 | 6.79 | 6.79 | 6.79 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 1.76 | 1.76 | 1.76 | 1.76 | 1.76 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 21.15 | 21.15 | 21.15 | 21.15 | 21.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 22 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 10.37 | 10.37 | -- | -- | -- | -- | 10.37 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.63 | 0.63 | -- | -- | -- | -- | 0.63 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.12 | 1.12 | -- | -- | -- | -- | 1.12 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.62 | 4.62 | -- | -- | -- | -- | 4.62 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 16.74 | 16.74 | -- | -- | -- | -- | 16.74 | -- | -- | -- | |
| 23 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.42 | 0.42 | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.75 | 0.75 | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.64 | 2.64 | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.81 | 3.81 | -- | -- | -- | -- | -- | -- | |
| 24 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.48 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.58 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.88 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.94 | |
| | | -- | 4.06 | 4.49 | 4.49 | 4.49 | 31.64 | 29.75 | 29.75 | 25.26 | 25.26 | 42.00 | 20.85 | 4.12 | 7.92 | 7.92 | 4.12 | 20.85 | 4.12 | 4.12 | 4.12 | 9.06 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.19 | -- | -- | -- | 0.19 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.65 | -- | -- | -- | 3.65 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.22 | -- | -- | -- | 0.22 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.06 | -- | -- | -- | 4.06 | -- | -- | -- | |
| 26 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.32 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.99 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.46 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.56 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.28 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 6.79 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.76 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 21.15 | -- | -- | -- | -- | -- | -- | -- | |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.46 | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.21 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.37 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.54 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.58 | -- | -- | -- | -- | -- | -- | -- | |
| 28 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.48 | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.37 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.10 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.95 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.06 | 21.15 | 5.58 | 4.95 | 4.06 | -- | -- | -- | -- | |

Table K-128. CO Exhaust Emissions from Offroad Con

| # | Activity | | | | | | | Annual Emissions , tpy |
|-------------------------------------------|----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|--------|------------------------|
| | | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 20 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | 0.0104 |
| | | -- | -- | -- | -- | -- | -- | 0.0046 |
| | | -- | -- | -- | -- | -- | -- | 0.0157 |
| 21 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | 0.0325 |
| | | -- | -- | -- | -- | -- | -- | 0.0418 |
| | | -- | -- | -- | -- | -- | -- | 0.0484 |
| | | -- | -- | -- | -- | -- | -- | 0.0078 |
| | | -- | -- | -- | -- | -- | -- | 0.0459 |
| | | -- | -- | -- | -- | -- | -- | 0.0950 |
| | | -- | -- | -- | -- | -- | -- | 0.0246 |
| | | -- | -- | -- | -- | -- | -- | 0.2960 |
| 22 | Headworks Structure | -- | -- | -- | -- | -- | -- | 0.0933 |
| | | -- | -- | -- | -- | -- | -- | 0.0057 |
| | | -- | -- | -- | -- | -- | -- | 0.0101 |
| | | -- | -- | -- | -- | -- | -- | 0.0416 |
| | | -- | -- | -- | -- | -- | -- | 0.1506 |
| 23 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | 0.0021 |
| | | -- | -- | -- | -- | -- | -- | 0.0037 |
| | | -- | -- | -- | -- | -- | -- | 0.0132 |
| | | -- | -- | -- | -- | -- | -- | 0.0190 |
| 24 | Hinged Bottom Gates | 3.48 | 3.48 | 3.48 | -- | -- | -- | 0.0261 |
| | | 0.58 | 0.58 | 0.58 | -- | -- | -- | 0.0044 |
| | | 0.88 | 0.88 | 0.88 | -- | -- | -- | 0.0066 |
| | | 4.94 | 4.94 | 4.94 | -- | -- | -- | 0.0371 |
| | | 9.06 | 9.06 | 9.06 | 4.12 | 4.06 | -- | 0.8650 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | |
| 25 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0036 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0041 |
| 26 | Pedestrian Bridge Concete Piles | -- | -- | -- | -- | -- | -- | 0.0023 |
| | | -- | -- | -- | -- | -- | -- | 0.0030 |
| | | -- | -- | -- | -- | -- | -- | 0.0035 |
| | | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0033 |
| | | -- | -- | -- | -- | -- | -- | 0.0068 |
| | | -- | -- | -- | -- | -- | -- | 0.0018 |
| | | -- | -- | -- | -- | -- | -- | 0.0211 |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | -- | -- | -- | -- | -- | -- | 0.0017 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | 0.0028 |
| 28 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | 0.0052 |
| | | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | 0.0074 |
| | | -- | -- | -- | -- | -- | -- | 0.0354 |

Table K-128. CO Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|-----------------------------------------------|---------------------------------------------|----------|------|--------------------------------------------------------------|-------------------------|-----------------------------|-----------|-------------------|--------------|--------------------|--------------------------|-----------------|---------|--------------|
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | - | - | Flatbed Truck | n/a - onroad | 1 | MHDT | - | 1 | 1 | 2 | 10.5648 | g/hr | 0.19 |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | | | | 2.0693 | g/hp-hr | 3.65 |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | - | | | | 12.4711 | g/hr | 0.22 |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | - | | | | 0.0000 | g/hr | -- |
| | | | | Mobilization and Demobilization Subtotal | | | | | | | | | | 4.06 |
| 30 | CMU Building and Earthwork Pad Construction | 1 | EA | 165 HP Dozer | Rubber Tired Dozers | 1 | 165 | - | 1 | 1 | 30 | 1.9690 | g/hp-hr | -- |
| | | | | Scraper | Scrapers | 1 | 367 | - | | | | 0.7376 | g/hp-hr | -- |
| | | | | Motor Grader | Graders | 1 | 187 | - | | | | 0.6411 | g/hp-hr | -- |
| | | | | Compactor | Rollers | 1 | 80 | - | | | | 1.8537 | g/hp-hr | -- |
| | | | | 4000 gallon Water Truck | n/a - onroad | 1 | MHDT | - | | | | 10.5648 | g/hr | -- |
| | | | | 10 TN Smooth Roller | Rollers | 1 | 157 | - | | | | 1.6405 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | - | | | | 12.4711 | g/hr | -- |
| | | | | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | - | | | | 2.3329 | g/hp-hr | -- |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | - | | | | 1.4921 | g/hp-hr | -- |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | | | | 2.0693 | g/hp-hr | -- |
| | | | | Concrete Mixer Truck | n/a - onroad | 1 | MHDT | - | | | | 10.5648 | g/hr | -- |
| | | | | CMU Building and Earthwork Pad Construction Subtotal | | | | | | | | | | -- |
| 31 | Concrete Duct Banc | 190 | CY | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | 60 | 1 | 60 | 4 | 2.3329 | g/hp-hr | -- |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | - | | | | 1.4921 | g/hp-hr | -- |
| | | | | Concrete Mixer Truck | n/a - onroad | 2 | MHDT | - | | | | 10.5648 | g/hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | - | | | | 12.4711 | g/hr | -- |
| | | | | Concrete Duct Banc Subtotal | | | | | | | | | | -- |
| | | | | 19 - Buildings, Grounds, and Utilities Total | | | | | | | | | | 4.06 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | - | - | Flatbed Truck | n/a - onroad | 1 | MHDT | - | 1 | 1 | 2 | 10.5648 | g/hr | -- |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | | | | 2.0693 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | - | | | | 12.4711 | g/hr | -- |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | - | | | | 0.0000 | g/hr | -- |
| | | | | Mobilization and Demobilization Subtotal | | | | | | | | | | -- |
| 33 | Mechanical Hydraulic Cylinders & Housing | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 2.0693 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | | | | 12.4711 | g/hr | -- |
| | | | | Mechanical Hydraulic Cylinders & Housing Subtotal | | | | | | | | | | -- |
| 34 | CMU Building Mechanical Equipment | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 2.0693 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | | | | 12.4711 | g/hr | -- |
| | | | | CMU Building Mechanical Equipment Subtotal | | | | | | | | | | -- |
| 35 | Electrical Control Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 12.4711 | g/hr | -- |
| | | | | Electrical Control Equipment CMU Building Subtotal | | | | | | | | | | -- |
| 36 | Electrical Power Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 12.4711 | g/hr | -- |
| | | | | Electrical Power Equipment CMU Building Subtotal | | | | | | | | | | -- |
| 37 | Communication Equipment | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 12 | 12.4711 | g/hr | -- |
| | | | | Communication Equipment Subtotal | | | | | | | | | | -- |
| | | | | 20 -Permanent Operating Equipment Total | | | | | | | | | | -- |
| GRAND TOTAL | | | | | | | | | | | | | | 12.79 |

Table K-128. CO Exhaust Emissions from Offroad Con

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------|---------------------------------------------|----------------------------------|---------------|--------------|--------------|--------------|---------------|--------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|--------------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 3.65 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 4.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30 | CMU Building and Earthwork Pad Construction | 5.73 | 5.73 | 5.73 | 5.73 | 5.73 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 4.77 | 4.77 | 4.77 | 4.77 | 4.77 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 2.11 | 2.11 | 2.11 | 2.11 | 2.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 2.62 | 2.62 | 2.62 | 2.62 | 2.62 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 4.54 | 4.54 | 4.54 | 4.54 | 4.54 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 3.46 | 3.46 | 3.46 | 3.46 | 3.46 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 3.65 | 3.65 | 3.65 | 3.65 | 3.65 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 29.01 | 29.01 | 29.01 | 29.01 | 29.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31 | Concrete Duct Banc | -- | -- | -- | 3.46 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.37 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 1.54 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 5.58 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 29.01 | 29.01 | 29.01 | 34.58 | 29.01 | 4.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.19 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.65 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.22 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.06 | -- |
| 33 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.65 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.66 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.31 |
| 34 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.65 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.66 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.31 |
| 35 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.66 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.66 |
| 36 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.66 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.66 |
| 37 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.06 | 9.94 |
| GRAND TOTAL | | 102.66 | 110.17 | 93.21 | 67.42 | 70.54 | 100.26 | 85.80 | 101.72 | 97.22 | 68.88 | 69.71 | 67.65 | 78.37 | 99.27 | 83.70 | 55.87 | 71.71 | 8.17 | 4.12 | 8.17 | 23.15 |

Table K-128. CO Exhaust Emissions from Offroad Con

| # | Activity | | | | | | | Annual Emissions , tpy |
|-----------------------------------------------|---------------------------------------------|--------------|--------------|--------------|--------------|--------------|-------------|------------------------|
| | | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | |
| 29 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0036 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0041 |
| 30 | CMU Building and Earthwork Pad Construction | -- | -- | -- | -- | -- | -- | 0.0859 |
| | | -- | -- | -- | -- | -- | -- | 0.0716 |
| | | -- | -- | -- | -- | -- | -- | 0.0317 |
| | | -- | -- | -- | -- | -- | -- | 0.0392 |
| | | -- | -- | -- | -- | -- | -- | 0.0028 |
| | | -- | -- | -- | -- | -- | -- | 0.0681 |
| | | -- | -- | -- | -- | -- | -- | 0.0231 |
| | | -- | -- | -- | -- | -- | -- | 0.0518 |
| | | -- | -- | -- | -- | -- | -- | 0.0032 |
| | | -- | -- | -- | -- | -- | -- | 0.0547 |
| | | -- | -- | -- | -- | -- | -- | 0.0028 |
| | | -- | -- | -- | -- | -- | -- | 0.4351 |
| 31 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | 0.0069 |
| | | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | 0.0031 |
| | | -- | -- | -- | -- | -- | -- | 0.0112 |
| | | -- | -- | -- | -- | -- | -- | 0.4503 |
| 20 -Permanent Operating Equipment | | | | | | | | |
| 32 | Mobilization and Demobilization | -- | -- | -- | -- | 0.19 | -- | 0.0002 |
| | | -- | -- | -- | -- | 3.65 | -- | 0.0036 |
| | | -- | -- | -- | -- | 0.22 | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 4.06 | -- | 0.0041 |
| 33 | Mechanical Hydraulic Cylinders & Housing | 3.65 | 3.65 | 3.65 | 3.65 | -- | -- | 0.0547 |
| | | 0.66 | 0.66 | 0.66 | 0.66 | -- | -- | 0.0099 |
| | | 4.31 | 4.31 | 4.31 | 4.31 | -- | -- | 0.0646 |
| 34 | CMU Building Mechanical Equipment | 3.65 | 3.65 | 3.65 | 3.65 | -- | -- | 0.0547 |
| | | 0.66 | 0.66 | 0.66 | 0.66 | -- | -- | 0.0099 |
| | | 4.31 | 4.31 | 4.31 | 4.31 | -- | -- | 0.0646 |
| 35 | Electrical Control Equipment CMU Building | 0.66 | 0.66 | 0.66 | 0.66 | -- | -- | 0.0099 |
| | | 0.66 | 0.66 | 0.66 | 0.66 | -- | -- | 0.0099 |
| 36 | Electrical Power Equipment CMU Building | 0.66 | 0.66 | 0.66 | 0.66 | -- | -- | 0.0099 |
| | | 0.66 | 0.66 | 0.66 | 0.66 | -- | -- | 0.0099 |
| 37 | Communication Equipment | -- | -- | 0.66 | 0.66 | -- | -- | 0.0040 |
| | | -- | -- | 0.66 | 0.66 | -- | -- | 0.0040 |
| | | 9.94 | 9.94 | 10.60 | 10.60 | 4.06 | -- | 0.1571 |
| GRAND TOTAL | | 23.15 | 23.15 | 19.66 | 14.71 | 17.00 | 4.06 | 4.0864 |

Table K-129. SO2 Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|------------------------------------------------------|-------------------------------------|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------|-------------------|--------------|--------------------|--------------------------|----------------------------------------------------------|-------------------------------------------------------|----------------------------------|
| 02 - Relocations | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 0.1718 0.0040 0.0468 0.0000 | g/hr g/hp-hr g/hr g/hr | 0.00 0.01 0.00 -- |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | 0.01 |
| 2 | Fremont Weir Demo | 450 | CY | 3.5 CY Hydraulic Excavator 3.5 CY Front End Loader Wheel 0.8 CY Loader/Backhoe, Wheel 4000 gallon Water Truck 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Loaders Tractors/Loaders/Backhoes n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 1 6 | 359 164 97 MHDT HHDT LDT2 | 40 | 1 | 40 | 12 | 0.0032 0.0035 0.0037 0.1718 0.2206 0.0468 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr | -- -- -- -- -- -- |
| Fremont Weir Demo Subtotal | | | | | | | | | | | | | | -- |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Graders n/a - onroad n/a - onroad n/a - onroad | 1 1 1 5 | 187 MHDT LDT2 HHDT | 39,400 | 1 | 39,400 | 4 | 0.0039 0.1718 0.0468 0.2206 | g/hp-hr g/hr g/hr g/hr | -- -- -- -- |
| Levee O&M Road Regrading (6" AB) Subtotal | | | | | | | | | | | | | | -- |
| 4 | Temporary Electrical Power | 100 | LF | Flatbed Truck Pickup Truck Conventional | n/a - onroad n/a - onroad | 1 2 | MHDT LDT2 | 1,500 | 1 | 1,500 | 1 | 0.1718 0.0468 | g/hr g/hr | 0.00 0.00 |
| Temporary Electrical Power Subtotal | | | | | | | | | | | | | | 0.00 |
| 02 - Relocations Total | | | | | | | | | | | | | | 0.02 |
| 09 - Channels and Canals | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 0.1718 0.0040 0.0468 0.0000 | g/hr g/hp-hr g/hr g/hr | 0.00 0.01 0.00 -- |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | 0.01 |
| 6 | Clearing and Grubbing | 61 | ACR | 1.5 CY Front End Loader Crawler Trailer Mounted Brush Chipper Chainsaw 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Crawler Tractors Shredders Chainsaws n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 6 1 | 110 140 8 MHDT LDT2 HHDT | 2 | 2 | 4 | 16 | 0.0043 0.0026 0.0163 0.1718 0.0468 0.2206 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr | -- -- -- -- -- -- |
| Clearing and Grubbing Subtotal | | | | | | | | | | | | | | -- |
| 7 | Excavation (Wet Conditions) | 61,810 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 35 | 0.0032 0.0033 0.0035 0.2206 0.0468 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr | -- -- -- -- -- |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | | -- |
| 8 | Excavation/Grading (Dry Conditions) | 118,960 | CY | 300 HP Dozer 21 CY Scrapers 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional | Rubber Tired Dozers Scrapers Graders n/a - onroad n/a - onroad | 1 4 1 1 7 | 300 407 187 MHDT LDT2 | 3,500 | 1 | 3,500 | 34 | 0.0033 0.0040 0.0039 0.1718 0.0468 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr | -- -- -- -- -- |
| Excavation/Grading (Dry Conditions) Subtotal | | | | | | | | | | | | | | -- |
| 9 | Earthen Backfill | 8,950 | CY | 300 HP Dozer 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional | Rubber Tired Dozers n/a - onroad Rollers n/a - onroad | 1 1 1 3 | 300 MHDT 157 LDT2 | 1,000 | 1 | 1,000 | 9 | 0.0033 0.1718 0.0036 0.0468 | g/hp-hr g/hr g/hp-hr g/hr | -- -- -- -- |
| Earthen Backfill Subtotal | | | | | | | | | | | | | | -- |

Table K-129. SO2 Exhaust Emissions from Offroad Co

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|--------|--------|--------|-------|--------|-------------|--------|-------|-------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- |
| 6 | Clearing and Grubbing | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.00 | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 9 | Earthen Backfill | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-129. SO2 Exhaust Emissions from Offroad Co

| # | Activity | | | | | | | Annual Emissions , tpy |
|---------------------------------|-------------------------------------|--------|--------|--------|-------|-------------|---------------|------------------------|
| | | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.00 | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.01 | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.00 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.01 | 0.0000 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.0003 | 0.0003 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.00 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.00 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.04 | -- | 0.0001 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.04 | 0.01 | 0.0004 |
| 09 - Channels and Canals | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0005 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0021 |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | 0.0020 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0026 |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |

Table K-129. SO2 Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr | |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------|------------------------|-------------------|--------------|--------------------|--------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|--------|----|
| 10 | Riprap - Class 2 | 24,940 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | HHDT LDT2 | 1,000 | 1 | 1,000 | 25 | 0.0032 0.0036 0.2206 0.0468 | g/hp-hr g/hp-hr g/hr g/hr | -- | |
| Riprap - Class 2 Subtotal | | | | | | | | | | | | | | -- | |
| 11 | Riprap - Class 3 | 9,420 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | HHDT LDT2 | 1,000 | 1 | 1,000 | 10 | 0.0032 0.0036 0.2206 0.0468 | g/hp-hr g/hp-hr g/hr g/hr | -- | |
| Riprap - Class 3 Subtotal | | | | | | | | | | | | | | -- | |
| 12 | RSP Bedding Material | 36,150 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 5 23 | LDT2 HHDT | 1,000 | 2 | 2,000 | 19 | 0.0032 0.0036 0.0468 0.2206 | g/hp-hr g/hp-hr g/hr g/hr | -- | |
| RSP Bedding Material Subtotal | | | | | | | | | | | | | | -- | |
| 13 | Erosion Control Seeding | 31 | ACR | 0.8 CY Front End Loader Wheel Pickup Truck Conventional | Tractors/Loaders/Backhoes n/a - onroad | 1 4 | 97 LDT2 | 2 | 1 | 2 | 16 | 0.0037 0.0468 | g/hp-hr g/hr | -- | |
| Erosion Control Seeding Subtotal | | | | | | | | | | | | | | -- | |
| 09 - Channels and Canals Total | | | | | | | | | | | | | | 0 | |
| 11 - Levees and Floodwalls | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT LDT2 n/a | - | 1 | 1 | 2 | 0.1718 0.0040 0.0468 0.0000 | g/hr g/hp-hr g/hr g/hr | -- | |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | -- | |
| 15 | Soil Cement Bentonite Cutoff Wall | 84,480 | SF | 4.5 CY Hydraulic Excavator 300 HP Dozer 2.5 CY Hydraulic Excavator 16 CY 3 Axle Dump Truck Flash Mixer Slurry Pump Pickup Truck Conventional | Excavators Rubber Tired Dozers Excavators n/a - onroad Cement and Mortar Mixers Pumps n/a - onroad | 1 1 1 14 1 1 5 | HDT 9 84 LDT2 | 7,000 | 1 | 7,000 | 13 | 0.0032 0.0033 0.0032 0.2206 0.0049 0.0049 0.0468 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr | -- | |
| Soil Cement Bentonite Cutoff Wall Subtotal | | | | | | | | | | | | | | -- | |
| 11 - Levees and Floodwalls Total | | | | | | | | | | | | | | | -- |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT LDT2 n/a | - | 1 | 1 | 2 | 0.1718 0.0040 0.0468 0.0000 | g/hr g/hp-hr g/hr g/hr | -- | |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | -- | |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | 21,000 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT LDT2 | 1,200 | 1 | 1,200 | 18 | 0.1718 0.0048 0.0468 | g/hr g/hp-hr g/hr | -- | |
| Construction Site Dewatering (Temporary Cofferdam) Subtotal | | | | | | | | | | | | | | -- | |
| 18 | Construction Site Dewatering (Pumping) | - | - | 6" Dia. Pump Engine Drive Pickup Truck Conventional | Pumps n/a - onroad | 1 3 | 84 LDT2 | - | 1 | 1 | 120 | 0.0049 0.0468 | g/hp-hr g/hr | -- | |
| Construction Site Dewatering (Pumping) Subtotal | | | | | | | | | | | | | | -- | |
| 19 | Excavation (Wet Conditions) | 6,130 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | HDT LDT2 | 1,800 | 1 | 1,800 | 4 | 0.0032 0.0033 0.0035 0.2206 0.0468 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr | -- | |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | | -- | |

Table K-129. SO2 Exhaust Emissions from Offroad Co

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------|----------------------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | -- | -- | -- | -- |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 | 0.09 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | 0.00 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | -- | -- | -- | -- |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.18 | 0.18 | 0.18 | 0.18 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.28 | 0.28 | 0.28 | 0.28 | -- | -- | -- | -- | -- | -- |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
| | | 0.06 | 0.06 | 0.06 | 0.15 | 0.19 | 0.31 | 0.27 | 0.27 | 0.27 | 0.12 | 0.12 | 0.28 | 0.42 | 0.42 | 0.42 | 0.28 | 0.28 | 0.01 | -- | -- | 0.01 |
| 11 - Levees and Floodwalls | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.00 | -- | -- | -- | 0.01 | 0.01 | 0.01 | -- | 0.00 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 | Soil Cement Bentonite Cutoff Wall | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | -- | -- | -- | -- | -- | -- | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | -- | -- | -- | -- | 0.00 | 0.07 | 0.07 | 0.07 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | -- | -- | 0.00 | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.00 | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18 | Construction Site Dewatering (Pumping) | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| | | -- | -- | -- | -- | -- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 19 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-129. SO2 Exhaust Emissions from Offroad Co

| # | Activity | 16-S ip | 23-S ip | 30-S ip | 7-Oct | 14-O t | 21-O t | Annual Emissions |
|-------------------------------------------------------|----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|--------|------------------|
| | | | | | | | | , tpy |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0018 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0007 |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0017 |
| | | -- | -- | -- | -- | -- | -- | 0.0027 |
| 13 | Erosion Control Seeding | 0.01 | 0.01 | -- | -- | -- | -- | 0.0001 |
| | | 0.00 | 0.00 | -- | -- | -- | -- | 0.0000 |
| | | 0.01 | 0.01 | -- | -- | -- | -- | 0.0001 |
| | | 0.01 | 0.01 | -- | -- | -- | -- | 0.0106 |
| 11 - Levees and Floodwalls | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| 15 | Soil Cement Bentonite Cutoff Wall | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0005 |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0005 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | |
| 16 | Mobilization and Demobilization | -- | -- | -- | -- | 0.00 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.00 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| 18 | Construction Site Dewatering (Pumping) | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0004 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0001 |
| | | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0006 |
| 19 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |

Table K-129. SO2 Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|-------------------------------------------|----------------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------------|-------------------|--------------|--------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|--------|
| 20 | Sheet Pile Wall | 7,790 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT LDT2 | 1,200 | 1 | | 7 | 0.1718 0.0048 0.0468 | g/hr g/hp-hr g/hr | -- |
| | | | | | | | | | | 1,200 | Sheet Pile Wall Subtotal | | -- | |
| 21 | Headworks Structure Concrete Piles | 5,040 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 84 MHDT 97 LDT2 | 180 | 1 | 180 | 28 | 0.0024 0.0048 0.0049 0.1718 0.0037 0.0032 0.0468 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr | -- |
| | | | | | | | | | | | Headworks Structure Concrete Piles Subtotal | | -- | |
| 22 | Headworks Structure | 3,080 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 3 | 180 | 18 | 0.0049 0.0038 0.1718 0.0468 | g/hp-hr g/hp-hr g/hr g/hr | -- |
| | | | | | | | | | | | Headworks Structure Subtotal | | -- | |
| 23 | Headworks Channel Transition | 1,330 | CY | 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Plate Compactors n/a - onroad n/a - onroad | 1 2 6 | 8 MHDT LDT2 | 70 | 2 | 140 | 10 | 0.0038 0.1718 0.0468 | g/hp-hr g/hr g/hr | -- |
| | | | | | | | | | | | Headworks Channel Transition Subtotal | | -- | |
| 24 | Hinged Bottom Gates | 3 | EA | 90 TN Truck-mounted Hydraulic Crane Haul Truck Oversize Transport Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 1 4 | HHDT LDT2 | 0.2 | 1 | 0.2 | 15 | 0.0024 0.2206 0.0468 | g/hp-hr g/hr g/hr | -- |
| | | | | | | | | | | 450 | Hinged Bottom Gates Subtotal | | -- | |
| | | | | | | | | | | | 15 - Floodway Control and Diversion Structures Total | | -- | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT LDT2 n/a | - | 1 | 1 | 2 | 0.1718 0.0040 0.0468 0.0000 | g/hr g/hp-hr g/hr g/hr | -- |
| | | | | | | | | | | 100 | Mobilization and Demobilization Subtotal | | -- | |
| 26 | Pedestrian Bridge Concrete Piles | 320 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 84 MHDT 97 LDT2 | 180 | 1 | 180 | 2 | 0.0024 0.0048 0.0049 0.1718 0.0037 0.0032 0.0468 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr | -- |
| | | | | | | | | | | | Pedestrian Bridge Concrete Piles Subtotal | | -- | |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | 24 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 1 | 0.0049 0.0038 0.1718 0.0468 | g/hp-hr g/hp-hr g/hr g/hr | -- |
| | | | | | | | | | | | Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | | -- | |
| 28 | Pedestrian Bridge Span Installation | 1,040 | SF | 90 TN Truck-mounted Hydraulic Crane Flatbed Truck Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 2 5 | MHDT LDT2 | 390 | 1 | 390 | 3 | 0.0024 0.1718 0.0468 | g/hp-hr g/hr g/hr | -- |
| | | | | | | | | | | 450 | Pedestrian Bridge Span Installation Subtotal | | -- | |
| | | | | | | | | | | | 08 - Roads, Railroads, and Bridges Total | | -- | |

Table K-129. SO2 Exhaust Emissions from Offroad Co

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------|----------------------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep | |
| 20 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 21 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
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| 22 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | |
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| 23 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | |
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| 24 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | |
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| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | -- | -- | -- | 0.00 | -- | -- | -- | -- | |
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| 26 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | |
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| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | 0.01 | -- | -- | -- | -- | |
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| 28 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | |
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Table K-129. SO2 Exhaust Emissions from Offroad Co

| # | Activity | | | | | | | | Annual Emissions, tpy |
|-------------------------------------------|----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|--------|---------------|-----------------------|
| | | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | | |
| 20 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
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| 21 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
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| 22 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
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| 23 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
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| 24 | Hinged Bottom Gates | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | 0.0001 |
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| | | 0.04 | 0.04 | 0.04 | 0.01 | 0.01 | -- | 0.0034 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | |
| 25 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
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| 26 | Pedestrian Bridge Concete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
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| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
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| 28 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
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Table K-129. SO2 Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|-----------------------------------------------|---------------------------------------------|----------|------|--------------------------------------------------------------|-------------------------|-----------------------------|-----------|-------------------|--------------|--------------------|--------------------------|-----------------|---------|-------------|
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | - | - | Flatbed Truck | n/a - onroad | 1 | MHDT | - | 1 | 1 | 2 | 0.1718 | g/hr | 0.00 |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | | | | 0.0040 | g/hp-hr | 0.01 |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | - | | | | 0.0468 | g/hr | 0.00 |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | - | | | | 0.0000 | g/hr | -- |
| | | | | Mobilization and Demobilization Subtotal | | | | | | | | | | 0.01 |
| 30 | CMU Building and Earthwork Pad Construction | 1 | EA | 165 HP Dozer | Rubber Tired Dozers | 1 | 165 | - | 1 | 1 | 30 | 0.0039 | g/hp-hr | -- |
| | | | | Scraper | Scrapers | 1 | 367 | - | | | | 0.0040 | g/hp-hr | -- |
| | | | | Motor Grader | Graders | 1 | 187 | - | | | | 0.0039 | g/hp-hr | -- |
| | | | | Compactor | Rollers | 1 | 80 | - | | | | 0.0037 | g/hp-hr | -- |
| | | | | 4000 gallon Water Truck | n/a - onroad | 1 | MHDT | - | | | | 0.1718 | g/hr | -- |
| | | | | 10 TN Smooth Roller | Rollers | 1 | 157 | - | | | | 0.0036 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | - | | | | 0.0468 | g/hr | -- |
| | | | | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | - | | | | 0.0049 | g/hp-hr | -- |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | - | | | | 0.0038 | g/hp-hr | -- |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | | | | 0.0040 | g/hp-hr | -- |
| | | | | Concrete Mixer Truck | n/a - onroad | 1 | MHDT | - | | | | 0.1718 | g/hr | -- |
| | | | | CMU Building and Earthwork Pad Construction Subtotal | | | | | | | | | | -- |
| 31 | Concrete Duct Banc | 190 | CY | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | 60 | 1 | 60 | 4 | 0.0049 | g/hp-hr | -- |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | - | | | | 0.0038 | g/hp-hr | -- |
| | | | | Concrete Mixer Truck | n/a - onroad | 2 | MHDT | - | | | | 0.1718 | g/hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | - | | | | 0.0468 | g/hr | -- |
| | | | | Concrete Duct Banc Subtotal | | | | | | | | | | -- |
| | | | | 19 - Buildings, Grounds, and Utilities Total | | | | | | | | | | 0.01 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | - | - | Flatbed Truck | n/a - onroad | 1 | MHDT | - | 1 | 1 | 2 | 0.1718 | g/hr | -- |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | | | | 0.0040 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | - | | | | 0.0468 | g/hr | -- |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | - | | | | 0.0000 | g/hr | -- |
| | | | | Mobilization and Demobilization Subtotal | | | | | | | | | | -- |
| 33 | Mechanical Hydraulic Cylinders & Housing | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.0040 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | | | | 0.0468 | g/hr | -- |
| | | | | Mechanical Hydraulic Cylinders & Housing Subtotal | | | | | | | | | | -- |
| 34 | CMU Building Mechanical Equipment | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.0040 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | | | | 0.0468 | g/hr | -- |
| | | | | CMU Building Mechanical Equipment Subtotal | | | | | | | | | | -- |
| 35 | Electrical Control Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 0.0468 | g/hr | -- |
| | | | | Electrical Control Equipment CMU Building Subtotal | | | | | | | | | | -- |
| 36 | Electrical Power Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 0.0468 | g/hr | -- |
| | | | | Electrical Power Equipment CMU Building Subtotal | | | | | | | | | | -- |
| 37 | Communication Equipment | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 12 | 0.0468 | g/hr | -- |
| | | | | Communication Equipment Subtotal | | | | | | | | | | -- |
| | | | | 20 -Permanent Operating Equipment Total | | | | | | | | | | -- |
| GRAND TOTAL | | | | | | | | | | | | | | 0.04 |

Table K-129. SO2 Exhaust Emissions from Offroad Co

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------|---------------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
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| 30 | CMU Building and Earthwork Pad Construction | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
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| 31 | Concrete Duct Banc | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
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| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | -- |
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| 33 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
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| 34 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
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| 35 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 |
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| 36 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 |
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| 37 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
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| GRAND TOTAL | | 0.20 | 0.22 | 0.18 | 0.29 | 0.31 | 0.45 | 0.41 | 0.48 | 0.45 | 0.30 | 0.29 | 0.35 | 0.44 | 0.55 | 0.48 | 0.32 | 0.36 | 0.02 | 0.01 | 0.02 | 0.07 |

Table K-129. SO2 Exhaust Emissions from Offroad Co

| # | Activity | | | | | | | Annual Emissions , tpy |
|-----------------------------------------------|---------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------------|
| | | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | |
| 29 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0000 |
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| 30 | CMU Building and Earthwork Pad Construction | -- | -- | -- | -- | -- | -- | 0.0002 |
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| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0014 |
| 31 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0014 |
| 20 -Permanent Operating Equipment | | | | | | | | |
| 32 | Mobilization and Demobilization | -- | -- | -- | -- | 0.00 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.00 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| 33 | Mechanical Hydraulic Cylinders & Housing | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0001 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0000 |
| | | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0001 |
| 34 | CMU Building Mechanical Equipment | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0001 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0000 |
| | | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0001 |
| 35 | Electrical Control Equipment CMU Building | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0000 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0000 |
| 36 | Electrical Power Equipment CMU Building | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0000 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0000 |
| 37 | Communication Equipment | -- | -- | 0.00 | 0.00 | -- | -- | 0.0000 |
| | | -- | -- | 0.00 | 0.00 | -- | -- | 0.0000 |
| | | 0.02 | 0.02 | 0.03 | 0.03 | 0.01 | -- | 0.0004 |
| GRAND TOTAL | | 0.07 | 0.07 | 0.06 | 0.04 | 0.07 | 0.01 | 0.0168 |

Table K-130. PM10 Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|------------------------------------------------------|-------------------------------------|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------|-------------------|--------------|--------------------|--------------------------|----------------------------------------------------------|-------------------------------------------------------|----------------------------------|
| 02 - Relocations | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 2.2051 0.0038 0.7714 0.0000 | g/hr g/hp-hr g/hr g/hr | 0.04 0.01 0.01 -- |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | 0.06 |
| 2 | Fremont Weir Demo | 450 | CY | 3.5 CY Hydraulic Excavator 3.5 CY Front End Loader Wheel 0.8 CY Loader/Backhoe, Wheel 4000 gallon Water Truck 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Loaders Tractors/Loaders/Backhoes n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 1 6 | 359 164 97 MHDT HHDT LDT2 | 40 | 1 | 40 | 12 | 0.0036 0.0038 0.0040 2.2051 1.5952 0.7714 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr | -- -- -- -- -- -- |
| Fremont Weir Demo Subtotal | | | | | | | | | | | | | | -- |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Graders n/a - onroad n/a - onroad n/a - onroad | 1 1 1 5 | 187 MHDT LDT2 HHDT | 39,400 | 1 | 39,400 | 4 | 0.0038 2.2051 0.7714 1.5952 | g/hp-hr g/hr g/hr g/hr | -- -- -- -- |
| Levee O&M Road Regrading (6" AB) Subtotal | | | | | | | | | | | | | | -- |
| 4 | Temporary Electrical Power | 100 | LF | Flatbed Truck Pickup Truck Conventional | n/a - onroad n/a - onroad | 1 2 | MHDT LDT2 | 1,500 | 1 | 1,500 | 1 | 2.2051 0.7714 | g/hr g/hr | 0.04 0.03 |
| Temporary Electrical Power Subtotal | | | | | | | | | | | | | | 0.07 |
| 02 - Relocations Total | | | | | | | | | | | | | | 0.13 |
| 09 - Channels and Canals | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 2.2051 0.0038 0.7714 0.0000 | g/hr g/hp-hr g/hr g/hr | 0.04 0.01 0.01 -- |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | 0.06 |
| 6 | Clearing and Grubbing | 61 | ACR | 1.5 CY Front End Loader Crawler Trailer Mounted Brush Chipper Chainsaw 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Crawler Tractors Shredders Chainsaws n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 6 1 | 110 140 8 MHDT LDT2 HHDT | 2 | 2 | 4 | 16 | 0.0045 0.0303 0.2300 2.2051 0.7714 1.5952 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr | -- -- -- -- -- -- |
| Clearing and Grubbing Subtotal | | | | | | | | | | | | | | -- |
| 7 | Excavation (Wet Conditions) | 61,810 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 35 | 0.0036 0.0040 0.0038 1.5952 0.7714 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr | -- -- -- -- -- |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | | -- |
| 8 | Excavation/Grading (Dry Conditions) | 118,960 | CY | 300 HP Dozer 21 CY Scrapers 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional | Rubber Tired Dozers Scrapers Graders n/a - onroad n/a - onroad | 1 4 1 1 7 | 300 407 187 MHDT LDT2 | 3,500 | 1 | 3,500 | 34 | 0.0040 0.0045 0.0038 2.2051 0.7714 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr | -- -- -- -- -- |
| Excavation/Grading (Dry Conditions) Subtotal | | | | | | | | | | | | | | -- |
| 9 | Earthen Backfill | 8,950 | CY | 300 HP Dozer 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional | Rubber Tired Dozers n/a - onroad Rollers n/a - onroad | 1 1 1 3 | 300 MHDT 157 LDT2 | 1,000 | 1 | 1,000 | 9 | 0.0040 2.2051 0.0034 0.7714 | g/hp-hr g/hr g/hp-hr g/hr | -- -- -- -- |
| Earthen Backfill Subtotal | | | | | | | | | | | | | | -- |

Table K-130. PM10 Exhaust Emissions from Offroad C

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|--------|--------|--------|-------|--------|-------------|--------|-------|-------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.08 | 0.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.19 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.19 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- |
| 6 | Clearing and Grubbing | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.15 | 0.15 | 0.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.08 | 0.08 | 0.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.16 | 0.16 | 0.16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.53 | 0.53 | 0.53 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 9 | Earthen Backfill | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.11 | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-130. PM10 Exhaust Emissions from Offroad C

| # | Activity | | | | | | | Annual Emissions , tpy |
|---------------------------------|-------------------------------------|--------|--------|--------|-------|-------------|-------------|------------------------|
| | | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.04 | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.01 | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.01 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.06 | 0.0001 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | 0.0005 | |
| | | -- | -- | -- | -- | -- | -- | 0.0011 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.04 | -- | 0.0001 |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.14 | -- | 0.0003 |
| | | -- | -- | -- | -- | 0.21 | -- | 0.0004 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.21 | 0.06 | 0.0016 |
| 09 - Channels and Canals | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0012 |
| | | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | 0.0005 | |
| | | -- | -- | -- | -- | -- | -- | 0.0042 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0044 |
| | | -- | -- | -- | -- | -- | -- | 0.0017 |
| | | -- | -- | -- | -- | -- | -- | 0.0077 |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0022 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | 0.0051 |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0005 |

Table K-130. PM10 Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------|------------------------|-------------------|--------------|--------------------|--------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|----------|
| 10 | Riprap - Class 2 | 24,940 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | HHDT LDT2 | 1,000 | 1 | 1,000 | 25 | 0.0036 0.0040 1.5952 0.7714 | g/hp-hr g/hp-hr g/hr g/hr | -- |
| Riprap - Class 2 Subtotal | | | | | | | | | | | | | | -- |
| 11 | Riprap - Class 3 | 9,420 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | HHDT LDT2 | 1,000 | 1 | 1,000 | 10 | 0.0036 0.0040 1.5952 0.7714 | g/hp-hr g/hp-hr g/hr g/hr | -- |
| Riprap - Class 3 Subtotal | | | | | | | | | | | | | | -- |
| 12 | RSP Bedding Material | 36,150 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 5 23 | LDT2 HHDT | 1,000 | 2 | 2,000 | 19 | 0.0036 0.0040 0.7714 1.5952 | g/hp-hr g/hp-hr g/hr g/hr | -- |
| RSP Bedding Material Subtotal | | | | | | | | | | | | | | -- |
| 13 | Erosion Control Seeding | 31 | ACR | 0.8 CY Front End Loader Wheel Pickup Truck Conventional | Tractors/Loaders/Backhoes n/a - onroad | 1 4 | 97 LDT2 | 2 | 1 | 2 | 16 | 0.0040 0.7714 | g/hp-hr g/hr | -- |
| Erosion Control Seeding Subtotal | | | | | | | | | | | | | | -- |
| 09 - Channels and Canals Total | | | | | | | | | | | | | | -- |
| 11 - Levees and Floodwalls | | | | | | | | | | | | | | 0 |
| 14 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT LDT2 n/a | - | 1 | 1 | 6 | 2.2051 0.0038 0.7714 0.0000 | g/hr g/hp-hr g/hr g/hr | -- |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | -- |
| 15 | Soil Cement Bentonite Cutoff Wall | 84,480 | SF | 4.5 CY Hydraulic Excavator 300 HP Dozer 2.5 CY Hydraulic Excavator 16 CY 3 Axle Dump Truck Flash Mixer Slurry Pump Pickup Truck Conventional | Excavators Rubber Tired Dozers Excavators n/a - onroad Cement and Mortar Mixers Pumps n/a - onroad | 1 1 1 14 1 1 5 | HDT 9 84 LDT2 | 7,000 | 1 | 7,000 | 13 | 0.0036 0.0040 0.0036 1.5952 0.0906 0.0071 0.7714 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr | -- |
| Soil Cement Bentonite Cutoff Wall Subtotal | | | | | | | | | | | | | | -- |
| 11 - Levees and Floodwalls Total | | | | | | | | | | | | | | -- |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT LDT2 n/a | - | 1 | 1 | 2 | 2.2051 0.0038 0.7714 0.0000 | g/hr g/hp-hr g/hr g/hr | -- |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | -- |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | 21,000 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT LDT2 | 1,200 | 1 | 1,200 | 18 | 2.2051 0.0046 0.7714 | g/hr g/hp-hr g/hr | -- |
| Construction Site Dewatering (Temporary Cofferdam) Subtotal | | | | | | | | | | | | | | -- |
| 18 | Construction Site Dewatering (Pumping) | - | - | 6" Dia. Pump Engine Drive Pickup Truck Conventional | Pumps n/a - onroad | 1 3 | 84 LDT2 | - | 1 | 1 | 120 | 0.0071 0.7714 | g/hp-hr g/hr | -- |
| Construction Site Dewatering (Pumping) Subtotal | | | | | | | | | | | | | | -- |
| 19 | Excavation (Wet Conditions) | 6,130 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | HDT LDT2 | 1,800 | 1 | 1,800 | 4 | 0.0036 0.0040 0.0038 1.5952 0.7714 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr | -- |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | | -- |

Table K-130. PM10 Exhaust Emissions from Offroad C

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------|----------------------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | -- | -- | -- | -- | |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.65 | 0.65 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.07 | 0.07 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | -- | -- | -- | -- | |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.14 | 0.14 | 0.14 | 0.14 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.29 | 1.29 | 1.29 | 1.29 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.54 | 1.54 | 1.54 | 1.54 | -- | -- | -- | -- | -- | -- | |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.05 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 |
| | | 0.53 | 0.53 | 0.53 | 0.30 | 0.41 | 0.85 | 0.74 | 0.74 | 0.74 | 0.44 | 0.44 | 1.54 | 2.31 | 2.31 | 2.31 | 1.54 | 1.54 | 0.06 | -- | 0.06 | |
| 11 - Levees and Floodwalls | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.04 | 0.02 | 0.02 | 0.02 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 | Soil Cement Bentonite Cutoff Wall | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | 0.01 | -- | -- | -- | -- | -- | 0.16 | 0.16 | 0.16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | 0.01 | -- | -- | -- | -- | 0.04 | 0.18 | 0.18 | 0.18 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | -- | -- | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.08 | 0.08 | 0.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.14 | 0.14 | 0.14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 18 | Construction Site Dewatering (Pumping) | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| | | -- | -- | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |
| | | -- | -- | -- | -- | -- | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
| 19 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | 0.44 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |

Table K-130. PM10 Exhaust Emissions from Offroad C

| # | Activity | 16-S ip | 23-S ip | 30-S ip | 7-Oct | 14-O t | 21-O t | Annual Emissions |
|-------------------------------------------------------|----------------------------------------------------|-------------|-------------|-------------|-------------|---------------|---------------|------------------|
| | | | | | | | | , tpy |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | 0.0081 |
| | | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | 0.0096 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0032 |
| | | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | 0.0038 |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | -- | 0.0123 |
| | | -- | -- | -- | -- | -- | -- | 0.0146 |
| 13 | Erosion Control Seeding | 0.01 | 0.01 | -- | -- | -- | -- | 0.0001 |
| | | 0.05 | 0.05 | -- | -- | -- | -- | 0.0004 |
| | | 0.06 | 0.06 | -- | -- | -- | -- | 0.0005 |
| | | 0.06 | 0.06 | -- | -- | -- | -- | 0.0461 |
| 11 - Levees and Floodwalls | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| 15 | Soil Cement Bentonite Cutoff Wall | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0004 |
| -- | -- | -- | -- | -- | 0.01 | -- | 0.0012 | |
| -- | -- | -- | -- | -- | 0.01 | -- | 0.0013 | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | |
| 16 | Mobilization and Demobilization | -- | -- | -- | -- | 0.04 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.06 | -- |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | 0.0012 |
| 18 | Construction Site Dewatering (Pumping) | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0006 |
| | | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | 0.0024 |
| | | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | 0.0031 |
| 19 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| -- | -- | -- | -- | -- | -- | 0.0009 | | |

Table K-130. PM10 Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|-------------------------------------------|----------------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------|-------------------|--------------|--------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|--------|
| 20 | Sheet Pile Wall | 7,790 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT LDT2 | 1,200 | 1 | | 7 | 2.2051 0.0046 0.7714 | g/hr g/hp-hr g/hr | -- |
| | | | | | | | | | | | Sheet Pile Wall Subtotal | -- | | |
| 21 | Headworks Structure Concrete Piles | 5,040 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 84 MHDT 97 LDT2 | 180 | 1 | 180 | 28 | 0.0027 0.0046 0.0071 2.2051 0.0040 0.0041 0.7714 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr | -- |
| | | | | | | | | | | | Headworks Structure Concrete Piles Subtotal | -- | | |
| 22 | Headworks Structure | 3,080 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 3 | 180 | 18 | 0.0071 0.0696 2.2051 0.7714 | g/hp-hr g/hp-hr g/hr g/hr | -- |
| | | | | | | | | | | | Headworks Structure Subtotal | -- | | |
| 23 | Headworks Channel Transition | 1,330 | CY | 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Plate Compactors n/a - onroad n/a - onroad | 1 2 6 | 8 MHDT LDT2 | 70 | 2 | 140 | 10 | 0.0696 2.2051 0.7714 | g/hp-hr g/hr g/hr | -- |
| | | | | | | | | | | | Headworks Channel Transition Subtotal | -- | | |
| 24 | Hinged Bottom Gates | 3 | EA | 90 TN Truck-mounted Hydraulic Crane Haul Truck Oversize Transport Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 1 4 | HHDT LDT2 | 0.2 | 1 | 0.2 | 15 | 0.0027 1.5952 0.7714 | g/hp-hr g/hr g/hr | -- |
| | | | | | | | | | | | Hinged Bottom Gates Subtotal | -- | | |
| | | | | | | | | | | | 15 - Floodway Control and Diversion Structures Total | -- | | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT LDT2 n/a | - | 1 | 1 | 2 | 2.2051 0.0038 0.7714 0.0000 | g/hr g/hp-hr g/hr g/hr | -- |
| | | | | | | | | | | | Mobilization and Demobilization Subtotal | -- | | |
| 26 | Pedestrian Bridge Concrete Piles | 320 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 84 MHDT 97 LDT2 | 180 | 1 | 180 | 2 | 0.0027 0.0046 0.0071 2.2051 0.0040 0.0041 0.7714 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr | -- |
| | | | | | | | | | | | Pedestrian Bridge Concrete Piles Subtotal | -- | | |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | 24 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 1 | 0.0071 0.0696 2.2051 0.7714 | g/hp-hr g/hp-hr g/hr g/hr | -- |
| | | | | | | | | | | | Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | -- | | |
| 28 | Pedestrian Bridge Span Installation | 1,040 | SF | 90 TN Truck-mounted Hydraulic Crane Flatbed Truck Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 2 5 | MHDT LDT2 | 390 | 1 | 390 | 3 | 0.0027 2.2051 0.7714 | g/hp-hr g/hr g/hr | -- |
| | | | | | | | | | | | Pedestrian Bridge Span Installation Subtotal | -- | | |
| | | | | | | | | | | | 08 - Roads, Railroads, and Bridges Total | -- | | |

Table K-130. PM10 Exhaust Emissions from Offroad C

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------|----------------------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep | |
| 20 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.08 | 0.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.14 | 0.14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 21 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 22 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | -- | -- | -- | -- | -- | 0.03 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | -- | -- | -- | -- | -- | 0.03 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.23 | 0.23 | -- | -- | -- | -- | -- | 0.23 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.29 | 0.29 | -- | -- | -- | -- | -- | 0.29 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.58 | 0.58 | -- | -- | -- | -- | -- | 0.58 | -- | -- | -- | |
| 23 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.16 | 0.16 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.16 | 0.16 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.34 | 0.34 | -- | -- | -- | -- | -- | -- | -- | |
| 24 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.05 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 | |
| | | -- | 0.06 | 0.14 | 0.14 | 0.14 | 0.49 | 0.51 | 0.51 | 0.37 | 0.37 | 0.95 | 0.63 | 0.05 | 0.39 | 0.39 | 0.05 | 0.63 | 0.05 | 0.05 | 0.05 | 0.16 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | 0.04 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | 0.01 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | 0.01 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | 0.06 | -- | -- | -- | |
| 26 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.32 | -- | -- | -- | -- | -- | -- | -- | -- | |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.08 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.19 | -- | -- | -- | |
| 28 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.08 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.07 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.17 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | 0.32 | 0.19 | 0.17 | 0.06 | -- | -- | -- | -- | |

Table K-130. PM10 Exhaust Emissions from Offroad C

| # | Activity | | | | | | | | Annual Emissions , tpy |
|-------------------------------------------|----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|--------|---------------|------------------------|
| | | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | | |
| 20 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | 0.0005 | |
| 21 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0015 | |
| | | -- | -- | -- | -- | -- | -- | 0.0045 | |
| 22 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0021 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0026 |
| | | -- | -- | -- | -- | -- | -- | 0.0052 | |
| 23 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | 0.0017 | |
| 24 | Hinged Bottom Gates | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | 0.0002 |
| | | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | 0.0002 |
| | | 0.05 | 0.05 | 0.05 | -- | -- | -- | -- | 0.0004 |
| | | 0.10 | 0.10 | 0.10 | -- | -- | -- | -- | 0.0008 |
| | | 0.16 | 0.16 | 0.16 | 0.05 | 0.06 | -- | 0.0179 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | |
| 25 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0001 | |
| 26 | Pedestrian Bridge Concete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 | |
| | | -- | -- | -- | -- | -- | -- | 0.0003 | |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 | |
| 28 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0003 | |
| | | -- | -- | -- | -- | -- | -- | 0.0007 | |

Table K-130. PM10 Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|-----------------------------------------------|---------------------------------------------|----------|------|--------------------------------------------------------------|-------------------------|-----------------------------|-----------|-------------------|--------------|--------------------|--------------------------|-----------------|---------|-------------|
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | - | - | Flatbed Truck | n/a - onroad | 1 | MHDT | - | 1 | 1 | 2 | 2.2051 | g/hr | 0.04 |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | | | | 0.0038 | g/hp-hr | 0.01 |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | - | | | | 0.7714 | g/hr | 0.01 |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | - | | | | 0.0000 | g/hr | -- |
| | | | | Mobilization and Demobilization Subtotal | | | | | | | | | | 0.06 |
| 30 | CMU Building and Earthwork Pad Construction | 1 | EA | 165 HP Dozer | Rubber Tired Dozers | 1 | 165 | - | 1 | 1 | 30 | 0.0043 | g/hp-hr | -- |
| | | | | Scraper | Scrapers | 1 | 367 | - | | | | 0.0045 | g/hp-hr | -- |
| | | | | Motor Grader | Graders | 1 | 187 | - | | | | 0.0038 | g/hp-hr | -- |
| | | | | Compactor | Rollers | 1 | 80 | - | | | | 0.0037 | g/hp-hr | -- |
| | | | | 4000 gallon Water Truck | n/a - onroad | 1 | MHDT | - | | | | 2.2051 | g/hr | -- |
| | | | | 10 TN Smooth Roller | Rollers | 1 | 157 | - | | | | 0.0034 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | - | | | | 0.7714 | g/hr | -- |
| | | | | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | - | | | | 0.0071 | g/hp-hr | -- |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | - | | | | 0.0696 | g/hp-hr | -- |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | | | | 0.0038 | g/hp-hr | -- |
| | | | | Concrete Mixer Truck | n/a - onroad | 1 | MHDT | - | | | | 2.2051 | g/hr | -- |
| | | | | CMU Building and Earthwork Pad Construction Subtotal | | | | | | | | | | -- |
| 31 | Concrete Duct Banc | 190 | CY | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | 60 | 1 | 60 | 4 | 0.0071 | g/hp-hr | -- |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | - | | | | 0.0696 | g/hp-hr | -- |
| | | | | Concrete Mixer Truck | n/a - onroad | 2 | MHDT | - | | | | 2.2051 | g/hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | - | | | | 0.7714 | g/hr | -- |
| | | | | Concrete Duct Banc Subtotal | | | | | | | | | | -- |
| | | | | 19 - Buildings, Grounds, and Utilities Total | | | | | | | | | | 0.06 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | - | - | Flatbed Truck | n/a - onroad | 1 | MHDT | - | 1 | 1 | 2 | 2.2051 | g/hr | -- |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | | | | 0.0038 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | - | | | | 0.7714 | g/hr | -- |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | - | | | | 0.0000 | g/hr | -- |
| | | | | Mobilization and Demobilization Subtotal | | | | | | | | | | -- |
| 33 | Mechanical Hydraulic Cylinders & Housing | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.0038 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | | | | 0.7714 | g/hr | -- |
| | | | | Mechanical Hydraulic Cylinders & Housing Subtotal | | | | | | | | | | -- |
| 34 | CMU Building Mechanical Equipment | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.0038 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | | | | 0.7714 | g/hr | -- |
| | | | | CMU Building Mechanical Equipment Subtotal | | | | | | | | | | -- |
| 35 | Electrical Control Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 0.7714 | g/hr | -- |
| | | | | Electrical Control Equipment CMU Building Subtotal | | | | | | | | | | -- |
| 36 | Electrical Power Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 0.7714 | g/hr | -- |
| | | | | Electrical Power Equipment CMU Building Subtotal | | | | | | | | | | -- |
| 37 | Communication Equipment | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 12 | 0.7714 | g/hr | -- |
| | | | | Communication Equipment Subtotal | | | | | | | | | | -- |
| | | | | 20 -Permanent Operating Equipment Total | | | | | | | | | | -- |
| GRAND TOTAL | | | | | | | | | | | | | | 0.24 |

Table K-130. PM10 Exhaust Emissions from Offroad C

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------|---------------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 30 | CMU Building and Earthwork Pad Construction | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 31 | Concrete Duct Banc | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | 0.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.27 | 0.27 | 0.27 | 0.46 | 0.27 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | |
| 33 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.05 | |
| 34 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.05 | |
| 35 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | |
| 36 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | |
| 37 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.18 | |
| GRAND TOTAL | | 0.99 | 1.06 | 0.94 | 0.90 | 0.82 | 1.40 | 1.29 | 1.43 | 1.29 | 0.99 | 1.43 | 2.17 | 2.42 | 3.02 | 2.89 | 1.76 | 2.23 | 0.11 | 0.05 | 0.11 | 0.39 |

Table K-130. PM10 Exhaust Emissions from Offroad C

| # | Activity | | | | | | | Annual Emissions , tpy |
|-----------------------------------------------|---------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|------------------------|
| | | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | |
| 29 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| 30 | CMU Building and Earthwork Pad Construction | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0014 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0040 |
| 31 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0045 |
| 20 -Permanent Operating Equipment | | | | | | | | |
| 32 | Mobilization and Demobilization | -- | -- | -- | -- | 0.04 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.06 | -- | 0.0001 |
| 33 | Mechanical Hydraulic Cylinders & Housing | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0001 |
| | | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | 0.0006 |
| | | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | 0.0007 |
| 34 | CMU Building Mechanical Equipment | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0001 |
| | | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | 0.0006 |
| | | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | 0.0007 |
| 35 | Electrical Control Equipment CMU Building | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | 0.0006 |
| | | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | 0.0006 |
| 36 | Electrical Power Equipment CMU Building | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | 0.0006 |
| | | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | 0.0006 |
| 37 | Communication Equipment | -- | -- | 0.04 | 0.04 | -- | -- | 0.0002 |
| | | -- | -- | 0.04 | 0.04 | -- | -- | 0.0002 |
| | | 0.18 | 0.18 | 0.22 | 0.22 | 0.06 | -- | 0.0030 |
| GRAND TOTAL | | 0.39 | 0.39 | 0.37 | 0.27 | 0.33 | 0.06 | 0.0751 |

Table K-131. PM2.5 Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|------------------------------------------------------|-------------------------------------|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------|-------------------|--------------|--------------------|--------------------------|----------------------------------------------------------|-------------------------------------------------------|----------------------------------|
| 02 - Relocations | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 0.9499 0.0035 0.3620 0.0000 | g/hr g/hp-hr g/hr g/hr | 0.02 0.01 0.01 -- |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | 0.03 |
| 2 | Fremont Weir Demo | 450 | CY | 3.5 CY Hydraulic Excavator 3.5 CY Front End Loader Wheel 0.8 CY Loader/Backhoe, Wheel 4000 gallon Water Truck 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Loaders Tractors/Loaders/Backhoes n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 1 6 | 359 164 97 MHDT HHDT LDT2 | 40 | 1 | 40 | 12 | 0.0033 0.0035 0.0037 0.9499 0.6688 0.3620 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr | -- -- -- -- -- -- |
| Fremont Weir Demo Subtotal | | | | | | | | | | | | | | -- |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Graders n/a - onroad n/a - onroad n/a - onroad | 1 1 1 5 | 187 MHDT LDT2 HHDT | 39,400 | 1 | 39,400 | 4 | 0.0035 0.9499 0.3620 0.6688 | g/hp-hr g/hr g/hr g/hr | -- -- -- -- |
| Levee O&M Road Regrading (6" AB) Subtotal | | | | | | | | | | | | | | -- |
| 4 | Temporary Electrical Power | 100 | LF | Flatbed Truck Pickup Truck Conventional | n/a - onroad n/a - onroad | 1 2 | MHDT LDT2 | 1,500 | 1 | 1,500 | 1 | 0.9499 0.3620 | g/hr g/hr | 0.02 0.01 |
| Temporary Electrical Power Subtotal | | | | | | | | | | | | | | 0.03 |
| 02 - Relocations Total | | | | | | | | | | | | | | 0.06 |
| 09 - Channels and Canals | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 0.9499 0.0035 0.3620 0.0000 | g/hr g/hp-hr g/hr g/hr | 0.02 0.01 0.01 -- |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | 0.03 |
| 6 | Clearing and Grubbing | 61 | ACR | 1.5 CY Front End Loader Crawler Trailer Mounted Brush Chipper Chainsaw 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Crawler Tractors Shredders Chainsaws n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 6 1 | 110 140 8 MHDT LDT2 HHDT | 2 | 2 | 4 | 16 | 0.0041 0.0279 0.2116 0.9499 0.3620 0.6688 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr | -- -- -- -- -- -- |
| Clearing and Grubbing Subtotal | | | | | | | | | | | | | | -- |
| 7 | Excavation (Wet Conditions) | 61,810 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 35 | 0.0033 0.0037 0.0035 0.6688 0.3620 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr | -- -- -- -- -- |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | | -- |
| 8 | Excavation/Grading (Dry Conditions) | 118,960 | CY | 300 HP Dozer 21 CY Scrapers 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional | Rubber Tired Dozers Scrapers Graders n/a - onroad n/a - onroad | 1 4 1 1 7 | 300 407 187 MHDT LDT2 | 3,500 | 1 | 3,500 | 34 | 0.0037 0.0042 0.0035 0.9499 0.3620 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr | -- -- -- -- -- |
| Excavation/Grading (Dry Conditions) Subtotal | | | | | | | | | | | | | | -- |
| 9 | Earthen Backfill | 8,950 | CY | 300 HP Dozer 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional | Rubber Tired Dozers n/a - onroad Rollers n/a - onroad | 1 1 1 3 | 300 MHDT 157 LDT2 | 1,000 | 1 | 1,000 | 9 | 0.0042 0.9499 2.0287 0.3620 | g/hp-hr g/hr g/hp-hr g/hr | -- -- -- -- |
| Earthen Backfill Subtotal | | | | | | | | | | | | | | -- |

Table K-131. PM2.5 Exhaust Emissions from Offroad C

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|--------|--------|--------|-------|--------|--------|-------------|-------|-------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | -- | -- |
| 6 | Clearing and Grubbing | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.14 | 0.14 | 0.14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.08 | 0.08 | 0.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.35 | 0.35 | 0.35 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 9 | Earthen Backfill | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 5.62 | 5.62 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 5.68 | 5.68 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-131. PM2.5 Exhaust Emissions from Offroad C

| # | Activity | | | | | | | Annual Emissions , tpy |
|---------------------------------|-------------------------------------|--------|--------|--------|-------|-------------|-------------|------------------------|
| | | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.02 | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.01 | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.01 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.03 | 0.0000 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | 0.0002 | |
| | | -- | -- | -- | -- | -- | -- | 0.0006 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.06 | -- | 0.0001 |
| | | -- | -- | -- | -- | 0.09 | -- | 0.0002 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.09 | 0.03 | 0.0009 |
| 09 - Channels and Canals | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | 0.0002 | |
| | | -- | -- | -- | -- | -- | -- | 0.0028 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0019 |
| | | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | 0.0041 |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | 0.0020 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | 0.0036 |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0253 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0255 |

Table K-131. PM2.5 Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr | |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------|------------------------|-------------------|--------------|--------------------|--------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|--------|----|
| 10 | Riprap - Class 2 | 24,940 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | HHDT LDT2 | 1,000 | 1 | 1,000 | 25 | 0.0033 0.0036 0.6688 0.3620 | g/hp-hr g/hp-hr g/hr g/hr | -- | |
| Riprap - Class 2 Subtotal | | | | | | | | | | | | | | -- | |
| 11 | Riprap - Class 3 | 9,420 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | HHDT LDT2 | 1,000 | 1 | 1,000 | 10 | 0.0033 0.0036 0.6688 0.3620 | g/hp-hr g/hp-hr g/hr g/hr | -- | |
| Riprap - Class 3 Subtotal | | | | | | | | | | | | | | -- | |
| 12 | RSP Bedding Material | 36,150 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 5 23 | LDT2 HHDT | 1,000 | 2 | 2,000 | 19 | 0.0033 0.0036 0.3620 0.6688 | g/hp-hr g/hp-hr g/hr g/hr | -- | |
| RSP Bedding Material Subtotal | | | | | | | | | | | | | | -- | |
| 13 | Erosion Control Seeding | 31 | ACR | 0.8 CY Front End Loader Wheel Pickup Truck Conventional | Tractors/Loaders/Backhoes n/a - onroad | 1 4 | 97 LDT2 | 2 | 1 | 2 | 16 | 0.0037 0.3620 | g/hp-hr g/hr | -- | |
| Erosion Control Seeding Subtotal | | | | | | | | | | | | | | -- | |
| 09 - Channels and Canals Total | | | | | | | | | | | | | | 0 | |
| 11 - Levees and Floodwalls | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT LDT2 n/a | - | 1 | 1 | 3 | 0.9499 0.0036 0.3620 0.0000 | g/hr g/hp-hr g/hr g/hr | -- | |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | -- | |
| 15 | Soil Cement Bentonite Cutoff Wall | 84,480 | SF | 4.5 CY Hydraulic Excavator 300 HP Dozer 2.5 CY Hydraulic Excavator 16 CY 3 Axle Dump Truck Flash Mixer Slurry Pump Pickup Truck Conventional | Excavators Rubber Tired Dozers Excavators n/a - onroad Cement and Mortar Mixers Pumps n/a - onroad | 1 1 1 14 1 1 5 | HDT 9 84 LDT2 | 7,000 | 1 | 7,000 | 13 | 0.0037 0.7097 0.0000 0.6688 0.0000 2.0287 0.3620 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr | -- | |
| Soil Cement Bentonite Cutoff Wall Subtotal | | | | | | | | | | | | | | -- | |
| 11 - Levees and Floodwalls Total | | | | | | | | | | | | | | | -- |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT LDT2 n/a | - | 1 | 1 | 2 | 0.9499 0.0035 0.3620 0.0000 | g/hr g/hp-hr g/hr g/hr | -- | |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | -- | |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | 21,000 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT LDT2 | 1,200 | 1 | 1,200 | 18 | 0.9499 0.0042 0.3620 | g/hr g/hp-hr g/hr | -- | |
| Construction Site Dewatering (Temporary Cofferdam) Subtotal | | | | | | | | | | | | | | -- | |
| 18 | Construction Site Dewatering (Pumping) | - | - | 6" Dia. Pump Engine Drive Pickup Truck Conventional | Pumps n/a - onroad | 1 3 | 84 LDT2 | - | 1 | 1 | 120 | 0.0066 0.3620 | g/hp-hr g/hr | -- | |
| Construction Site Dewatering (Pumping) Subtotal | | | | | | | | | | | | | | -- | |
| 19 | Excavation (Wet Conditions) | 6,130 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | HDT LDT2 | 1,800 | 1 | 1,800 | 4 | 0.0033 0.0037 0.0035 0.6688 0.3620 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr | -- | |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | | -- | |

Table K-131. PM2.5 Exhaust Emissions from Offroad C

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------|----------------------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | -- | -- | -- | -- |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.27 | 0.27 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.35 | 0.35 | -- | -- | -- | -- | -- |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.54 | 0.54 | 0.54 | 0.54 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.70 | 0.70 | 0.70 | 0.70 | -- | -- | -- | -- | -- | -- |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 |
| | | 0.35 | 0.35 | 0.35 | 0.21 | 5.89 | 6.12 | 0.45 | 0.45 | 0.45 | 0.23 | 0.23 | 0.70 | 1.06 | 1.06 | 1.06 | 0.70 | 0.70 | 0.03 | -- | -- | 0.03 |
| 11 - Levees and Floodwalls | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | 0.01 | 0.01 | 0.01 | -- | 0.02 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 | Soil Cement Bentonite Cutoff Wall | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 3.75 | 3.75 | 3.75 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 3.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 3.01 | -- | -- | -- | -- | -- | -- | 3.83 | 3.83 | 3.83 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 3.01 | -- | -- | -- | -- | 0.02 | 3.84 | 3.84 | 3.84 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | -- | -- | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.07 | 0.07 | 0.07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18 | Construction Site Dewatering (Pumping) | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| | | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| | | -- | -- | -- | -- | -- | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| 19 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-131. PM2.5 Exhaust Emissions from Offroad C

| # | Activity | 16-S ip | 23-S ip | 30-S ip | 7-Oct | 14-O t | 21-O t | Annual Emissions |
|-------------------------------------------------------|----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|--------|------------------|
| | | | | | | | | , tpy |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0034 |
| | | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0044 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0014 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0018 |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0052 |
| | | -- | -- | -- | -- | -- | -- | 0.0067 |
| 13 | Erosion Control Seeding | 0.01 | 0.01 | -- | -- | -- | -- | 0.0001 |
| | | 0.03 | 0.03 | -- | -- | -- | -- | 0.0002 |
| | | 0.03 | 0.03 | -- | -- | -- | -- | 0.0003 |
| | | 0.03 | 0.03 | -- | -- | -- | -- | 0.0492 |
| 11 - Levees and Floodwalls | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| 15 | Soil Cement Bentonite Cutoff Wall | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0244 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 3.01 | -- | 0.0195 |
| | | -- | -- | -- | -- | 3.01 | -- | 0.0444 |
| | | -- | -- | -- | -- | 3.01 | -- | 0.0444 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | |
| 16 | Mobilization and Demobilization | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.03 | -- | 0.0000 |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | 0.0006 |
| 18 | Construction Site Dewatering (Pumping) | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0006 |
| | | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0011 |
| | | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | 0.0017 |
| 19 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0005 |

Table K-131. PM2.5 Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|-------------------------------------------|----------------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------|-------------------|--------------|--------------------|--------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------|
| 20 | Sheet Pile Wall | 7,790 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT LDT2 | 1,200 | 1 | | 7 | 0.9499 0.0042 0.3620 | g/hr g/hp-hr g/hr | -- -- -- |
| | | | | | | | | | | 1,200 | | | Sheet Pile Wall Subtotal | -- |
| 21 | Headworks Structure Concrete Piles | 5,040 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 84 MHDT 97 LDT2 | 180 | 1 | 180 | 28 | 0.0025 0.0042 0.0066 0.9499 0.0037 0.0037 0.3620 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr | -- -- -- -- -- -- -- |
| | | | | | | | | | | | | | Headworks Structure Concrete Piles Subtotal | -- |
| 22 | Headworks Structure | 3,080 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 3 | 180 | 18 | 0.0066 0.0640 0.9499 0.3620 | g/hp-hr g/hp-hr g/hr g/hr | -- -- -- -- |
| | | | | | | | | | | | | | Headworks Structure Subtotal | -- |
| 23 | Headworks Channel Transition | 1,330 | CY | 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Plate Compactors n/a - onroad n/a - onroad | 1 2 6 | 8 MHDT LDT2 | 70 | 2 | 140 | 10 | 0.0640 0.9499 0.3620 | g/hp-hr g/hr g/hr | -- -- -- |
| | | | | | | | | | | | | | Headworks Channel Transition Subtotal | -- |
| 24 | Hinged Bottom Gates | 3 | EA | 90 TN Truck-mounted Hydraulic Crane Haul Truck Oversize Transport Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 1 4 | HHDT LDT2 | 0.2 | 1 | 0.2 | 15 | 0.0025 0.6688 0.3620 | g/hp-hr g/hr g/hr | -- -- -- |
| | | | | | | | | | | | | | Hinged Bottom Gates Subtotal | -- |
| | | | | | | | | | | | | | 15 - Floodway Control and Diversion Structures Total | -- |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT LDT2 n/a | - | 1 | 1 | 2 | 0.9499 0.0035 0.3620 0.0000 | g/hr g/hp-hr g/hr g/hr | -- -- -- -- |
| | | | | | | | | | | | | | Mobilization and Demobilization Subtotal | -- |
| 26 | Pedestrian Bridge Concrete Piles | 320 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 84 MHDT 97 LDT2 | 180 | 1 | 180 | 2 | 0.0025 0.0042 0.0066 0.9499 0.0037 0.0037 0.3620 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr | -- -- -- -- -- -- -- |
| | | | | | | | | | | | | | Pedestrian Bridge Concrete Piles Subtotal | -- |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | 24 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 1 | 0.0066 0.0640 0.9499 0.3620 | g/hp-hr g/hp-hr g/hr g/hr | -- -- -- -- |
| | | | | | | | | | | | | | Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | -- |
| 28 | Pedestrian Bridge Span Installation | 1,040 | SF | 90 TN Truck-mounted Hydraulic Crane Flatbed Truck Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 2 5 | MHDT LDT2 | 390 | 1 | 390 | 3 | 0.0025 0.9499 0.3620 | g/hp-hr g/hr g/hr | -- -- -- |
| | | | | | | | | | | | | | Pedestrian Bridge Span Installation Subtotal | -- |
| | | | | | | | | | | | | | 08 - Roads, Railroads, and Bridges Total | -- |

Table K-131. PM2.5 Exhaust Emissions from Offroad C

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------|----------------------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep | |
| 20 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.07 | 0.07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 21 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 22 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | -- | -- | -- | -- | 0.03 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | -- | -- | -- | -- | 0.03 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 | 0.10 | -- | -- | -- | -- | 0.10 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.13 | 0.13 | -- | -- | -- | -- | 0.13 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.29 | 0.29 | -- | -- | -- | -- | 0.29 | -- | -- | -- | -- | |
| 23 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.07 | 0.07 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.08 | 0.08 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.16 | 0.16 | -- | -- | -- | -- | -- | -- | -- | |
| 24 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | |
| | | -- | 0.03 | 0.07 | 0.07 | 0.07 | 0.26 | 0.29 | 0.29 | 0.22 | 0.22 | 0.51 | 0.32 | 0.03 | 0.19 | 0.19 | 0.03 | 0.32 | 0.03 | 0.03 | 0.03 | 0.09 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | 0.02 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | 0.01 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | 0.01 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | -- | -- | -- | 0.03 | -- | -- | -- | -- | |
| 26 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 | -- | -- | -- | -- | -- | -- | -- | |
| 28 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.19 | 0.10 | 0.09 | 0.03 | -- | -- | -- | -- | |

Table K-131. PM2.5 Exhaust Emissions from Offroad C

| # | Activity | | | | | | | | Annual Emissions , tpy |
|-------------------------------------------|----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|--------|---------------|------------------------|
| | | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | | |
| 20 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0003 | |
| 21 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | 0.0026 | |
| 22 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0012 |
| | | -- | -- | -- | -- | -- | -- | 0.0026 | |
| 23 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0008 | |
| 24 | Hinged Bottom Gates | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | 0.0001 |
| | | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | 0.0001 |
| | | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | 0.0002 |
| | | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | 0.0004 |
| | | 0.09 | 0.09 | 0.09 | 0.03 | 0.03 | -- | 0.0096 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | |
| 25 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0000 | |
| 26 | Pedestrian Bridge Concete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 | |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 | |
| 28 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 | |
| | | -- | -- | -- | -- | -- | -- | 0.0004 | |

Table K-131. PM2.5 Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | 15-Apr |
|-----------------------------------------------|---------------------------------------------|----------|------|----------------------------------|-------------------------|-----------------------------|-----------|-------------------|--------------|--------------------|--------------------------|-----------------|---------|--------------------------------------------------------------|
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | - | - | Flatbed Truck | n/a - onroad | 1 | MHDT | - | 1 | 1 | 2 | 0.9499 | g/hr | 0.02 |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | | | | | 0.0042 | g/hp-hr | 0.01 |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | | | | | 0.3620 | g/hr | 0.01 |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | | | | | 0.0000 | g/hr | -- |
| | | | | | | | | | | | | | | Mobilization and Demobilization Subtotal |
| | | | | | | | | | | | | | | 0.03 |
| 30 | CMU Building and Earthwork Pad Construction | 1 | EA | 165 HP Dozer | Rubber Tired Dozers | 1 | 165 | - | 1 | 1 | 30 | 0.0040 | g/hp-hr | -- |
| | | | | Scraper | Scrapers | 1 | 367 | | | | | 0.0042 | g/hp-hr | -- |
| | | | | Motor Grader | Graders | 1 | 187 | | | | | 0.0035 | g/hp-hr | -- |
| | | | | Compactor | Rollers | 1 | 80 | | | | | 0.0034 | g/hp-hr | -- |
| | | | | 4000 gallon Water Truck | n/a - onroad | 1 | MHDT | | | | | 0.9499 | g/hr | -- |
| | | | | 10 TN Smooth Roller | Rollers | 1 | 157 | | | | | 0.0031 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | | | | | 0.3620 | g/hr | -- |
| | | | | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | | | | | 0.0066 | g/hp-hr | -- |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | | | | | 0.0640 | g/hp-hr | -- |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | | | | | 0.0035 | g/hp-hr | -- |
| | | | | Concrete Mixer Truck | n/a - onroad | 1 | MHDT | | | | | 0.9499 | g/hr | -- |
| | | | | | | | | | | | | | | CMU Building and Earthwork Pad Construction Subtotal |
| | | | | | | | | | | | | | | -- |
| 31 | Concrete Duct Banc | 190 | CY | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | 60 | 1 | 60 | 4 | 0.0066 | g/hp-hr | -- |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | | | | | 0.0640 | g/hp-hr | -- |
| | | | | Concrete Mixer Truck | n/a - onroad | 2 | MHDT | | | | | 0.9499 | g/hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | | | | | 0.3620 | g/hr | -- |
| | | | | | | | | | | | | | | Concrete Duct Banc Subtotal |
| | | | | | | | | | | | | | | -- |
| | | | | | | | | | | | | | | 19 - Buildings, Grounds, and Utilities Total |
| | | | | | | | | | | | | | | 0.03 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | - | - | Flatbed Truck | n/a - onroad | 1 | MHDT | - | 1 | 1 | 2 | 0.9499 | g/hr | -- |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | | | | | 0.7097 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | | | | | 0.3620 | g/hr | -- |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | | | | | 0.0000 | g/hr | -- |
| | | | | | | | | | | | | | | Mobilization and Demobilization Subtotal |
| | | | | | | | | | | | | | | -- |
| 33 | Mechanical Hydraulic Cylinders & Housing | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.0035 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | | | | 0.3620 | g/hr | -- |
| | | | | | | | | | | | | | | Mechanical Hydraulic Cylinders & Housing Subtotal |
| | | | | | | | | | | | | | | -- |
| 34 | CMU Building Mechanical Equipment | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.0035 | g/hp-hr | -- |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | | | | 0.3620 | g/hr | -- |
| | | | | | | | | | | | | | | CMU Building Mechanical Equipment Subtotal |
| | | | | | | | | | | | | | | -- |
| 35 | Electrical Control Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 0.3620 | g/hr | -- |
| | | | | | | | | | | | | | | Electrical Control Equipment CMU Building Subtotal |
| | | | | | | | | | | | | | | -- |
| 36 | Electrical Power Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 0.3620 | g/hr | -- |
| | | | | | | | | | | | | | | Electrical Power Equipment CMU Building Subtotal |
| | | | | | | | | | | | | | | -- |
| 37 | Communication Equipment | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 12 | 0.3620 | g/hr | -- |
| | | | | | | | | | | | | | | Communication Equipment Subtotal |
| | | | | | | | | | | | | | | -- |
| | | | | | | | | | | | | | | 20 -Permanent Operating Equipment Total |
| | | | | | | | | | | | | | | -- |
| GRAND TOTAL | | | | | | | | | | | | | | 0.12 |

Table K-131. PM2.5 Exhaust Emissions from Offroad C

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------|---------------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 30 | CMU Building and Earthwork Pad Construction | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 31 | Concrete Duct Banc | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.17 | 0.17 | 0.17 | 0.26 | 0.17 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.25 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.27 | -- | |
| 33 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | |
| 34 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | |
| 35 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | |
| 36 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | |
| 37 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.27 | 0.09 | |
| GRAND TOTAL | | 0.62 | 3.65 | 0.59 | 0.55 | 6.13 | 6.42 | 0.75 | 4.58 | 4.50 | 4.29 | 0.76 | 1.02 | 1.12 | 1.44 | 1.34 | 0.82 | 1.05 | 0.06 | 0.03 | 1.30 | 0.21 |

Table K-131. PM2.5 Exhaust Emissions from Offroad C

| # | Activity | | | | | | | Annual Emissions, tpy |
|-----------------------------------------------|---------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|
| | | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | |
| 29 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| 30 | CMU Building and Earthwork Pad Construction | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | 0.0025 |
| 31 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0027 |
| 20 -Permanent Operating Equipment | | | | | | | | |
| 32 | Mobilization and Demobilization | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | 1.25 | -- | 0.0013 |
| | | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 1.27 | -- | 0.0013 |
| 33 | Mechanical Hydraulic Cylinders & Housing | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0001 |
| | | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0003 |
| | | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | 0.0004 |
| 34 | CMU Building Mechanical Equipment | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0001 |
| | | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0003 |
| | | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | 0.0004 |
| 35 | Electrical Control Equipment CMU Building | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0003 |
| | | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0003 |
| 36 | Electrical Power Equipment CMU Building | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0003 |
| | | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0003 |
| 37 | Communication Equipment | -- | -- | 0.02 | 0.02 | -- | -- | 0.0001 |
| | | -- | -- | 0.02 | 0.02 | -- | -- | 0.0001 |
| | | 0.09 | 0.09 | 0.11 | 0.11 | 1.27 | -- | 0.0027 |
| GRAND TOTAL | | 0.21 | 0.21 | 0.19 | 0.14 | 4.40 | 0.03 | 0.1099 |

Table K-132. GHG Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days |
|---------------------------------|-------------------------------------|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------|-------------------|--------------|--------------------|--------------------------|
| 02 - Relocations | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 |
| 2 | Fremont Weir Demo | 450 | CY | 3.5 CY Hydraulic Excavator 3.5 CY Front End Loader Wheel 0.8 CY Loader/Backhoe, Wheel 4000 gallon Water Truck 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Loaders Tractors/Loaders/Backhoes n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 1 6 | 359 164 97 MHDT HHDT LDT2 | 40 | 1 | 40 | 12 |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Graders n/a - onroad n/a - onroad n/a - onroad | 1 1 1 5 | 187 MHDT LDT2 HHDT | 39,400 | 1 | 39,400 | 4 |
| 4 | Temporary Electrical Power | 100 | LF | Flatbed Truck Pickup Truck Conventional | n/a - onroad n/a - onroad | 1 2 | MHDT LDT2 | 1,500 | 1 | 1,500 | 1 |
| 09 - Channels and Canals | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 |
| 6 | Clearing and Grubbing | 61 | ACR | 1.5 CY Front End Loader Crawler Trailer Mounted Brush Chipper Chainsaw 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Crawler Tractors Shredders Chainsaws n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 6 1 | 110 140 8 MHDT LDT2 HHDT | 2 | 2 | 4 | 16 |
| 7 | Excavation (Wet Conditions) | 61,810 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 35 |
| 8 | Excavation/Grading (Dry Conditions) | 118,960 | CY | 300 HP Dozer 21 CY Scrapers 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional | Rubber Tired Dozers Scrapers Graders n/a - onroad n/a - onroad | 1 4 1 1 7 | 300 407 187 MHDT LDT2 | 3,500 | 1 | 3,500 | 34 |

Table K-132. GHG Exhaust Emissions from Offroad C

| # | Activity | Emission Factors | | | | Units | Annual Emissions, MTCO2e/yr |
|------------------------------------------------------|-------------------------------------|------------------|----------|------|----------|---------------|-----------------------------|
| | | CO2 | CH4 | N2O | CO2e | | |
| 02 - Relocations | | | | | | | |
| 1 | Mobilization and Demobilization | 24535.76 | 0 | 0 | 24535.76 | g/hr | 0.39 |
| | | 340.9885 | 0.010135 | 0 | 341.2419 | g/hp-hr | 0.55 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 0.14 |
| | | 0 | 0 | 0 | 0 | g/hr | 0.00 |
| Mobilization and Demobilization Subtotal | | | | | | 1.08 | |
| 2 | Fremont Weir Demo | 323.9047 | 0.008193 | 0 | 324.1095 | g/hp-hr | 11.17 |
| | | 306.8813 | 0.006461 | 0 | 307.0428 | g/hp-hr | 4.83 |
| | | 312.5705 | 0.009723 | 0 | 312.8135 | g/hp-hr | 2.91 |
| | | 24535.76 | 0 | 0 | 24535.76 | g/hr | 2.36 |
| | | 34432.03 | 0 | 0 | 34432.03 | g/hr | 3.31 |
| 8626.376 | 0 | 0 | 8626.376 | g/hr | 4.97 | | |
| Fremont Weir Demo Subtotal | | | | | | 29.55 | |
| 3 | Levee O&M Road Regrading (6" AB) | 346.6654 | 0.007486 | 0 | 346.8525 | g/hp-hr | 2.08 |
| | | 24535.76 | 0 | 0 | 24535.76 | g/hr | 0.79 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 0.28 |
| | | 34432.03 | 0 | 0 | 34432.03 | g/hr | 5.51 |
| Levee O&M Road Regrading (6" AB) Subtotal | | | | | | 8.65 | |
| 4 | Temporary Electrical Power | 24535.76 | 0 | 0 | 24535.76 | g/hr | 0.20 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 0.14 |
| Temporary Electrical Power Subtotal | | | | | | 0.33 | |
| 02 - Relocations Total | | | | | | 39.60 | |
| 09 - Channels and Canals | | | | | | | |
| 5 | Mobilization and Demobilization | 24535.76 | 0 | 0 | 24535.76 | g/hr | 0.39 |
| | | 340.9885 | 0.010135 | 0 | 341.2419 | g/hp-hr | 0.55 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 0.14 |
| | | 0 | 0 | 0 | 0 | g/hr | 0.00 |
| Mobilization and Demobilization Subtotal | | | | | | 1.08 | |
| 6 | Clearing and Grubbing | 363.734 | 0.012212 | 0 | 364.0393 | g/hp-hr | 10.25 |
| | | 227.3238 | 0.0068 | 0 | 227.4937 | g/hp-hr | 8.15 |
| | | 395.0924 | 0 | 0 | 395.0924 | g/hp-hr | 0.81 |
| | | 24535.76 | 0 | 0 | 24535.76 | g/hr | 6.28 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 13.25 |
| 34432.03 | 0 | 0 | 34432.03 | g/hr | 8.81 | | |
| Clearing and Grubbing Subtotal | | | | | | 47.56 | |
| 7 | Excavation (Wet Conditions) | 323.9047 | 0.008193 | 0 | 324.1095 | g/hp-hr | 38.93 |
| | | 335.2553 | 0.009105 | 0 | 335.4829 | g/hp-hr | 56.36 |
| | | 306.8813 | 0.006461 | 0 | 307.0428 | g/hp-hr | 28.20 |
| | | 34432.03 | 0 | 0 | 34432.03 | g/hr | 86.77 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 16.91 |
| Excavation (Wet Conditions) Subtotal | | | | | | 227.17 | |
| 8 | Excavation/Grading (Dry Conditions) | 335.2553 | 0.009105 | 0 | 335.4829 | g/hp-hr | 27.38 |
| | | 409.1243 | 0.009162 | 0 | 409.3534 | g/hp-hr | 181.27 |
| | | 346.6654 | 0.007486 | 0 | 346.8525 | g/hp-hr | 17.64 |
| | | 24535.76 | 0 | 0 | 24535.76 | g/hr | 6.67 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 16.42 |
| Excavation/Grading (Dry Conditions) Subtotal | | | | | | 249.38 | |

Table K-132. GHG Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days |
|-------------------------------------------------------|----------------------------------------------------|----------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------------|-------------------|--------------|--------------------|--------------------------|
| 9 | Earthen Backfill | 8,950 | CY | 300 HP Dozer 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional | Rubber Tired Dozers n/a - onroad Rollers n/a - onroad | 1 1 1 3 | 300 MHDT 157 LDT2 | 1,000 | 1 | 1,000 | 9 |
| 10 | Riprap - Class 2 | 24,940 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 1 | 1,000 | 25 |
| 11 | Riprap - Class 3 | 9,420 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 1 | 1,000 | 10 |
| 12 | RSP Bedding Material | 36,150 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 5 23 | 257 300 LDT2 HHDT | 1,000 | 2 | 2,000 | 19 |
| 13 | Erosion Control Seeding | 31 | ACR | 0.8 CY Front End Loader Wheel Pickup Truck Conventional | Tractors/Loaders/Backhoes n/a - onroad | 1 4 | 97 LDT2 | 2 | 1 | 2 | 16 |
| 11 - Levees and Floodwalls | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 |
| 15 | Soil Cement Bentonite Cutoff Wall | 84,480 | SF | 4.5 CY Hydraulic Excavator 300 HP Dozer 2.5 CY Hydraulic Excavator 16 CY 3 Axle Dump Truck Flash Mixer Slurry Pump Pickup Truck Conventional | Excavators Rubber Tired Dozers Excavators n/a - onroad Cement and Mortar Mixers Pumps n/a - onroad | 1 1 1 1 1 1 5 | 429 300 257 HHDT 9 84 LDT2 | 7,000 | 1 | 7,000 | 13 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | 21,000 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 18 |
| | | | | | | | | | | | Constru |

Table K-132. GHG Exhaust Emissions from Offroad C

| # | Activity | Emission Factors | | | | Units | Annual Emissions, MTCO2e/yr |
|--------------------------------------------------------------------|----------------------------------------------------|------------------|----------|-----|----------|-----------------|-----------------------------|
| | | CO2 | CH4 | N2O | CO2e | | |
| 9 | Earthen Backfill | 335.2553 | 0.009105 | 0 | 335.4829 | g/hp-hr | 7.25 |
| | | 24535.76 | 0 | 0 | 24535.76 | g/hr | 1.77 |
| | | 318.2734 | 0.005321 | 0 | 318.4065 | g/hp-hr | 3.60 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 1.86 |
| Earthen Backfill Subtotal | | | | | | 14.48 | |
| 10 | Riprap - Class 2 | 323.9047 | 0.008193 | 0 | 324.1095 | g/hp-hr | 33.32 |
| | | 363.7512 | 0.008415 | 0 | 363.9615 | g/hp-hr | 21.84 |
| | | 34432.03 | 0 | 0 | 34432.03 | g/hr | 158.39 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 8.63 |
| Riprap - Class 2 Subtotal | | | | | | 222.17 | |
| 11 | Riprap - Class 3 | 323.9047 | 0.008193 | 0 | 324.1095 | g/hp-hr | 13.33 |
| | | 363.7512 | 0.008415 | 0 | 363.9615 | g/hp-hr | 8.74 |
| | | 34432.03 | 0 | 0 | 34432.03 | g/hr | 63.35 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 3.45 |
| Riprap - Class 3 Subtotal | | | | | | 88.87 | |
| 12 | RSP Bedding Material | 323.9047 | 0.008193 | 0 | 324.1095 | g/hp-hr | 50.64 |
| | | 363.7512 | 0.008415 | 0 | 363.9615 | g/hp-hr | 33.19 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 13.11 |
| | | 34432.03 | 0 | 0 | 34432.03 | g/hr | 240.75 |
| RSP Bedding Material Subtotal | | | | | | 337.70 | |
| 13 | Erosion Control Seeding | 312.5705 | 0.009723 | 0 | 312.8135 | g/hp-hr | 3.88 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 4.42 |
| Erosion Control Seeding Subtotal | | | | | | 8.30 | |
| 09 - Channels and Canals Total | | | | | | 1,196.70 | |
| 11 - Levees and Floodwalls | | | | | | | |
| 14 | Mobilization and Demobilization | 24535.76 | 0 | 0 | 24535.76 | g/hr | 0.39 |
| | | 340.9885 | 0.010135 | 0 | 341.2419 | g/hp-hr | 0.55 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 0.14 |
| | | 0 | 0 | 0 | 0 | g/hr | 0.00 |
| Mobilization and Demobilization Subtotal | | | | | | 1.08 | |
| 15 | Soil Cement Bentonite Cutoff Wall | 323.9047 | 0.008193 | 0 | 324.1095 | g/hp-hr | 14.46 |
| | | 335.2553 | 0.009105 | 0 | 335.4829 | g/hp-hr | 10.47 |
| | | 323.9047 | 0.008193 | 0 | 324.1095 | g/hp-hr | 8.66 |
| | | 34432.03 | 0 | 0 | 34432.03 | g/hr | 3.58 |
| | | 318.0018 | 0.0334 | 0 | 318.8368 | g/hp-hr | 0.30 |
| | | 420.626 | 0.007382 | 0 | 420.8105 | g/hp-hr | 3.68 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 4.49 |
| Soil Cement Bentonite Cutoff Wall Subtotal | | | | | | 45.63 | |
| 11 - Levees and Floodwalls Total | | | | | | 46.71 | |
| 15 - Floodway Control and Diversion Structures | | | | | | | |
| 16 | Mobilization and Demobilization | 24535.76 | 0 | 0 | 24535.76 | g/hr | 0.39 |
| | | 340.9885 | 0.010135 | 0 | 341.2419 | g/hp-hr | 0.55 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 0.14 |
| | | 0 | 0 | 0 | 0 | g/hr | 0.00 |
| Mobilization and Demobilization Subtotal | | | | | | 1.08 | |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | 24535.76 | 0 | 0 | 24535.76 | g/hr | 3.53 |
| | | 426.9427 | 0.007987 | 0 | 427.1424 | g/hp-hr | 13.59 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 7.45 |
| Construction Site Dewatering (Temporary Cofferdam) Subtotal | | | | | | 24.58 | |

Table K-132. GHG Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days |
|-------------------------------------------|----------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|-------------------|--------------|--------------------|--------------------------|
| 18 | Construction Site Dewatering (Pumping) | - | - | 6" Dia. Pump Engine Drive Pickup Truck Conventional | Pumps n/a - onroad | 1 3 | 84 LDT2 | - | 1 | 1 | 120 |
| 19 | Excavation (Wet Conditions) | 6,130 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 4 |
| 20 | Sheet Pile Wall | 7,790 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 7 |
| 21 | Headworks Structure Concrete Piles | 5,040 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 28 |
| 22 | Headworks Structure | 3,080 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 3 | 180 | 18 |
| 23 | Headworks Channel Transition | 1,330 | CY | 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Plate Compactors n/a - onroad n/a - onroad | 1 2 6 | 8 MHDT LDT2 | 70 | 2 | 140 | 10 |
| 24 | Hinged Bottom Gates | 3 | EA | 90 TN Truck-mounted Hydraulic Crane Haul Truck Oversize Transport Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 1 4 | 450 HHDT LDT2 | 0.2 | 1 | 0.2 | 15 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 |

Table K-132. GHG Exhaust Emissions from Offroad C

| # | Activity | Emission Factors | | | | Units | Annual Emissions, MTCO2e/yr |
|-------------------------------------------|----------------------------------------|-------------------------------------------------------------|----------|------|----------|---------|-----------------------------|
| | | CO2 | CH4 | N2O | CO2e | | |
| 18 | Construction Site Dewatering (Pumping) | 420.626 | 0.007382 | 0 | 420.8105 | g/hp-hr | 33.93 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 24.84 |
| | | Construction Site Dewatering (Pumping) Subtotal | | | | | 58.78 |
| 19 | Excavation (Wet Conditions) | 323.9047 | 0.008193 | 0 | 324.1095 | g/hp-hr | 4.45 |
| | | 335.2553 | 0.009105 | 0 | 335.4829 | g/hp-hr | 6.44 |
| | | 306.8813 | 0.006461 | 0 | 307.0428 | g/hp-hr | 3.22 |
| | | 34432.03 | 0 | 0 | 34432.03 | g/hr | 9.92 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 1.93 |
| | | Excavation (Wet Conditions) Subtotal | | | | | 25.96 |
| 20 | Sheet Pile Wall | 24535.76 | 0 | 0 | 24535.76 | g/hr | 1.37 |
| | | 426.9427 | 0.007987 | 0 | 427.1424 | g/hp-hr | 5.29 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 2.90 |
| | | Sheet Pile Wall Subtotal | | | | | 9.56 |
| 21 | Headworks Structure Concrete Piles | 244.4287 | 0.005327 | 0 | 244.5619 | g/hp-hr | 16.43 |
| | | 426.9427 | 0.007987 | 0 | 427.1424 | g/hp-hr | 21.15 |
| | | 420.626 | 0.007382 | 0 | 420.8105 | g/hp-hr | 7.92 |
| | | 24535.76 | 0 | 0 | 24535.76 | g/hr | 16.49 |
| | | 312.5705 | 0.009723 | 0 | 312.8135 | g/hp-hr | 6.80 |
| | | 323.9835 | 0.009263 | 0 | 324.215 | g/hp-hr | 45.61 |
| 8626.376 | 0 | 0 | 8626.376 | g/hr | 15.46 | | |
| | | Headworks Structure Concrete Piles Subtotal | | | | | 129.85 |
| 22 | Headworks Structure | 420.626 | 0.007382 | 0 | 420.8105 | g/hp-hr | 15.27 |
| | | 244.3625 | 0.025666 | 0 | 245.0041 | g/hp-hr | 0.85 |
| | | 24535.76 | 0 | 0 | 24535.76 | g/hr | 21.20 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 26.09 |
| | | Headworks Structure Subtotal | | | | | 63.40 |
| 23 | Headworks Channel Transition | 244.3625 | 0.025666 | 0 | 245.0041 | g/hp-hr | 0.31 |
| | | 24535.76 | 0 | 0 | 24535.76 | g/hr | 7.85 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 8.28 |
| | | Headworks Channel Transition Subtotal | | | | | 16.45 |
| 24 | Hinged Bottom Gates | 244.4287 | 0.005327 | 0 | 244.5619 | g/hp-hr | 13.21 |
| | | 34432.03 | 0 | 0 | 34432.03 | g/hr | 4.13 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 4.14 |
| | | Hinged Bottom Gates Subtotal | | | | | 21.48 |
| | | 15 - Floodway Control and Diversion Structures Total | | | | | 351.13 |
| 08 - Roads, Railroads, and Bridges | | | | | | | |
| 25 | Mobilization and Demobilization | 24535.76 | 0 | 0 | 24535.76 | g/hr | 0.39 |
| | | 340.9885 | 0.010135 | 0 | 341.2419 | g/hp-hr | 0.55 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 0.14 |
| | | 0 | 0 | 0 | 0 | g/hr | 0.00 |
| | | Mobilization and Demobilization Subtotal | | | | | 1.08 |

Table K-132. GHG Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days |
|-----------------------------------------------|----------------------------------------------------|----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------|-------------------|--------------|--------------------|--------------------------|
| 26 | Pedestrian Bridge Concete Piles | 320 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 2 |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | 24 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 1 |
| 28 | Pedestrian Bridge Span Installation | 1,040 | SF | 90 TN Truck-mounted Hydraulic Crane Flatbed Truck Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 2 5 | 450 MHDT LDT2 | 390 | 1 | 390 | 3 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 |
| 30 | CMU Building and Earthwork Pad Construction | 1 | EA | 165 HP Dozer Scraper Motor Grader Compactor 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Extended Boom Pallet Loader Concrete Mixer Truck | Rubber Tired Dozers Scrapers Graders Rollers n/a - onroad Rollers n/a - onroad Pumps Plate Compactors Rough Terrain Forklifts n/a - onroad | 1 1 1 1 1 7 1 1 1 1 | 165 367 187 80 n/a 157 LDT2 MHDT 84 8 100 MHDT | - | 1 | 1 | 30 |
| 31 | Concrete Duct Banc | 190 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 4 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 |
| 33 | Mechanical Hydraulic Cylinders & Housing | - | - | Extended Boom Pallet Loader Pickup Truck Conventional | Rough Terrain Forklifts n/a - onroad | 1 3 | 100 LDT2 | - | 1 | 1 | 30 |
| 34 | CMU Building Mechanical Equipment | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 |

Table K-132. GHG Exhaust Emissions from Offroad C

| # | Activity | Emission Factors | | | | Units | Annual Emissions, MTCO2e/yr |
|-----------------------------------------------|----------------------------------------------------|------------------|--------------------------------------------------------------|------|----------|---------|-----------------------------|
| | | CO2 | CH4 | N2O | CO2e | | |
| 26 | Pedestrian Bridge Concrete Piles | 244.4287 | 0.005327 | 0 | 244.5619 | g/hp-hr | 1.17 |
| | | 426.9427 | 0.007987 | 0 | 427.1424 | g/hp-hr | 1.51 |
| | | 420.626 | 0.007382 | 0 | 420.8105 | g/hp-hr | 0.57 |
| | | 24535.76 | 0 | 0 | 24535.76 | g/hr | 1.18 |
| | | 312.5705 | 0.009723 | 0 | 312.8135 | g/hp-hr | 0.49 |
| | | 323.9835 | 0.009263 | 0 | 324.215 | g/hp-hr | 3.26 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 1.10 |
| | | | Pedestrian Bridge Concrete Piles Subtotal | | | | 9.27 |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | 420.626 | 0.007382 | 0 | 420.8105 | g/hp-hr | 0.28 |
| | | 244.3625 | 0.025666 | 0 | 245.0041 | g/hp-hr | 0.02 |
| | | 24535.76 | 0 | 0 | 24535.76 | g/hr | 0.39 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 0.48 |
| | | | n Bridge Concrete Abutments and Wingwalls Subtotal | | | | 1.17 |
| 28 | Pedestrian Bridge Span Installation | 244.4287 | 0.005327 | 0 | 244.5619 | g/hp-hr | 2.64 |
| | | 24535.76 | 0 | 0 | 24535.76 | g/hr | 1.18 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 1.04 |
| | | | Pedestrian Bridge Span Installation Subtotal | | | | 4.85 |
| | | | 08 - Roads, Railroads, and Bridges Total | | | | 16.38 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | |
| 29 | Mobilization and Demobilization | 24535.76 | 0 | 0 | 24535.76 | g/hr | 0.39 |
| | | 340.9885 | 0.010135 | 0 | 341.2419 | g/hp-hr | 0.55 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 0.14 |
| | | 0 | 0 | 0 | 0 | g/hr | 0.00 |
| | | | Mobilization and Demobilization Subtotal | | | | 1.08 |
| 30 | CMU Building and Earthwork Pad Construction | 342.9603 | 0.009314 | 0 | 343.1931 | g/hp-hr | 13.59 |
| | | 409.1243 | 0.009162 | 0 | 409.3534 | g/hp-hr | 36.06 |
| | | 346.6654 | 0.007486 | 0 | 346.8525 | g/hp-hr | 15.57 |
| | | 318.2617 | 0.007649 | 0 | 318.4529 | g/hp-hr | 6.11 |
| | | 24535.76 | 0 | 0 | 24535.76 | g/hr | 5.89 |
| | | 318.2734 | 0.005321 | 0 | 318.4065 | g/hp-hr | 12.00 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 14.49 |
| | | 420.626 | 0.007382 | 0 | 420.8105 | g/hp-hr | 8.48 |
| | | 244.3625 | 0.025666 | 0 | 245.0041 | g/hp-hr | 0.47 |
| | | 340.9885 | 0.010135 | 0 | 341.2419 | g/hp-hr | 8.19 |
| 24535.76 | 0 | 0 | 24535.76 | g/hr | 5.89 | | |
| | | | CMU Building and Earthwork Pad Construction Subtotal | | | | 126.74 |
| 31 | Concrete Duct Banc | 420.626 | 0.007382 | 0 | 420.8105 | g/hp-hr | 1.13 |
| | | 244.3625 | 0.025666 | 0 | 245.0041 | g/hp-hr | 0.06 |
| | | 24535.76 | 0 | 0 | 24535.76 | g/hr | 1.57 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 1.93 |
| | | | Concrete Duct Banc Subtotal | | | | 4.70 |
| | | | 19 - Buildings, Grounds, and Utilities Total | | | | 132.51 |
| 20 -Permanent Operating Equipment | | | | | | | |
| 32 | Mobilization and Demobilization | 24535.76 | 0 | 0 | 24535.76 | g/hr | 0.39 |
| | | 340.9885 | 0.010135 | 0 | 341.2419 | g/hp-hr | 0.55 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 0.14 |
| | | 0 | 0 | 0 | 0 | g/hr | 0.00 |
| | | | Mobilization and Demobilization Subtotal | | | | 1.08 |
| 33 | Mechanical Hydraulic Cylinders & Housing | 340.9885 | 0.010135 | 0 | 341.2419 | g/hp-hr | 8.19 |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 6.21 |
| | | | Mechanical Hydraulic Cylinders & Housing Subtotal | | | | 14.40 |
| 34 | CMU Building Mechanical Equipment | 340.9885 | 0.010135 | 0 | 341.2419 | g/hp-hr | 8.19 |

Table K-132. GHG Exhaust Emissions from Offroad Construction Equipment (Alternative 1) - Mitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days |
|--------------------|-------------------------------------------|----------|------|---------------------------|--------------|-----------------------------|-----------|-------------------|--------------|--------------------|--------------------------|
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | | | |
| 35 | Electrical Control Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 |
| 36 | Electrical Power Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 |
| 37 | Communication Equipment | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 12 |
| GRAND TOTAL | | | | | | | | | | | |

Table K-132. GHG Exhaust Emissions from Offroad C

| # | Activity | Emission Factors | | | | Units | Annual Emissions, MTCO2e/yr |
|--------------------|-------------------------------------------|-----------------------------------------------------------|-----|-----|----------|-------|-----------------------------|
| | | CO2 | CH4 | N2O | CO2e | | |
| | | 8626.376 | 0 | 0 | 8626.376 | g/hr | 6.21 |
| | | CMU Building Mechanical Equipment Subtotal | | | | | 14.40 |
| 35 | Electrical Control Equipment CMU Building | 8626.376 | 0 | 0 | 8626.376 | g/hr | 6.21 |
| | | Electrical Control Equipment CMU Building Subtotal | | | | | 6.21 |
| 36 | Electrical Power Equipment CMU Building | 8626.376 | 0 | 0 | 8626.376 | g/hr | 6.21 |
| | | Electrical Power Equipment CMU Building Subtotal | | | | | 6.21 |
| 37 | Communication Equipment | 8626.376 | 0 | 0 | 8626.376 | g/hr | 2.48 |
| | | Communication Equipment Subtotal | | | | | 2.48 |
| | | 20 -Permanent Operating Equipment Total | | | | | 44.78 |
| GRAND TOTAL | | | | | | | 1,827.82 |

Table K-133. PM10 Emissions Summary from Fugitive Dust (Alternative 1) - Mitigated

| # | Activity | PM10 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | |
|---------------------------------|------------------------------------------------------|---------------------------------------|-------------|-------------|-------------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | n/a | | | | | | | | | | | | | | | | | | |
| | Material Handling | n/a | | | | | | | | | | | | | | | | | | |
| | Grading | n/a | | | | | | | | | | | | | | | | | | |
| | Bulldozing | n/a | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | n/a | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | n/a | | | | | | | | | | | | | | | | | | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | 0.13 | 0.13 | | | | | | | | | | | | | | | | |
| | Grading | n/a | n/a | n/a | | | | | | | | | | | | | | | | |
| | Bulldozing | n/a | n/a | n/a | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | n/a | n/a | n/a | | | | | | | | | | | | | | | | |
| | Paved Road Dust | n/a | n/a | n/a | | | | | | | | | | | | | | | | |
| | Fremont Weir Demo Subtotal | -- | 0.13 | 0.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 | Levee O&M Road Regrading (6" AB) | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | |
| | Grading | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Levee O&M Road Regrading (6" AB) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | Temporary Electrical Power | | | | | | | | | | | | | | | | | | | |
| | Material Handling | n/a | | | | | | | | | | | | | | | | | | |
| | Grading | n/a | | | | | | | | | | | | | | | | | | |
| | Bulldozing | n/a | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | n/a | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | n/a | | | | | | | | | | | | | | | | | | |
| | Temporary Electrical Power Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 02 - Relocations Total | -- | 0.13 | 0.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Material Handling | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Grading | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Bulldozing | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Unpaved Road Dust | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Paved Road Dust | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 6 | Clearing and Grubbing | | | | | | | | | | | | | | | | | | | |
| | Material Handling | n/a | n/a | n/a | | | | | | | | | | | | | | | | |
| | Grading | | 0.41 | 0.41 | 0.41 | 0.41 | | | | | | | | | | | | | | |
| | Bulldozing | n/a | n/a | n/a | n/a | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | n/a | n/a | n/a | n/a | | | | | | | | | | | | | | | |
| | Paved Road Dust | n/a | n/a | n/a | n/a | | | | | | | | | | | | | | | |
| | Clearing and Grubbing Subtotal | -- | 0.41 | 0.41 | 0.41 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-133. PM10 Emissions Summary from Fugitive D

| # | Activity | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions, tpy |
|---------------------------------|------------------------------------------------------|--------|-------|-------|--------|--------|--------|-------|-------------|--------|-----------------------|
| | | | | | | | | | | | |
| 02 - Relocations | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | | | | | | | | | | |
| | Material Handling | | | | | | | | | n/a | n/a |
| | Grading | | | | | | | | | n/a | n/a |
| | Bulldozing | | | | | | | | | n/a | n/a |
| | Unpaved Road Dust | | | | | | | | | n/a | n/a |
| | Paved Road Dust | | | | | | | | | n/a | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | | | | | | | | | | |
| | Material Handling | | | | | | | | | | 0.00 |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Fremont Weir Demo Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 |
| 3 | Levee O&M Road Regrading (6" AB) | | | | | | | | | | |
| | Material Handling | | | | | | | | n/a | | n/a |
| | Grading | | | | | | | | 0.21 | | 0.00 |
| | Bulldozing | | | | | | | | n/a | | n/a |
| | Unpaved Road Dust | | | | | | | | n/a | | n/a |
| | Paved Road Dust | | | | | | | | n/a | | n/a |
| | Levee O&M Road Regrading (6" AB) Subtotal | -- | -- | -- | -- | -- | -- | -- | 0.21 | -- | 0.00 |
| 4 | Temporary Electrical Power | | | | | | | | | | |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Temporary Electrical Power Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 02 - Relocations Total | -- | -- | -- | -- | -- | -- | -- | 0.21 | -- | 0.00 |
| 09 - Channels and Canals | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | | | | | | | | | | |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 6 | Clearing and Grubbing | | | | | | | | | | |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | 0.00 |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Clearing and Grubbing Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 |

Table K-133. PM10 Emissions Summary from Fugitive Dust (Alternative 1) - Mitigated

| # | Activity | PM10 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | |
|----|-----------------------------------------------------|---------------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 7 | Excavation (Wet Conditions) | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Grading | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Bulldozing | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Unpaved Road Dust | | | | | | | 46.27 | 46.27 | 46.27 | 46.27 | 46.27 | 46.27 | | | | | | | |
| | Paved Road Dust | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Excavation (Wet Conditions) Subtotal | -- | -- | -- | -- | -- | -- | 46.27 | 46.27 | 46.27 | 46.27 | 46.27 | 46.27 | -- | -- | -- | -- | -- | -- | -- |
| 8 | Excavation/Grading (Dry Conditions) | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 | | | | | | | | |
| | Grading | | | | | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | | | | | | | | |
| | Bulldozing | | | | | 2.35 | 2.35 | 2.35 | 2.35 | 2.35 | 2.35 | 2.35 | | | | | | | | |
| | Unpaved Road Dust | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | | |
| | Paved Road Dust | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | | |
| | Excavation/Grading (Dry Conditions) Subtotal | -- | -- | -- | -- | 5.05 | 5.05 | 5.05 | 5.05 | 5.05 | 5.05 | 5.05 | -- | -- | -- | -- | -- | -- | -- | -- |
| 9 | Earthen Backfill | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | 0.18 | 0.18 | | | | | | | | | | | |
| | Grading | | | | | | | 0.21 | 0.21 | | | | | | | | | | | |
| | Bulldozing | | | | | | | 2.35 | 2.35 | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | n/a | n/a | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | n/a | n/a | | | | | | | | | | | |
| | Earthen Backfill Subtotal | -- | -- | -- | -- | -- | -- | 2.74 | 2.74 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10 | Riprap - Class 2 | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | 1.65 | 1.65 | 1.65 | 1.65 | 1.65 | 1.65 |
| | Grading | | | | | | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Bulldozing | | | | | | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Unpaved Road Dust | | | | | | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Paved Road Dust | | | | | | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Riprap - Class 2 Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.65 | 1.65 | 1.65 | 1.65 | 1.65 | 1.65 |
| 11 | Riprap - Class 3 | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | 1.65 | 1.65 |
| | Grading | | | | | | | | | | | | | | | | | n/a | n/a | n/a |
| | Bulldozing | | | | | | | | | | | | | | | | | n/a | n/a | n/a |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | n/a | n/a | n/a |
| | Paved Road Dust | | | | | | | | | | | | | | | | | n/a | n/a | n/a |
| | Riprap - Class 3 Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.65 | 1.65 |
| 12 | RSP Bedding Material | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | 1.65 | 1.65 | 1.65 | 1.65 | | |
| | Grading | | | | | | | | | | | | | n/a | n/a | n/a | n/a | | | |
| | Bulldozing | | | | | | | | | | | | | n/a | n/a | n/a | n/a | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | n/a | n/a | n/a | n/a | | | |
| | Paved Road Dust | | | | | | | | | | | | | n/a | n/a | n/a | n/a | | | |
| | RSP Bedding Material Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.65 | 1.65 | 1.65 | 1.65 | -- | -- | -- |
| 13 | Erosion Control Seeding | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | |
| | Grading | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Erosion Control Seeding Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09 - Channels and Canals Total | -- | 0.41 | 0.41 | 0.41 | 5.05 | 7.78 | 54.05 | 51.32 | 51.32 | 51.32 | 46.27 | 46.27 | 1.65 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | -- |

Table K-133. PM10 Emissions Summary from Fugitive D

| # | Activity | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions , tpy |
|----|-----------------------------------------------------|--------|-------|-------|--------|--------|--------|-------|--------|--------|------------------------|
| | | | | | | | | | | | |
| 7 | Excavation (Wet Conditions) | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | 0.78 |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Excavation (Wet Conditions) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.78 |
| 8 | Excavation/Grading (Dry Conditions) | | | | | | | | | | 0.01 |
| | Material Handling | | | | | | | | | | 0.04 |
| | Grading | | | | | | | | | | 0.04 |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Excavation/Grading (Dry Conditions) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 |
| 9 | Earthen Backfill | | | | | | | | | | 0.00 |
| | Material Handling | | | | | | | | | | 0.00 |
| | Grading | | | | | | | | | | 0.01 |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Earthen Backfill Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
| 10 | Riprap - Class 2 | | | | | | | | | | 0.01 |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Riprap - Class 2 Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
| 11 | Riprap - Class 3 | | | | | | | | | | 0.02 |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Riprap - Class 3 Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 |
| 12 | RSP Bedding Material | | | | | | | | | | 0.01 |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | RSP Bedding Material Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
| 13 | Erosion Control Seeding | | | | | | | | | | n/a |
| | Material Handling | | | n/a | n/a | n/a | | | | | n/a |
| | Grading | | | n/a | n/a | n/a | | | | | n/a |
| | Bulldozing | | | n/a | n/a | n/a | | | | | n/a |
| | Unpaved Road Dust | | | n/a | n/a | n/a | | | | | n/a |
| | Paved Road Dust | | | n/a | n/a | n/a | | | | | n/a |
| | Erosion Control Seeding Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09 - Channels and Canals Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.91 |

Table K-133. PM10 Emissions Summary from Fugitive Dust (Alternative 1) - Mitigated

| # | Activity | PM10 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 11 - Levees and Floodwalls | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | n/a | | | n/a | | | | | | | |
| | Grading | | | | | | | | | n/a | | | n/a | | | | | | | |
| | Bulldozing | | | | | | | | | n/a | | | n/a | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | n/a | | | n/a | | | | | | | |
| | Paved Road Dust | | | | | | | | | n/a | | | n/a | | | | | | | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 | Soil Cement Bentonite Cutoff Wall | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | n/a | | n/a | | n/a | | | | | | |
| | Grading | | | | | | | | | 0.21 | | 0.21 | | 0.21 | | | | | | |
| | Bulldozing | | | | | | | | | 2.35 | | 2.35 | | 2.35 | | | | | | |
| | Unpaved Road Dust | | | | | | | | | n/a | | n/a | | n/a | | | | | | |
| | Paved Road Dust | | | | | | | | | n/a | | n/a | | n/a | | | | | | |
| | Soil Cement Bentonite Cutoff Wall Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | 2.56 | | 2.56 | | 2.56 | | -- | -- | -- | -- | -- |
| | 11 - Levees and Floodwalls Total | -- | -- | -- | -- | -- | -- | -- | -- | 2.56 | | 2.56 | | 2.56 | | -- | -- | -- | -- | -- |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | |
| | Grading | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | n/a | | n/a | | n/a | | | | | | | | | | | |
| | Grading | | | | n/a | | n/a | | n/a | | | | | | | | | | | |
| | Bulldozing | | | | n/a | | n/a | | n/a | | | | | | | | | | | |
| | Unpaved Road Dust | | | | n/a | | n/a | | n/a | | | | | | | | | | | |
| | Paved Road Dust | | | | n/a | | n/a | | n/a | | | | | | | | | | | |
| | Construction Site Dewatering (Temporary Cofferdam) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18 | Construction Site Dewatering (Pumping) | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Grading | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Bulldozing | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Unpaved Road Dust | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Paved Road Dust | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Construction Site Dewatering (Pumping) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 | Excavation (Wet Conditions) | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | n/a | | | | | | | | | | | |
| | Grading | | | | | | | | n/a | | | | | | | | | | | |
| | Bulldozing | | | | | | | | n/a | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | 46.27 | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | n/a | | | | | | | | | | | |
| | Excavation (Wet Conditions) Subtotal | -- | -- | -- | -- | -- | -- | -- | 46.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-133. PM10 Emissions Summary from Fugitive D

| # | Activity | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions, tpy |
|-------------------------------------------------------|---------------------------------------------------------------|--------|-------|-------|--------|--------|--------|-------|--------|--------|-----------------------|
| | | | | | | | | | | | |
| 11 - Levees and Floodwalls | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 | Soil Cement Bentonite Cutoff Wall | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | 0.00 |
| | Grading | | | | | | | | | | 0.02 |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Soil Cement Bentonite Cutoff Wall Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 |
| | 11 - Levees and Floodwalls Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | n/a | | n/a |
| | Grading | | | | | | | | n/a | | n/a |
| | Bulldozing | | | | | | | | n/a | | n/a |
| | Unpaved Road Dust | | | | | | | | n/a | | n/a |
| | Paved Road Dust | | | | | | | | n/a | | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Construction Site Dewatering (Temporary Cofferdam) Sub | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18 | Construction Site Dewatering (Pumping) | | | | | | | | | | n/a |
| | Material Handling | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Grading | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Bulldozing | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Unpaved Road Dust | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Paved Road Dust | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Construction Site Dewatering (Pumping) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 | Excavation (Wet Conditions) | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | 0.08 |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Excavation (Wet Conditions) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.08 |

Table K-133. PM10 Emissions Summary from Fugitive Dust (Alternative 1) - Mitigated

| # | Activity | PM10 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | |
|-------------------------------------------|-------------------------------------------------------------|---------------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 20 | Sheet Pile Wall | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | n/a | n/a | | | | | | | | | | |
| | Grading | | | | | | | | n/a | n/a | | | | | | | | | | |
| | Bulldozing | | | | | | | | n/a | n/a | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | n/a | n/a | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | n/a | n/a | | | | | | | | | | |
| | Sheet Pile Wall Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21 | Headworks Structure Concrete Piles | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Grading | | | | | | | | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Bulldozing | | | | | | | | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Unpaved Road Dust | | | | | | | | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Paved Road Dust | | | | | | | | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Headworks Structure Concrete Piles Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22 | Headworks Structure | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | n/a | n/a | | | | | n/a | |
| | Grading | | | | | | | | | | | | n/a | n/a | | | | | n/a | |
| | Bulldozing | | | | | | | | | | | | n/a | n/a | | | | | n/a | |
| | Unpaved Road Dust | | | | | | | | | | | | n/a | n/a | | | | | n/a | |
| | Paved Road Dust | | | | | | | | | | | | n/a | n/a | | | | | n/a | |
| | Headworks Structure Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | Headworks Channel Transition | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | n/a | n/a | | | n/a |
| | Grading | | | | | | | | | | | | | | | n/a | n/a | | | n/a |
| | Bulldozing | | | | | | | | | | | | | | | n/a | n/a | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | | | | | | n/a | n/a | | | n/a |
| | Paved Road Dust | | | | | | | | | | | | | | | n/a | n/a | | | n/a |
| | Headworks Channel Transition Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24 | Hinged Bottom Gates | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | |
| | Grading | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Hinged Bottom Gates Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 15 - Floodway Control and Diversion Structures Total | -- | -- | -- | -- | -- | -- | 46.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | n/a | | | n/a | |
| | Grading | | | | | | | | | | | | | | | n/a | | | n/a | |
| | Bulldozing | | | | | | | | | | | | | | | n/a | | | n/a | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | n/a | | | n/a | |
| | Paved Road Dust | | | | | | | | | | | | | | | n/a | | | n/a | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26 | Pedestrian Bridge Concete Piles | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | n/a | | |
| | Grading | | | | | | | | | | | | | | | | | n/a | | |
| | Bulldozing | | | | | | | | | | | | | | | | | n/a | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | n/a | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | n/a | | |
| | Pedestrian Bridge Concete Piles Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-133. PM10 Emissions Summary from Fugitive D

| # | Activity | | | | | | | | | | Annual Emissions, tpy |
|-------------------------------------------|-------------------------------------------------------------|--------|-------|-------|--------|--------|--------|-------|--------|--------|-----------------------|
| | | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 20 | Sheet Pile Wall | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Sheet Pile Wall Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21 | Headworks Structure Concrete Piles | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Headworks Structure Concrete Piles Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22 | Headworks Structure | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Headworks Structure Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | Headworks Channel Transition | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Headworks Channel Transition Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24 | Hinged Bottom Gates | | | | | | | | | | n/a |
| | Material Handling | | | n/a | n/a | n/a | n/a | | | | n/a |
| | Grading | | | n/a | n/a | n/a | n/a | | | | n/a |
| | Bulldozing | | | n/a | n/a | n/a | n/a | | | | n/a |
| | Unpaved Road Dust | | | n/a | n/a | n/a | n/a | | | | n/a |
| | Paved Road Dust | | | n/a | n/a | n/a | n/a | | | | n/a |
| | Hinged Bottom Gates Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 15 - Floodway Control and Diversion Structures Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.08 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26 | Pedestrian Bridge Concrete Piles | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Pedestrian Bridge Concrete Piles Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-133. PM10 Emissions Summary from Fugitive Dust (Alternative 1) - Mitigated

| # | Activity | PM10 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------|--------------------------------------------------------------|---------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | n/a |
| | Pedestrian Bridge Concrete Abutments and Wingwalls Su | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28 | Pedestrian Bridge Span Installation | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | n/a |
| | Pedestrian Bridge Span Installation Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 08 - Roads, Railroads, and Bridges Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | | | | | | | | | | | | | | | | | | | |
| | Material Handling | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Grading | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Bulldozing | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Unpaved Road Dust | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Paved Road Dust | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30 | CMU Building and Earthwork Pad Construction | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | | | |
| | Grading | | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | | | | | | | | | | | | |
| | Bulldozing | | 2.35 | 2.35 | 2.35 | 2.35 | 2.35 | 2.35 | | | | | | | | | | | | |
| | Unpaved Road Dust | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | | |
| | Paved Road Dust | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | | |
| | CMU Building and Earthwork Pad Construction Subtotal | -- | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31 | Concrete Duct Banc | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | n/a |
| | Concrete Duct Banc Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 19 - Buildings, Grounds, and Utilities Total | -- | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | |
| | Grading | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-133. PM10 Emissions Summary from Fugitive D

| # | Activity | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions, tpy |
|-----------------------------------------------|--------------------------------------------------------------------|--------|-------|-------|--------|--------|--------|-------|--------|--------|-----------------------|
| | | | | | | | | | | | |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28 | Pedestrian Bridge Span Installation | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Pedestrian Bridge Span Installation Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 08 - Roads, Railroads, and Bridges Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30 | CMU Building and Earthwork Pad Construction | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | 0.01 |
| | Grading | | | | | | | | | | 0.04 |
| | Bulldozing | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | CMU Building and Earthwork Pad Construction Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.05 |
| 31 | Concrete Duct Banc | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Concrete Duct Banc Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 19 - Buildings, Grounds, and Utilities Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.05 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | | | | | | | | | | n/a |
| | Material Handling | | n/a | | | | | | n/a | | n/a |
| | Grading | | n/a | | | | | | n/a | | n/a |
| | Bulldozing | | n/a | | | | | | n/a | | n/a |
| | Unpaved Road Dust | | n/a | | | | | | n/a | | n/a |
| | Paved Road Dust | | n/a | | | | | | n/a | | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-133. PM10 Emissions Summary from Fugitive Dust (Alternative 1) - Mitigated

| # | Activity | PM10 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 33 | Mechanical Hydraulic Cylinders & Housing Material Handling Grading Bulldozing Unpaved Road Dust Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Mechanical Hydraulic Cylinders & Housing Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34 | CMU Building Mechanical Equipment Material Handling Grading Bulldozing Unpaved Road Dust Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | CMU Building Mechanical Equipment Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 35 | Electrical Control Equipment CMU Building Material Handling Grading Bulldozing Unpaved Road Dust Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Electrical Control Equipment CMU Building Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 36 | Electrical Power Equipment CMU Building Material Handling Grading Bulldozing Unpaved Road Dust Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Electrical Power Equipment CMU Building Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 37 | Communication Equipment Material Handling Grading Bulldozing Unpaved Road Dust Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Communication Equipment Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 20 -Permanent Operating Equipment Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| GRAND TOTAL | | -- | 3.72 | 3.72 | 3.59 | 8.22 | 10.96 | 100.33 | 51.32 | 53.87 | 53.87 | 48.83 | 46.27 | 1.65 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | -- |
| | <i>Percent Reduction (Compared to Unmitigated)</i> | n/a | 0% | 0% | 0% | 0% | 2% | -57% | -56% | -55% | -55% | -58% | -59% | 0% | 0% | 0% | 0% | 0% | 0% | n/a |

Table K-133. PM10 Emissions Summary from Fugitive D

| # | Activity | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions, tpy |
|--------------------------------------------------------------|-------------------------------------------|--------|-------|-------|--------|--------|--------|-------|--------|--------|-----------------------|
| | | | | | | | | | | | |
| 33 | Mechanical Hydraulic Cylinders & Housing | | | | | | | | | | |
| | Material Handling | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Grading | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Bulldozing | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Unpaved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Paved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| Mechanical Hydraulic Cylinders & Housing Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34 | CMU Building Mechanical Equipment | | | | | | | | | | |
| | Material Handling | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Grading | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Bulldozing | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Unpaved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Paved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| CMU Building Mechanical Equipment Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 35 | Electrical Control Equipment CMU Building | | | | | | | | | | |
| | Material Handling | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Grading | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Bulldozing | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Unpaved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Paved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| Electrical Control Equipment CMU Building Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 36 | Electrical Power Equipment CMU Building | | | | | | | | | | |
| | Material Handling | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Grading | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Bulldozing | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Unpaved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Paved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| Electrical Power Equipment CMU Building Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 37 | Communication Equipment | | | | | | | | | | |
| | Material Handling | | | | | | n/a | n/a | | | n/a |
| | Grading | | | | | | n/a | n/a | | | n/a |
| | Bulldozing | | | | | | n/a | n/a | | | n/a |
| | Unpaved Road Dust | | | | | | n/a | n/a | | | n/a |
| | Paved Road Dust | | | | | | n/a | n/a | | | n/a |
| Communication Equipment Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment Total | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| GRAND TOTAL | | | | | | | | | 0.21 | | 1.06 |
| <i>Percent Reduction (Compared to Unmitigated)</i> | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 0% | n/a | -54% |

Table K-134. PM2.5 Emissions Summary from Fugitive Dust (Alternative 1) - Mitigated

| # | Activity | PM2.5 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | |
|---------------------------------|------------------------------------------------------|----------------------------------------|-------------|-------------|-------------|-------------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | n/a | | | | | | | | | | | | | | | | | | |
| | Material Handling | n/a | | | | | | | | | | | | | | | | | | |
| | Grading | n/a | | | | | | | | | | | | | | | | | | |
| | Bulldozing | n/a | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | n/a | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | n/a | | | | | | | | | | | | | | | | | | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | 0.02 | 0.02 | | | | | | | | | | | | | | | | |
| | Grading | n/a | n/a | n/a | | | | | | | | | | | | | | | | |
| | Bulldozing | n/a | n/a | n/a | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | n/a | n/a | n/a | | | | | | | | | | | | | | | | |
| | Paved Road Dust | n/a | n/a | n/a | | | | | | | | | | | | | | | | |
| | Fremont Weir Demo Subtotal | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 | Levee O&M Road Regrading (6" AB) | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | |
| | Grading | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Levee O&M Road Regrading (6" AB) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | Temporary Electrical Power | | | | | | | | | | | | | | | | | | | |
| | Material Handling | n/a | | | | | | | | | | | | | | | | | | |
| | Grading | n/a | | | | | | | | | | | | | | | | | | |
| | Bulldozing | n/a | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | n/a | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | n/a | | | | | | | | | | | | | | | | | | |
| | Temporary Electrical Power Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 02 - Relocations Total | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Material Handling | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Grading | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Bulldozing | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Unpaved Road Dust | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Paved Road Dust | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 6 | Clearing and Grubbing | | | | | | | | | | | | | | | | | | | |
| | Material Handling | n/a | n/a | n/a | | | | | | | | | | | | | | | | |
| | Grading | | 0.04 | 0.04 | 0.04 | 0.04 | | | | | | | | | | | | | | |
| | Bulldozing | n/a | n/a | n/a | n/a | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | n/a | n/a | n/a | n/a | | | | | | | | | | | | | | | |
| | Paved Road Dust | n/a | n/a | n/a | n/a | | | | | | | | | | | | | | | |
| | Clearing and Grubbing Subtotal | -- | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-134. PM2.5 Emissions Summary from Fugitive D

| # | Activity | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions, tpy |
|---------------------------------|------------------------------------------------------|--------|-------|-------|--------|--------|--------|-------|-------------|--------|-----------------------|
| | | | | | | | | | | | |
| 02 - Relocations | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | | | | | | | | | | |
| | Material Handling | | | | | | | | | n/a | n/a |
| | Grading | | | | | | | | | n/a | n/a |
| | Bulldozing | | | | | | | | | n/a | n/a |
| | Unpaved Road Dust | | | | | | | | | n/a | n/a |
| | Paved Road Dust | | | | | | | | | n/a | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | | | | | | | | | | 0.00 |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Fremont Weir Demo Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 |
| 3 | Levee O&M Road Regrading (6" AB) | | | | | | | | | | |
| | Material Handling | | | | | | | | n/a | | n/a |
| | Grading | | | | | | | | 0.02 | | 0.00 |
| | Bulldozing | | | | | | | | n/a | | n/a |
| | Unpaved Road Dust | | | | | | | | n/a | | n/a |
| | Paved Road Dust | | | | | | | | n/a | | n/a |
| | Levee O&M Road Regrading (6" AB) Subtotal | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | 0.00 |
| 4 | Temporary Electrical Power | | | | | | | | | | |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Temporary Electrical Power Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 02 - Relocations Total | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | 0.00 |
| 09 - Channels and Canals | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | | | | | | | | | | |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 6 | Clearing and Grubbing | | | | | | | | | | |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | 0.00 |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Clearing and Grubbing Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 |

Table K-134. PM2.5 Emissions Summary from Fugitive Dust (Alternative 1) - Mitigated

| # | Activity | PM2.5 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | |
|----|-----------------------------------------------------|----------------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 7 | Excavation (Wet Conditions) | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Grading | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Bulldozing | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Unpaved Road Dust | | | | | | | | 4.63 | 4.63 | 4.63 | 4.63 | 4.63 | 4.63 | | | | | | |
| | Paved Road Dust | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | |
| | Excavation (Wet Conditions) Subtotal | -- | -- | -- | -- | -- | -- | 4.63 | 4.63 | 4.63 | 4.63 | 4.63 | 4.63 | -- | -- | -- | -- | -- | -- | -- |
| 8 | Excavation/Grading (Dry Conditions) | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | | | | | | | | | |
| | Grading | | | | | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | | | | | | | | | |
| | Bulldozing | | | | | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | | | | | | | | | |
| | Unpaved Road Dust | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | | | |
| | Paved Road Dust | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | | | |
| | Excavation/Grading (Dry Conditions) Subtotal | -- | -- | -- | -- | 1.61 | 1.61 | 1.61 | 1.61 | 1.61 | 1.61 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 9 | Earthen Backfill | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | 0.03 | 0.03 | | | | | | | | | | | |
| | Grading | | | | | | | 0.02 | 0.02 | | | | | | | | | | | |
| | Bulldozing | | | | | | | 1.29 | 1.29 | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | n/a | n/a | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | n/a | n/a | | | | | | | | | | | |
| | Earthen Backfill Subtotal | -- | -- | -- | -- | -- | 1.34 | 1.34 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10 | Riprap - Class 2 | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| | Grading | | | | | | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Bulldozing | | | | | | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Unpaved Road Dust | | | | | | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Paved Road Dust | | | | | | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Riprap - Class 2 Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | -- |
| 11 | Riprap - Class 3 | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | 0.25 | 0.25 | |
| | Grading | | | | | | | | | | | | | | | | | n/a | n/a | |
| | Bulldozing | | | | | | | | | | | | | | | | | n/a | n/a | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | n/a | n/a | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | n/a | n/a | |
| | Riprap - Class 3 Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.25 | 0.25 | -- |
| 12 | RSP Bedding Material | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | 0.25 | 0.25 | 0.25 | 0.25 | | |
| | Grading | | | | | | | | | | | | | n/a | n/a | n/a | n/a | | | |
| | Bulldozing | | | | | | | | | | | | | n/a | n/a | n/a | n/a | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | n/a | n/a | n/a | n/a | | | |
| | Paved Road Dust | | | | | | | | | | | | | n/a | n/a | n/a | n/a | | | |
| | RSP Bedding Material Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.25 | 0.25 | 0.25 | 0.25 | -- | -- | -- |
| 13 | Erosion Control Seeding | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | |
| | Grading | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Erosion Control Seeding Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09 - Channels and Canals Total | -- | 0.04 | 0.04 | 0.04 | 1.61 | 2.95 | 7.58 | 6.24 | 6.24 | 6.24 | 4.63 | 4.63 | 0.25 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | -- |

Table K-134. PM2.5 Emissions Summary from Fugitive D

| # | Activity | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions, tpy |
|----|-----------------------------------------------------|--------|-------|-------|--------|--------|--------|-------|--------|--------|-----------------------|
| | | | | | | | | | | | |
| 7 | Excavation (Wet Conditions) | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | 0.08 |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Excavation (Wet Conditions) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.08 |
| 8 | Excavation/Grading (Dry Conditions) | | | | | | | | | | 0.00 |
| | Material Handling | | | | | | | | | | 0.00 |
| | Grading | | | | | | | | | | 0.02 |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Excavation/Grading (Dry Conditions) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 |
| 9 | Earthen Backfill | | | | | | | | | | 0.00 |
| | Material Handling | | | | | | | | | | 0.00 |
| | Grading | | | | | | | | | | 0.01 |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Earthen Backfill Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
| 10 | Riprap - Class 2 | | | | | | | | | | 0.00 |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Riprap - Class 2 Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 |
| 11 | Riprap - Class 3 | | | | | | | | | | 0.00 |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Riprap - Class 3 Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 |
| 12 | RSP Bedding Material | | | | | | | | | | 0.00 |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | RSP Bedding Material Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 |
| 13 | Erosion Control Seeding | | | | | | | | | | n/a |
| | Material Handling | | | n/a | n/a | n/a | | | | | n/a |
| | Grading | | | n/a | n/a | n/a | | | | | n/a |
| | Bulldozing | | | n/a | n/a | n/a | | | | | n/a |
| | Unpaved Road Dust | | | n/a | n/a | n/a | | | | | n/a |
| | Paved Road Dust | | | n/a | n/a | n/a | | | | | n/a |
| | Erosion Control Seeding Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 09 - Channels and Canals Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.12 |

Table K-134. PM2.5 Emissions Summary from Fugitive Dust (Alternative 1) - Mitigated

| # | Activity | PM2.5 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 11 - Levees and Floodwalls | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | n/a | | | n/a | | | | | | | |
| | Grading | | | | | | | | | n/a | | | n/a | | | | | | | |
| | Bulldozing | | | | | | | | | n/a | | | n/a | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | n/a | | | n/a | | | | | | | |
| | Paved Road Dust | | | | | | | | | n/a | | | n/a | | | | | | | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 | Soil Cement Bentonite Cutoff Wall | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | n/a | | n/a | | n/a | | | | | | |
| | Grading | | | | | | | | | 0.02 | | 0.02 | | 0.02 | | | | | | |
| | Bulldozing | | | | | | | | | 1.29 | | 1.29 | | 1.29 | | | | | | |
| | Unpaved Road Dust | | | | | | | | | n/a | | n/a | | n/a | | | | | | |
| | Paved Road Dust | | | | | | | | | n/a | | n/a | | n/a | | | | | | |
| | Soil Cement Bentonite Cutoff Wall Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | 1.31 | | 1.31 | | 1.31 | -- | -- | -- | -- | -- | -- |
| | 11 - Levees and Floodwalls Total | -- | -- | -- | -- | -- | -- | -- | -- | 1.31 | | 1.31 | | 1.31 | -- | -- | -- | -- | -- | -- |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | n/a | | | | | | | | | | | | | | | | |
| | Grading | | | n/a | | | | | | | | | | | | | | | | |
| | Bulldozing | | | n/a | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | n/a | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | n/a | | | | | | | | | | | | | | | | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | n/a | n/a | n/a | | | | | | | | | | | | | | |
| | Grading | | | n/a | n/a | n/a | | | | | | | | | | | | | | |
| | Bulldozing | | | n/a | n/a | n/a | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | n/a | n/a | n/a | | | | | | | | | | | | | | |
| | Paved Road Dust | | | n/a | n/a | n/a | | | | | | | | | | | | | | |
| | Construction Site Dewatering (Temporary Cofferdam) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18 | Construction Site Dewatering (Pumping) | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Grading | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Bulldozing | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Unpaved Road Dust | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Paved Road Dust | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| | Construction Site Dewatering (Pumping) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 | Excavation (Wet Conditions) | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | n/a | | | | | | | | | | | | |
| | Grading | | | | | | | n/a | | | | | | | | | | | | |
| | Bulldozing | | | | | | | n/a | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | 4.63 | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | n/a | | | | | | | | | | | |
| | Excavation (Wet Conditions) Subtotal | -- | -- | -- | -- | -- | -- | -- | 4.63 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-134. PM2.5 Emissions Summary from Fugitive D

| # | Activity | | | | | | | | | | Annual Emissions, tpy | |
|-------------------------------------------------------|---------------------------------------------------------------|--------|-------|-------|--------|--------|--------|-------|--------|--------|-----------------------|-------------|
| | | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | | |
| 11 - Levees and Floodwalls | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 | Soil Cement Bentonite Cutoff Wall | | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | | 0.00 |
| | Grading | | | | | | | | | | | 0.01 |
| | Bulldozing | | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | | n/a |
| | Soil Cement Bentonite Cutoff Wall Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
| | 11 - Levees and Floodwalls Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | |
| 16 | Mobilization and Demobilization | | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | n/a | | | n/a |
| | Grading | | | | | | | | n/a | | | n/a |
| | Bulldozing | | | | | | | | n/a | | | n/a |
| | Unpaved Road Dust | | | | | | | | n/a | | | n/a |
| | Paved Road Dust | | | | | | | | n/a | | | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17 | Construction Site Dewatering (Temporary Cofferdam) | | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | | n/a |
| | Construction Site Dewatering (Temporary Cofferdam) Sub | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18 | Construction Site Dewatering (Pumping) | | | | | | | | | | | n/a |
| | Material Handling | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Grading | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Bulldozing | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Unpaved Road Dust | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Paved Road Dust | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Construction Site Dewatering (Pumping) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 | Excavation (Wet Conditions) | | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | | 0.01 |
| | Paved Road Dust | | | | | | | | | | | n/a |
| | Excavation (Wet Conditions) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |

Table K-134. PM2.5 Emissions Summary from Fugitive Dust (Alternative 1) - Mitigated

| # | Activity | PM2.5 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | |
|-------------------------------------------|-------------------------------------------------------------|----------------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 20 | Sheet Pile Wall | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | n/a | n/a | | | | | | | | | | |
| | Grading | | | | | | | | n/a | n/a | | | | | | | | | | |
| | Bulldozing | | | | | | | | n/a | n/a | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | n/a | n/a | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | n/a | n/a | | | | | | | | | | |
| | Sheet Pile Wall Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21 | Headworks Structure Concrete Piles | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Grading | | | | | | | | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Bulldozing | | | | | | | | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Unpaved Road Dust | | | | | | | | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Paved Road Dust | | | | | | | | n/a | n/a | n/a | n/a | n/a | | | | | | | |
| | Headworks Structure Concrete Piles Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22 | Headworks Structure | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | n/a | n/a | | | | | n/a | |
| | Grading | | | | | | | | | | | | n/a | n/a | | | | | n/a | |
| | Bulldozing | | | | | | | | | | | | n/a | n/a | | | | | n/a | |
| | Unpaved Road Dust | | | | | | | | | | | | n/a | n/a | | | | | n/a | |
| | Paved Road Dust | | | | | | | | | | | | n/a | n/a | | | | | n/a | |
| | Headworks Structure Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | Headworks Channel Transition | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | n/a | n/a | | | |
| | Grading | | | | | | | | | | | | | | | n/a | n/a | | | |
| | Bulldozing | | | | | | | | | | | | | | | n/a | n/a | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | n/a | n/a | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | n/a | n/a | | | |
| | Headworks Channel Transition Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24 | Hinged Bottom Gates | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | |
| | Grading | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Hinged Bottom Gates Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 15 - Floodway Control and Diversion Structures Total | -- | -- | -- | -- | -- | -- | 4.63 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | n/a | | | n/a | |
| | Grading | | | | | | | | | | | | | | | n/a | | | n/a | |
| | Bulldozing | | | | | | | | | | | | | | | n/a | | | n/a | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | n/a | | | n/a | |
| | Paved Road Dust | | | | | | | | | | | | | | | n/a | | | n/a | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26 | Pedestrian Bridge Concrete Piles | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | n/a | | |
| | Grading | | | | | | | | | | | | | | | | | n/a | | |
| | Bulldozing | | | | | | | | | | | | | | | | | n/a | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | n/a | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | n/a | | |
| | Pedestrian Bridge Concrete Piles Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-134. PM2.5 Emissions Summary from Fugitive D

| # | Activity | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions, tpy |
|-------------------------------------------------------------|------------------------------------|--------|-------|-------|--------|--------|--------|-------|--------|--------|-----------------------|
| | | | | | | | | | | | |
| 20 | Sheet Pile Wall | | | | | | | | | | |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| Sheet Pile Wall Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21 | Headworks Structure Concrete Piles | | | | | | | | | | |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| Headworks Structure Concrete Piles Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22 | Headworks Structure | | | | | | | | | | |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| Headworks Structure Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23 | Headworks Channel Transition | | | | | | | | | | |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| Headworks Channel Transition Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24 | Hinged Bottom Gates | | | | | | | | | | |
| | Material Handling | | | n/a | n/a | n/a | n/a | | | | n/a |
| | Grading | | | n/a | n/a | n/a | n/a | | | | n/a |
| | Bulldozing | | | n/a | n/a | n/a | n/a | | | | n/a |
| | Unpaved Road Dust | | | n/a | n/a | n/a | n/a | | | | n/a |
| | Paved Road Dust | | | n/a | n/a | n/a | n/a | | | | n/a |
| Hinged Bottom Gates Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 - Floodway Control and Diversion Structures Total | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | |
| 25 | Mobilization and Demobilization | | | | | | | | | | |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| Mobilization and Demobilization Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26 | Pedestrian Bridge Concrete Piles | | | | | | | | | | |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| Pedestrian Bridge Concrete Piles Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-134. PM2.5 Emissions Summary from Fugitive Dust (Alternative 1) - Mitigated

| # | Activity | PM2.5 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------|--------------------------------------------------------------|----------------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Pedestrian Bridge Concrete Abutments and Wingwalls Su | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28 | Pedestrian Bridge Span Installation | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Pedestrian Bridge Span Installation Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 08 - Roads, Railroads, and Bridges Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | | | | | | | | | | | | | | | | | | | |
| | Material Handling | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Grading | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Bulldozing | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Unpaved Road Dust | n/a | | | | | | | | | | | | | | | | | | n/a |
| | Paved Road Dust | n/a | | | | | | | | | | | | | | | | | | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30 | CMU Building and Earthwork Pad Construction | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | | | |
| | Grading | | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | | | | | | | | | | | | |
| | Bulldozing | | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | | | | | | | | | | | | |
| | Unpaved Road Dust | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | | |
| | Paved Road Dust | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | | |
| | CMU Building and Earthwork Pad Construction Subtotal | -- | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31 | Concrete Duct Banc | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Concrete Duct Banc Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 19 - Buildings, Grounds, and Utilities Total | -- | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | |
| | Grading | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-134. PM2.5 Emissions Summary from Fugitive D

| # | Activity | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions, tpy |
|-----------------------------------------------|--------------------------------------------------------------------|--------|-------|-------|--------|--------|--------|-------|--------|--------|-----------------------|
| | | | | | | | | | | | |
| 27 | Pedestrian Bridge Concrete Abutments and Wingwalls | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28 | Pedestrian Bridge Span Installation | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Pedestrian Bridge Span Installation Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 08 - Roads, Railroads, and Bridges Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | |
| 29 | Mobilization and Demobilization | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30 | CMU Building and Earthwork Pad Construction | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | 0.00 |
| | Grading | | | | | | | | | | 0.02 |
| | Bulldozing | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | CMU Building and Earthwork Pad Construction Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 |
| 31 | Concrete Duct Banc | | | | | | | | | | n/a |
| | Material Handling | | | | | | | | | | n/a |
| | Grading | | | | | | | | | | n/a |
| | Bulldozing | | | | | | | | | | n/a |
| | Unpaved Road Dust | | | | | | | | | | n/a |
| | Paved Road Dust | | | | | | | | | | n/a |
| | Concrete Duct Banc Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 19 - Buildings, Grounds, and Utilities Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | |
| 32 | Mobilization and Demobilization | | | | | | | | | | n/a |
| | Material Handling | | n/a | | | | | | n/a | | n/a |
| | Grading | | n/a | | | | | | n/a | | n/a |
| | Bulldozing | | n/a | | | | | | n/a | | n/a |
| | Unpaved Road Dust | | n/a | | | | | | n/a | | n/a |
| | Paved Road Dust | | n/a | | | | | | n/a | | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-134. PM2.5 Emissions Summary from Fugitive Dust (Alternative 1) - Mitigated

| # | Activity | PM2.5 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 33 | Mechanical Hydraulic Cylinders & Housing Material Handling Grading Bulldozing Unpaved Road Dust Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Mechanical Hydraulic Cylinders & Housing Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34 | CMU Building Mechanical Equipment Material Handling Grading Bulldozing Unpaved Road Dust Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | CMU Building Mechanical Equipment Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 35 | Electrical Control Equipment CMU Building Material Handling Grading Bulldozing Unpaved Road Dust Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Electrical Control Equipment CMU Building Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 36 | Electrical Power Equipment CMU Building Material Handling Grading Bulldozing Unpaved Road Dust Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Electrical Power Equipment CMU Building Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 37 | Communication Equipment Material Handling Grading Bulldozing Unpaved Road Dust Paved Road Dust | | | | | | | | | | | | | | | | | | | |
| | Communication Equipment Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 20 -Permanent Operating Equipment Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| GRAND TOTAL | | -- | 1.45 | 1.45 | 1.42 | 2.99 | 4.33 | 12.20 | 6.24 | 7.55 | 7.55 | 5.94 | 4.63 | 0.25 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | -- |
| | <i>Percent Reduction (Compared to Unmitigated)</i> | n/a | 0% | 0% | 0% | 0% | 1% | -52% | -52% | -47% | -47% | -53% | -59% | 0% | 0% | 0% | 0% | 0% | 0% | n/a |

Table K-134. PM2.5 Emissions Summary from Fugitive D

| # | Activity | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions, tpy |
|--------------------------------------------------------------|-------------------------------------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------|-----------------------|
| | | | | | | | | | | | |
| 33 | Mechanical Hydraulic Cylinders & Housing | | | | | | | | | | |
| | Material Handling | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Grading | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Bulldozing | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Unpaved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Paved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| Mechanical Hydraulic Cylinders & Housing Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34 | CMU Building Mechanical Equipment | | | | | | | | | | |
| | Material Handling | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Grading | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Bulldozing | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Unpaved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Paved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| CMU Building Mechanical Equipment Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 35 | Electrical Control Equipment CMU Building | | | | | | | | | | |
| | Material Handling | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Grading | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Bulldozing | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Unpaved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Paved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| Electrical Control Equipment CMU Building Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 36 | Electrical Power Equipment CMU Building | | | | | | | | | | |
| | Material Handling | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Grading | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Bulldozing | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Unpaved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| | Paved Road Dust | | | n/a | n/a | n/a | n/a | n/a | | | n/a |
| Electrical Power Equipment CMU Building Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 37 | Communication Equipment | | | | | | | | | | |
| | Material Handling | | | | | | n/a | n/a | | | n/a |
| | Grading | | | | | | n/a | n/a | | | n/a |
| | Bulldozing | | | | | | n/a | n/a | | | n/a |
| | Unpaved Road Dust | | | | | | n/a | n/a | | | n/a |
| | Paved Road Dust | | | | | | n/a | n/a | | | n/a |
| Communication Equipment Subtotal | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment Total | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| GRAND TOTAL | | | | | | | | | 0.02 | | 0.15 |
| <i>Percent Reduction (Compared to Unmitigated)</i> | | <i>n/a</i> | <i>n/a</i> | <i>n/a</i> | <i>n/a</i> | <i>n/a</i> | <i>n/a</i> | <i>n/a</i> | <i>0%</i> | <i>n/a</i> | <i>-44%</i> |

**Alternative 1: East Side Small Gated Notch
Fugitive Dust Emissions - Unpaved Road Dust (Haul Roads)**

Equation (AP-42, Chapter 13.2.2):

$$E = k (s/12)^a (W/3)^b$$

where:

E = size-specific emission factor (lb/VMT)

s = surface material silt content (%)

W = mean vehicle weight (tons)

Variables

| | |
|-----------|-----------------------------------------------|
| k (PM10) | 1.5 |
| k (PM2.5) | 0.15 |
| a | 0.9 |
| b | 0.45 |
| s, % | 1.6 crushed limestone (AP-42, Table 13.2.4-1) |
| W, tons | 180 loaded 74 unloaded |

Table K-135. Mitigated Unpaved Road Dust Emission Factors (lb/VMT)

| Weight | PM10 | PM2.5 |
|----------|------|-------|
| Loaded | 1.54 | 0.15 |
| Unloaded | 1.04 | 0.10 |
| Average | 1.29 | 0.13 |

Table K-136. Mitigated Unpaved Road Dust Emissions (Alternative 1)

| Activity | Total Daily Output | Total Quantity | Unit | Estimated Duration, Days | VMT per Day | VMT per Year | PM10, lb/day | PM2.5, lb/day | PM10, tpy | PM2.5, tpy |
|-------------------------------------------------------|--------------------|----------------|------|--------------------------|-------------|--------------|--------------|---------------|-----------|------------|
| 09 - Channels and Canals | | | | | | | | | | |
| Excavation (Wet Conditions) | 1,800 | 61,810 | CY | 35 | 92 | 3,092 | 46.3 | 4.6 | 0.8 | 0.1 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | |
| Excavation (Wet Conditions) | 1,800 | 6,130 | CY | 13 | 92 | 308 | 46.3 | 4.6 | 0.1 | 0.01 |

Notes:

Assumes payload of each truck is 100 tons.

Half of truck trips will be loaded and other half will be unloaded.

Only includes materials that will be transported to spoil site by dump trucks.

Appendix K1
Air Quality Emission Calculations

Distance to borrow area

2 miles (spoils site located within a 1-mile radius of the project access point(s); average of 1 mile travel distance from point of excavation)

Density

1.25 tons/cy

Note: CalEEMod assumes haul trucks can handle 20 tons or 16 cy.

Dust Control

61% reduction from watering at least 3 times per day

Source: CalEEMod

Offroad Exhaust Emissions Summary

Table K-137. Maximum Daily Offroad Construction Equipment Emissions (Alternative 2)

| Phase | ROG lbs/day | NOx lbs/day | CO lbs/day | SO2 lbs/day | PM10 lbs/day | PM2.5 lbs/day |
|------------------------------------------------------|----------------|----------------|---------------|----------------|-----------------|------------------|
| 02 - Relocations | 1.07 | 20.99 | 14.88 | 0.05 | 0.57 | 0.45 |
| 09 - Channels and Canals | 23.68 | 324.65 | 199.82 | 0.74 | 12.44 | 10.89 |
| 15 - Floodway Control and Diversion Structures | 4.93 | 59.98 | 44.88 | 0.17 | 2.56 | 1.99 |
| 08 - Roads, Railroads, and Bridges | 2.29 | 25.87 | 22.55 | 0.10 | 1.16 | 0.96 |
| 19 - Buildings, Grounds, and Utilities | 3.67 | 42.91 | 39.08 | 0.11 | 2.11 | 1.78 |
| 20 -Permanent Operating Equipment | 0.60 | 3.68 | 11.36 | 0.03 | 0.35 | 0.23 |
| Peak Day Construction Exhaust Emissions Total | 28.27 | 387.58 | 242.73 | 0.88 | 14.66 | 12.72 |

Notes:

Construction total will not add to the sum of each phase because not all tasks overlap on the same day.

Table K-138. Annual Offroad Construction Equipment Emissions (Alternative 2)

| Phase | ROG tpy | NOx tpy | CO tpy | SO2 tpy | PM10 tpy | PM2.5 tpy | CO2e MT/yr |
|----------------------------------------------------|-------------|--------------|-------------|-------------|-------------|--------------|-----------------|
| 02 - Relocations | 0.01 | 0.12 | 0.10 | 0.00 | 0.00 | 0.00 | 38.76 |
| 09 - Channels and Canals | 0.88 | 11.26 | 5.69 | 0.02 | 0.31 | 0.25 | 2,679.86 |
| 15 - Floodway Control and Diversion Structures | 0.11 | 1.12 | 1.00 | 0.00 | 0.06 | 0.04 | 385.05 |
| 08 - Roads, Railroads, and Bridges | 0.01 | 0.10 | 0.07 | 0.00 | 0.00 | 0.00 | 32.24 |
| 19 - Buildings, Grounds, and Utilities | 0.05 | 0.62 | 0.57 | 0.00 | 0.03 | 0.03 | 155.08 |
| 20 -Permanent Operating Equipment | 0.01 | 0.06 | 0.17 | 0.00 | 0.01 | 0.00 | 45.09 |
| Annual Construction Exhaust Emissions Total | 1.07 | 13.28 | 7.61 | 0.03 | 0.41 | 0.33 | 3,336.08 |

Notes:

Total may not add exactly because of rounding.

Table K-139. ROG Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|------------------------------------------------------|-------------------------------------|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------|-------------------|--------------|--------------------|--------------------------|-----------------------------------------------------------|-------------------------------------------------------|
| 02 - Relocations | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 3.1225 0.0580 1.4797 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 2 | Fremont Weir Demo | 420 | CY | 3.5 CY Hydraulic Excavator 3.5 CY Front End Loader Wheel 0.8 CY Loader/Backhoe, Wheel 4000 gallon Water Truck 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Loaders Tractors/Loaders/Backhoes n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 1 6 | 359 164 97 MHDT HHDT LDT2 | 40 | 1 | 40 | 11 | 0.0451 0.1035 0.0901 3.1225 6.9998 1.4797 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr |
| Fremont Weir Demo Subtotal | | | | | | | | | | | | | |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Graders n/a - onroad n/a - onroad n/a - onroad | 1 1 1 5 | 187 MHDT LDT2 HHDT | 39,400 | 1 | 39,400 | 4 | 0.1131 3.1225 1.4797 6.9998 | g/hp-hr g/hr g/hr g/hr |
| Levee O&M Road Regrading (6" AB) Subtotal | | | | | | | | | | | | | |
| 4 | Temporary Electrical Power | 5,280 | LF | Flatbed Truck Pickup Truck Conventional | n/a - onroad n/a - onroad | 1 2 | MHDT LDT2 | 1,500 | 1 | 1,500 | 4 | 3.1225 1.4797 | g/hr g/hr |
| Temporary Electrical Power Subtotal | | | | | | | | | | | | | |
| 02 - Relocations Total | | | | | | | | | | | | | |
| 09 - Channels and Canals | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 3.1225 0.0580 1.4797 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 6 | Clearing and Grubbing | 70 | ACR | 1.5 CY Front End Loader Crawler Trailer Mounted Brush Chipper Chainsaw 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Crawler Tractors Shredders Chainsaws n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 6 1 | 110 140 8 MHDT LDT2 HHDT | 2 | 2 | 4 | 18 | 0.2384 0.0754 72.5631 3.1225 1.4797 6.9998 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr |
| Clearing and Grubbing Subtotal | | | | | | | | | | | | | |
| 7 | Excavation (Wet Conditions) | 93,610 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 2 | 3,600 | 27 | 0.0451 0.1608 0.1035 6.9998 1.4797 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | |
| 8 | Excavation/Grading (Dry Conditions) | 372,680 | CY | 300 HP Dozer 21 CY Scrapers 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional | Rubber Tired Dozers Scrapers Graders n/a - onroad n/a - onroad | 1 4 1 1 7 | 300 407 187 MHDT LDT2 | 3,500 | 3 | 10,500 | 36 | 0.1608 0.1193 0.1131 3.1225 1.4797 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation/Grading (Dry Conditions) Subtotal | | | | | | | | | | | | | |

Table K-139. ROG Exhaust Emissions from Offroad C

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------------------------------|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------|-------|--------|--------|--------|-------|--------|--------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | -- | 0.29 | 0.29 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.30 | 0.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.15 | 0.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.12 | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.16 | 0.16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 1.07 | 1.07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | Temporary Electrical Power | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.29 | 1.07 | 1.07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 6 | Clearing and Grubbing | -- | 0.93 | 0.93 | 0.93 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.37 | 0.37 | 0.37 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 20.48 | 20.48 | 20.48 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.11 | 0.11 | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.31 | 0.31 | 0.31 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.25 | 0.25 | 0.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 22.44 | 22.44 | 22.44 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 2.22 | 2.22 | 2.22 | 2.22 | 2.22 | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 7.87 | 7.87 | 7.87 | 7.87 | 7.87 | -- | -- | -- | -- | -- | -- | -- | -- |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 10.27 | 10.27 | 10.27 | 10.27 | 10.27 | 10.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 1.12 | 1.12 | 1.12 | 1.12 | 1.12 | 1.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 14.66 | 14.66 | 14.66 | 14.66 | 14.66 | 14.66 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-139. ROG Exhaust Emissions from Offroad C

| # | Activity | | | | | | | | | | Annual Emissions , tpy |
|---------------------------------|-------------------------------------|--------|-------------|-------|--------|--------|--------|-------|-------------|---------------|------------------------|
| | | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.18 | 0.0002 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0009 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0059 | |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | 0.37 | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.06 | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.03 | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.62 | -- | 0.0012 |
| | | -- | -- | -- | -- | -- | -- | -- | 1.07 | -- | 0.0021 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 1.07 | 0.18 | 0.0084 |
| 09 - Channels and Canals | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | 0.10 | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | 0.03 | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.18 | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0083 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0033 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.1843 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0010 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0028 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0022 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.2020 | |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0092 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0459 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0162 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0300 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0049 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.1063 | |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0459 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.1849 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0202 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0030 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0099 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.2639 | |

Table K-139. ROG Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------------------|-----------------------------------|-------------------|--------------|--------------------|--------------------------|------------------------------------------------|-----------------------------------------------|
| 9 | Earthen Backfill | 1,010 | CY | 300 HP Dozer 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional | Rubber Tired Dozers n/a - onroad Rollers n/a - onroad | 1 1 1 3 | 300 MHDT 157 LDT2 | 1,000 | 1 | 1,000 | 2 | 0.1608 3.1225 0.0598 1.4797 | g/hp-hr g/hr g/hp-hr g/hr |
| Earthen Backfill Subtotal | | | | | | | | | | | | | |
| 10 | Riprap - Class 2 | 87,580 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 2 | 2,000 | 37 | 0.0451 0.1004 6.9998 1.4797 | g/hp-hr g/hp-hr g/hr g/hr |
| Riprap - Class 2 Subtotal | | | | | | | | | | | | | |
| 11 | Riprap - Class 3 | 1,530 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 1 | 1,000 | 2 | 0.0451 0.1004 6.9998 1.4797 | g/hp-hr g/hp-hr g/hr g/hr |
| Riprap - Class 3 Subtotal | | | | | | | | | | | | | |
| 12 | RSP Bedding Material | 81,050 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 5 23 | 257 300 LDT2 HHDT | 1,000 | 2 | 2,000 | 41 | 0.0451 0.1004 1.4797 6.9998 | g/hp-hr g/hp-hr g/hr g/hr |
| RSP Bedding Material Subtotal | | | | | | | | | | | | | |
| 13 | Erosion Control Seeding | 13 | ACR | 0.8 CY Front End Loader Wheel Pickup Truck Conventional | Tractors/Loaders/Backhoes n/a - onroad | 1 4 | 97 LDT2 | 2 | 1 | 2 | 7 | 0.0901 1.4797 | g/hp-hr g/hr |
| Erosion Control Seeding Subtotal | | | | | | | | | | | | | |
| 09 - Channels and Canals Total | | | | | | | | | | | | | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 3.1225 0.0580 1.4797 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 15 | Construction Site Dewatering (Temporary Cofferdam) | 21,000 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 18 | 3.1225 0.0550 1.4797 | g/hr g/hp-hr g/hr |
| Construction Site Dewatering (Temporary Cofferdam) Subtotal | | | | | | | | | | | | | |
| 16 | Construction Site Dewatering (Pumping) | - | - | 6" Dia. Pump Engine Drive Pickup Truck Conventional | Pumps n/a - onroad | 1 3 | 84 LDT2 | - | 1 | 1 | 120 | 0.2640 1.4797 | g/hp-hr g/hr |
| Construction Site Dewatering (Pumping) Subtotal | | | | | | | | | | | | | |
| 17 | Excavation (Wet Conditions) | 6,460 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 4 | 0.0451 0.1608 0.1035 6.9998 1.4797 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | |
| 18 | Sheet Pile Wall | 7,940 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 7 | 3.1225 0.0550 1.4797 | g/hr g/hp-hr g/hr |
| Sheet Pile Wall Subtotal | | | | | | | | | | | | | |

Table K-139. ROG Exhaust Emissions from Offroad C

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------|----------------------------------------------------|----------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | 0.85 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 1.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.68 | 5.68 | 5.68 | 5.68 | 5.68 | 5.68 | 5.68 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 7.82 | 7.82 | 7.82 | 7.82 | 7.82 | 7.82 | 7.82 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.41 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.53 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.84 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.13 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.91 |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.68 | 5.68 | 5.68 | 5.68 | 5.68 | 5.68 | 5.68 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 7.82 | 7.82 | 7.82 | 7.82 | 7.82 | 7.82 | 7.82 | -- |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.18 | 22.44 | 22.44 | 22.44 | 14.66 | 14.66 | 23.68 | 22.53 | 22.53 | 22.53 | 7.87 | 7.82 | 15.64 | 15.64 | 15.64 | 15.64 | 15.64 | 15.64 | 11.73 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 | Construction Site Dewatering (Temporary Cofferdam) | -- | -- | -- | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.21 | 0.21 | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.16 | 0.16 | 0.16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 0.43 | 0.43 | 0.43 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16 | Construction Site Dewatering (Pumping) | -- | -- | -- | -- | -- | -- | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 |
| | | -- | -- | -- | -- | -- | -- | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| | | -- | -- | -- | -- | -- | -- | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.34 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 1.70 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.60 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 1.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 3.94 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.21 | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.16 | 0.16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.43 | 0.43 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-139. ROG Exhaust Emissions from Offroad C

| # | Activity | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions , tpy |
|-------------------------------------------------------|----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|------------------------|
| | | | | | | | | | | | |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0011 |
| 10 | Riprap - Class 2 | 0.82 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0151 |
| | | 1.06 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0196 |
| | | 5.68 | -- | -- | -- | -- | -- | -- | -- | -- | 0.1051 |
| | | 0.26 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0048 |
| | | 7.82 | -- | -- | -- | -- | -- | -- | -- | -- | 0.1447 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0028 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0039 |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0168 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0218 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0053 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.1164 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.1603 |
| 13 | Erosion Control Seeding | -- | -- | -- | 0.15 | 0.15 | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | 0.10 | 0.10 | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | 0.26 | 0.26 | -- | -- | -- | -- | 0.0009 |
| | | 7.82 | 0.18 | -- | 0.26 | 0.26 | -- | -- | -- | -- | 0.8832 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.06 | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.10 | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.03 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.18 | -- | -- | 0.0002 |
| 15 | Construction Site Dewatering (Temporary Cofferdam) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0019 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0014 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0038 |
| 16 | Construction Site Dewatering (Pumping) | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | -- | -- | 0.0235 |
| | | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | -- | -- | 0.0047 |
| | | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | -- | -- |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0034 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0012 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0022 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0079 |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0015 |

Table K-139. ROG Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|-------------------|--------------|--------------------|--------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|
| 19 | Headworks Structure Concrete Piles | 5,600 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 32 | 0.0703 0.0550 0.2640 3.1225 0.0901 0.0710 1.4797 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr |
| Headworks Structure Concrete Piles Subtotal | | | | | | | | | | | | | |
| 20 | Headworks Structure | 3,140 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 3 | 180 | 18 | 0.2640 0.2845 3.1225 1.4797 | g/hp-hr g/hp-hr g/hr g/hr |
| Headworks Structure Subtotal | | | | | | | | | | | | | |
| 21 | Headworks Channel Transition | 1,370 | CY | 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Plate Compactors n/a - onroad n/a - onroad | 1 2 6 | 8 MHDT LDT2 | 70 | 2 | 140 | 10 | 0.2845 3.1225 1.4797 | g/hp-hr g/hr g/hr |
| Headworks Channel Transition Subtotal | | | | | | | | | | | | | |
| 22 | Hinged Bottom Gates | 3 | EA | 90 TN Truck-mounted Hydraulic Crane Haul Truck Oversize Transport Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 1 4 | 450 HHDT LDT2 | 0.1 | 1 | 0.1 | 24 | 0.0703 6.9998 1.4797 | g/hp-hr g/hr g/hr |
| Hinged Bottom Gates Subtotal | | | | | | | | | | | | | |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | | | | | | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 3.1225 0.0580 1.4797 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 24 | Pedestrian Bridge Concrete Piles | 640 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 4 | 0.0703 0.0550 0.2640 3.1225 0.0901 0.0710 1.4797 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr |
| Pedestrian Bridge Concrete Piles Subtotal | | | | | | | | | | | | | |
| 25 | Pedestrian Bridge Concrete Abutments and Wingwalls | 48 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 1 | 0.2640 0.2845 3.1225 1.4797 | g/hp-hr g/hp-hr g/hr g/hr |
| Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | | | | | | | | | | | | | |
| 26 | Pedestrian Bridge Span Installation | 2,720 | SF | 90 TN Truck-mounted Hydraulic Crane Flatbed Truck Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 2 5 | 450 MHDT LDT2 | 390 | 1 | 390 | 7 | 0.0703 3.1225 1.4797 | g/hp-hr g/hr g/hr |
| Pedestrian Bridge Span Installation Subtotal | | | | | | | | | | | | | |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | | | | | | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 3.1225 0.0580 1.4797 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |

Table K-139. ROG Exhaust Emissions from Offroad C

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------|----------------------------------------------------|----------------------------------|--------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 | -- | -- | -- | -- | -- | |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.17 | 1.17 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.12 | 0.12 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.33 | 0.33 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.55 | 0.55 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.17 | 2.17 | -- | -- | -- | -- | | |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.08 | 0.08 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.22 | 0.22 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.31 | 0.31 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.61 | 0.61 | -- | -- | | |
| 22 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | 0.18 | 0.43 | 0.43 | 0.43 | 4.41 | 3.19 | 3.19 | 2.76 | 2.76 | 2.76 | 4.93 | 2.64 | 1.08 | 1.08 | 0.47 | 0.47 | 2.64 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.18 | -- | -- | -- | | |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.37 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.21 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.39 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.17 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.15 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.79 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.21 | -- | -- | | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.29 | -- | -- | | |
| 25 | Pedestrian Bridge Concrete Abutments and Wingwalls | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.39 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.11 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.18 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.72 | -- | -- | | |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.56 | 0.56 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.11 | 0.11 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.13 | 0.13 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.80 | 0.80 | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.18 | 2.29 | 0.72 | 0.80 | 0.80 | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | 0.06 | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.10 | -- | -- | -- | -- | -- | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.03 | -- | -- | -- | -- | -- | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.18 | -- | -- | -- | -- | 0.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |

Table K-139. ROG Exhaust Emissions from Offroad C

| # | Activity | 2 -Aug | 2-Sep | 9-Sep | 16-Sep | 2 -Sep | 3 -Sep | 7 -Oct | 1 -Oct | 2 -Oct | Annual Emissions , tpy |
|-----------------------------------------------|----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|------------------------|
| | | | | | | | | | | | |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0060 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0034 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0063 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0026 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0025 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0126 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0033 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0367 | |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0106 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0030 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0049 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0196 | |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0031 | |
| 22 | Hinged Bottom Gates | -- | -- | -- | 0.56 | 0.56 | 0.56 | 0.56 | -- | -- | 0.0067 |
| | | -- | -- | -- | 0.12 | 0.12 | 0.12 | 0.12 | -- | -- | 0.0015 |
| | | -- | -- | -- | 0.10 | 0.10 | 0.10 | 0.10 | -- | -- | 0.0013 |
| | | -- | -- | -- | 0.79 | 0.79 | 0.79 | 0.79 | -- | -- | 0.0094 |
| | | 0.47 | 0.47 | 0.47 | 1.26 | 1.26 | 1.26 | 1.26 | 0.18 | -- | 0.1103 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0046 | |
| 25 | Pedestrian Bridge Concrete Abutments and Wingwalls | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 | |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0020 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0028 | |
| | | 0.18 | -- | -- | -- | -- | -- | -- | -- | 0.0079 | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 | |

Table K-139. ROG Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | | | | | | |
|--------------------------------------------------------------|---------------------------------------------|----------|------|-------------------------------------------------------------|-------------------------|-----------------------------|-----------|----------------------------------|--------------|--------------------|--------------------------|-----------------|---------|----|----|---|----|----|--------|
| 28 | CMU Building and Earthwork Pad Construction | 1 | EA | 165 HP Dozer | Rubber Tired Dozers | 1 | 165 | - | 1 | 1 | 30 | 0.2258 | g/hp-hr | | | | | | |
| | | | | Scraper | Scrapers | 1 | 367 | 0.1193 | | | | g/hp-hr | | | | | | | |
| | | | | Motor Grader | Graders | 1 | 187 | 0.1131 | | | | g/hp-hr | | | | | | | |
| | | | | Compactor | Rollers | 1 | 80 | 0.1096 | | | | g/hp-hr | | | | | | | |
| | | | | 4000 gallon Water Truck | n/a - onroad | 1 | MHDT | 3.1225 | | | | g/hr | | | | | | | |
| | | | | 10 TN Smooth Roller | Rollers | 1 | 157 | 0.0598 | | | | g/hp-hr | | | | | | | |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | 1.4797 | | | | g/hr | | | | | | | |
| | | | | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | 0.2640 | | | | g/hp-hr | | | | | | | |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | 0.2845 | | | | g/hp-hr | | | | | | | |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | 0.0580 | | | | g/hp-hr | | | | | | | |
| | | | | Concrete Mixer Truck | n/a - onroad | 1 | MHDT | 3.1225 | | | | g/hr | | | | | | | |
| | | | | CMU Building and Earthwork Pad Construction Subtotal | | | | | | | | | | | | | | | |
| | | | | 29 | Concrete Duct Banc | 1,350 | CY | Concrete Pump Boom Truck Mounted | | | | Pumps | 1 | 84 | 60 | 1 | 60 | 23 | 0.2640 |
| 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | | | | | 0.2845 | g/hp-hr | | | | | | | | | | |
| Concrete Mixer Truck | n/a - onroad | 2 | MHDT | | | | | 3.1225 | g/hr | | | | | | | | | | |
| Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | | | | | 1.4797 | g/hr | | | | | | | | | | |
| Concrete Duct Banc Subtotal | | | | | | | | | | | | | | | | | | | |
| 19 - Buildings, Grounds, and Utilities Total | | | | | | | | | | | | | | | | | | | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | | | Flatbed Truck | n/a - onroad | 1 | MHDT | | 1 | 1 | 2 | 3.1225 | g/hr | | | | | | |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | | | | | 0.0580 | g/hp-hr | | | | | | |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | | | | | 1.4797 | g/hr | | | | | | |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | | | | | 0.0000 | g/hr | | | | | | |
| | | | | Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | | |
| 31 | Mechanical Hydraulic Cylinders & Housing | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | | 1 | 1 | 30 | 0.0580 | g/hp-hr | | | | | | |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | | | | 1.4797 | g/hr | | | | | | |
| Mechanical Hydraulic Cylinders & Housing Subtotal | | | | | | | | | | | | | | | | | | | |
| 32 | CMU Building Mechanical Equipment | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | | 1 | 1 | 30 | 0.0580 | g/hp-hr | | | | | | |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | | | | 1.4797 | g/hr | | | | | | |
| CMU Building Mechanical Equipment Subtotal | | | | | | | | | | | | | | | | | | | |
| 33 | Electrical Control Equipment CMU Building | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | 1 | 1 | 30 | 1.4797 | g/hr | | | | | | |
| Electrical Control Equipment CMU Building Subtotal | | | | | | | | | | | | | | | | | | | |
| 34 | Electrical Power Equipment CMU Building | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | 1 | 1 | 30 | 1.4797 | g/hr | | | | | | |
| Electrical Power Equipment CMU Building Subtotal | | | | | | | | | | | | | | | | | | | |
| 35 | Communication Equipment | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | 1 | 1 | 12 | 1.4797 | g/hr | | | | | | |
| Communication Equipment Subtotal | | | | | | | | | | | | | | | | | | | |
| 20 -Permanent Operating Equipment Total | | | | | | | | | | | | | | | | | | | |
| GRAND TOTAL | | | | | | | | | | | | | | | | | | | |

Table K-139. ROG Exhaust Emissions from Offroad C

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | |
|------------------------------------------|---------------------------------------------|----------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|----|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | |
| 28 | CMU Building and Earthwork Pad Construction | -- | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.37 | 0.37 | 0.37 | 0.37 | 0.37 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | 2.95 | 2.95 | 2.95 | 2.95 | 2.95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | 0.39 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | 0.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | 0.72 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| | | 0.18 | 2.95 | 2.95 | 2.95 | 3.67 | 2.95 | 0.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 32 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 33 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 34 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| GRAND TOTAL | | 0.66 | 26.47 | 26.65 | 25.82 | 18.76 | 18.03 | 28.27 | 25.72 | 25.72 | 25.29 | 10.63 | 10.58 | 20.57 | 18.28 | 16.91 | 19.02 | 16.83 | 16.91 | 15.17 | |

Table K-139. ROG Exhaust Emissions from Offroad C

| # | Activity | 2 -Aug | 2-Sep | 9-Sep | 16-Sep | 2 -Sep | 3 -Sep | 7 -Oct | 1 -Oct | 2 -Oct | Annual Emissions , tpy |
|------------------------------------------|---------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|------------------------|
| 28 | CMU Building and Earthwork Pad Construction | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0099 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0116 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0056 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0023 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0025 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0027 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0059 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0015 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0008 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0442 | |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0045 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0021 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0083 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.0527 | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | 0.06 | -- | -- | -- | -- | -- | 0.06 | -- | 0.0001 |
| | | -- | 0.10 | -- | -- | -- | -- | -- | 0.10 | -- | 0.0001 |
| | | -- | 0.03 | -- | -- | -- | -- | -- | 0.03 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.18 | -- | -- | -- | -- | -- | 0.18 | -- | 0.0002 |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | -- | -- | 0.0015 |
| | | -- | -- | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | -- | -- | 0.0012 |
| | | -- | -- | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | -- | -- | 0.0027 |
| 32 | CMU Building Mechanical Equipment | -- | -- | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | -- | -- | 0.0015 |
| | | -- | -- | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | -- | -- | 0.0012 |
| | | -- | -- | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | -- | -- | 0.0027 |
| 33 | Electrical Control Equipment CMU Building | -- | -- | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | -- | -- | 0.0012 |
| | | -- | -- | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | -- | -- | 0.0012 |
| 34 | Electrical Power Equipment CMU Building | -- | -- | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | -- | -- | 0.0012 |
| | | -- | -- | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | -- | -- | 0.0012 |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | 0.08 | 0.08 | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | 0.08 | 0.08 | -- | -- | 0.0005 |
| | | -- | 0.18 | 0.52 | 0.52 | 0.52 | 0.60 | 0.60 | 0.18 | -- | 0.0084 |
| GRAND TOTAL | | 8.47 | 0.84 | 0.99 | 2.03 | 2.03 | 1.85 | 1.85 | 1.44 | 0.18 | 1.0711 |

Table K-140. NOx Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|------------------------------------------------------|-------------------------------------|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------|-------------------|--------------|--------------------|--------------------------|-------------------------------------------------------------|-------------------------------------------------------|
| 02 - Relocations | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 73.7154 0.9187 1.6515 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 2 | Fremont Weir Demo | 420 | CY | 3.5 CY Hydraulic Excavator 3.5 CY Front End Loader Wheel 0.8 CY Loader/Backhoe, Wheel 4000 gallon Water Truck 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Loaders Tractors/Loaders/Backhoes n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 1 6 | 359 164 97 MHDT HHDT LDT2 | 40 | 1 | 40 | 11 | 0.5086 1.1284 1.1037 73.7154 155.9699 1.6515 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr |
| Fremont Weir Demo Subtotal | | | | | | | | | | | | | |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Graders n/a - onroad n/a - onroad n/a - onroad | 1 1 1 5 | 187 MHDT LDT2 HHDT | 39,400 | 1 | 39,400 | 4 | 1.7907 73.7154 1.6515 155.9699 | g/hp-hr g/hr g/hr g/hr |
| Levee O&M Road Regrading (6" AB) Subtotal | | | | | | | | | | | | | |
| 4 | Temporary Electrical Power | 5,280 | LF | Flatbed Truck Pickup Truck Conventional | n/a - onroad n/a - onroad | 1 2 | MHDT LDT2 | 1,500 | 1 | 1,500 | 4 | 73.7154 1.6515 | g/hr g/hr |
| Temporary Electrical Power Subtotal | | | | | | | | | | | | | |
| 02 - Relocations Total | | | | | | | | | | | | | |
| 09 - Channels and Canals | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 73.7154 0.9187 1.6515 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 6 | Clearing and Grubbing | 70 | ACR | 1.5 CY Front End Loader Crawler Trailer Mounted Brush Chipper Chainsaw 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Crawler Tractors Shredders Chainsaws n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 6 1 | 110 140 8 MHDT LDT2 HHDT | 2 | 2 | 4 | 18 | 2.4260 0.7727 1.2873 73.7154 1.6515 155.9699 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr |
| Clearing and Grubbing Subtotal | | | | | | | | | | | | | |
| 7 | Excavation (Wet Conditions) | 93,610 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 2 | 3,600 | 27 | 0.5086 2.0086 1.1284 155.9699 1.6515 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | |
| 8 | Excavation/Grading (Dry Conditions) | 372,680 | CY | 300 HP Dozer 21 CY Scrapers 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional | Rubber Tired Dozers Scrapers Graders n/a - onroad n/a - onroad | 1 4 1 1 7 | 300 407 187 MHDT LDT2 | 3,500 | 3 | 10,500 | 36 | 2.0086 1.6618 1.7907 73.7154 1.6515 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation/Grading (Dry Conditions) Subtotal | | | | | | | | | | | | | |
| 9 | Earthen Backfill | 1,010 | CY | 300 HP Dozer 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional | Rubber Tired Dozers n/a - onroad Rollers n/a - onroad | 1 1 1 3 | 300 MHDT 157 LDT2 | 1,000 | 1 | 1,000 | 2 | 2.0086 73.7154 0.7943 1.6515 | g/hp-hr g/hr g/hp-hr g/hr |
| Earthen Backfill Subtotal | | | | | | | | | | | | | |

Table K-140. NOx Exhaust Emissions from

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------------------------------|----------------------------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | 1.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 1.62 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 2.95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | -- | 3.22 | 3.22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 3.26 | 3.26 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 1.89 | 1.89 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 1.30 | 1.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 2.75 | 2.75 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 12.60 | 12.60 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | Temporary Electrical Power | 1.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 1.36 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 4.31 | 12.60 | 12.60 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | 1.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.30 |
| | | 1.62 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.62 |
| | | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 2.95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.95 |
| 6 | Clearing and Grubbing | -- | 9.41 | 9.41 | 9.41 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 3.82 | 3.82 | 3.82 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.36 | 0.36 | 0.36 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 2.60 | 2.60 | 2.60 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.35 | 0.35 | 0.35 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 5.50 | 5.50 | 5.50 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 22.04 | 22.04 | 22.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 7.70 | 7.70 | 7.70 | 7.70 | 7.70 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 42.51 | 42.51 | 42.51 | 42.51 | 42.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 13.06 | 13.06 | 13.06 | 13.06 | 13.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 49.51 | 49.51 | 49.51 | 49.51 | 49.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.41 | 0.41 | 0.41 | 0.41 | 0.41 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 113.18 | 113.18 | 113.18 | 113.18 | 113.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | 31.88 | 31.88 | 31.88 | 31.88 | 31.88 | 31.88 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 143.14 | 143.14 | 143.14 | 143.14 | 143.14 | 143.14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 17.72 | 17.72 | 17.72 | 17.72 | 17.72 | 17.72 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 197.25 | 197.25 | 197.25 | 197.25 | 197.25 | 197.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | 10.63 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 1.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 2.20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 14.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-140. NOx Exhaust Emissions from

| # | Activity | | | | | | | | Annual Emissions , tpy |
|---------------------------------|-------------------------------------|-------|--------|--------|--------|-------|--------------|-------------|------------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 1.30 | 0.0013 |
| | | -- | -- | -- | -- | -- | -- | 1.62 | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | 0.03 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 2.95 | 0.0029 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | -- | 0.0177 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0180 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0104 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0072 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0151 |
| | | -- | -- | -- | -- | -- | -- | 0.0010 | 0.0693 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | 5.91 | -- | 0.0118 |
| | | -- | -- | -- | -- | -- | 1.30 | -- | 0.0026 |
| | | -- | -- | -- | -- | -- | 0.03 | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | 13.75 | -- | 0.0275 |
| | | -- | -- | -- | -- | -- | 20.99 | -- | 0.0420 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | 0.0026 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0027 |
| | | -- | -- | -- | -- | -- | 20.99 | 2.95 | 0.1169 |
| 09 - Channels and Canals | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0029 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | 0.0847 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0343 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0033 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0234 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0031 |
| | | -- | -- | -- | -- | -- | -- | 0.0495 | 0.1984 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | 0.1039 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.5739 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.1762 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.6684 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0055 |
| | | -- | -- | -- | -- | -- | -- | -- | 1.5280 |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | 0.5739 |
| | | -- | -- | -- | -- | -- | -- | -- | 2.5766 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.3189 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0702 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0110 |
| | | -- | -- | -- | -- | -- | -- | -- | 3.5506 |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | 0.0106 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0022 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0142 |

Table K-140. NOx Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|-------------------|--------------|--------------------|--------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|
| 10 | Riprap - Class 2 | 87,580 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 2 | 2,000 | 37 | 0.5086 1.4049 155.9699 1.6515 | g/hp-hr g/hp-hr g/hr g/hr |
| Riprap - Class 2 Subtotal | | | | | | | | | | | | | |
| 11 | Riprap - Class 3 | 1,530 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 1 | 1,000 | 2 | 0.5086 1.4049 155.9699 1.6515 | g/hp-hr g/hp-hr g/hr g/hr |
| Riprap - Class 3 Subtotal | | | | | | | | | | | | | |
| 12 | RSP Bedding Material | 81,050 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 5 23 | 257 300 LDT2 HHDT | 1,000 | 2 | 2,000 | 41 | 0.5086 1.4049 1.6515 155.9699 | g/hp-hr g/hp-hr g/hr g/hr |
| RSP Bedding Material Subtotal | | | | | | | | | | | | | |
| 13 | Erosion Control Seeding | 13 | ACR | 0.8 CY Front End Loader Wheel Pickup Truck Conventional | Tractors/Loaders/Backhoes n/a - onroad | 1 4 | 97 LDT2 | 2 | 1 | 2 | 7 | 1.1037 1.6515 | g/hp-hr g/hr |
| Erosion Control Seeding Subtotal | | | | | | | | | | | | | |
| 09 - Channels and Canals Total | | | | | | | | | | | | | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 73.7154 0.9187 1.6515 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 15 | Construction Site Dewatering (Temporary Cofferdam) | 21,000 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 18 | 73.7154 0.7794 1.6515 | g/hr g/hp-hr g/hr |
| Construction Site Dewatering (Temporary Cofferdam) Subtotal | | | | | | | | | | | | | |
| 16 | Construction Site Dewatering (Pumping) | - | - | 6" Dia. Pump Engine Drive Pickup Truck Conventional | Pumps n/a - onroad | 1 3 | 84 LDT2 | - | 1 | 1 | 120 | 2.2288 1.6515 | g/hp-hr g/hr |
| Construction Site Dewatering (Pumping) Subtotal | | | | | | | | | | | | | |
| 17 | Excavation (Wet Conditions) | 6,460 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 4 | 0.5086 2.0086 1.1284 155.9699 1.6515 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | |
| 18 | Sheet Pile Wall | 7,940 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 7 | 73.7154 0.7794 1.6515 | g/hr g/hp-hr g/hr |
| Sheet Pile Wall Subtotal | | | | | | | | | | | | | |
| 19 | Headworks Structure Concrete Piles | 5,600 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 32 | 0.9918 0.7794 2.2288 73.7154 1.1037 0.7461 1.6515 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr |
| Headworks Structure Concrete Piles Subtotal | | | | | | | | | | | | | |

Table K-140. NOx Exhaust Emissions from

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------|--------------------------------------------|----------------------------------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 9.22 | 9.22 | 9.22 | 9.22 | 9.22 | 9.22 | 9.22 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 14.87 | 14.87 | 14.87 | 14.87 | 14.87 | 14.87 | 14.87 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 126.54 | 126.54 | 126.54 | 126.54 | 126.54 | 126.54 | 126.54 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 150.92 | 150.92 | 150.92 | 150.92 | 150.92 | 150.92 | 150.92 | 150.92 | -- | |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.61 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 7.43 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 63.27 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.15 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 75.46 | -- | | |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 9.22 | 9.22 | 9.22 | 9.22 | 9.22 | 9.22 | 9.22 | 9.22 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 14.87 | 14.87 | 14.87 | 14.87 | 14.87 | 14.87 | 14.87 | 14.87 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 126.54 | 126.54 | 126.54 | 126.54 | 126.54 | 126.54 | 126.54 | 126.54 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 150.92 | 150.92 | 150.92 | 150.92 | 150.92 | 150.92 | 150.92 | 150.92 | -- | -- | | |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 2.95 | 22.04 | 22.04 | 22.04 | 197.25 | 197.25 | 324.65 | 310.44 | 310.44 | 310.44 | 113.18 | 150.92 | 301.83 | 301.83 | 301.83 | 301.83 | 301.83 | 301.83 | 226.37 | 150.92 | 2.95 | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | 1.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | 1.62 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 2.95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | 1.30 | 1.30 | 1.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | 3.04 | 3.04 | 3.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | 0.17 | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | 4.51 | 4.51 | 4.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16 | Construction Site Dewatering (Pumping) | -- | -- | -- | -- | -- | -- | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | |
| | | -- | -- | -- | -- | -- | -- | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | |
| | | -- | -- | -- | -- | -- | -- | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 |
| | | -- | -- | -- | -- | -- | -- | 56.59 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 3.85 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 21.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 6.53 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 24.76 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 56.59 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | 1.30 | 1.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 3.04 | 3.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 4.51 | 4.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | 5.25 | 5.25 | 5.25 | 5.25 | 5.25 | 5.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 3.04 | 3.04 | 3.04 | 3.04 | 3.04 | 3.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 8.26 | 8.26 | 8.26 | 8.26 | 8.26 | 8.26 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 25.87 | 25.87 | 25.87 | 25.87 | 25.87 | 25.87 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |

Table K-140. NOx Exhaust Emissions from

| # | Activity | | | | | | | | Annual Emissions, tpy |
|-------------------------------------------------------|--------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------|-----------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | 0.1706 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.2750 |
| | | -- | -- | -- | -- | -- | -- | -- | 2.3409 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0054 |
| | | -- | -- | -- | -- | -- | -- | 2.7919 | |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | 0.0046 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0074 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0633 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0755 | |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | 0.1890 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.3048 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0060 |
| | | -- | -- | -- | -- | -- | -- | -- | 2.5940 |
| | | -- | -- | -- | -- | -- | -- | 3.0938 | |
| 13 | Erosion Control Seeding | -- | 1.89 | 1.89 | -- | -- | -- | -- | 0.0066 |
| | | -- | 0.12 | 0.12 | -- | -- | -- | -- | 0.0004 |
| | | -- | 2.00 | 2.00 | -- | -- | -- | 0.0070 | |
| | | -- | 2.00 | 2.00 | -- | -- | -- | 11.2623 | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 1.30 | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | 1.62 | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | 0.03 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 2.95 | 0.0029 | |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | 0.0117 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0273 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0406 |
| 16 | Construction Site Dewatering (Pumping) | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | -- | -- | 0.1981 |
| | | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | -- | -- | 0.0052 |
| | | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | -- | -- | 0.2034 |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | 0.0077 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0425 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0131 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0495 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | 0.1132 | |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | 0.0046 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0106 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0158 | |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0840 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0486 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0528 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0624 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0302 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.1322 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0037 |
| | | -- | -- | -- | -- | -- | -- | 0.4140 | |

Table K-140. NOx Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------------|------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|-------------------|--------------|--------------------|--------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|
| 20 | Headworks Structure | 3,140 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 3 | 180 | 18 | 2.2288 1.7814 73.7154 1.6515 | g/hp-hr g/hp-hr g/hr g/hr |
| Headworks Structure Subtotal | | | | | | | | | | | | | |
| 21 | Headworks Channel Transition | 1,370 | CY | 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Plate Compactors n/a - onroad n/a - onroad | 1 2 6 | 8 MHDT LDT2 | 70 | 2 | 140 | 10 | 1.7814 73.7154 1.6515 | g/hp-hr g/hr g/hr |
| Headworks Channel Transition Subtotal | | | | | | | | | | | | | |
| 22 | Hinged Bottom Gates | 3 | EA | 90 TN Truck-mounted Hydraulic Crane Haul Truck Oversize Transport Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 1 4 | 450 HHDT LDT2 | 0.1 | 1 | 0.1 | 24 | 0.9918 155.9699 1.6515 | g/hp-hr g/hr g/hr |
| Hinged Bottom Gates Subtotal | | | | | | | | | | | | | |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | | | | | | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 73.7154 0.9187 1.6515 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 24 | Pedestrian Bridge Concete Piles | 640 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 4 | 0.9918 0.7794 2.2288 73.7154 1.1037 0.7461 1.6515 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr |
| Pedestrian Bridge Concete Piles Subtotal | | | | | | | | | | | | | |
| 25 | Pedestrian Bridge Concrete Abutments and | 48 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 1 | 2.2288 1.7814 73.7154 1.6515 | g/hp-hr g/hp-hr g/hr g/hr |
| Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | | | | | | | | | | | | | |
| 26 | Pedestrian Bridge Span Installation | 2,720 | SF | 90 TN Truck-mounted Hydraulic Crane Flatbed Truck Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 2 5 | 450 MHDT LDT2 | 390 | 1 | 390 | 7 | 0.9918 73.7154 1.6515 | g/hp-hr g/hr g/hr |
| Pedestrian Bridge Span Installation Subtotal | | | | | | | | | | | | | |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | | | | | | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 73.7154 0.9187 1.6515 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |

Table K-140. NOx Exhaust Emissions from

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------|------------------------------------------|----------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------|----|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 9.91 | 9.91 | -- | -- | -- | -- | 9.91 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.75 | 0.75 | -- | -- | -- | -- | 0.75 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 7.80 | 7.80 | -- | -- | -- | -- | 7.80 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.61 | 0.61 | -- | -- | -- | -- | 0.61 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 19.07 | 19.07 | -- | -- | -- | -- | 19.07 | -- | -- | | |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.50 | 0.50 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.20 | 5.20 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.35 | 0.35 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 6.05 | 6.05 | -- | -- | -- | -- | -- | | |
| 22 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | 2.95 | 4.51 | 4.51 | 4.51 | 59.98 | 33.77 | 33.77 | 29.26 | 29.26 | 29.26 | 48.33 | 22.46 | 9.44 | 9.44 | 3.39 | 3.39 | 22.46 | 3.39 | 3.39 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.30 | -- | -- | -- | -- | 1.30 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.62 | -- | -- | -- | -- | 1.62 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | -- | -- | -- | -- | 0.03 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.95 | -- | -- | -- | -- | 2.95 | -- | | |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.25 | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.04 | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.30 | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.90 | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.89 | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 8.26 | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 25.87 | -- | -- | -- | -- | 25.87 | -- | | |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.30 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.25 | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.60 | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 6.36 | -- | -- | -- | -- | 6.36 | -- | | |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 7.87 | 7.87 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.60 | 2.60 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.15 | 0.15 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 10.62 | 10.62 | -- | -- | -- | 10.62 | 10.62 | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.95 | 25.87 | 6.36 | 10.62 | 10.62 | 2.95 | -- | | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | 1.30 | -- | -- | -- | -- | -- | 1.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 1.62 | -- | -- | -- | -- | -- | 1.62 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.03 | -- | -- | -- | -- | -- | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 2.95 | -- | -- | -- | -- | 2.95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |

Table K-140. NOx Exhaust Emissions from

| # | Activity | | | | | | | | Annual Emissions, tpy |
|-----------------------------------------------|------------------------------------------|-------------|--------------|--------------|--------------|--------------|-------------|---------------|-----------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | 0.0892 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0068 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0702 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0055 |
| | | -- | -- | -- | -- | -- | -- | 0.1716 | |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | 0.0025 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0260 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0017 |
| | | -- | -- | -- | -- | -- | -- | 0.0303 | |
| 22 | Hinged Bottom Gates | -- | 7.87 | 7.87 | 7.87 | 7.87 | -- | -- | 0.0945 |
| | | -- | 2.75 | 2.75 | 2.75 | 2.75 | -- | -- | 0.0330 |
| | | -- | 0.12 | 0.12 | 0.12 | 0.12 | -- | -- | 0.0014 |
| | | -- | 10.74 | 10.74 | 10.74 | 10.74 | -- | -- | 0.1289 |
| | | 3.39 | 14.13 | 14.13 | 14.13 | 14.13 | 2.95 | -- | 1.1206 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0029 | |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0105 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0061 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0066 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0078 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0038 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0165 |
| | | -- | -- | -- | -- | -- | -- | 0.0005 | |
| | | -- | -- | -- | -- | -- | -- | 0.0517 | |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | 0.0017 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0032 | |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | 0.0276 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0091 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | 0.0372 | |
| | | -- | -- | -- | -- | -- | -- | 0.0950 | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0029 | |

Table K-140. NOx Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | | |
|--------------------------------------------------------------|-------------------------------------------|----------|------|----------------------------------|-------------------------|-----------------------------|-----------|-------------------|--------------|--------------------|--------------------------|-----------------|---------|---------|---------|
| 28 | CMU Building and Earthwork Pad Constructi | 1 | EA | 165 HP Dozer | Rubber Tired Dozers | 1 | 165 | - | 1 | 1 | 30 | 2.6843 | g/hp-hr | | |
| | | | | Scraper | Scrapers | 1 | 367 | | | | | | | 1.6618 | g/hp-hr |
| | | | | Motor Grader | Graders | 1 | 187 | | | | | | | 1.7907 | g/hp-hr |
| | | | | Compactor | Rollers | 1 | 80 | | | | | | | 1.3466 | g/hp-hr |
| | | | | 4000 gallon Water Truck | n/a - onroad | 1 | MHDT | | | | | | | 73.7154 | g/hr |
| | | | | 10 TN Smooth Roller | Rollers | 1 | 157 | | | | | | | 0.7943 | g/hp-hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | | | | | | | 1.6515 | g/hr |
| | | | | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | | | | | | | 2.2288 | g/hp-hr |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | | | | | | | 1.7814 | g/hp-hr |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | | | | | | | 0.9187 | g/hp-hr |
| | | | | Concrete Mixer Truck | n/a - onroad | 1 | MHDT | | | | | | | 73.7154 | g/hr |
| CMU Building and Earthwork Pad Construction Subtotal | | | | | | | | | | | | | | | |
| 29 | Concrete Duct Banc | 1,350 | CY | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | 60 | 1 | 60 | 23 | 2.2288 | g/hp-hr | | |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | | | | | | | 1.7814 | g/hp-hr |
| | | | | Concrete Mixer Truck | n/a - onroad | 2 | MHDT | | | | | | | 73.7154 | g/hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | | | | | | | 1.6515 | g/hr |
| Concrete Duct Banc Subtotal | | | | | | | | | | | | | | | |
| 19 - Buildings, Grounds, and Utilities Total | | | | | | | | | | | | | | | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | - | - | Flatbed Truck | n/a - onroad | 1 | MHDT | - | 1 | 1 | 2 | 73.7154 | g/hr | | |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | | | | | | | 0.9187 | g/hp-hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | | | | | | | 1.6515 | g/hr |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | | | | | | | 0.0000 | g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | | |
| 31 | Mechanical Hydraulic Cylinders & Housing | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.9187 | g/hp-hr | | |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | | | | | | 1.6515 | g/hr |
| Mechanical Hydraulic Cylinders & Housing Subtotal | | | | | | | | | | | | | | | |
| 32 | CMU Building Mechanical Equipment | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.9187 | g/hp-hr | | |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | | | | | | 1.6515 | g/hr |
| CMU Building Mechanical Equipment Subtotal | | | | | | | | | | | | | | | |
| 33 | Electrical Control Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 1.6515 | g/hr | | |
| Electrical Control Equipment CMU Building Subtotal | | | | | | | | | | | | | | | |
| 34 | Electrical Power Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 1.6515 | g/hr | | |
| Electrical Power Equipment CMU Building Subtotal | | | | | | | | | | | | | | | |
| 35 | Communication Equipment | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 12 | 1.6515 | g/hr | | |
| Communication Equipment Subtotal | | | | | | | | | | | | | | | |
| 20 -Permanent Operating Equipment Total | | | | | | | | | | | | | | | |
| GRAND TOTAL | | | | | | | | | | | | | | | |

Table K-140. NOx Exhaust Emissions from

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------------|-------------------------------------------|----------------------------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------|------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | |
| 28 | CMU Building and Earthwork Pad Constructi | -- | 7.81 | 7.81 | 7.81 | 7.81 | 7.81 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | 10.76 | 10.76 | 10.76 | 10.76 | 10.76 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 5.91 | 5.91 | 5.91 | 5.91 | 5.91 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 1.90 | 1.90 | 1.90 | 1.90 | 1.90 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 1.30 | 1.30 | 1.30 | 1.30 | 1.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 1.62 | 1.62 | 1.62 | 1.62 | 1.62 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 1.30 | 1.30 | 1.30 | 1.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | 36.55 | 36.55 | 36.55 | 36.55 | 36.55 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | 3.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 2.60 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 6.36 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 2.95 | 36.55 | 36.55 | 36.55 | 42.91 | 36.55 | 2.95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.30 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.62 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.95 | |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 32 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 33 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.95 | |
| GRAND TOTAL | | 10.21 | 71.19 | 74.14 | 63.11 | 244.68 | 238.32 | 387.58 | 344.21 | 344.21 | 339.70 | 142.44 | 180.18 | 350.17 | 324.29 | 314.22 | 337.15 | 311.58 | 315.84 | 259.45 | 157.25 | 9.29 | |

Table K-140. NOx Exhaust Emissions from

| # | Activity | 9- e) | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions , tpy |
|------------------------------------------|-------------------------------------------|-------------|--------------|--------------|--------------|--------------|--------------|---------------|------------------------|
| 28 | CMU Building and Earthwork Pad Constructi | -- | -- | -- | -- | -- | -- | -- | 0.1172 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.1613 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0886 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0285 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0195 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0330 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0031 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0495 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0038 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0243 |
| | | -- | -- | -- | -- | -- | -- | 0.0195 | |
| | | -- | -- | -- | -- | -- | -- | 0.5483 | |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | -- | 0.0380 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0029 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0299 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0023 |
| | | -- | -- | -- | -- | -- | -- | 0.0731 | |
| | | -- | -- | -- | -- | -- | -- | 0.6243 | |
| 20 -Permanent Operating Equipment | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 1.30 | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | 1.62 | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | 0.03 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 2.95 | -- | 0.0029 |
| 31 | Mechanical Hydraulic Cylinders & Housing | 1.62 | 1.62 | 1.62 | 1.62 | 1.62 | -- | -- | 0.0243 |
| | | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | -- | -- | 0.0013 |
| | | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | -- | -- | 0.0256 |
| 32 | CMU Building Mechanical Equipment | 1.62 | 1.62 | 1.62 | 1.62 | 1.62 | -- | -- | 0.0243 |
| | | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | -- | -- | 0.0013 |
| | | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | -- | -- | 0.0256 |
| 33 | Electrical Control Equipment CMU Building | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | -- | -- | 0.0013 |
| | | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | -- | -- | 0.0013 |
| 34 | Electrical Power Equipment CMU Building | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | -- | -- | 0.0013 |
| | | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | -- | -- | 0.0013 |
| 35 | Communication Equipment | -- | -- | -- | 0.09 | 0.09 | -- | -- | 0.0005 |
| | | -- | -- | -- | 0.09 | 0.09 | -- | -- | 0.0005 |
| | | 3.59 | 3.59 | 3.59 | 3.68 | 3.68 | 2.95 | -- | 0.0573 |
| GRAND TOTAL | | 6.98 | 19.72 | 19.72 | 17.81 | 17.81 | 26.89 | 2.95 | 13.2765 |

Table K-141. CO Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|------------------------------------------------------|-------------------------------------|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------------------|-------------------|--------------|--------------------|--------------------------|---------------------------------------------------------------|-------------------------------------------------------|
| 02 - Relocations | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 12.0888 2.2556 12.8680 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 2 | Fremont Weir Demo | 420 | CY | 3.5 CY Hydraulic Excavator 3.5 CY Front End Loader Wheel 0.8 CY Loader/Backhoe, Wheel 4000 gallon Water Truck 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Loaders Tractors/Loaders/Backhoes n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 1 6 | 359 164 97 MHDT HHD LDT2 | 40 | 1 | 40 | 11 | 0.6321 1.7927 2.0507 12.0888 34.6908 12.8680 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr |
| Fremont Weir Demo Subtotal | | | | | | | | | | | | | |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Graders n/a - onroad n/a - onroad n/a - onroad | 1 1 1 5 | 187 MHDT LDT2 HHD | 39,400 | 1 | 39,400 | 4 | 0.7344 12.0888 12.8680 34.6908 | g/hp-hr g/hr g/hr g/hr |
| Levee O&M Road Regrading (6" AB) Subtotal | | | | | | | | | | | | | |
| 4 | Temporary Electrical Power | 5,280 | LF | Flatbed Truck Pickup Truck Conventional | n/a - onroad n/a - onroad | 1 2 | MHDT LDT2 | 1,500 | 1 | 1,500 | 4 | 12.0888 12.8680 | g/hr g/hr |
| Temporary Electrical Power Subtotal | | | | | | | | | | | | | |
| 02 - Relocations Total | | | | | | | | | | | | | |
| 09 - Channels and Canals | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 12.0888 2.2556 12.8680 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 6 | Clearing and Grubbing | 70 | ACR | 1.5 CY Front End Loader Crawler Trailer Mounted Brush Chipper Chainsaw 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Crawler Tractors Shredders Chainsaws n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 6 1 | 110 140 8 MHDT LDT2 HHD | 2 | 2 | 4 | 18 | 2.5463 1.1116 146.1720 12.0888 12.8680 34.6908 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr |
| Clearing and Grubbing Subtotal | | | | | | | | | | | | | |
| 7 | Excavation (Wet Conditions) | 93,610 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHD LDT2 | 1,800 | 2 | 3,600 | 27 | 0.6321 1.1166 1.7927 34.6908 12.8680 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | |
| 8 | Excavation/Grading (Dry Conditions) | 372,680 | CY | 300 HP Dozer 21 CY Scrapers 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional | Rubber Tired Dozers Scrapers Graders n/a - onroad n/a - onroad | 1 4 1 1 7 | 300 407 187 MHDT LDT2 | 3,500 | 3 | 10,500 | 36 | 1.1166 1.0393 0.7344 12.0888 12.8680 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation/Grading (Dry Conditions) Subtotal | | | | | | | | | | | | | |
| 9 | Earthen Backfill | 1,010 | CY | 300 HP Dozer 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional | Rubber Tired Dozers n/a - onroad Rollers n/a - onroad | 1 1 1 3 | 300 MHDT 157 LDT2 | 1,000 | 1 | 1,000 | 2 | 1.1166 12.0888 1.7974 12.8680 | g/hp-hr g/hr g/hp-hr g/hr |
| Earthen Backfill Subtotal | | | | | | | | | | | | | |

Table K-141. CO Exhaust Emissions from

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------------------------------|----------------------------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 3.98 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 4.42 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | -- | 4.00 | 4.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 5.19 | 5.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 3.51 | 3.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.21 | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.61 | 0.61 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 1.36 | 1.36 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 14.88 | 14.88 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | Temporary Electrical Power | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.45 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.67 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 5.09 | 14.88 | 14.88 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.21 |
| | | 3.98 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.98 |
| | | 0.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.23 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 4.42 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.42 |
| 6 | Clearing and Grubbing | -- | 9.88 | 9.88 | 9.88 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 5.49 | 5.49 | 5.49 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 41.25 | 41.25 | 41.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.43 | 0.43 | 0.43 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 2.72 | 2.72 | 2.72 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 1.22 | 1.22 | 1.22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 60.99 | 60.99 | 60.99 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 9.57 | 9.57 | 9.57 | 9.57 | 9.57 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 23.63 | 23.63 | 23.63 | 23.63 | 23.63 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 20.74 | 20.74 | 20.74 | 20.74 | 20.74 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 11.01 | 11.01 | 11.01 | 11.01 | 11.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 68.13 | 68.13 | 68.13 | 68.13 | 68.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | 17.72 | 17.72 | 17.72 | 17.72 | 17.72 | 17.72 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 89.52 | 89.52 | 89.52 | 89.52 | 89.52 | 89.52 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 7.27 | 7.27 | 7.27 | 7.27 | 7.27 | 7.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.64 | 0.64 | 0.64 | 0.64 | 0.64 | 0.64 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 4.77 | 4.77 | 4.77 | 4.77 | 4.77 | 4.77 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 119.92 | 119.92 | 119.92 | 119.92 | 119.92 | 119.92 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | 5.91 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 4.98 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.68 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 11.78 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-141. CO Exhaust Emissions from

| # | Activity | | | | | | | | Annual Emissions, tpy |
|---------------------------------|-------------------------------------|-------|--------|--------|--------|-------|-------------|-------------|-----------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.21 | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 3.98 | 0.0040 |
| | | -- | -- | -- | -- | -- | -- | 0.23 | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 4.42 | 0.0044 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | -- | 0.0220 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0285 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0193 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0012 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0034 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0075 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0819 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | 2.42 | -- | 0.0048 |
| | | -- | -- | -- | -- | -- | 0.21 | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | 0.23 | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | 3.06 | -- | 0.0061 |
| | | -- | -- | -- | -- | -- | 5.92 | -- | 0.0118 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | 5.92 | 4.42 | 0.0994 |
| 09 - Channels and Canals | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0040 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0044 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | 0.0889 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0494 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.3712 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0038 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0245 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0110 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.5489 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | 0.1291 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.3190 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.2800 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.1487 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0429 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.9197 |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | 0.3190 |
| | | -- | -- | -- | -- | -- | -- | -- | 1.6114 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.1308 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0115 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0858 |
| | | -- | -- | -- | -- | -- | -- | -- | 2.1585 |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | 0.0059 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0050 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0118 |

Table K-141. CO Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|-------------------|--------------|--------------------|--------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------|
| 10 | Riprap - Class 2 | 87,580 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 2 | 2,000 | 37 | 0.6321 0.9049 34.6908 12.8680 | g/hp-hr g/hp-hr g/hr g/hr |
| Riprap - Class 2 Subtotal | | | | | | | | | | | | | |
| 11 | Riprap - Class 3 | 1,530 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 1 | 1,000 | 2 | 0.6321 0.9049 34.6908 12.8680 | g/hp-hr g/hp-hr g/hr g/hr |
| Riprap - Class 3 Subtotal | | | | | | | | | | | | | |
| 12 | RSP Bedding Material | 81,050 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 5 23 | 257 300 LDT2 HHDT | 1,000 | 2 | 2,000 | 41 | 0.6321 0.9049 12.8680 34.6908 | g/hp-hr g/hp-hr g/hr g/hr |
| RSP Bedding Material Subtotal | | | | | | | | | | | | | |
| 13 | Erosion Control Seeding | 13 | ACR | 0.8 CY Front End Loader Wheel Pickup Truck Conventional | Tractors/Loaders/Backhoes n/a - onroad | 1 4 | 97 LDT2 | 2 | 1 | 2 | 7 | 2.0507 12.8680 | g/hp-hr g/hr |
| Erosion Control Seeding Subtotal | | | | | | | | | | | | | |
| 09 - Channels and Canals Total | | | | | | | | | | | | | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 12.0888 2.2556 12.8680 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 15 | Construction Site Dewatering (Temporary Cofferdam) | 21,000 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 18 | 12.0888 0.7762 12.8680 | g/hr g/hp-hr g/hr |
| Construction Site Dewatering (Temporary Cofferdam) Subtotal | | | | | | | | | | | | | |
| 16 | Construction Site Dewatering (Pumping) | - | - | 6" Dia. Pump Engine Drive Pickup Truck Conventional | Pumps n/a - onroad | 1 3 | 84 LDT2 | - | 1 | 1 | 120 | 2.5278 12.8680 | g/hp-hr g/hr |
| Construction Site Dewatering (Pumping) Subtotal | | | | | | | | | | | | | |
| 17 | Excavation (Wet Conditions) | 6,460 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 4 | 0.6321 1.1166 1.7927 34.6908 12.8680 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | |
| 18 | Sheet Pile Wall | 7,940 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 7 | 12.0888 0.7762 12.8680 | g/hr g/hp-hr g/hr |
| Sheet Pile Wall Subtotal | | | | | | | | | | | | | |
| 19 | Headworks Structure Concrete Piles | 5,600 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 32 | 0.5082 0.7762 2.5278 12.0888 2.0507 0.6431 12.8680 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr |
| Headworks Structure Concrete Piles Subtotal | | | | | | | | | | | | | |

Table K-141. CO Exhaust Emissions from

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------|--------------------------------------------|----------------------------------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 11.46 | 11.46 | 11.46 | 11.46 | 11.46 | 11.46 | 11.46 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 9.58 | 9.58 | 9.58 | 9.58 | 9.58 | 9.58 | 9.58 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 28.14 | 28.14 | 28.14 | 28.14 | 28.14 | 28.14 | 28.14 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.27 | 2.27 | 2.27 | 2.27 | 2.27 | 2.27 | 2.27 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 51.45 | 51.45 | 51.45 | 51.45 | 51.45 | 51.45 | 51.45 | -- |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.73 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.79 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 14.07 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.13 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 25.72 | -- | -- |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 11.46 | 11.46 | 11.46 | 11.46 | 11.46 | 11.46 | 11.46 | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 9.58 | 9.58 | 9.58 | 9.58 | 9.58 | 9.58 | 9.58 | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.27 | 2.27 | 2.27 | 2.27 | 2.27 | 2.27 | 2.27 | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 28.14 | 28.14 | 28.14 | 28.14 | 28.14 | 28.14 | 28.14 | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 51.45 | 51.45 | 51.45 | 51.45 | 51.45 | 51.45 | 51.45 | -- | -- | -- |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 4.42 | 60.99 | 60.99 | 60.99 | 119.92 | 119.92 | 199.82 | 188.05 | 188.05 | 188.05 | 68.13 | 51.45 | 102.90 | 102.90 | 102.90 | 102.90 | 102.90 | 102.90 | 77.17 | 51.45 | 4.42 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 3.98 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 4.42 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | 0.21 | 0.21 | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 3.03 | 3.03 | 3.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 1.36 | 1.36 | 1.36 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | 4.60 | 4.60 | 4.60 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16 | Construction Site Dewatering (Pumping) | -- | -- | -- | -- | -- | -- | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 |
| | | -- | -- | -- | -- | -- | -- | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |
| | | -- | -- | -- | -- | -- | -- | 4.43 | 4.43 | 4.43 | 4.43 | 4.43 | 4.43 | 4.43 | 4.43 | 4.43 | 4.43 | 4.43 | 4.43 | 4.43 | 4.43 | 4.43 |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 4.78 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 11.82 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 10.37 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 5.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 1.59 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 34.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | 0.21 | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 3.03 | 3.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 1.36 | 1.36 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 4.60 | 4.60 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 3.03 | 3.03 | 3.03 | 3.03 | 3.03 | 3.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.64 | 0.64 | 0.64 | 0.64 | 0.64 | 0.64 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 3.51 | 3.51 | 3.51 | 3.51 | 3.51 | 3.51 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 7.12 | 7.12 | 7.12 | 7.12 | 7.12 | 7.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 1.82 | 1.82 | 1.82 | 1.82 | 1.82 | 1.82 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 22.55 | 22.55 | 22.55 | 22.55 | 22.55 | 22.55 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-141. CO Exhaust Emissions from

| # | Activity | | | | | | | | Annual Emissions, tpy |
|-------------------------------------------------------|--------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-----------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | 0.2120 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.1771 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.5207 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0420 |
| | | -- | -- | -- | -- | -- | -- | 0.9518 | |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | 0.0057 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0048 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0141 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | 0.0257 | |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | 0.2349 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.1963 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0465 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.5770 |
| | | -- | -- | -- | -- | -- | -- | 1.0547 | |
| 13 | Erosion Control Seeding | -- | 3.51 | 3.51 | -- | -- | -- | -- | 0.0123 |
| | | -- | 0.91 | 0.91 | -- | -- | -- | -- | 0.0032 |
| | | -- | 4.42 | 4.42 | -- | -- | -- | -- | 0.0155 |
| | | -- | 4.42 | 4.42 | -- | -- | -- | 5.6911 | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.21 | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | 3.98 | -- | 0.0040 |
| | | -- | -- | -- | -- | -- | 0.23 | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 4.42 | -- | 0.0044 |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | 0.0019 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0272 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0123 |
| | | -- | -- | -- | -- | -- | -- | 0.0414 | |
| 16 | Construction Site Dewatering (Pumping) | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | -- | -- | 0.2247 |
| | | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | -- | -- | 0.0409 |
| | | 4.43 | 4.43 | 4.43 | 4.43 | 4.43 | -- | -- | 0.2655 |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | 0.0096 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0236 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0207 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0110 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0032 |
| | | -- | -- | -- | -- | -- | -- | 0.0681 | |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0106 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0048 |
| | | -- | -- | -- | -- | -- | -- | 0.0161 | |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0430 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0484 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0599 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0102 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0561 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.1140 |
| | | -- | -- | -- | -- | -- | -- | 0.0290 | |
| | | -- | -- | -- | -- | -- | -- | 0.3607 | |

Table K-141. CO Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------------|------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|-------------------|--------------|--------------------|--------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------|
| 20 | Headworks Structure | 3,140 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 3 | 180 | 18 | 2.5278 1.4921 12.0888 12.8680 | g/hp-hr g/hp-hr g/hr g/hr |
| Headworks Structure Subtotal | | | | | | | | | | | | | |
| 21 | Headworks Channel Transition | 1,370 | CY | 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Plate Compactors n/a - onroad n/a - onroad | 1 2 6 | 8 MHDT LDT2 | 70 | 2 | 140 | 10 | 1.4921 12.0888 12.8680 | g/hp-hr g/hr g/hr |
| Headworks Channel Transition Subtotal | | | | | | | | | | | | | |
| 22 | Hinged Bottom Gates | 3 | EA | 90 TN Truck-mounted Hydraulic Crane Haul Truck Oversize Transport Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 1 4 | 450 HHDT LDT2 | 0.1 | 1 | 0.1 | 24 | 0.5082 34.6908 12.8680 | g/hp-hr g/hr g/hr |
| Hinged Bottom Gates Subtotal | | | | | | | | | | | | | |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | | | | | | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 12.0888 2.2556 12.8680 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 24 | Pedestrian Bridge Concrete Piles | 640 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 4 | 0.5082 0.7762 2.5278 12.0888 2.0507 0.6431 12.8680 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr |
| Pedestrian Bridge Concrete Piles Subtotal | | | | | | | | | | | | | |
| 25 | Pedestrian Bridge Concrete Abutments and | 48 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 1 | 2.5278 1.4921 12.0888 12.8680 | g/hp-hr g/hp-hr g/hr g/hr |
| Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | | | | | | | | | | | | | |
| 26 | Pedestrian Bridge Span Installation | 2,720 | SF | 90 TN Truck-mounted Hydraulic Crane Flatbed Truck Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 2 5 | 450 MHDT LDT2 | 390 | 1 | 390 | 7 | 0.5082 12.0888 12.8680 | g/hp-hr g/hr g/hr |
| Pedestrian Bridge Span Installation Subtotal | | | | | | | | | | | | | |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | | | | | | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 12.0888 2.2556 12.8680 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |

Table K-141. CO Exhaust Emissions from

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------|------------------------------------------|----------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 11.23 | 11.23 | -- | -- | -- | -- | 11.23 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.63 | 0.63 | -- | -- | -- | -- | 0.63 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.28 | 1.28 | -- | -- | -- | -- | 1.28 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.77 | 4.77 | -- | -- | -- | -- | 4.77 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 17.91 | 17.91 | -- | -- | -- | -- | 17.91 | -- | -- |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.42 | 0.42 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.85 | 0.85 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.72 | 2.72 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.00 | 4.00 | -- | -- | -- | -- | -- |
| 22 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 4.42 | 4.60 | 4.60 | 4.60 | 38.49 | 31.57 | 31.57 | 26.97 | 26.97 | 26.97 | 44.88 | 22.34 | 8.42 | 8.42 | 4.43 | 4.43 | 22.34 | 4.43 | 4.43 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.21 | -- | -- | -- | -- | 0.21 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.98 | -- | -- | -- | -- | 3.98 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.23 | -- | -- | -- | -- | 0.23 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.42 | -- | -- | -- | -- | 4.42 | -- |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.69 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.03 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.74 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.64 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.51 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 7.12 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.82 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 22.55 | -- | -- | -- | -- | -- |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.74 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.21 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.43 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.59 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.97 | -- | -- | -- | -- |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.03 | 4.03 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.43 | 0.43 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.13 | 1.13 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.59 | 5.59 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.42 | 22.55 | 5.97 | 5.59 | 5.59 | 4.42 | -- |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | 0.21 | -- | -- | -- | -- | -- | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 3.98 | -- | -- | -- | -- | -- | 3.98 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.23 | -- | -- | -- | -- | -- | 0.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 4.42 | -- | -- | -- | -- | -- | 4.42 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-141. CO Exhaust Emissions from

| # | Activity | | | | | | | | Annual Emissions, tpy |
|-----------------------------------------------|------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-----------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | 0.1011 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0057 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0115 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0429 |
| | | -- | -- | -- | -- | -- | -- | 0.1612 | |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | 0.0021 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0043 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0136 |
| | | -- | -- | -- | -- | -- | -- | 0.0200 | |
| 22 | Hinged Bottom Gates | -- | 4.03 | 4.03 | 4.03 | 4.03 | -- | -- | 0.0484 |
| | | -- | 0.61 | 0.61 | 0.61 | 0.61 | -- | -- | 0.0073 |
| | | -- | 0.91 | 0.91 | 0.91 | 0.91 | -- | -- | 0.0109 |
| | | -- | 5.55 | 5.55 | 5.55 | 5.55 | -- | -- | 0.0666 |
| | | 4.43 | 9.98 | 9.98 | 9.98 | 9.98 | 4.42 | -- | 1.0042 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0040 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0044 | |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0054 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0061 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0075 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0070 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0142 |
| | | -- | -- | -- | -- | -- | -- | 0.0036 | |
| | | -- | -- | -- | -- | -- | -- | 0.0451 | |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | 0.0019 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | 0.0030 | |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | 0.0141 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0015 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0040 |
| | | -- | -- | -- | -- | -- | -- | 0.0196 | |
| | | -- | -- | -- | -- | -- | -- | 0.0721 | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0040 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0044 | |

Table K-141. CO Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | |
|--------------------------------------------------------------|-------------------------------------------|----------|------|-------------------------------------------------------------|-------------------------|-----------------------------|-----------|-------------------|--------------|--------------------|--------------------------|-----------------|---------|---------|
| 28 | CMU Building and Earthwork Pad Constructi | 1 | EA | 165 HP Dozer | Rubber Tired Dozers | 1 | 165 | - | 1 | 1 | 30 | 2.0968 | g/hp-hr | |
| | | | | Scraper | Scrapers | 1 | 367 | | | | | | 1.0393 | g/hp-hr |
| | | | | Motor Grader | Graders | 1 | 187 | | | | | | 0.7344 | g/hp-hr |
| | | | | Compactor | Rollers | 1 | 80 | | | | | | 2.0792 | g/hp-hr |
| | | | | 4000 gallon Water Truck | n/a - onroad | 1 | MHDT | | | | | | 12.0888 | g/hr |
| | | | | 10 TN Smooth Roller | Rollers | 1 | 157 | | | | | | 1.7974 | g/hp-hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | | | | | | 12.8680 | g/hr |
| | | | | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | | | | | | 2.5278 | g/hp-hr |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | | | | | | 1.4921 | g/hp-hr |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | | | | | | 2.2556 | g/hp-hr |
| | | | | Concrete Mixer Truck | n/a - onroad | 1 | MHDT | | | | | | 12.0888 | g/hr |
| | | | | CMU Building and Earthwork Pad Construction Subtotal | | | | | | | | | | |
| 29 | Concrete Duct Banc | 1,350 | CY | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | 60 | 1 | 60 | 23 | 2.5278 | g/hp-hr | |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | | | | | | 1.4921 | g/hp-hr |
| | | | | Concrete Mixer Truck | n/a - onroad | 2 | MHDT | | | | | | 12.0888 | g/hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | | | | | | 12.8680 | g/hr |
| Concrete Duct Banc Subtotal | | | | | | | | | | | | | | |
| 19 - Buildings, Grounds, and Utilities Total | | | | | | | | | | | | | | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | - | - | Flatbed Truck | n/a - onroad | 1 | MHDT | - | 1 | 1 | 2 | 12.0888 | g/hr | |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | | | | | | 2.2556 | g/hp-hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | | | | | | 12.8680 | g/hr |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | | | | | | 0.0000 | g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | |
| 31 | Mechanical Hydraulic Cylinders & Housing | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 2.2556 | g/hp-hr | |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | | | | | 12.8680 | g/hr |
| Mechanical Hydraulic Cylinders & Housing Subtotal | | | | | | | | | | | | | | |
| 32 | CMU Building Mechanical Equipment | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 2.2556 | g/hp-hr | |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | | | | | 12.8680 | g/hr |
| CMU Building Mechanical Equipment Subtotal | | | | | | | | | | | | | | |
| 33 | Electrical Control Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 12.8680 | g/hr | |
| Electrical Control Equipment CMU Building Subtotal | | | | | | | | | | | | | | |
| 34 | Electrical Power Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 12.8680 | g/hr | |
| Electrical Power Equipment CMU Building Subtotal | | | | | | | | | | | | | | |
| 35 | Communication Equipment | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 12 | 12.8680 | g/hr | |
| Communication Equipment Subtotal | | | | | | | | | | | | | | |
| 20 -Permanent Operating Equipment Total | | | | | | | | | | | | | | |
| GRAND TOTAL | | | | | | | | | | | | | | |

Table K-141. CO Exhaust Emissions from

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------------|-------------------------------------------|----------------------------------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|----|----|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | | |
| 28 | CMU Building and Earthwork Pad Constructi | -- | 6.10 | 6.10 | 6.10 | 6.10 | 6.10 | 6.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | 6.73 | 6.73 | 6.73 | 6.73 | 6.73 | 6.73 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | 2.93 | 2.93 | 2.93 | 2.93 | 2.93 | 2.93 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | 4.98 | 4.98 | 4.98 | 4.98 | 4.98 | 4.98 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | 33.11 | 33.11 | 33.11 | 33.11 | 33.11 | 33.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | 3.74 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | 0.43 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 1.59 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 5.97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | 4.42 | 33.11 | 33.11 | 33.11 | 39.08 | 33.11 | 4.42 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.21 | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.98 | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.23 | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.42 | | |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 32 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.42 | | |
| GRAND TOTAL | | 13.92 | 108.98 | 113.40 | 98.70 | 163.60 | 157.63 | 242.73 | 219.62 | 219.62 | 215.02 | 95.10 | 78.42 | 147.78 | 125.24 | 115.74 | 133.87 | 113.30 | 112.92 | 105.11 | 60.29 | 13.26 | | |

Table K-141. CO Exhaust Emissions from

| # | Activity | 9- e) | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions , tpy |
|------------------------------------------|-------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|------------------------|
| 28 | CMU Building and Earthwork Pad Constructi | -- | -- | -- | -- | -- | -- | -- | 0.0915 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.1009 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0363 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0440 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0032 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0747 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0238 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0562 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0032 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0597 |
| | | -- | -- | -- | -- | -- | -- | 0.0032 | |
| | | | | | | | | 0.4967 | |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | -- | 0.0431 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0024 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0049 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0183 |
| | | -- | -- | -- | -- | -- | -- | 0.0687 | |
| | | -- | -- | -- | -- | -- | -- | 0.5697 | |
| 20 -Permanent Operating Equipment | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.21 | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | 3.98 | -- | 0.0040 |
| | | -- | -- | -- | -- | -- | 0.23 | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 4.42 | -- | 0.0044 |
| 31 | Mechanical Hydraulic Cylinders & Housing | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | -- | -- | 0.0597 |
| | | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | -- | -- | 0.0102 |
| | | 4.66 | 4.66 | 4.66 | 4.66 | 4.66 | -- | -- | 0.0699 |
| 32 | CMU Building Mechanical Equipment | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | -- | -- | 0.0597 |
| | | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | -- | -- | 0.0102 |
| | | 4.66 | 4.66 | 4.66 | 4.66 | 4.66 | -- | -- | 0.0699 |
| 33 | Electrical Control Equipment CMU Building | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | -- | -- | 0.0102 |
| | | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | -- | -- | 0.0102 |
| 34 | Electrical Power Equipment CMU Building | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | -- | -- | 0.0102 |
| | | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 | -- | -- | 0.0102 |
| 35 | Communication Equipment | -- | -- | -- | 0.68 | 0.68 | -- | -- | 0.0041 |
| | | -- | -- | -- | 0.68 | 0.68 | -- | -- | 0.0041 |
| | | 10.68 | 10.68 | 10.68 | 11.36 | 11.36 | 4.42 | -- | 0.1687 |
| GRAND TOTAL | | 15.11 | 25.07 | 25.07 | 21.34 | 21.34 | 14.76 | 4.42 | 7.6052 |

Table K-142. SO2 Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|---------------------------------|-------------------------------------|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------|-------------------|--------------|--------------------|--------------------------|----------------------------------------------------------|-------------------------------------------------------|
| 02 - Relocations | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 0.1721 0.0040 0.0474 0.0000 | g/hr g/hp-hr g/hr g/hr |
| | | | | | | | | | | | | Mobilization and Demobilization Subtotal | |
| 2 | Fremont Weir Demo | 420 | CY | 3.5 CY Hydraulic Excavator 3.5 CY Front End Loader Wheel 0.8 CY Loader/Backhoe, Wheel 4000 gallon Water Truck 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Loaders Tractors/Loaders/Backhoes n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 1 6 | 359 164 97 MHDT HHDT LDT2 | 40 | 1 | 40 | 11 | 0.0032 0.0035 0.0037 0.1721 0.2281 0.0474 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr |
| | | | | | | | | | | | | Fremont Weir Demo Subtotal | |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Graders n/a - onroad n/a - onroad n/a - onroad | 1 1 1 5 | 187 MHDT LDT2 HHDT | 39,400 | 1 | 39,400 | 4 | 0.0039 0.1721 0.0474 0.2281 | g/hp-hr g/hr g/hr g/hr |
| | | | | | | | | | | | | Levee O&M Road Regrading (6" AB) Subtotal | |
| 4 | Temporary Electrical Power | 5,280 | LF | Flatbed Truck Pickup Truck Conventional | n/a - onroad n/a - onroad | 1 2 | MHDT LDT2 | 1,500 | 1 | 1,500 | 4 | 0.1721 0.0474 | g/hr g/hr |
| | | | | | | | | | | | | Temporary Electrical Power Subtotal | |
| | | | | | | | | | | | | 02 - Relocations Total | |
| 09 - Channels and Canals | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 0.1721 0.0040 0.0474 0.0000 | g/hr g/hp-hr g/hr g/hr |
| | | | | | | | | | | | | Mobilization and Demobilization Subtotal | |
| 6 | Clearing and Grubbing | 70 | ACR | 1.5 CY Front End Loader Crawler Trailer Mounted Brush Chipper Chainsaw 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Crawler Tractors Shredders Chainsaws n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 6 1 | 110 140 8 MHDT LDT2 HHDT | 2 | 2 | 4 | 18 | 0.0043 0.0026 0.0163 0.1721 0.0474 0.2281 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr |
| | | | | | | | | | | | | Clearing and Grubbing Subtotal | |
| 7 | Excavation (Wet Conditions) | 93,610 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 2 | 3,600 | 27 | 0.0032 0.0033 0.0035 0.2281 0.0474 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| | | | | | | | | | | | | Excavation (Wet Conditions) Subtotal | |
| 8 | Excavation/Grading (Dry Conditions) | 372,680 | CY | 300 HP Dozer 21 CY Scrapers 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional | Rubber Tired Dozers Scrapers Graders n/a - onroad n/a - onroad | 1 4 1 1 7 | 300 407 187 MHDT LDT2 | 3,500 | 3 | 10,500 | 36 | 0.0033 0.0040 0.0039 0.1721 0.0474 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| | | | | | | | | | | | | Excavation/Grading (Dry Conditions) Subtotal | |
| 9 | Earthen Backfill | 1,010 | CY | 300 HP Dozer 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional | Rubber Tired Dozers n/a - onroad Rollers n/a - onroad | 1 1 1 3 | 300 MHDT 157 LDT2 | 1,000 | 1 | 1,000 | 2 | 0.0033 0.1721 0.0036 0.0474 | g/hp-hr g/hr g/hp-hr g/hr |
| | | | | | | | | | | | | Earthen Backfill Subtotal | |

Table K-142. SO2 Exhaust Emissions from

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|-------|--------|--------|--------|-------|--------|--------|-------------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | Temporary Electrical Power | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.02 | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 |
| | | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
| | | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
| 6 | Clearing and Grubbing | -- | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.00 | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | 0.46 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-142. SO2 Exhaust Emissions from

| # | Activity | | | | | | | | Annual Emissions , tpy |
|---------------------------------|-------------------------------------|-------|--------|--------|--------|-------|--------|--------|------------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.00 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.01 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.00 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.01 | 0.0000 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.00 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.00 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.04 | -- | 0.0001 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.04 | 0.01 | 0.0004 |
| 09 - Channels and Canals | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0010 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0033 |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0062 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0083 |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |

Table K-142. SO2 Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|-------------------|--------------|--------------------|--------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|
| 10 | Riprap - Class 2 | 87,580 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 2 | 2,000 | 37 | 0.0032 0.0036 0.2281 0.0474 | g/hp-hr g/hp-hr g/hr g/hr |
| Riprap - Class 2 Subtotal | | | | | | | | | | | | | |
| 11 | Riprap - Class 3 | 1,530 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 1 | 1,000 | 2 | 0.0032 0.0036 0.2281 0.0474 | g/hp-hr g/hp-hr g/hr g/hr |
| Riprap - Class 3 Subtotal | | | | | | | | | | | | | |
| 12 | RSP Bedding Material | 81,050 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 5 23 | 257 300 LDT2 HHDT | 1,000 | 2 | 2,000 | 41 | 0.0032 0.0036 0.0474 0.2281 | g/hp-hr g/hp-hr g/hr g/hr |
| RSP Bedding Material Subtotal | | | | | | | | | | | | | |
| 13 | Erosion Control Seeding | 13 | ACR | 0.8 CY Front End Loader Wheel Pickup Truck Conventional | Tractors/Loaders/Backhoes n/a - onroad | 1 4 | 97 LDT2 | 2 | 1 | 2 | 7 | 0.0037 0.0474 | g/hp-hr g/hr |
| Erosion Control Seeding Subtotal | | | | | | | | | | | | | |
| 09 - Channels and Canals Total | | | | | | | | | | | | | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 0.1721 0.0040 0.0474 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 15 | Construction Site Dewatering (Temporary Cofferdam) | 21,000 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 18 | 0.1721 0.0048 0.0474 | g/hr g/hp-hr g/hr |
| Construction Site Dewatering (Temporary Cofferdam) Subtotal | | | | | | | | | | | | | |
| 16 | Construction Site Dewatering (Pumping) | - | - | 6" Dia. Pump Engine Drive Pickup Truck Conventional | Pumps n/a - onroad | 1 3 | 84 LDT2 | - | 1 | 1 | 120 | 0.0049 0.0474 | g/hp-hr g/hr |
| Construction Site Dewatering (Pumping) Subtotal | | | | | | | | | | | | | |
| 17 | Excavation (Wet Conditions) | 6,460 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 4 | 0.0032 0.0033 0.0035 0.2281 0.0474 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | |
| 18 | Sheet Pile Wall | 7,940 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 7 | 0.1721 0.0048 0.0474 | g/hr g/hp-hr g/hr |
| Sheet Pile Wall Subtotal | | | | | | | | | | | | | |
| 19 | Headworks Structure Concrete Piles | 5,600 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 32 | 0.0024 0.0048 0.0049 0.1721 0.0037 0.0032 0.0474 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr |
| Headworks Structure Concrete Piles Subtotal | | | | | | | | | | | | | |

Table K-142. SO2 Exhaust Emissions from

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------|--------------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | -- |
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| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | -- | -- |
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| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | |
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| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
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| | | 0.01 | 0.06 | 0.06 | 0.06 | 0.46 | 0.46 | 0.74 | 0.71 | 0.71 | 0.71 | 0.24 | 0.29 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.43 | 0.29 | 0.01 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
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| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | 0.00 | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
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| 16 | Construction Site Dewatering (Pumping) | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
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| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
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| | | -- | -- | -- | -- | -- | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
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| | | -- | -- | -- | -- | -- | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
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| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | |
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| | | -- | -- | -- | -- | -- | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | | |

Table K-142. SO2 Exhaust Emissions from

| # | Activity | | | | | | | | Annual Emissions, tpy |
|-------------------------------------------------------|--------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-----------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0034 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0053 | |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 | |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | 0.0012 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0038 |
| | | -- | -- | -- | -- | -- | -- | 0.0059 | |
| 13 | Erosion Control Seeding | -- | 0.01 | 0.01 | -- | -- | -- | -- | 0.0000 |
| | | -- | 0.00 | 0.00 | -- | -- | -- | -- | 0.0000 |
| | | -- | 0.01 | 0.01 | -- | -- | -- | -- | 0.0000 |
| | | -- | 0.01 | 0.01 | -- | -- | -- | -- | 0.0236 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.00 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.00 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| 16 | Construction Site Dewatering (Pumping) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0004 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0002 |
| | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 | |
| | | -- | -- | -- | -- | -- | -- | 0.0002 | |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 | |
| | | -- | -- | -- | -- | -- | -- | 0.0015 | |

Table K-142. SO2 Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------------|------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|-------------------|--------------|--------------------|--------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|
| 20 | Headworks Structure | 3,140 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 3 | 180 | 18 | 0.0049 0.0038 0.1721 0.0474 | g/hp-hr g/hp-hr g/hr g/hr |
| Headworks Structure Subtotal | | | | | | | | | | | | | |
| 21 | Headworks Channel Transition | 1,370 | CY | 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Plate Compactors n/a - onroad n/a - onroad | 1 2 6 | 8 MHDT LDT2 | 70 | 2 | 140 | 10 | 0.0038 0.1721 0.0474 | g/hp-hr g/hr g/hr |
| Headworks Channel Transition Subtotal | | | | | | | | | | | | | |
| 22 | Hinged Bottom Gates | 3 | EA | 90 TN Truck-mounted Hydraulic Crane Haul Truck Oversize Transport Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 1 4 | 450 HHDT LDT2 | 0.1 | 1 | 0.1 | 24 | 0.0024 0.2281 0.0474 | g/hp-hr g/hr g/hr |
| Hinged Bottom Gates Subtotal | | | | | | | | | | | | | |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | | | | | | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 0.1721 0.0040 0.0474 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 24 | Pedestrian Bridge Concete Piles | 640 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 4 | 0.0024 0.0048 0.0049 0.1721 0.0037 0.0032 0.0474 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr |
| Pedestrian Bridge Concete Piles Subtotal | | | | | | | | | | | | | |
| 25 | Pedestrian Bridge Concrete Abutments and | 48 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 1 | 0.0049 0.0038 0.1721 0.0474 | g/hp-hr g/hp-hr g/hr g/hr |
| Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | | | | | | | | | | | | | |
| 26 | Pedestrian Bridge Span Installation | 2,720 | SF | 90 TN Truck-mounted Hydraulic Crane Flatbed Truck Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 2 5 | 450 MHDT LDT2 | 390 | 1 | 390 | 7 | 0.0024 0.1721 0.0474 | g/hp-hr g/hr g/hr |
| Pedestrian Bridge Span Installation Subtotal | | | | | | | | | | | | | |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | | | | | | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 0.1721 0.0040 0.0474 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |

Table K-142. SO2 Exhaust Emissions from

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------|------------------------------------------|----------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------|----|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | 0.02 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | 0.00 | -- | -- | -- | -- | 0.00 | -- | -- | |
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| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | 0.06 | -- | -- | -- | -- | 0.06 | -- | -- | | |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | 0.00 | -- | -- | -- | -- | -- | |
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| 22 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
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| | | -- | -- | 0.01 | 0.03 | 0.03 | 0.03 | 0.13 | 0.13 | 0.13 | 0.11 | 0.11 | 0.11 | 0.17 | 0.07 | 0.03 | 0.03 | 0.01 | 0.01 | 0.07 | 0.01 | 0.01 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | -- | -- | -- | -- | 0.00 | -- | |
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| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | |
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| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | |
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| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | 0.01 | -- | -- | -- | -- | |
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| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | 0.10 | 0.02 | 0.03 | 0.03 | 0.01 | -- | | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | 0.00 | -- | -- | -- | -- | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.01 | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
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| | | 0.01 | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |

Table K-142. SO2 Exhaust Emissions from

| # | Activity | | | | | | | | Annual Emissions, tpy |
|-----------------------------------------------|------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-----------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0005 | |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 | |
| 22 | Hinged Bottom Gates | -- | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0002 |
| | | -- | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0000 |
| | | -- | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0000 |
| | | -- | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | 0.0003 |
| | | 0.01 | 0.04 | 0.04 | 0.04 | 0.04 | 0.01 | -- | 0.0037 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0000 | |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 | |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0000 | |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 | |
| | | -- | -- | -- | -- | -- | -- | 0.0003 | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0000 | |

Table K-142. SO2 Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------|-------------------------------------------|----------|------|----------------------------------|-------------------------|-----------------------------|-----------|-------------------|--------------|--------------------|--------------------------|-----------------|---------|
| 28 | CMU Building and Earthwork Pad Constructi | 1 | EA | 165 HP Dozer | Rubber Tired Dozers | 1 | 165 | - | 1 | 1 | 30 | 0.0038 | g/hp-hr |
| | | | | Scraper | Scrapers | 1 | 367 | 0.0040 | | | | g/hp-hr | |
| | | | | Motor Grader | Graders | 1 | 187 | 0.0039 | | | | g/hp-hr | |
| | | | | Compactor | Rollers | 1 | 80 | 0.0037 | | | | g/hp-hr | |
| | | | | 4000 gallon Water Truck | n/a - onroad | 1 | MHDT | 0.1721 | | | | g/hr | |
| | | | | 10 TN Smooth Roller | Rollers | 1 | 157 | 0.0036 | | | | g/hp-hr | |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | 0.0474 | | | | g/hr | |
| | | | | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | 0.0049 | | | | g/hp-hr | |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | 0.0038 | | | | g/hp-hr | |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | 0.0040 | | | | g/hp-hr | |
| | | | | Concrete Mixer Truck | n/a - onroad | 1 | MHDT | 0.1721 | | | | g/hr | |
| CMU Building and Earthwork Pad Construction Subtotal | | | | | | | | | | | | | |
| 29 | Concrete Duct Banc | 1,350 | CY | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | 60 | 1 | 60 | 23 | 0.0049 | g/hp-hr |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | | | | | 0.0038 | g/hp-hr |
| | | | | Concrete Mixer Truck | n/a - onroad | 2 | MHDT | | | | | 0.1721 | g/hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | | | | | 0.0474 | g/hr |
| Concrete Duct Banc Subtotal | | | | | | | | | | | | | |
| 19 - Buildings, Grounds, and Utilities Total | | | | | | | | | | | | | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | - | - | Flatbed Truck | n/a - onroad | 1 | MHDT | - | 1 | 1 | 2 | 0.1721 | g/hr |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | | | | | 0.0040 | g/hp-hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | | | | | 0.0474 | g/hr |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | | | | | 0.0000 | g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 31 | Mechanical Hydraulic Cylinders & Housing | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.0040 | g/hp-hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | | | | 0.0474 | g/hr |
| Mechanical Hydraulic Cylinders & Housing Subtotal | | | | | | | | | | | | | |
| 32 | CMU Building Mechanical Equipment | - | - | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.0040 | g/hp-hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | | | | 0.0474 | g/hr |
| CMU Building Mechanical Equipment Subtotal | | | | | | | | | | | | | |
| 33 | Electrical Control Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 0.0474 | g/hr |
| Electrical Control Equipment CMU Building Subtotal | | | | | | | | | | | | | |
| 34 | Electrical Power Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 0.0474 | g/hr |
| Electrical Power Equipment CMU Building Subtotal | | | | | | | | | | | | | |
| 35 | Communication Equipment | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 12 | 0.0474 | g/hr |
| Communication Equipment Subtotal | | | | | | | | | | | | | |
| 20 -Permanent Operating Equipment Total | | | | | | | | | | | | | |
| GRAND TOTAL | | | | | | | | | | | | | |

Table K-142. SO2 Exhaust Emissions from

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------------|-------------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | |
| 28 | CMU Building and Earthwork Pad Constructi | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.01 | 0.09 | 0.09 | 0.09 | 0.11 | 0.09 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 32 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | |
| GRAND TOTAL | | 0.04 | 0.20 | 0.21 | 0.18 | 0.60 | 0.58 | 0.88 | 0.84 | 0.84 | 0.81 | 0.35 | 0.39 | 0.74 | 0.65 | 0.62 | 0.71 | 0.61 | 0.62 | 0.53 | 0.31 | 0.03 | |

Table K-142. SO2 Exhaust Emissions from

| # | Activity | | | | | | | | Annual Emissions, tpy |
|------------------------------------------|-------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-----------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 28 | CMU Building and Earthwork Pad Constructi | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0014 | |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 | |
| | | -- | -- | -- | -- | -- | -- | 0.0016 | |
| 20 -Permanent Operating Equipment | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.00 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.00 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| 31 | Mechanical Hydraulic Cylinders & Housing | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0001 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0000 |
| | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0001 |
| 32 | CMU Building Mechanical Equipment | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0001 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0000 |
| | | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | 0.0001 |
| 33 | Electrical Control Equipment CMU Building | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0000 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0000 |
| 34 | Electrical Power Equipment CMU Building | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0000 |
| | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -- | -- | 0.0000 |
| 35 | Communication Equipment | -- | -- | -- | 0.00 | 0.00 | -- | -- | 0.0000 |
| | | -- | -- | -- | 0.00 | 0.00 | -- | -- | 0.0000 |
| | | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.01 | -- | 0.0004 |
| GRAND TOTAL | | 0.03 | 0.07 | 0.07 | 0.06 | 0.06 | 0.06 | 0.01 | 0.0300 |

Table K-143. PM10 Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|------------------------------------------------------|-------------------------------------|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------|-------------------|--------------|--------------------|--------------------------|----------------------------------------------------------|-------------------------------------------------------|
| 02 - Relocations | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 2.4742 0.0356 0.8623 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 2 | Fremont Weir Demo | 420 | CY | 3.5 CY Hydraulic Excavator 3.5 CY Front End Loader Wheel 0.8 CY Loader/Backhoe, Wheel 4000 gallon Water Truck 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Loaders Tractors/Loaders/Backhoes n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 1 6 | 359 164 97 MHDT HHDT LDT2 | 40 | 1 | 40 | 11 | 0.0170 0.0617 0.0651 2.4742 1.8973 0.8623 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr |
| Fremont Weir Demo Subtotal | | | | | | | | | | | | | |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Graders n/a - onroad n/a - onroad n/a - onroad | 1 1 1 5 | 187 MHDT LDT2 HHDT | 39,400 | 1 | 39,400 | 4 | 0.0567 2.4742 0.8623 1.8973 | g/hp-hr g/hr g/hr g/hr |
| Levee O&M Road Regrading (6" AB) Subtotal | | | | | | | | | | | | | |
| 4 | Temporary Electrical Power | 5,280 | LF | Flatbed Truck Pickup Truck Conventional | n/a - onroad n/a - onroad | 1 2 | MHDT LDT2 | 1,500 | 1 | 1,500 | 4 | 2.4742 0.8623 | g/hr g/hr |
| Temporary Electrical Power Subtotal | | | | | | | | | | | | | |
| 02 - Relocations Total | | | | | | | | | | | | | |
| 09 - Channels and Canals | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 2.4742 0.0356 0.8623 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 6 | Clearing and Grubbing | 70 | ACR | 1.5 CY Front End Loader Crawler Trailer Mounted Brush Chipper Chainsaw 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Crawler Tractors Shredders Chainsaws n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 6 1 | 110 140 8 MHDT LDT2 HHDT | 2 | 2 | 4 | 18 | 0.1997 0.0303 0.2300 2.4742 0.8623 1.8973 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr |
| Clearing and Grubbing Subtotal | | | | | | | | | | | | | |
| 7 | Excavation (Wet Conditions) | 93,610 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 2 | 3,600 | 27 | 0.0170 0.0917 0.0617 1.8973 0.8623 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | |
| 8 | Excavation/Grading (Dry Conditions) | 372,680 | CY | 300 HP Dozer 21 CY Scrapers 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional | Rubber Tired Dozers Scrapers Graders n/a - onroad n/a - onroad | 1 4 1 1 7 | 300 407 187 MHDT LDT2 | 3,500 | 3 | 10,500 | 36 | 0.0917 0.0647 0.0567 2.4742 0.8623 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation/Grading (Dry Conditions) Subtotal | | | | | | | | | | | | | |
| 9 | Earthen Backfill | 1,010 | CY | 300 HP Dozer 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional | Rubber Tired Dozers n/a - onroad Rollers n/a - onroad | 1 1 1 3 | 300 MHDT 157 LDT2 | 1,000 | 1 | 1,000 | 2 | 0.0917 2.4742 0.0365 0.8623 | g/hp-hr g/hr g/hp-hr g/hr |
| Earthen Backfill Subtotal | | | | | | | | | | | | | |

Table K-143. PM10 Exhaust Emissions fro

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | -- | 0.11 | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.18 | 0.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.11 | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.09 | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.57 | 0.57 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | Temporary Electrical Power | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.20 | 0.57 | 0.57 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 |
| | | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 |
| | | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.12 |
| 6 | Clearing and Grubbing | -- | 0.77 | 0.77 | 0.77 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.15 | 0.15 | 0.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.09 | 0.09 | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.18 | 0.18 | 0.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.07 | 0.07 | 0.07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 1.33 | 1.33 | 1.33 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 1.94 | 1.94 | 1.94 | 1.94 | 1.94 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 3.73 | 3.73 | 3.73 | 3.73 | 3.73 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | 1.46 | 1.46 | 1.46 | 1.46 | 1.46 | 1.46 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 5.57 | 5.57 | 5.57 | 5.57 | 5.57 | 5.57 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 8.04 | 8.04 | 8.04 | 8.04 | 8.04 | 8.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | 0.49 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.68 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-143. PM10 Exhaust Emissions fro

| # | Activity | | | | | | | | Annual Emissions , tpy |
|---------------------------------|-------------------------------------|-------|--------|--------|--------|-------|-------------|---------------|------------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.04 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.06 | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.02 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.12 | 0.0001 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0010 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0005 | |
| | | -- | -- | -- | -- | -- | -- | 0.0031 | |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | 0.19 | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | 0.04 | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.17 | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | 0.41 | -- | 0.0008 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 | |
| | | -- | -- | -- | -- | -- | 0.41 | 0.12 | 0.0042 |
| 09 - Channels and Canals | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0001 | |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | 0.0070 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | 0.0006 | |
| | | -- | -- | -- | -- | -- | -- | 0.0119 | |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | 0.0035 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0262 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0096 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0081 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0029 |
| | | -- | -- | -- | -- | -- | -- | 0.0503 | |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | 0.0262 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.1002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0101 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0024 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0057 |
| | | -- | -- | -- | -- | -- | -- | 0.1447 | |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0007 | |

Table K-143. PM10 Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|-------------------|--------------|--------------------|--------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|
| 10 | Riprap - Class 2 | 87,580 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 2 | 2,000 | 37 | 0.0170 0.0553 1.8973 0.8623 | g/hp-hr g/hp-hr g/hr g/hr |
| Riprap - Class 2 Subtotal | | | | | | | | | | | | | |
| 11 | Riprap - Class 3 | 1,530 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 1 | 1,000 | 2 | 0.0170 0.0553 1.8973 0.8623 | g/hp-hr g/hp-hr g/hr g/hr |
| Riprap - Class 3 Subtotal | | | | | | | | | | | | | |
| 12 | RSP Bedding Material | 81,050 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 5 23 | 257 300 LDT2 HHDT | 1,000 | 2 | 2,000 | 41 | 0.0170 0.0553 0.8623 1.8973 | g/hp-hr g/hp-hr g/hr g/hr |
| RSP Bedding Material Subtotal | | | | | | | | | | | | | |
| 13 | Erosion Control Seeding | 13 | ACR | 0.8 CY Front End Loader Wheel Pickup Truck Conventional | Tractors/Loaders/Backhoes n/a - onroad | 1 4 | 97 LDT2 | 2 | 1 | 2 | 7 | 0.0651 0.8623 | g/hp-hr g/hr |
| Erosion Control Seeding Subtotal | | | | | | | | | | | | | |
| 09 - Channels and Canals Total | | | | | | | | | | | | | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 2.4742 0.0356 0.8623 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 15 | Construction Site Dewatering (Temporary Cofferdam) | 21,000 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 18 | 2.4742 0.0236 0.8623 | g/hr g/hp-hr g/hr |
| Construction Site Dewatering (Temporary Cofferdam) Subtotal | | | | | | | | | | | | | |
| 16 | Construction Site Dewatering (Pumping) | - | - | 6" Dia. Pump Engine Drive Pickup Truck Conventional | Pumps n/a - onroad | 1 3 | 84 LDT2 | - | 1 | 1 | 120 | 0.1259 0.8623 | g/hp-hr g/hr |
| Construction Site Dewatering (Pumping) Subtotal | | | | | | | | | | | | | |
| 17 | Excavation (Wet Conditions) | 6,460 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 4 | 0.0170 0.0917 0.0617 1.8973 0.8623 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | |
| 18 | Sheet Pile Wall | 7,940 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 7 | 2.4742 0.0236 0.8623 | g/hr g/hp-hr g/hr |
| Sheet Pile Wall Subtotal | | | | | | | | | | | | | |
| 19 | Headworks Structure Concrete Piles | 5,600 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 32 | 0.0399 0.0236 0.1259 2.4742 0.0651 0.0274 0.8623 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr |
| Headworks Structure Concrete Piles Subtotal | | | | | | | | | | | | | |

Table K-143. PM10 Exhaust Emissions fro

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------|--------------------------------------------|----------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.59 | 2.59 | 2.59 | 2.59 | 2.59 | 2.59 | 2.59 | 2.59 | -- | |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.15 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.29 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.77 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.08 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.29 | -- | -- | |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | 0.59 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.59 | 2.59 | 2.59 | 2.59 | 2.59 | 2.59 | 2.59 | -- | -- | | |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.12 | 1.33 | 1.33 | 1.33 | 8.04 | 8.04 | 12.44 | 11.76 | 11.76 | 11.76 | 3.73 | 2.59 | 5.17 | 5.17 | 5.17 | 5.17 | 5.17 | 5.17 | 3.88 | 2.59 | 0.12 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | 0.09 | 0.09 | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | 0.09 | 0.09 | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | 0.23 | 0.23 | 0.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 16 | Construction Site Dewatering (Pumping) | -- | -- | -- | -- | -- | -- | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | |
| | | -- | -- | -- | -- | -- | -- | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | |
| | | -- | -- | -- | -- | -- | -- | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| | | -- | -- | -- | -- | -- | -- | 0.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.36 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 1.86 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.09 | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.09 | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.23 | 0.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | -- | -- | -- | -- | -- | -- | -- | | | |
| | | -- | -- | -- | -- | -- | -- | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | -- | -- | -- | -- | -- | -- | -- | | |

Table K-143. PM10 Exhaust Emissions fro

| # | Activity | Date | | | | | | | Annual Emissions, tpy |
|-------------------------------------------------------|--------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-----------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | 0.0057 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0108 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0285 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0028 |
| | | -- | -- | -- | -- | -- | -- | 0.0478 | |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0013 | |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | 0.0063 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0120 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0031 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0316 |
| | | -- | -- | -- | -- | -- | -- | 0.0530 | |
| 13 | Erosion Control Seeding | -- | 0.11 | 0.11 | -- | -- | -- | -- | 0.0004 |
| | | -- | 0.06 | 0.06 | -- | -- | -- | -- | 0.0002 |
| | | -- | 0.17 | 0.17 | -- | -- | -- | -- | 0.0006 |
| | | -- | 0.17 | 0.17 | -- | -- | -- | -- | 0.3104 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.04 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.06 | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.12 | -- | 0.0001 |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0020 |
| 16 | Construction Site Dewatering (Pumping) | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | -- | -- | 0.0112 |
| | | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | 0.0027 |
| | | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | -- | -- | 0.0139 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | 0.0019 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0037 | |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0034 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0015 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0030 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0021 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0018 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0048 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0019 |
| | | -- | -- | -- | -- | -- | -- | 0.0185 | |

Table K-143. PM10 Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------------|------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|-------------------|--------------|--------------------|--------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|
| 20 | Headworks Structure | 3,140 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 3 | 180 | 18 | 0.1259 0.0696 2.4742 0.8623 | g/hp-hr g/hp-hr g/hr g/hr |
| Headworks Structure Subtotal | | | | | | | | | | | | | |
| 21 | Headworks Channel Transition | 1,370 | CY | 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Plate Compactors n/a - onroad n/a - onroad | 1 2 6 | 8 MHDT LDT2 | 70 | 2 | 140 | 10 | 0.0696 2.4742 0.8623 | g/hp-hr g/hr g/hr |
| Headworks Channel Transition Subtotal | | | | | | | | | | | | | |
| 22 | Hinged Bottom Gates | 3 | EA | 90 TN Truck-mounted Hydraulic Crane Haul Truck Oversize Transport Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 1 4 | 450 HHDT LDT2 | 0.1 | 1 | 0.1 | 24 | 0.0399 1.8973 0.8623 | g/hp-hr g/hr g/hr |
| Hinged Bottom Gates Subtotal | | | | | | | | | | | | | |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | | | | | | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 2.4742 0.0356 0.8623 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 24 | Pedestrian Bridge Concete Piles | 640 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 4 | 0.0399 0.0236 0.1259 2.4742 0.0651 0.0274 0.8623 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr |
| Pedestrian Bridge Concete Piles Subtotal | | | | | | | | | | | | | |
| 25 | Pedestrian Bridge Concrete Abutments and | 48 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 1 | 0.1259 0.0696 2.4742 0.8623 | g/hp-hr g/hp-hr g/hr g/hr |
| Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | | | | | | | | | | | | | |
| 26 | Pedestrian Bridge Span Installation | 2,720 | SF | 90 TN Truck-mounted Hydraulic Crane Flatbed Truck Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 2 5 | 450 MHDT LDT2 | 390 | 1 | 390 | 7 | 0.0399 2.4742 0.8623 | g/hp-hr g/hr g/hr |
| Pedestrian Bridge Span Installation Subtotal | | | | | | | | | | | | | |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | | | | | | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 2.4742 0.0356 0.8623 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |

Table K-143. PM10 Exhaust Emissions fro

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------|------------------------------------------|----------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------|----|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.56 | 0.56 | -- | -- | -- | -- | 0.56 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | -- | -- | -- | -- | 0.03 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.26 | 0.26 | -- | -- | -- | -- | 0.26 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.32 | 0.32 | -- | -- | -- | -- | 0.32 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.17 | 1.17 | -- | -- | -- | -- | 1.17 | -- | -- | | |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.17 | 0.17 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.18 | 0.18 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.38 | 0.38 | -- | -- | -- | -- | -- | | |
| 22 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.12 | 0.23 | 0.23 | 0.23 | 2.10 | 1.62 | 1.62 | 1.39 | 1.39 | 1.39 | 2.56 | 1.40 | 0.61 | 0.61 | 0.23 | 0.23 | 1.40 | 0.23 | 0.23 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | 0.04 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | 0.06 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | 0.02 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.12 | -- | -- | -- | -- | 0.12 | -- | | |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.21 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.19 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.13 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.11 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.30 | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.12 | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.16 | -- | -- | -- | -- | -- | | |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.19 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.11 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.39 | -- | -- | -- | -- | -- | -- | | |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.32 | 0.32 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 | 0.09 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.08 | 0.08 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.48 | 0.48 | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.12 | 1.16 | 0.39 | 0.48 | 0.48 | 0.12 | -- | | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | 0.04 | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.06 | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.02 | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.12 | -- | -- | -- | -- | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |

Table K-143. PM10 Exhaust Emissions fro

| # | Activity | Date | | | | | | | Annual Emissions, tpy |
|-----------------------------------------------|------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-----------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | 0.0050 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0024 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0029 |
| | | -- | -- | -- | -- | -- | -- | 0.0105 | |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | 0.0019 | |
| 22 | Hinged Bottom Gates | -- | 0.32 | 0.32 | 0.32 | 0.32 | -- | -- | 0.0038 |
| | | -- | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | 0.0004 |
| | | -- | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | 0.0007 |
| | | -- | 0.41 | 0.41 | 0.41 | 0.41 | -- | -- | 0.0049 |
| | | 0.23 | 0.64 | 0.64 | 0.64 | 0.64 | 0.12 | -- | 0.0565 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0001 | |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 | |
| | | -- | -- | -- | -- | -- | -- | 0.0023 | |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0002 | |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | 0.0017 | |
| | | -- | -- | -- | -- | -- | -- | 0.0043 | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0001 | |

Table K-143. PM10 Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units | | |
|--------------------------------------------------------------|-------------------------------------------|----------|------|-------------------------------------------------------------|-------------------------|-----------------------------|-----------|-------------------|--------------|--------------------|--------------------------|-----------------|---------|--------|---------|
| 28 | CMU Building and Earthwork Pad Constructi | | EA | 165 HP Dozer | Rubber Tired Dozers | 1 | 165 | - | 1 | 1 | 30 | 0.1527 | g/hp-hr | | |
| | | | | Scraper | Scrapers | 1 | 367 | | | | | | | 0.0647 | g/hp-hr |
| | | | | Motor Grader | Graders | 1 | 187 | | | | | | | 0.0567 | g/hp-hr |
| | | | | Compactor | Rollers | 1 | 80 | | | | | | | 0.0823 | g/hp-hr |
| | | | | 4000 gallon Water Truck | n/a - onroad | 1 | MHDT | | | | | | | 2.4742 | g/hr |
| | | | | 10 TN Smooth Roller | Rollers | 1 | 157 | | | | | | | 0.0365 | g/hp-hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | | | | | | | 0.8623 | g/hr |
| | | | | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | | | | | | | 0.1259 | g/hp-hr |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | | | | | | | 0.0696 | g/hp-hr |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | | | | | | | 0.0356 | g/hp-hr |
| | | | | Concrete Mixer Truck | n/a - onroad | 1 | MHDT | | | | | | | 2.4742 | g/hr |
| | | | | CMU Building and Earthwork Pad Construction Subtotal | | | | | | | | | | | |
| 29 | Concrete Duct Banc | 1,350 | CY | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | 60 | 1 | 60 | 23 | 0.1259 | g/hp-hr | | |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | | | | | | | 0.0696 | g/hp-hr |
| | | | | Concrete Mixer Truck | n/a - onroad | 2 | MHDT | | | | | | | 2.4742 | g/hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | | | | | | | 0.8623 | g/hr |
| Concrete Duct Banc Subtotal | | | | | | | | | | | | | | | |
| 19 - Buildings, Grounds, and Utilities Total | | | | | | | | | | | | | | | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | | | Flatbed Truck | n/a - onroad | 1 | MHDT | - | 1 | 1 | 2 | 2.4742 | g/hr | | |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | | | | | | | 0.0356 | g/hp-hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | | | | | | | 0.8623 | g/hr |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | | | | | | | 0.0000 | g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | | | |
| 31 | Mechanical Hydraulic Cylinders & Housing | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.0356 | g/hp-hr | | |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | | | | | | 0.8623 | g/hr |
| Mechanical Hydraulic Cylinders & Housing Subtotal | | | | | | | | | | | | | | | |
| 32 | CMU Building Mechanical Equipment | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.0356 | g/hp-hr | | |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | | | | | | 0.8623 | g/hr |
| CMU Building Mechanical Equipment Subtotal | | | | | | | | | | | | | | | |
| 33 | Electrical Control Equipment CMU Building | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 0.8623 | g/hr | | |
| Electrical Control Equipment CMU Building Subtotal | | | | | | | | | | | | | | | |
| 34 | Electrical Power Equipment CMU Building | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 0.8623 | g/hr | | |
| Electrical Power Equipment CMU Building Subtotal | | | | | | | | | | | | | | | |
| 35 | Communication Equipment | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 12 | 0.8623 | g/hr | | |
| Communication Equipment Subtotal | | | | | | | | | | | | | | | |
| 20 -Permanent Operating Equipment Total | | | | | | | | | | | | | | | |
| GRAND TOTAL | | | | | | | | | | | | | | | |

Table K-143. PM10 Exhaust Emissions fro

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------------|-------------------------------------------|----------------------------------|-------------|-------------|-------------|--------------|-------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | |
| 28 | CMU Building and Earthwork Pad Constructi | -- | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | 0.42 | 0.42 | 0.42 | 0.42 | 0.42 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 29 | Concrete Duct Banc | -- | 1.72 | 1.72 | 1.72 | 1.72 | 1.72 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.39 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | 0.12 | 1.72 | 1.72 | 1.72 | 2.11 | 1.72 | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.12 | |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 32 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.12 | |
| GRAND TOTAL | | 0.44 | 3.61 | 3.73 | 3.27 | 10.37 | 9.98 | 14.66 | 13.38 | 13.38 | 13.15 | 5.12 | 3.97 | 7.73 | 6.57 | 5.90 | 6.94 | 5.79 | 5.88 | 5.76 | 2.94 | 0.48 | |

Table K-143. PM10 Exhaust Emissions fro

| # | Activity | Date | | | | | | | Annual Emissions, tpy |
|------------------------------------------|-------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-----------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 28 | CMU Building and Earthwork Pad Constructi | -- | -- | -- | -- | -- | -- | -- | 0.0067 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0063 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0028 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0017 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0015 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0028 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | 0.0007 | |
| | | | | | | | | 0.0258 | |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | -- | 0.0021 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0010 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0012 |
| | | -- | -- | -- | -- | -- | -- | 0.0045 | |
| | | -- | -- | -- | -- | -- | -- | 0.0304 | |
| 20 -Permanent Operating Equipment | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.04 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.06 | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.12 | -- | 0.0001 |
| 31 | Mechanical Hydraulic Cylinders & Housing | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | 0.0009 |
| | | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | 0.0007 |
| | | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | -- | -- | 0.0016 |
| 32 | CMU Building Mechanical Equipment | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | 0.0009 |
| | | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | 0.0007 |
| | | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | -- | -- | 0.0016 |
| 33 | Electrical Control Equipment CMU Building | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | 0.0007 |
| | | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | 0.0007 |
| 34 | Electrical Power Equipment CMU Building | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | 0.0007 |
| | | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | -- | -- | 0.0007 |
| 35 | Communication Equipment | -- | -- | -- | 0.05 | 0.05 | -- | -- | 0.0003 |
| | | -- | -- | -- | 0.05 | 0.05 | -- | -- | 0.0003 |
| | | 0.31 | 0.31 | 0.31 | 0.35 | 0.35 | 0.12 | -- | 0.0050 |
| GRAND TOTAL | | 0.54 | 1.12 | 1.12 | 1.00 | 1.00 | 0.66 | 0.12 | 0.4109 |

Table K-144. PM2.5 Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|------------------------------------------------------|-------------------------------------|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------|-------------------|--------------|--------------------|--------------------------|----------------------------------------------------------|-------------------------------------------------------|
| 02 - Relocations | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 1.2073 0.0327 0.4490 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 2 | Fremont Weir Demo | 420 | CY | 3.5 CY Hydraulic Excavator 3.5 CY Front End Loader Wheel 0.8 CY Loader/Backhoe, Wheel 4000 gallon Water Truck 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Loaders Tractors/Loaders/Backhoes n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 1 6 | 359 164 97 MHDT HHDT LDT2 | 40 | 1 | 40 | 11 | 0.0157 0.0568 0.0599 1.2073 0.9593 0.4490 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr |
| Fremont Weir Demo Subtotal | | | | | | | | | | | | | |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Graders n/a - onroad n/a - onroad n/a - onroad | 1 1 1 5 | 187 MHDT LDT2 HHDT | 39,400 | 1 | 39,400 | 4 | 0.0522 1.2073 0.4490 0.9593 | g/hp-hr g/hr g/hr g/hr |
| Levee O&M Road Regrading (6" AB) Subtotal | | | | | | | | | | | | | |
| 4 | Temporary Electrical Power | 5,280 | LF | Flatbed Truck Pickup Truck Conventional | n/a - onroad n/a - onroad | 1 2 | MHDT LDT2 | 1,500 | 1 | 1,500 | 4 | 1.2073 0.4490 | g/hr g/hr |
| Temporary Electrical Power Subtotal | | | | | | | | | | | | | |
| 02 - Relocations Total | | | | | | | | | | | | | |
| 09 - Channels and Canals | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 1.2073 0.0327 0.4490 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 6 | Clearing and Grubbing | 70 | ACR | 1.5 CY Front End Loader Crawler Trailer Mounted Brush Chipper Chainsaw 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Crawler Tractors Shredders Chainsaws n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 6 1 | 110 140 8 MHDT LDT2 HHDT | 2 | 2 | 4 | 18 | 0.1837 0.0279 0.2116 1.2073 0.4490 0.9593 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr g/hr |
| Clearing and Grubbing Subtotal | | | | | | | | | | | | | |
| 7 | Excavation (Wet Conditions) | 93,610 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 2 | 3,600 | 27 | 0.0157 0.0844 0.0568 0.9593 0.4490 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | |
| 8 | Excavation/Grading (Dry Conditions) | 372,680 | CY | 300 HP Dozer 21 CY Scrapers 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional | Rubber Tired Dozers Scrapers Graders n/a - onroad n/a - onroad | 1 4 1 1 7 | 300 407 187 MHDT LDT2 | 3,500 | 3 | 10,500 | 36 | 0.0844 0.0595 0.0522 1.2073 0.4490 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation/Grading (Dry Conditions) Subtotal | | | | | | | | | | | | | |
| 9 | Earthen Backfill | 1,010 | CY | 300 HP Dozer 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional | Rubber Tired Dozers n/a - onroad Rollers n/a - onroad | 1 1 1 3 | 300 MHDT 157 LDT2 | 1,000 | 1 | 1,000 | 2 | 0.0844 1.2073 0.0336 0.4490 | g/hp-hr g/hr g/hp-hr g/hr |
| Earthen Backfill Subtotal | | | | | | | | | | | | | |

Table K-144. PM2.5 Exhaust Emissions fro

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | -- | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.16 | 0.16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.45 | 0.45 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | Temporary Electrical Power | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.12 | 0.45 | 0.45 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 |
| | | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 |
| | | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 |
| 6 | Clearing and Grubbing | -- | 0.71 | 0.71 | 0.71 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.14 | 0.14 | 0.14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.04 | 0.04 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.10 | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 1.08 | 1.08 | 1.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 1.79 | 1.79 | 1.79 | 1.79 | 1.79 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.66 | 0.66 | 0.66 | 0.66 | 0.66 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 3.10 | 3.10 | 3.10 | 3.10 | 3.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | 1.34 | 1.34 | 1.34 | 1.34 | 1.34 | 1.34 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | 7.21 | 7.21 | 7.21 | 7.21 | 7.21 | 7.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | 0.45 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.58 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Table K-144. PM2.5 Exhaust Emissions fro

| # | Activity | | | | | | | | Annual Emissions , tpy |
|---------------------------------|-------------------------------------|-------|--------|--------|--------|-------|-------------|---------------|------------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | 0.02 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.06 | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.01 | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.09 | 0.0001 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | 0.0025 | |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | 0.17 | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.08 | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | 0.29 | -- | 0.0006 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | 0.29 | 0.09 | 0.0032 |
| 09 - Channels and Canals | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | 0.0064 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0012 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0097 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | 0.0032 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0241 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0089 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0041 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0015 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0418 |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | 0.0241 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0922 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0093 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0030 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.1298 |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0006 |

Table K-144. PM2.5 Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------------|----------------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|-------------------|--------------|--------------------|--------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|
| 10 | Riprap - Class 2 | 87,580 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 2 | 2,000 | 37 | 0.0157 0.0509 0.9593 0.4490 | g/hp-hr g/hp-hr g/hr g/hr |
| Riprap - Class 2 Subtotal | | | | | | | | | | | | | |
| 11 | Riprap - Class 3 | 1,530 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 1 | 1,000 | 2 | 0.0157 0.0509 0.9593 0.4490 | g/hp-hr g/hp-hr g/hr g/hr |
| Riprap - Class 3 Subtotal | | | | | | | | | | | | | |
| 12 | RSP Bedding Material | 81,050 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 5 23 | 257 300 LDT2 HHDT | 1,000 | 2 | 2,000 | 41 | 0.0157 0.0509 0.4490 0.9593 | g/hp-hr g/hp-hr g/hr g/hr |
| RSP Bedding Material Subtotal | | | | | | | | | | | | | |
| 13 | Erosion Control Seeding | 13 | ACR | 0.8 CY Front End Loader Wheel Pickup Truck Conventional | Tractors/Loaders/Backhoes n/a - onroad | 1 4 | 97 LDT2 | 2 | 1 | 2 | 7 | 0.0599 0.4490 | g/hp-hr g/hr |
| Erosion Control Seeding Subtotal | | | | | | | | | | | | | |
| 09 - Channels and Canals Total | | | | | | | | | | | | | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 1.2073 0.0327 0.4490 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 15 | Construction Site Dewatering (Temporary Cofferdam) | 21,000 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 18 | 1.2073 0.0217 0.4490 | g/hr g/hp-hr g/hr |
| Construction Site Dewatering (Temporary Cofferdam) Subtotal | | | | | | | | | | | | | |
| 16 | Construction Site Dewatering (Pumping) | - | - | 6" Dia. Pump Engine Drive Pickup Truck Conventional | Pumps n/a - onroad | 1 3 | 84 LDT2 | - | 1 | 1 | 120 | 0.1159 0.4490 | g/hp-hr g/hr |
| Construction Site Dewatering (Pumping) Subtotal | | | | | | | | | | | | | |
| 17 | Excavation (Wet Conditions) | 6,460 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 4 | 0.0157 0.0844 0.0568 0.9593 0.4490 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hr |
| Excavation (Wet Conditions) Subtotal | | | | | | | | | | | | | |
| 18 | Sheet Pile Wall | 7,940 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 7 | 1.2073 0.0217 0.4490 | g/hr g/hp-hr g/hr |
| Sheet Pile Wall Subtotal | | | | | | | | | | | | | |
| 19 | Headworks Structure Concrete Piles | 5,600 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 32 | 0.0367 0.0217 0.1159 1.2073 0.0599 0.0252 0.4490 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr |
| Headworks Structure Concrete Piles Subtotal | | | | | | | | | | | | | |

Table K-144. PM2.5 Exhaust Emissions fro

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------|--------------------------------------------|----------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------|----|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.78 | 0.78 | 0.78 | 0.78 | 0.78 | 0.78 | 0.78 | 0.78 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.68 | 1.68 | 1.68 | 1.68 | 1.68 | 1.68 | 1.68 | 1.68 | -- | |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.14 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.27 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.39 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.84 | -- | -- | | |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.78 | 0.78 | 0.78 | 0.78 | 0.78 | 0.78 | 0.78 | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.68 | 1.68 | 1.68 | 1.68 | 1.68 | 1.68 | 1.68 | -- | -- | | | |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | 0.09 | 1.08 | 1.08 | 1.08 | 7.21 | 7.21 | 10.89 | 10.30 | 10.30 | 10.30 | 3.10 | 1.68 | 3.36 | 3.36 | 3.36 | 3.36 | 3.36 | 3.36 | 2.52 | 1.68 | 0.09 | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | 0.08 | 0.08 | 0.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | 0.05 | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | 0.15 | 0.15 | 0.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 16 | Construction Site Dewatering (Pumping) | -- | -- | -- | -- | -- | -- | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | | |
| | | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | | |
| | | -- | -- | -- | -- | -- | -- | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | |
| | | -- | -- | -- | -- | -- | -- | 0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | 0.89 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | 0.33 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | 0.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 1.55 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | 0.08 | 0.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | 0.05 | 0.05 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | 0.15 | 0.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | -- | -- | -- | -- | -- | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | | | |
| | | -- | -- | -- | -- | -- | -- | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | -- | -- | -- | -- | -- | -- | -- | -- | | |

Table K-144. PM2.5 Exhaust Emissions fro

| # | Activity | | | | | | | | Annual Emissions, tpy |
|-------------------------------------------------------|--------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-----------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 10 | Riprap - Class 2 | -- | -- | -- | -- | -- | -- | -- | 0.0053 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0100 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0144 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0015 |
| | | -- | -- | -- | -- | -- | -- | 0.0311 | |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0008 | |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | 0.0058 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0110 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0160 |
| | | -- | -- | -- | -- | -- | -- | 0.0344 | |
| 13 | Erosion Control Seeding | -- | 0.10 | 0.10 | -- | -- | -- | -- | 0.0004 |
| | | -- | 0.03 | 0.03 | -- | -- | -- | -- | 0.0001 |
| | | -- | 0.13 | 0.13 | -- | -- | -- | -- | 0.0005 |
| | | -- | 0.13 | 0.13 | -- | -- | -- | 0.2488 | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.06 | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.09 | -- | 0.0001 |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0014 |
| 16 | Construction Site Dewatering (Pumping) | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | -- | -- | 0.0103 |
| | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0014 |
| | | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | -- | -- | 0.0117 |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0018 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0031 | |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | 0.0005 | |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0031 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0014 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0027 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0010 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0045 |
| | | -- | -- | -- | -- | -- | -- | 0.0010 | |
| | | -- | -- | -- | -- | -- | -- | 0.0153 | |

Table K-144. PM2.5 Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------------|------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|-------------------|--------------|--------------------|--------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|
| 20 | Headworks Structure | 3,140 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 3 | 180 | 18 | 0.1159 0.0640 1.2073 0.4490 | g/hp-hr g/hp-hr g/hr g/hr |
| Headworks Structure Subtotal | | | | | | | | | | | | | |
| 21 | Headworks Channel Transition | 1,370 | CY | 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Plate Compactors n/a - onroad n/a - onroad | 1 2 6 | 8 MHDT LDT2 | 70 | 2 | 140 | 10 | 0.0640 1.2073 0.4490 | g/hp-hr g/hr g/hr |
| Headworks Channel Transition Subtotal | | | | | | | | | | | | | |
| 22 | Hinged Bottom Gates | 3 | EA | 90 TN Truck-mounted Hydraulic Crane Haul Truck Oversize Transport Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 1 4 | 450 HHDT LDT2 | 0.1 | 1 | 0.1 | 24 | 0.0367 0.9593 0.4490 | g/hp-hr g/hr g/hr |
| Hinged Bottom Gates Subtotal | | | | | | | | | | | | | |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | | | | | | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 1.2073 0.0327 0.4490 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 24 | Pedestrian Bridge Concete Piles | 640 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 4 | 0.0367 0.0217 0.1159 1.2073 0.0599 0.0252 0.4490 | g/hp-hr g/hp-hr g/hp-hr g/hr g/hp-hr g/hp-hr g/hr |
| Pedestrian Bridge Concete Piles Subtotal | | | | | | | | | | | | | |
| 25 | Pedestrian Bridge Concrete Abutments and | 48 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 1 | 0.1159 0.0640 1.2073 0.4490 | g/hp-hr g/hp-hr g/hr g/hr |
| Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | | | | | | | | | | | | | |
| 26 | Pedestrian Bridge Span Installation | 2,720 | SF | 90 TN Truck-mounted Hydraulic Crane Flatbed Truck Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 2 5 | 450 MHDT LDT2 | 390 | 1 | 390 | 7 | 0.0367 1.2073 0.4490 | g/hp-hr g/hr g/hr |
| Pedestrian Bridge Span Installation Subtotal | | | | | | | | | | | | | |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | | | | | | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 | 1.2073 0.0327 0.4490 0.0000 | g/hr g/hp-hr g/hr g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |

Table K-144. PM2.5 Exhaust Emissions fro

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------|------------------------------------------|----------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.51 | 0.51 | -- | -- | -- | -- | 0.51 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.03 | -- | -- | -- | -- | 0.03 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.13 | 0.13 | -- | -- | -- | -- | 0.13 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.17 | 0.17 | -- | -- | -- | -- | 0.17 | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.84 | 0.84 | -- | -- | -- | -- | 0.84 | -- | -- | |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.02 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 | 0.09 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 | 0.10 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.20 | 0.20 | -- | -- | -- | -- | -- | |
| 22 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | 0.09 | 0.15 | 0.15 | 0.15 | 1.74 | 1.31 | 1.31 | 1.15 | 1.15 | 1.15 | 1.99 | 1.03 | 0.39 | 0.39 | 0.20 | 0.20 | 1.03 | 0.20 | 0.20 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | 0.02 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | 0.06 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | 0.01 | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 | -- | -- | -- | -- | 0.09 | -- | |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.19 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.08 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.17 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.28 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.96 | -- | -- | -- | -- | -- | |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.17 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.28 | -- | -- | -- | -- | -- | |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.29 | 0.29 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | 0.04 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | 0.04 | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.37 | 0.37 | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 | 0.96 | 0.28 | 0.37 | 0.37 | 0.09 | -- | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | 0.02 | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.06 | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.01 | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | 0.09 | -- | -- | -- | -- | -- | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |

Table K-144. PM2.5 Exhaust Emissions fro

| # | Activity | Date | | | | | | | Annual Emissions, tpy |
|-----------------------------------------------|------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-----------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | 0.0046 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0011 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0015 |
| | | -- | -- | -- | -- | -- | -- | 0.0075 | |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | 0.0010 | |
| 22 | Hinged Bottom Gates | -- | 0.29 | 0.29 | 0.29 | 0.29 | -- | -- | 0.0035 |
| | | -- | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0002 |
| | | -- | 0.03 | 0.03 | 0.03 | 0.03 | -- | -- | 0.0004 |
| | | -- | 0.34 | 0.34 | 0.34 | 0.34 | -- | -- | 0.0041 |
| | | 0.20 | 0.54 | 0.54 | 0.54 | 0.54 | 0.09 | 0.0448 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0001 | |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0019 | |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | 0.0001 | |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | 0.0010 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | 0.0013 | |
| | | -- | -- | -- | -- | -- | -- | 0.0035 | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | 0.0001 | |

Table K-144. PM2.5 Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days | Emission Factor | Units |
|--------------------------------------------------------------|-------------------------------------------|----------|------|-------------------------------------------------------------|-------------------------|-----------------------------|-----------|-------------------|--------------|--------------------|--------------------------|-----------------|---------|
| 28 | CMU Building and Earthwork Pad Constructi | | EA | 165 HP Dozer | Rubber Tired Dozers | 1 | 165 | - | 1 | 1 | 30 | 0.1405 | g/hp-hr |
| | | | | Scraper | Scrapers | 1 | 367 | | | | | 0.0595 | g/hp-hr |
| | | | | Motor Grader | Graders | 1 | 187 | | | | | 0.0522 | g/hp-hr |
| | | | | Compactor | Rollers | 1 | 80 | | | | | 0.0757 | g/hp-hr |
| | | | | 4000 gallon Water Truck | n/a - onroad | 1 | MHDT | | | | | 1.2073 | g/hr |
| | | | | 10 TN Smooth Roller | Rollers | 1 | 157 | | | | | 0.0336 | g/hp-hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | | | | | 0.4490 | g/hr |
| | | | | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | | | | | 0.1159 | g/hp-hr |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | | | | | 0.0640 | g/hp-hr |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | | | | | 0.0327 | g/hp-hr |
| | | | | Concrete Mixer Truck | n/a - onroad | 1 | MHDT | | | | | 1.2073 | g/hr |
| | | | | CMU Building and Earthwork Pad Construction Subtotal | | | | | | | | | |
| 29 | Concrete Duct Banc | 1,350 | CY | Concrete Pump Boom Truck Mounted | Pumps | 1 | 84 | 60 | 1 | 60 | 23 | 0.1159 | g/hp-hr |
| | | | | 2.5" Dia. Concrete Vibrator | Plate Compactors | 1 | 8 | | | | | 0.0640 | g/hp-hr |
| | | | | Concrete Mixer Truck | n/a - onroad | 2 | MHDT | | | | | 1.2073 | g/hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 7 | LDT2 | | | | | 0.4490 | g/hr |
| Concrete Duct Banc Subtotal | | | | | | | | | | | | | |
| 19 - Buildings, Grounds, and Utilities Total | | | | | | | | | | | | | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | | | Flatbed Truck | n/a - onroad | 1 | MHDT | - | 1 | 1 | 2 | 1.2073 | g/hr |
| | | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | | | | | 0.0327 | g/hp-hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 1 | LDT2 | | | | | 0.4490 | g/hr |
| | | | | Temp. Mobile Office Building | n/a - onroad | 1 | n/a | | | | | 0.0000 | g/hr |
| Mobilization and Demobilization Subtotal | | | | | | | | | | | | | |
| 31 | Mechanical Hydraulic Cylinders & Housing | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.0327 | g/hp-hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | | | | 0.4490 | g/hr |
| Mechanical Hydraulic Cylinders & Housing Subtotal | | | | | | | | | | | | | |
| 32 | CMU Building Mechanical Equipment | | | Extended Boom Pallet Loader | Rough Terrain Forklifts | 1 | 100 | - | 1 | 1 | 30 | 0.0327 | g/hp-hr |
| | | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | | | | | 0.4490 | g/hr |
| CMU Building Mechanical Equipment Subtotal | | | | | | | | | | | | | |
| 33 | Electrical Control Equipment CMU Building | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 0.4490 | g/hr |
| Electrical Control Equipment CMU Building Subtotal | | | | | | | | | | | | | |
| 34 | Electrical Power Equipment CMU Building | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 | 0.4490 | g/hr |
| Electrical Power Equipment CMU Building Subtotal | | | | | | | | | | | | | |
| 35 | Communication Equipment | | | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 12 | 0.4490 | g/hr |
| Communication Equipment Subtotal | | | | | | | | | | | | | |
| 20 -Permanent Operating Equipment Total | | | | | | | | | | | | | |
| GRAND TOTAL | | | | | | | | | | | | | |

Table K-144. PM2.5 Exhaust Emissions fro

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------------|-------------------------------------------|----------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | |
| 28 | CMU Building and Earthwork Pad Constructi | -- | 0.41 | 0.41 | 0.41 | 0.41 | 0.41 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | -- | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | 0.28 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | 0.09 | 1.50 | 1.50 | 1.50 | 1.78 | 1.50 | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.01 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 | |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 32 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.09 | |
| GRAND TOTAL | | 0.30 | 3.04 | 3.12 | 2.74 | 9.14 | 8.87 | 12.72 | 11.61 | 11.61 | 11.46 | 4.25 | 2.83 | 5.35 | 4.39 | 3.84 | 4.71 | 3.83 | 3.93 | 3.92 | 1.96 | 0.37 | |

Table K-144. PM2.5 Exhaust Emissions fro

| # | Activity | Date | | | | | | | Annual Emissions, tpy |
|------------------------------------------|-------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-----------------------|
| | | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 28 | CMU Building and Earthwork Pad Constructi | -- | -- | -- | -- | -- | -- | -- | 0.0061 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0058 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0026 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0014 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0026 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0009 |
| | | -- | -- | -- | -- | -- | -- | 0.0003 | |
| | | -- | -- | -- | -- | -- | -- | 0.0225 | |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | -- | 0.0020 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | 0.0032 | |
| | | -- | -- | -- | -- | -- | -- | 0.0258 | |
| 20 -Permanent Operating Equipment | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | 0.06 | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | 0.01 | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | -- |
| | | -- | -- | -- | -- | -- | 0.09 | -- | 0.0001 |
| 31 | Mechanical Hydraulic Cylinders & Housing | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | 0.0009 |
| | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0004 |
| | | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | -- | -- | 0.0012 |
| 32 | CMU Building Mechanical Equipment | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | -- | -- | 0.0009 |
| | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0004 |
| | | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | -- | -- | 0.0012 |
| 33 | Electrical Control Equipment CMU Building | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0004 |
| | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0004 |
| 34 | Electrical Power Equipment CMU Building | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0004 |
| | | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | -- | -- | 0.0004 |
| 35 | Communication Equipment | -- | -- | -- | 0.02 | 0.02 | -- | -- | 0.0001 |
| | | -- | -- | -- | 0.02 | 0.02 | -- | -- | 0.0001 |
| | | 0.21 | 0.21 | 0.21 | 0.23 | 0.23 | 0.09 | -- | 0.0034 |
| GRAND TOTAL | | 0.41 | 0.88 | 0.88 | 0.77 | 0.77 | 0.46 | 0.09 | 0.3294 |

Table K-145. GHG Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days |
|---------------------------------|-------------------------------------|----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------|-------------------|--------------|--------------------|--------------------------|
| 02 - Relocations | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 |
| 2 | Fremont Weir Demo | 420 | CY | 3.5 CY Hydraulic Excavator 3.5 CY Front End Loader Wheel 0.8 CY Loader/Backhoe, Wheel 4000 gallon Water Truck 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Loaders Tractors/Loaders/Backhoes n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 1 6 | 359 164 97 MHDT HHDT LDT2 | 40 | 1 | 40 | 11 |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Graders n/a - onroad n/a - onroad n/a - onroad | 1 1 1 5 | 187 MHDT LDT2 HHDT | 39,400 | 1 | 39,400 | 4 |
| 4 | Temporary Electrical Power | 5,280 | LF | Flatbed Truck Pickup Truck Conventional | n/a - onroad n/a - onroad | 1 2 | MHDT LDT2 | 1,500 | 1 | 1,500 | |
| | | | | | | | | | | | 4 |
| 09 - Channels and Canals | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | | 1 | 1 |
| 6 | Clearing and Grubbing | 70 | ACR | 1.5 CY Front End Loader Crawler Trailer Mounted Brush Chipper Chainsaw 4000 gallon Water Truck Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Crawler Tractors Shredders Chainsaws n/a - onroad n/a - onroad n/a - onroad | 1 1 1 1 6 1 | 110 140 8 MHDT LDT2 HHDT | 2 | 2 | 2 | 4 |
| 7 | Excavation (Wet Conditions) | 93,610 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 2 | 3,600 | 27 |
| 8 | Excavation/Grading (Dry Conditions) | 372,680 | CY | 300 HP Dozer 21 CY Scrapers 12' Blade Grader 4000 gallon Water Truck Pickup Truck Conventional | Rubber Tired Dozers Scrapers Graders n/a - onroad n/a - onroad | 1 4 1 1 7 | 300 407 187 MHDT LDT2 | 3,500 | 3 | 10,500 | 36 |
| 9 | Earthen Backfill | 1,010 | CY | 300 HP Dozer 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional | Rubber Tired Dozers n/a - onroad Rollers n/a - onroad | 1 1 1 3 | 300 MHDT 157 LDT2 | 1,000 | 1 | 1,000 | 2 |

Table K-145. GHG Exhaust Emissions from

| # | Activity | Emission Factors | | | | | Annual Emissions, MTCO2e/yr |
|------------------------------------------------------|-------------------------------------|------------------|---------|-----|---------|---------|-----------------------------|
| | | CO2 | CH4 | N2O | CO2e | Units | |
| 02 - Relocations | | | | | | | |
| 1 | Mobilization and Demobilization | 24743.4 | 0 | 0 | 24743.4 | g/hr | 0.40 |
| | | 340.986 | 0.02272 | 0 | 341.554 | g/hp-hr | 0.55 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 0.14 |
| | | 0 | 0 | 0 | 0 | g/hr | 0.00 |
| Mobilization and Demobilization Subtotal | | | | | | | 1.08 |
| 2 | Fremont Weir Demo | 323.936 | 0.01421 | 0 | 324.292 | g/hp-hr | 10.25 |
| | | 306.887 | 0.01857 | 0 | 307.351 | g/hp-hr | 4.44 |
| | | 312.57 | 0.01854 | 0 | 313.034 | g/hp-hr | 2.67 |
| | | 24743.4 | 0 | 0 | 24743.4 | g/hr | 2.18 |
| | | 36496.5 | 0 | 0 | 36496.5 | g/hr | 3.21 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 4.60 |
| Fremont Weir Demo Subtotal | | | | | | | 27.34 |
| 3 | Levee O&M Road Regrading (6" AB) | 346.669 | 0.01722 | 0 | 347.099 | g/hp-hr | 2.08 |
| | | 24743.4 | 0 | 0 | 24743.4 | g/hr | 0.79 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 0.28 |
| | | 36496.5 | 0 | 0 | 36496.5 | g/hr | 5.84 |
| Levee O&M Road Regrading (6" AB) Subtotal | | | | | | | 8.99 |
| 4 | Temporary Electrical Power | 24743.4 | 0 | 0 | 24743.4 | g/hr | 0.79 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 0.56 |
| Temporary Electrical Power Subtotal | | | | | | | 1.35 |
| 02 - Relocations Total | | | | | | | 38.76 |
| 09 - Channels and Canals | | | | | | | |
| 5 | Mobilization and Demobilization | 24743.4 | 0 | 0 | 24743.4 | g/hr | 0.40 |
| | | 340.986 | 0.02272 | 0 | 341.554 | g/hp-hr | 0.55 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 0.14 |
| | | 0 | 0 | 0 | 0 | g/hr | 0.00 |
| Mobilization and Demobilization Subtotal | | | | | | | 1.08 |
| 6 | Clearing and Grubbing | 363.718 | 0.03898 | 0 | 364.692 | g/hp-hr | 11.55 |
| | | 227.324 | 0.0068 | 0 | 227.494 | g/hp-hr | 9.17 |
| | | 395.091 | 0 | 0 | 395.091 | g/hp-hr | 0.91 |
| | | 24743.4 | 0 | 0 | 24743.4 | g/hr | 7.13 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 15.06 |
| | | 36496.5 | 0 | 0 | 36496.5 | g/hr | 10.51 |
| Clearing and Grubbing Subtotal | | | | | | | 54.34 |
| 7 | Excavation (Wet Conditions) | 323.936 | 0.01421 | 0 | 324.292 | g/hp-hr | 60.10 |
| | | 335.303 | 0.02493 | 0 | 335.926 | g/hp-hr | 87.07 |
| | | 306.887 | 0.01857 | 0 | 307.351 | g/hp-hr | 43.55 |
| | | 36496.5 | 0 | 0 | 36496.5 | g/hr | 141.90 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 26.36 |
| Excavation (Wet Conditions) Subtotal | | | | | | | 358.98 |
| 8 | Excavation/Grading (Dry Conditions) | 335.303 | 0.02493 | 0 | 335.926 | g/hp-hr | 87.07 |
| | | 409.183 | 0.02415 | 0 | 409.787 | g/hp-hr | 576.40 |
| | | 346.669 | 0.01722 | 0 | 347.099 | g/hp-hr | 56.08 |
| | | 24743.4 | 0 | 0 | 24743.4 | g/hr | 21.38 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 52.72 |
| Excavation/Grading (Dry Conditions) Subtotal | | | | | | | 793.65 |
| 9 | Earthen Backfill | 335.303 | 0.02493 | 0 | 335.926 | g/hp-hr | 1.61 |
| | | 24743.4 | 0 | 0 | 24743.4 | g/hr | 0.40 |
| | | 318.253 | 0.01911 | 0 | 318.731 | g/hp-hr | 0.80 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 0.42 |
| Earthen Backfill Subtotal | | | | | | | 3.23 |

Table K-145. GHG Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days |
|-------------------------------------------------------|-------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|-------------------|--------------|--------------------|--------------------------|
| 10 | Riprap - Class 2 | 87,580 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 2 | 2,000 | 37 |
| 11 | Riprap - Class 3 | 1,530 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 23 5 | 257 300 HHDT LDT2 | 1,000 | 1 | 1,000 | 2 |
| 12 | RSP Bedding Material | 81,050 | TN | 2.5 CY Hydraulic Excavator 300 HP Dozer Crawler Pickup Truck Conventional 16 CY 3 Axle Dump Truck | Excavators Crawler Tractors n/a - onroad n/a - onroad | 2 1 5 23 | 257 300 LDT2 HHDT | 1,000 | 2 | 2,000 | 41 |
| 13 | Erosion Control Seeding | 13 | ACR | 0.8 CY Front End Loader Wheel Pickup Truck Conventional | Tractors/Loaders/Backhoes n/a - onroad | 1 4 | 97 LDT2 | 2 | 1 | 2 | 7 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 |
| 15 | Construction Site Dewatering (TemporaryCo | 21,000 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 18 |
| 16 | Construction Site Dewatering (Pumping) | - | - | 6" Dia. Pump Engine Drive Pickup Truck Conventional | Pumps n/a - onroad | 1 3 | 84 LDT2 | - | 1 | 1 | 120 |
| 17 | Excavation (Wet Conditions) | 6,460 | CY | 4.5 CY Hydraulic Excavator 300 HP Dozer 3.5 CY Front End Loader Wheel 16 CY 3 Axle Dump Truck Pickup Truck Conventional | Excavators Rubber Tired Dozers Rubber Tired Loaders n/a - onroad n/a - onroad | 1 2 2 9 7 | 429 300 164 HHDT LDT2 | 1,800 | 1 | 1,800 | 4 |
| 18 | Sheet Pile Wall | 7,940 | SF | Flatbed Truck 75 TN Crane Crawler Pile Hammer Pickup Truck Conventional | n/a - onroad Bore/Drill Rigs n/a - onroad | 1 1 6 | MHDT 221 LDT2 | 1,200 | 1 | 1,200 | 7 |
| 19 | Headworks Structure Concrete Piles | 5,600 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 32 |

Table K-145. GHG Exhaust Emissions from

| # | Activity | Emission Factors | | | | | Units | Annual Emissions, MTCO2e/yr |
|--------------------------------------------------------|--------------------------------------------|------------------|---------|-----|---------|---------|-----------------|-----------------------------|
| | | CO2 | CH4 | N2O | CO2e | | | |
| 10 | Riprap - Class 2 | 323.936 | 0.01421 | 0 | 324.292 | g/hp-hr | 98.68 | |
| | | 363.718 | 0.02114 | 0 | 364.246 | g/hp-hr | 64.69 | |
| | | 36496.5 | 0 | 0 | 36496.5 | g/hr | 496.94 | |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 25.80 | |
| Riprap - Class 2 Subtotal | | | | | | | 686.11 | |
| 11 | Riprap - Class 3 | 323.936 | 0.01421 | 0 | 324.292 | g/hp-hr | 2.67 | |
| | | 363.718 | 0.02114 | 0 | 364.246 | g/hp-hr | 1.75 | |
| | | 36496.5 | 0 | 0 | 36496.5 | g/hr | 13.43 | |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 0.70 | |
| Riprap - Class 3 Subtotal | | | | | | | 18.54 | |
| 12 | RSP Bedding Material | 323.936 | 0.01421 | 0 | 324.292 | g/hp-hr | 109.35 | |
| | | 363.718 | 0.02114 | 0 | 364.246 | g/hp-hr | 71.68 | |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 28.59 | |
| | | 36496.5 | 0 | 0 | 36496.5 | g/hr | 550.66 | |
| RSP Bedding Material Subtotal | | | | | | | 760.28 | |
| 13 | Erosion Control Seeding | 312.57 | 0.01854 | 0 | 313.034 | g/hp-hr | 1.70 | |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 1.95 | |
| Erosion Control Seeding Subtotal | | | | | | | 3.65 | |
| 09 - Channels and Canals Total | | | | | | | 2,679.86 | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | |
| 14 | Mobilization and Demobilization | 24743.4 | 0 | 0 | 24743.4 | g/hr | 0.40 | |
| | | 340.986 | 0.02272 | 0 | 341.554 | g/hp-hr | 0.55 | |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 0.14 | |
| | | 0 | 0 | 0 | 0 | g/hr | 0.00 | |
| Mobilization and Demobilization Subtotal | | | | | | | 1.08 | |
| 15 | Construction Site Dewatering (Temporary Co | 24743.4 | 0 | 0 | 24743.4 | g/hr | 3.56 | |
| | | 426.232 | 0.00931 | 0 | 426.465 | g/hp-hr | 13.57 | |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 7.53 | |
| Site Dewatering (Temporary Cofferdam) Subtotal | | | | | | | 24.67 | |
| 16 | Construction Site Dewatering (Pumping) | 420.549 | 0.02382 | 0 | 421.145 | g/hp-hr | 33.96 | |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 25.10 | |
| Construction Site Dewatering (Pumping) Subtotal | | | | | | | 59.07 | |
| 17 | Excavation (Wet Conditions) | 323.936 | 0.01421 | 0 | 324.292 | g/hp-hr | 4.45 | |
| | | 335.303 | 0.02493 | 0 | 335.926 | g/hp-hr | 6.45 | |
| | | 306.887 | 0.01857 | 0 | 307.351 | g/hp-hr | 3.23 | |
| | | 36496.5 | 0 | 0 | 36496.5 | g/hr | 10.51 | |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 1.95 | |
| Excavation (Wet Conditions) Subtotal | | | | | | | 26.59 | |
| 18 | Sheet Pile Wall | 24743.4 | 0 | 0 | 24743.4 | g/hr | 1.39 | |
| | | 426.232 | 0.00931 | 0 | 426.465 | g/hp-hr | 5.28 | |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 2.93 | |
| Sheet Pile Wall Subtotal | | | | | | | 9.59 | |
| 19 | Headworks Structure Concrete Piles | 244.373 | 0.01266 | 0 | 244.69 | g/hp-hr | 18.79 | |
| | | 426.232 | 0.00931 | 0 | 426.465 | g/hp-hr | 24.13 | |
| | | 420.549 | 0.02382 | 0 | 421.145 | g/hp-hr | 9.06 | |
| | | 24743.4 | 0 | 0 | 24743.4 | g/hr | 19.00 | |
| | | 312.57 | 0.01854 | 0 | 313.034 | g/hp-hr | 7.77 | |
| | | 323.936 | 0.01518 | 0 | 324.316 | g/hp-hr | 52.14 | |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 17.85 | |
| Headworks Structure Concrete Piles Subtotal | | | | | | | 148.74 | |

Table K-145. GHG Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days |
|-----------------------------------------------|------------------------------------------|----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------|-------------------|--------------|--------------------|--------------------------|
| 20 | Headworks Structure | 3,140 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 3 | 180 | 18 |
| 21 | Headworks Channel Transition | 1,370 | CY | 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Plate Compactors n/a - onroad n/a - onroad | 1 2 6 | 8 MHDT LDT2 | 70 | 2 | 140 | 10 |
| 22 | Hinged Bottom Gates | 3 | EA | 90 TN Truck-mounted Hydraulic Crane Haul Truck Oversize Transport Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 1 4 | 450 HHDT LDT2 | 0.1 | 1 | 0.1 | 24 |
| 15 - | | | | | | | | | | | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 |
| 24 | Pedestrian Bridge Concete Piles | 640 | LF | 40 TN Truck-mounted Hydraulic Crane 100 FT Auger Track-mounted Drill Rig Concrete Pump Boom Truck Mounted Concrete Mixer Truck 0.8 CY Backhoe Loader 24 TN Truck End Dump Pickup Truck Conventional | Cranes Bore/Drill Rigs Pumps n/a - onroad Tractors/Loaders/Backhoes Off-Highway Trucks n/a - onroad | 1 1 1 3 1 2 8 | 300 221 84 MHDT 97 314 LDT2 | 180 | 1 | 180 | 4 |
| 25 | Pedestrian Bridge Concrete Abutments and | 48 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 1 |
| Pedestrian Bri | | | | | | | | | | | |
| 26 | Pedestrian Bridge Span Installation | 2,720 | SF | 90 TN Truck-mounted Hydraulic Crane Flatbed Truck Pickup Truck Conventional | Cranes n/a - onroad n/a - onroad | 1 2 5 | 450 MHDT LDT2 | 390 | 1 | 390 | 7 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 |

Table K-145. GHG Exhaust Emissions from

| # | Activity | Emission Factors | | | | | Annual Emissions, MTCO2e/yr |
|--------------------------------------------------------------------|----------------------------------------------------|------------------|---------|-----|---------|---------------|-----------------------------|
| | | CO2 | CH4 | N2O | CO2e | Units | |
| 20 | Headworks Structure | 420.549 | 0.02382 | 0 | 421.145 | g/hp-hr | 15.28 |
| | | 244.373 | 0.02567 | 0 | 245.015 | g/hp-hr | 0.85 |
| | | 24743.4 | 0 | 0 | 24743.4 | g/hr | 21.38 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 26.36 |
| Headworks Structure Subtotal | | | | | | 63.87 | |
| 21 | Headworks Channel Transition | 244.373 | 0.02567 | 0 | 245.015 | g/hp-hr | 0.31 |
| | | 24743.4 | 0 | 0 | 24743.4 | g/hr | 7.92 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 8.37 |
| Headworks Channel Transition Subtotal | | | | | | 16.60 | |
| 22 | Hinged Bottom Gates | 244.373 | 0.01266 | 0 | 244.69 | g/hp-hr | 21.14 |
| | | 36496.5 | 0 | 0 | 36496.5 | g/hr | 7.01 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 6.69 |
| Hinged Bottom Gates Subtotal | | | | | | 34.84 | |
| Floodway Control and Diversion Structures Total | | | | | | 385.05 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | |
| 23 | Mobilization and Demobilization | 24743.4 | 0 | 0 | 24743.4 | g/hr | 0.40 |
| | | 340.986 | 0.02272 | 0 | 341.554 | g/hp-hr | 0.55 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 0.14 |
| | | 0 | 0 | 0 | 0 | g/hr | 0.00 |
| Mobilization and Demobilization Subtotal | | | | | | 1.08 | |
| 24 | Pedestrian Bridge Concrete Piles | 244.373 | 0.01266 | 0 | 244.69 | g/hp-hr | 2.35 |
| | | 426.232 | 0.00931 | 0 | 426.465 | g/hp-hr | 3.02 |
| | | 420.549 | 0.02382 | 0 | 421.145 | g/hp-hr | 1.13 |
| | | 24743.4 | 0 | 0 | 24743.4 | g/hr | 2.38 |
| | | 312.57 | 0.01854 | 0 | 313.034 | g/hp-hr | 0.97 |
| | | 323.936 | 0.01518 | 0 | 324.316 | g/hp-hr | 6.52 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 2.23 |
| Pedestrian Bridge Concrete Piles Subtotal | | | | | | 18.59 | |
| 25 | Pedestrian Bridge Concrete Abutments and Wingwalls | 420.549 | 0.02382 | 0 | 421.145 | g/hp-hr | 0.28 |
| | | 244.373 | 0.02567 | 0 | 245.015 | g/hp-hr | 0.02 |
| | | 24743.4 | 0 | 0 | 24743.4 | g/hr | 0.40 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 0.49 |
| Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | | | | | | 1.18 | |
| 26 | Pedestrian Bridge Span Installation | 244.373 | 0.01266 | 0 | 244.69 | g/hp-hr | 6.17 |
| | | 24743.4 | 0 | 0 | 24743.4 | g/hr | 2.77 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 2.44 |
| Pedestrian Bridge Span Installation Subtotal | | | | | | 11.38 | |
| 08 - Roads, Railroads, and Bridges Total | | | | | | 32.24 | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | |
| 27 | Mobilization and Demobilization | 24743.4 | 0 | 0 | 24743.4 | g/hr | 0.40 |
| | | 340.986 | 0.02272 | 0 | 341.554 | g/hp-hr | 0.55 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 0.14 |
| | | 0 | 0 | 0 | 0 | g/hr | 0.00 |
| Mobilization and Demobilization Subtotal | | | | | | 1.08 | |

Table K-145. GHG Exhaust Emissions from Offroad Construction Equipment (Alternative 2) - Unmitigated

| # | Activity | Quantity | Unit | Crew / Equipment | OFFROAD Name | Equipment Quantity per Crew | Size (hp) | Crew Daily Output | No. of Crews | Total Daily Output | Estimated Duration, Days |
|------------------------------------------|-------------------------------------------|----------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------|-------------------|--------------|--------------------|--------------------------|
| 28 | CMU Building and Earthwork Pad Constructi | | EA | 165 HP Dozer Scraper Motor Grader Compactor 4000 gallon Water Truck 10 TN Smooth Roller Pickup Truck Conventional Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Extended Boom Pallet Loader Concrete Mixer Truck | Rubber Tired Dozers Scrapers Graders Rollers n/a - onroad Rollers n/a - onroad Pumps Plate Compactors Rough Terrain Forklifts n/a - onroad | 1 1 1 1 1 1 7 1 1 1 1 | 165 367 187 80 MHDT 157 LDT2 84 8 100 MHDT | - | 1 | 1 | 30 |
| CMU B | | | | | | | | | | | |
| 29 | Concrete Duct Banc | 1,350 | CY | Concrete Pump Boom Truck Mounted 2.5" Dia. Concrete Vibrator Concrete Mixer Truck Pickup Truck Conventional | Pumps Plate Compactors n/a - onroad n/a - onroad | 1 1 2 7 | 84 8 MHDT LDT2 | 60 | 1 | 60 | 23 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | - | - | Flatbed Truck Extended Boom Pallet Loader Pickup Truck Conventional Temp. Mobile Office Building | n/a - onroad Rough Terrain Forklifts n/a - onroad n/a - onroad | 1 1 1 1 | MHDT 100 LDT2 n/a | - | 1 | 1 | 2 |
| 31 | Mechanical Hydraulic Cylinders & Housing | - | - | Extended Boom Pallet Loader Pickup Truck Conventional | Rough Terrain Forklifts n/a - onroad | 1 3 | 100 LDT2 | - | 1 | 1 | 30 |
| M | | | | | | | | | | | |
| 32 | CMU Building Mechanical Equipment | - | - | Extended Boom Pallet Loader Pickup Truck Conventional | Rough Terrain Forklifts n/a - onroad | 1 3 | 100 LDT2 | - | 1 | 1 | 30 |
| 33 | Electrical Control Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 |
| Ele | | | | | | | | | | | |
| 34 | Electrical Power Equipment CMU Building | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 30 |
| EI | | | | | | | | | | | |
| 35 | Communication Equipment | - | - | Pickup Truck Conventional | n/a - onroad | 3 | LDT2 | - | 1 | 1 | 12 |
| GRAND TOTAL | | | | | | | | | | | |

Table K-145. GHG Exhaust Emissions from

| # | Activity | Emission Factors | | | | | Annual Emissions, MTCO2e/yr |
|------------------------------------------|-------------------------------------------|------------------------------------------------------------|---------|-----|---------|-----------------|-----------------------------|
| | | CO2 | CH4 | N2O | CO2e | Units | |
| 28 | CMU Building and Earthwork Pad Constructi | 335.303 | 0.03353 | 0 | 336.141 | g/hp-hr | 13.31 |
| | | 409.183 | 0.02415 | 0 | 409.787 | g/hp-hr | 36.09 |
| | | 346.669 | 0.01722 | 0 | 347.099 | g/hp-hr | 15.58 |
| | | 318.253 | 0.02578 | 0 | 318.898 | g/hp-hr | 6.12 |
| | | 24743.4 | 0 | 0 | 24743.4 | g/hr | 5.94 |
| | | 318.253 | 0.01911 | 0 | 318.731 | g/hp-hr | 12.01 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 14.64 |
| | | 420.549 | 0.02382 | 0 | 421.145 | g/hr | 8.49 |
| | | 244.373 | 0.02567 | 0 | 245.015 | g/hp-hr | 0.47 |
| | | 340.986 | 0.02272 | 0 | 341.554 | g/hp-hr | 8.20 |
| | | 24743.4 | 0 | 0 | 24743.4 | g/hp-hr | 5.94 |
| | | uilding and Earthwork Pad Construction Subtotal | | | | | 126.79 |
| 29 | Concrete Duct Banc | 420.549 | 0.02382 | 0 | 421.145 | g/hp-hr | 6.51 |
| | | 244.373 | 0.02567 | 0 | 245.015 | g/hp-hr | 0.36 |
| | | 24743.4 | 0 | 0 | 24743.4 | g/hr | 9.11 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 11.23 |
| | | Concrete Duct Banc Subtotal | | | | | 27.20 |
| | | 19 - Buildings, Grounds, and Utilities Total | | | | | 155.08 |
| 20 -Permanent Operating Equipment | | | | | | | |
| 30 | Mobilization and Demobilization | 24743.4 | 0 | 0 | 24743.4 | g/hr | 0.40 |
| | | 340.986 | 0.02272 | 0 | 341.554 | g/hp-hr | 0.55 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 0.14 |
| | | 0 | 0 | 0 | 0 | g/hr | 0.00 |
| | | Mobilization and Demobilization Subtotal | | | | | 1.08 |
| 31 | Mechanical Hydraulic Cylinders & Housing | 340.986 | 0.02272 | 0 | 341.554 | g/hp-hr | 8.20 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 6.28 |
| | | chanical Hydraulic Cylinders & Housing Subtotal | | | | | 14.47 |
| 32 | CMU Building Mechanical Equipment | 340.986 | 0.02272 | 0 | 341.554 | g/hp-hr | 8.20 |
| | | 8716.75 | 0 | 0 | 8716.75 | g/hr | 6.28 |
| | | CMU Building Mechanical Equipment Subtotal | | | | | 14.47 |
| 33 | Electrical Control Equipment CMU Building | 8716.75 | 0 | 0 | 8716.75 | g/hr | 6.28 |
| | | ctrical Control Equipment CMU Building Subtotal | | | | | 6.28 |
| 34 | Electrical Power Equipment CMU Building | 8716.75 | 0 | 0 | 8716.75 | g/hr | 6.28 |
| | | ectrical Power Equipment CMU Building Subtotal | | | | | 6.28 |
| 35 | Communication Equipment | 8716.75 | 0 | 0 | 8716.75 | g/hr | 2.51 |
| | | ommunication Equipment Subtotal | | | | | 2.51 |
| | | 20 -Permanent Operating Equipment Total | | | | | 45.09 |
| GRAND TOTAL | | | | | | 3,336.08 | |

Construction Worker Commuting Exhaust Emissions Summary

Table K-146. Maximum Daily Construction Worker Commuting Emissions (Alternative 2)

| Phase | ROG lbs/day | NOx lbs/day | CO lbs/day | SO2 lbs/day | PM10 lbs/day | PM2.5 lbs/day |
|------------------------------------------------------|----------------|----------------|---------------|----------------|-----------------|------------------|
| 02 - Relocations | 0.02 | 0.10 | 1.03 | 0.00 | 0.46 | 0.12 |
| 09 - Channels and Canals | 0.23 | 1.14 | 11.49 | 0.04 | 5.13 | 1.38 |
| 15 - Floodway Control and Diversion Structures | 0.10 | 0.51 | 5.13 | 0.02 | 2.29 | 0.62 |
| 08 - Roads, Railroads, and Bridges | 0.03 | 0.13 | 1.33 | 0.01 | 0.60 | 0.16 |
| 19 - Buildings, Grounds, and Utilities | 0.04 | 0.19 | 1.95 | 0.01 | 0.87 | 0.23 |
| 20 -Permanent Operating Equipment | 0.04 | 0.20 | 2.05 | 0.01 | 0.92 | 0.25 |
| Peak Day Construction Exhaust Emissions Total | 0.32 | 1.58 | 15.90 | 0.06 | 7.10 | 1.91 |

Notes:

Construction total will not add to the sum of each phase because not all tasks overlap on the same day.

PM10 and PM2.5 emissions include exhaust, tire wear, brake wear, and paved road dust.

Table K-147. Annual Construction Worker Commuting Emissions (Alternative 2)

| Phase | ROG tpy | NOx tpy | CO tpy | SO2 tpy | PM10 tpy | PM2.5 tpy | CO2e MT/yr |
|----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|---------------|
| 02 - Relocations | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 2.96 |
| 09 - Channels and Canals | 0.01 | 0.03 | 0.35 | 0.00 | 0.16 | 0.04 | 123.54 |
| 15 - Floodway Control and Diversion Structures | 0.00 | 0.01 | 0.10 | 0.00 | 0.04 | 0.01 | 34.73 |
| 08 - Roads, Railroads, and Bridges | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 2.17 |
| 19 - Buildings, Grounds, and Utilities | 0.00 | 0.00 | 0.03 | 0.00 | 0.01 | 0.00 | 9.49 |
| 20 -Permanent Operating Equipment | 0.00 | 0.00 | 0.03 | 0.00 | 0.01 | 0.00 | 9.62 |
| Annual Construction Exhaust Emissions Total | 0.01 | 0.05 | 0.52 | 0.00 | 0.23 | 0.06 | 182.51 |

Notes:

Total may not add exactly because of rounding.

PM10 and PM2.5 emissions include exhaust, tire wear, brake wear, and paved road dust.

Table K-148. ROG Emissions from Construction Worker Commuting (Alternative 2)

| # | Activity | Estimated Duration, Days | Emission Factor (g/mi) | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------------|-------------------------------------------|--------------------------|------------------------|----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | 2 | 1.55E-02 | 0.0102 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2 | Fremont Weir Concrete Demo | 11 | 1.55E-02 | -- | 0.0205 | 0.0205 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3 | Levee O&M Road Regrading (6" AB) | 4 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 4 | Temporary Electrical Power | 4 | 1.55E-02 | 0.0061 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02 - Relocations Total | | | | 0.0164 | 0.0205 | 0.0205 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | 2 | 1.55E-02 | 0.1086 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 6 | Clearing and Grubbing | 18 | 1.55E-02 | -- | 0.0369 | 0.0369 | 0.0369 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 7 | Excavation (Wet Conditions) | 27 | 1.55E-02 | -- | -- | -- | -- | -- | 0.0820 | 0.0820 | 0.0820 | 0.0820 | 0.0820 | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8 | Excavation/Grading (Dry Conditions) | 36 | 1.55E-02 | -- | -- | -- | -- | 0.0492 | 0.0492 | 0.0492 | 0.0492 | 0.0492 | 0.0492 | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9 | Earthen Backfill | 2 | 1.55E-02 | -- | -- | -- | -- | -- | 0.0082 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10 | Riprap - Class 2 | 37 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.1148 | 0.1148 | 0.1148 | 0.1148 | 0.1148 | 0.1148 | 0.1148 | |
| 11 | Riprap - Class 3 | 2 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0574 | |
| 12 | RSP Bedding Material | 41 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.1148 | 0.1148 | 0.1148 | 0.1148 | 0.1148 | 0.1148 | 0.1148 | |
| 13 | Erosion Control Seeding | 7 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals Total | | | | 0.1086 | 0.0369 | 0.0369 | 0.0369 | 0.0492 | 0.0492 | 0.1393 | 0.1311 | 0.1311 | 0.1311 | 0.0820 | 0.1148 | 0.2295 | 0.2295 | 0.2295 | 0.2295 | 0.2295 | 0.2295 | 0.1721 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | 2 | 1.55E-02 | -- | -- | 0.1025 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 | Construction Site Dewatering (TemporaryCo | 18 | 1.55E-02 | -- | -- | -- | 0.0143 | 0.0143 | 0.0143 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 16 | Construction Site Dewatering (Pumping) | 120 | 1.55E-02 | -- | -- | -- | -- | -- | 0.0061 | 0.0061 | 0.0061 | 0.0061 | 0.0061 | 0.0061 | 0.0061 | 0.0061 | 0.0061 | 0.0061 | 0.0061 | 0.0061 | 0.0061 | |
| 17 | Excavation (Wet Conditions) | 4 | 1.55E-02 | -- | -- | -- | -- | -- | 0.0410 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 18 | Sheet Pile Wall | 7 | 1.55E-02 | -- | -- | -- | -- | -- | -- | 0.0143 | 0.0143 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 | Headworks Structure Concrete Piles | 32 | 1.55E-02 | -- | -- | -- | -- | -- | -- | 0.0266 | 0.0266 | 0.0266 | 0.0266 | 0.0266 | 0.0266 | 0.0266 | -- | -- | -- | -- | -- | |
| 20 | Headworks Structure | 18 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0553 | 0.0553 | -- | -- | -- | -- | 0.0553 | |
| 21 | Headworks Channel Transition | 10 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0328 | 0.0328 | -- | -- | -- | |
| 22 | Hinged Bottom Gates | 24 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 - Floodway Control and Diversion Structures Total | | | | -- | -- | 0.1025 | 0.0143 | 0.0143 | 0.0143 | 0.0471 | 0.0471 | 0.0471 | 0.0328 | 0.0328 | 0.0328 | 0.0881 | 0.0615 | 0.0389 | 0.0389 | 0.0061 | 0.0061 | 0.0615 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | 2 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0102 | -- | -- | -- | -- | |
| 24 | Pedestrian Bridge Concete Piles | 4 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0266 | -- | -- | -- | |
| 25 | Pedestrian Bridge Concrete Abutments and | 1 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0184 | -- | -- | |
| 26 | Pedestrian Bridge Span Installation | 7 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0143 | 0.0143 | |
| 08 - Roads, Railroads, and Bridges Total | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0102 | 0.0266 | 0.0184 | 0.0143 | 0.0143 | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | 2 | 1.55E-02 | 0.0184 | -- | -- | -- | -- | 0.0184 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 28 | CMU Building and Earthwork Pad Constructi | 30 | 1.55E-02 | -- | 0.0205 | 0.0205 | 0.0205 | 0.0205 | 0.0205 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 29 | Concrete Duct Bank | 23 | 1.55E-02 | -- | -- | -- | -- | 0.0184 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 - Buildings, Grounds, and Utilities Total | | | | 0.0184 | 0.0205 | 0.0205 | 0.0205 | 0.0389 | 0.0205 | 0.0184 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | 2 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 31 | Mechanical Hydraulic Cylinders & Housing | 30 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 32 | CMU Building Mechanical Equipment | 30 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | Electrical Control Equipment CMU Building | 30 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | Electrical Power Equipment CMU Building | 30 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 35 | Communication Equipment | 12 | 1.55E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment Total | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| GRAND TOTAL | | | | 0.1434 | 0.0779 | 0.1803 | 0.0717 | 0.1025 | 0.0840 | 0.2049 | 0.1783 | 0.1783 | 0.1639 | 0.1148 | 0.1475 | 0.3176 | 0.2910 | 0.2787 | 0.2951 | 0.2541 | 0.2500 | 0.2479 |

Table K-148. ROG Emissions from Co

| # | Activity | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions, tpy |
|-----------------------------------------------------|-------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------------|
| 02 - Relocations | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | 0.0102 | 0.0000 |
| 2 | Fremont Weir Concrete Demo | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | 0.0164 | -- | 0.0000 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0164 | 0.0102 | 0.0002 |
| 09 - Channels and Canals | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | 0.1086 | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0011 |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0009 |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 10 | Riprap - Class 2 | 0.1148 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0021 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0024 |
| 13 | Erosion Control Seeding | -- | -- | -- | 0.0082 | 0.0082 | -- | -- | -- | -- | 0.0000 |
| | 09 - Cha | 0.1148 | 0.1086 | -- | 0.0082 | 0.0082 | -- | -- | -- | -- | 0.0070 |
| 15 - Floodway Control and Diversion Structur | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.1025 | -- | 0.0001 |
| 15 | Construction Site Dewatering (TemporaryCo | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 16 | Construction Site Dewatering (Pumping) | 0.0061 | 0.0061 | 0.0061 | 0.0061 | 0.0061 | 0.0061 | 0.0061 | -- | -- | 0.0004 |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| 22 | Hinged Bottom Gates | -- | -- | -- | 0.0123 | 0.0123 | 0.0123 | 0.0123 | -- | -- | 0.0001 |
| | 15 - Floodway Control and Div | 0.0061 | 0.0061 | 0.0061 | 0.0184 | 0.0184 | 0.0184 | 0.0184 | 0.1025 | -- | 0.0020 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | 0.0102 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 24 | Pedestrian Bridge Concete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | 08 - Roads, Railro | 0.0102 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 28 | CMU Building and Earthwork Pad Constructi | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| 29 | Concrete Duct Bank | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | 19 - Buildings, Grou | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | 0.0041 | -- | -- | -- | -- | -- | 0.0041 | -- | 0.0000 |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | 0.0082 | 0.0082 | 0.0082 | 0.0082 | 0.0082 | -- | -- | 0.0001 |
| 32 | CMU Building Mechanical Equipment | -- | -- | 0.0082 | 0.0082 | 0.0082 | 0.0082 | 0.0082 | -- | -- | 0.0001 |
| 33 | Electrical Control Equipment CMU Building | -- | -- | 0.0082 | 0.0082 | 0.0082 | 0.0082 | 0.0082 | -- | -- | 0.0001 |
| 34 | Electrical Power Equipment CMU Building | -- | -- | 0.0082 | 0.0082 | 0.0082 | 0.0082 | 0.0082 | -- | -- | 0.0001 |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | 0.0082 | 0.0082 | -- | -- | 0.0000 |
| | 20 -Permanent Ope | -- | 0.0041 | 0.0328 | 0.0328 | 0.0328 | 0.0410 | 0.0410 | 0.0041 | -- | 0.0005 |
| GRAND TOTAL | | 0.1311 | 0.1189 | 0.0389 | 0.0594 | 0.0594 | 0.0594 | 0.0594 | 0.1229 | 0.0102 | 0.0103 |

Table K-149. NOx Emissions from Construction Worker Commuting (Alternative 2)

| # | Activity | Estimated Duration, Days | Emission Factor (g/mi) | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------------|-------------------------------------------|--------------------------|------------------------|----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | 2 | 7.71E-02 | 0.0510 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2 | Fremont Weir Concrete Demo | 11 | 7.71E-02 | -- | 0.1020 | 0.1020 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3 | Levee O&M Road Regrading (6" AB) | 4 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 4 | Temporary Electrical Power | 4 | 7.71E-02 | 0.0306 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02 - Relocations Total | | | | 0.0816 | 0.1020 | 0.1020 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | 2 | 7.71E-02 | 0.5407 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 6 | Clearing and Grubbing | 18 | 7.71E-02 | -- | 0.1836 | 0.1836 | 0.1836 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 7 | Excavation (Wet Conditions) | 27 | 7.71E-02 | -- | -- | -- | -- | -- | 0.4080 | 0.4080 | 0.4080 | 0.4080 | 0.4080 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8 | Excavation/Grading (Dry Conditions) | 36 | 7.71E-02 | -- | -- | -- | -- | 0.2448 | 0.2448 | 0.2448 | 0.2448 | 0.2448 | 0.2448 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9 | Earthen Backfill | 2 | 7.71E-02 | -- | -- | -- | -- | -- | 0.0408 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10 | Riprap - Class 2 | 37 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.5713 | 0.5713 | 0.5713 | 0.5713 | 0.5713 | 0.5713 | 0.5713 | 0.5713 | 0.5713 | |
| 11 | Riprap - Class 3 | 2 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.2856 | |
| 12 | RSP Bedding Material | 41 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.5713 | 0.5713 | 0.5713 | 0.5713 | 0.5713 | 0.5713 | 0.5713 | 0.5713 | -- | |
| 13 | Erosion Control Seeding | 7 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals Total | | | | 0.5407 | 0.1836 | 0.1836 | 0.1836 | 0.2448 | 0.2448 | 0.6937 | 0.6529 | 0.6529 | 0.6529 | 0.4080 | 0.5713 | 1.1425 | 1.1425 | 1.1425 | 1.1425 | 1.1425 | 1.1425 | 1.1425 | 0.8569 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | 2 | 7.71E-02 | -- | -- | 0.5101 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 | Construction Site Dewatering (TemporaryCo | 18 | 7.71E-02 | -- | -- | -- | 0.0714 | 0.0714 | 0.0714 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 16 | Construction Site Dewatering (Pumping) | 120 | 7.71E-02 | -- | -- | -- | -- | -- | 0.0306 | 0.0306 | 0.0306 | 0.0306 | 0.0306 | 0.0306 | 0.0306 | 0.0306 | 0.0306 | 0.0306 | 0.0306 | 0.0306 | 0.0306 | 0.0306 | |
| 17 | Excavation (Wet Conditions) | 4 | 7.71E-02 | -- | -- | -- | -- | -- | 0.2040 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 18 | Sheet Pile Wall | 7 | 7.71E-02 | -- | -- | -- | -- | -- | -- | 0.0714 | 0.0714 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 | Headworks Structure Concrete Piles | 32 | 7.71E-02 | -- | -- | -- | -- | -- | -- | 0.1326 | 0.1326 | 0.1326 | 0.1326 | 0.1326 | 0.1326 | -- | -- | -- | -- | -- | -- | -- | |
| 20 | Headworks Structure | 18 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.2754 | 0.2754 | -- | -- | -- | -- | -- | -- | 0.2754 | |
| 21 | Headworks Channel Transition | 10 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.1632 | 0.1632 | -- | -- | -- | -- | -- | |
| 22 | Hinged Bottom Gates | 24 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 - Floodway Control and Diversion Structures Total | | | | -- | -- | 0.5101 | 0.0714 | 0.0714 | 0.0714 | 0.2346 | 0.2346 | 0.2346 | 0.1632 | 0.1632 | 0.1632 | 0.4387 | 0.3060 | 0.1938 | 0.1938 | 0.0306 | 0.0306 | 0.3060 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | 2 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0510 | -- | -- | -- | -- | -- | -- | |
| 24 | Pedestrian Bridge Concrete Piles | 4 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.1326 | -- | -- | -- | -- | -- | |
| 25 | Pedestrian Bridge Concrete Abutments and | 1 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0918 | -- | -- | -- | -- | |
| 26 | Pedestrian Bridge Span Installation | 7 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0714 | -- | 0.0714 | 0.0714 | |
| 08 - Roads, Railroads, and Bridges Total | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0510 | 0.1326 | 0.0918 | 0.0714 | 0.0714 | 0.0714 | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | 2 | 7.71E-02 | 0.0918 | -- | -- | -- | -- | 0.0918 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 28 | CMU Building and Earthwork Pad Constructi | 30 | 7.71E-02 | -- | 0.1020 | 0.1020 | 0.1020 | 0.1020 | 0.1020 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 29 | Concrete Duct Bank | 23 | 7.71E-02 | -- | -- | -- | -- | 0.0918 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 - Buildings, Grounds, and Utilities Total | | | | 0.0918 | 0.1020 | 0.1020 | 0.1020 | 0.1938 | 0.1020 | 0.0918 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | 2 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 31 | Mechanical Hydraulic Cylinders & Housing | 30 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 32 | CMU Building Mechanical Equipment | 30 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | Electrical Control Equipment CMU Building | 30 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | Electrical Power Equipment CMU Building | 30 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 35 | Communication Equipment | 12 | 7.71E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment Total | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| GRAND TOTAL | | | | 0.7141 | 0.3876 | 0.8977 | 0.3570 | 0.5101 | 0.4183 | 1.0201 | 0.8875 | 0.8875 | 0.8161 | 0.5713 | 0.7345 | 1.5812 | 1.4486 | 1.3874 | 1.4690 | 1.2650 | 1.2445 | 1.2343 | |

Table K-149. NOx Emissions from Co

| # | Activity | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions, tpy |
|------------------------------------------------------|--------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------------|
| 02 - Relocations | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | 0.0510 | 0.0001 |
| 2 | Fremont Weir Concrete Demo | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | 0.0816 | -- | 0.0002 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0816 | 0.0510 | 0.0008 |
| 09 - Channels and Canals | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | 0.5407 | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0017 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0055 |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0044 |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 10 | Riprap - Class 2 | 0.5713 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0106 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0117 |
| 13 | Erosion Control Seeding | -- | -- | -- | 0.0408 | 0.0408 | -- | -- | -- | -- | 0.0001 |
| | 09 - Cha | 0.5713 | 0.5407 | -- | 0.0408 | 0.0408 | -- | -- | -- | -- | 0.0349 |
| 15 - Floodway Control and Diversion Structure | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.5101 | -- | 0.0005 |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| 16 | Construction Site Dewatering (Pumping) | 0.0306 | 0.0306 | 0.0306 | 0.0306 | 0.0306 | 0.0306 | 0.0306 | -- | -- | 0.0018 |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0021 |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0025 |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| 22 | Hinged Bottom Gates | -- | -- | -- | 0.0612 | 0.0612 | 0.0612 | 0.0612 | -- | -- | 0.0007 |
| | 15 - Floodway Control and Div | 0.0306 | 0.0306 | 0.0306 | 0.0918 | 0.0918 | 0.0918 | 0.0918 | 0.5101 | -- | 0.0098 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | 0.0510 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | 08 - Roads, Railro | 0.0510 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 28 | CMU Building and Earthwork Pad Constructi | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0015 |
| 29 | Concrete Duct Bank | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0011 |
| | 19 - Buildings, Grou | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0027 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | 0.0204 | -- | -- | -- | -- | -- | 0.0204 | -- | 0.0000 |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | 0.0408 | 0.0408 | 0.0408 | 0.0408 | 0.0408 | -- | -- | 0.0006 |
| 32 | CMU Building Mechanical Equipment | -- | -- | 0.0408 | 0.0408 | 0.0408 | 0.0408 | 0.0408 | -- | -- | 0.0006 |
| 33 | Electrical Control Equipment CMU Building | -- | -- | 0.0408 | 0.0408 | 0.0408 | 0.0408 | 0.0408 | -- | -- | 0.0006 |
| 34 | Electrical Power Equipment CMU Building | -- | -- | 0.0408 | 0.0408 | 0.0408 | 0.0408 | 0.0408 | -- | -- | 0.0006 |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | 0.0408 | 0.0408 | -- | -- | 0.0002 |
| | 20 -Permanent Ope | -- | 0.0204 | 0.1632 | 0.1632 | 0.1632 | 0.2040 | 0.2040 | 0.0204 | -- | 0.0027 |
| GRAND TOTAL | | 0.6529 | 0.5917 | 0.1938 | 0.2958 | 0.2958 | 0.2958 | 0.2958 | 0.6121 | 0.0510 | 0.0515 |

Table K-150. CO Emissions from Construction Worker Commuting (Alternative 2)

| # | Activity | Estimated Duration, Days | Emission Factor (g/mi) | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------------|--------------------------------------------|--------------------------|------------------------|----------------------------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | 2 | 7.76E-01 | 0.5129 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2 | Fremont Weir Concrete Demo | 11 | 7.76E-01 | -- | 1.0259 | 1.0259 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3 | Levee O&M Road Regrading (6" AB) | 4 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 4 | Temporary Electrical Power | 4 | 7.76E-01 | 0.3078 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02 - Relocations Total | | | | 0.8207 | 1.0259 | 1.0259 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | 2 | 7.76E-01 | 5.4371 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 6 | Clearing and Grubbing | 18 | 7.76E-01 | -- | 1.8465 | 1.8465 | 1.8465 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 7 | Excavation (Wet Conditions) | 27 | 7.76E-01 | -- | -- | -- | -- | -- | 4.1034 | 4.1034 | 4.1034 | 4.1034 | 4.1034 | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8 | Excavation/Grading (Dry Conditions) | 36 | 7.76E-01 | -- | -- | -- | -- | 2.4621 | 2.4621 | 2.4621 | 2.4621 | 2.4621 | 2.4621 | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9 | Earthen Backfill | 2 | 7.76E-01 | -- | -- | -- | -- | -- | 0.4103 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10 | Riprap - Class 2 | 37 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.7448 | 5.7448 | 5.7448 | 5.7448 | 5.7448 | 5.7448 | 5.7448 | |
| 11 | Riprap - Class 3 | 2 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.8724 | |
| 12 | RSP Bedding Material | 41 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.7448 | 5.7448 | 5.7448 | 5.7448 | 5.7448 | 5.7448 | 5.7448 | |
| 13 | Erosion Control Seeding | 7 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals Total | | | | 5.4371 | 1.8465 | 1.8465 | 1.8465 | 2.4621 | 2.4621 | 6.9758 | 6.5655 | 6.5655 | 6.5655 | 4.1034 | 5.7448 | 11.4896 | 11.4896 | 11.4896 | 11.4896 | 11.4896 | 11.4896 | 8.6172 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | 2 | 7.76E-01 | -- | -- | 5.1293 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 | Construction Site Dewatering (TemporaryCo) | 18 | 7.76E-01 | -- | -- | -- | 0.7181 | 0.7181 | 0.7181 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 16 | Construction Site Dewatering (Pumping) | 120 | 7.76E-01 | -- | -- | -- | -- | -- | 0.3078 | 0.3078 | 0.3078 | 0.3078 | 0.3078 | 0.3078 | 0.3078 | 0.3078 | 0.3078 | 0.3078 | 0.3078 | 0.3078 | 0.3078 | |
| 17 | Excavation (Wet Conditions) | 4 | 7.76E-01 | -- | -- | -- | -- | -- | 2.0517 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 18 | Sheet Pile Wall | 7 | 7.76E-01 | -- | -- | -- | -- | -- | -- | 0.7181 | 0.7181 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 | Headworks Structure Concrete Piles | 32 | 7.76E-01 | -- | -- | -- | -- | -- | -- | 1.3336 | 1.3336 | 1.3336 | 1.3336 | 1.3336 | 1.3336 | -- | -- | -- | -- | -- | -- | |
| 20 | Headworks Structure | 18 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.7698 | 2.7698 | -- | -- | -- | -- | 2.7698 | |
| 21 | Headworks Channel Transition | 10 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.6414 | 1.6414 | -- | -- | -- | |
| 22 | Hinged Bottom Gates | 24 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 - Floodway Control and Diversion Structures Total | | | | -- | -- | 5.1293 | 0.7181 | 0.7181 | 0.7181 | 2.3595 | 2.3595 | 2.3595 | 1.6414 | 1.6414 | 1.6414 | 4.4112 | 3.0776 | 1.9491 | 1.9491 | 0.3078 | 0.3078 | 3.0776 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | 2 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.5129 | -- | -- | -- | -- | |
| 24 | Pedestrian Bridge Concrete Piles | 4 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.3336 | -- | -- | -- | |
| 25 | Pedestrian Bridge Concrete Abutments and | 1 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.9233 | -- | -- | |
| 26 | Pedestrian Bridge Span Installation | 7 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.7181 | 0.7181 | |
| 08 - Roads, Railroads, and Bridges Total | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.5129 | 1.3336 | 0.9233 | 0.7181 | 0.7181 | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | 2 | 7.76E-01 | 0.9233 | -- | -- | -- | -- | 0.9233 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 28 | CMU Building and Earthwork Pad Constructi | 30 | 7.76E-01 | -- | 1.0259 | 1.0259 | 1.0259 | 1.0259 | 1.0259 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 29 | Concrete Duct Bank | 23 | 7.76E-01 | -- | -- | -- | -- | 0.9233 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 - Buildings, Grounds, and Utilities Total | | | | 0.9233 | 1.0259 | 1.0259 | 1.0259 | 1.9491 | 1.0259 | 0.9233 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | 2 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 31 | Mechanical Hydraulic Cylinders & Housing | 30 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 32 | CMU Building Mechanical Equipment | 30 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | Electrical Control Equipment CMU Building | 30 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | Electrical Power Equipment CMU Building | 30 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 35 | Communication Equipment | 12 | 7.76E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment Total | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| GRAND TOTAL | | | | 7.1810 | 3.8983 | 9.0276 | 3.5905 | 5.1293 | 4.2060 | 10.2586 | 8.9250 | 8.9250 | 8.2069 | 5.7448 | 7.3862 | 15.9008 | 14.5672 | 13.9517 | 14.7724 | 12.7206 | 12.5155 | 12.4129 |

Table K-150. CO Emissions from Con

| # | Activity | | | | | | | | | | Annual Emissions, tpy | |
|------------------------------------------------------|--------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------------|---------------|
| | | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | | |
| 02 - Relocations | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | 0.5129 | -- | 0.0005 |
| 2 | Fremont Weir Concrete Demo | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0056 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | 0.8207 | -- | -- | 0.0016 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.8207 | 0.5129 | -- | 0.0084 |
| 09 - Channels and Canals | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | 5.4371 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0054 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0166 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0554 |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0443 |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| 10 | Riprap - Class 2 | 5.7448 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.1063 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0029 |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.1178 |
| 13 | Erosion Control Seeding | -- | -- | -- | 0.4103 | 0.4103 | -- | -- | -- | -- | -- | 0.0014 |
| | 09 - Cha | 5.7448 | 5.4371 | -- | 0.4103 | 0.4103 | -- | -- | -- | -- | -- | 0.3505 |
| 15 - Floodway Control and Diversion Structure | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 5.1293 | -- | -- | 0.0051 |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0065 |
| 16 | Construction Site Dewatering (Pumping) | 0.3078 | 0.3078 | 0.3078 | 0.3078 | 0.3078 | 0.3078 | 0.3078 | -- | -- | -- | 0.0185 |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0041 |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0025 |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0213 |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0249 |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0082 |
| 22 | Hinged Bottom Gates | -- | -- | -- | 0.6155 | 0.6155 | 0.6155 | 0.6155 | -- | -- | -- | 0.0074 |
| | 15 - Floodway Control and Div | 0.3078 | 0.3078 | 0.3078 | 0.9233 | 0.9233 | 0.9233 | 0.9233 | 5.1293 | -- | -- | 0.0985 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | 0.5129 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0027 |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0025 |
| | 08 - Roads, Railro | 0.5129 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0062 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0009 |
| 28 | CMU Building and Earthwork Pad Constructi | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0154 |
| 29 | Concrete Duct Bank | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0106 |
| | 19 - Buildings, Grou | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0269 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | 0.2052 | -- | -- | -- | -- | -- | 0.2052 | -- | -- | 0.0002 |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | 0.4103 | 0.4103 | 0.4103 | 0.4103 | 0.4103 | -- | -- | -- | 0.0062 |
| 32 | CMU Building Mechanical Equipment | -- | -- | 0.4103 | 0.4103 | 0.4103 | 0.4103 | 0.4103 | -- | -- | -- | 0.0062 |
| 33 | Electrical Control Equipment CMU Building | -- | -- | 0.4103 | 0.4103 | 0.4103 | 0.4103 | 0.4103 | -- | -- | -- | 0.0062 |
| 34 | Electrical Power Equipment CMU Building | -- | -- | 0.4103 | 0.4103 | 0.4103 | 0.4103 | 0.4103 | -- | -- | -- | 0.0062 |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | 0.4103 | 0.4103 | -- | -- | -- | 0.0025 |
| | 20 -Permanent Ope | -- | 0.2052 | 1.6414 | 1.6414 | 1.6414 | 2.0517 | 2.0517 | 0.2052 | -- | -- | 0.0273 |
| GRAND TOTAL | | 6.5655 | 5.9500 | 1.9491 | 2.9750 | 2.9750 | 2.9750 | 2.9750 | 6.1552 | 0.5129 | -- | 0.5179 |

Table K-151. SOx Emissions from Construction Worker Commuting (Alternative 2)

| # | Activity | Estimated Duration, Days | Emission Factor (g/mi) | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------------|-------------------------------------------|--------------------------|------------------------|----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | 2 | 3.02E-03 | 0.0020 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2 | Fremont Weir Concrete Demo | 11 | 3.02E-03 | -- | 0.0040 | 0.0040 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3 | Levee O&M Road Regrading (6" AB) | 4 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 4 | Temporary Electrical Power | 4 | 3.02E-03 | 0.0012 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02 - Relocations Total | | | | 0.0032 | 0.0040 | 0.0040 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | 2 | 3.02E-03 | 0.0212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 6 | Clearing and Grubbing | 18 | 3.02E-03 | -- | 0.0072 | 0.0072 | 0.0072 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 7 | Excavation (Wet Conditions) | 27 | 3.02E-03 | -- | -- | -- | -- | -- | 0.0160 | 0.0160 | 0.0160 | 0.0160 | 0.0160 | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8 | Excavation/Grading (Dry Conditions) | 36 | 3.02E-03 | -- | -- | -- | -- | 0.0096 | 0.0096 | 0.0096 | 0.0096 | 0.0096 | 0.0096 | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9 | Earthen Backfill | 2 | 3.02E-03 | -- | -- | -- | -- | -- | 0.0016 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10 | Riprap - Class 2 | 37 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0224 | 0.0224 | 0.0224 | 0.0224 | 0.0224 | 0.0224 | 0.0224 | |
| 11 | Riprap - Class 3 | 2 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0112 | |
| 12 | RSP Bedding Material | 41 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0224 | 0.0224 | 0.0224 | 0.0224 | 0.0224 | 0.0224 | 0.0224 | 0.0224 | |
| 13 | Erosion Control Seeding | 7 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals Total | | | | 0.0212 | 0.0072 | 0.0072 | 0.0072 | 0.0096 | 0.0096 | 0.0272 | 0.0256 | 0.0256 | 0.0256 | 0.0160 | 0.0224 | 0.0447 | 0.0447 | 0.0447 | 0.0447 | 0.0447 | 0.0447 | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | 2 | 3.02E-03 | -- | -- | 0.0200 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 | Construction Site Dewatering (TemporaryCo | 18 | 3.02E-03 | -- | -- | -- | 0.0028 | 0.0028 | 0.0028 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 16 | Construction Site Dewatering (Pumping) | 120 | 3.02E-03 | -- | -- | -- | -- | -- | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | |
| 17 | Excavation (Wet Conditions) | 4 | 3.02E-03 | -- | -- | -- | -- | -- | 0.0080 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 18 | Sheet Pile Wall | 7 | 3.02E-03 | -- | -- | -- | -- | -- | -- | 0.0028 | 0.0028 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 | Headworks Structure Concrete Piles | 32 | 3.02E-03 | -- | -- | -- | -- | -- | -- | 0.0052 | 0.0052 | 0.0052 | 0.0052 | 0.0052 | 0.0052 | -- | -- | -- | -- | -- | -- | |
| 20 | Headworks Structure | 18 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0108 | 0.0108 | -- | -- | -- | -- | 0.0108 | |
| 21 | Headworks Channel Transition | 10 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0064 | 0.0064 | -- | -- | -- | -- | |
| 22 | Hinged Bottom Gates | 24 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 - Floodway Control and Diversion Structures Total | | | | -- | -- | 0.0200 | 0.0028 | 0.0028 | 0.0028 | 0.0092 | 0.0092 | 0.0092 | 0.0064 | 0.0064 | 0.0064 | 0.0172 | 0.0120 | 0.0076 | 0.0076 | 0.0012 | 0.0012 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | 2 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0020 | -- | -- | -- | -- | |
| 24 | Pedestrian Bridge Concrete Piles | 4 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0052 | -- | -- | -- | |
| 25 | Pedestrian Bridge Concrete Abutments and | 1 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0036 | -- | -- | |
| 26 | Pedestrian Bridge Span Installation | 7 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0028 | 0.0028 | |
| 08 - Roads, Railroads, and Bridges Total | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0020 | 0.0052 | 0.0036 | 0.0028 | 0.0028 | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | 2 | 3.02E-03 | 0.0036 | -- | -- | -- | -- | 0.0036 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 28 | CMU Building and Earthwork Pad Constructi | 30 | 3.02E-03 | -- | 0.0040 | 0.0040 | 0.0040 | 0.0040 | 0.0040 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 29 | Concrete Duct Bank | 23 | 3.02E-03 | -- | -- | -- | -- | 0.0036 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 - Buildings, Grounds, and Utilities Total | | | | 0.0036 | 0.0040 | 0.0040 | 0.0040 | 0.0076 | 0.0040 | 0.0036 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | 2 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 31 | Mechanical Hydraulic Cylinders & Housing | 30 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 32 | CMU Building Mechanical Equipment | 30 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | Electrical Control Equipment CMU Building | 30 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | Electrical Power Equipment CMU Building | 30 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 35 | Communication Equipment | 12 | 3.02E-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment Total | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| GRAND TOTAL | | | | 0.0280 | 0.0152 | 0.0351 | 0.0140 | 0.0200 | 0.0164 | 0.0399 | 0.0347 | 0.0347 | 0.0319 | 0.0224 | 0.0288 | 0.0619 | 0.0567 | 0.0543 | 0.0575 | 0.0495 | 0.0487 | 0.0483 |

Table K-151. SOx Emissions from Co

| # | Activity | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions, tpy |
|------------------------------------------------------|--------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------------|
| 02 - Relocations | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | 0.0020 | 0.0000 |
| 2 | Fremont Weir Concrete Demo | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | 0.0032 | -- | 0.0000 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0032 | 0.0020 | 0.0000 |
| 09 - Channels and Canals | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | 0.0212 | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 10 | Riprap - Class 2 | 0.0224 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| 13 | Erosion Control Seeding | -- | -- | -- | 0.0016 | 0.0016 | -- | -- | -- | -- | 0.0000 |
| | 09 - Cha | 0.0224 | 0.0212 | -- | 0.0016 | 0.0016 | -- | -- | -- | -- | 0.0014 |
| 15 - Floodway Control and Diversion Structure | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.0200 | -- | 0.0000 |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 16 | Construction Site Dewatering (Pumping) | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | -- | -- | 0.0001 |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 22 | Hinged Bottom Gates | -- | -- | -- | 0.0024 | 0.0024 | 0.0024 | 0.0024 | -- | -- | 0.0000 |
| | 15 - Floodway Control and Div | 0.0012 | 0.0012 | 0.0012 | 0.0036 | 0.0036 | 0.0036 | 0.0036 | 0.0200 | -- | 0.0004 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | 0.0020 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | 08 - Roads, Railro | 0.0020 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 28 | CMU Building and Earthwork Pad Constructi | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 29 | Concrete Duct Bank | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| | 19 - Buildings, Grou | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | 0.0008 | -- | -- | -- | -- | -- | 0.0008 | -- | 0.0000 |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | 0.0016 | 0.0016 | 0.0016 | 0.0016 | 0.0016 | -- | -- | 0.0000 |
| 32 | CMU Building Mechanical Equipment | -- | -- | 0.0016 | 0.0016 | 0.0016 | 0.0016 | 0.0016 | -- | -- | 0.0000 |
| 33 | Electrical Control Equipment CMU Building | -- | -- | 0.0016 | 0.0016 | 0.0016 | 0.0016 | 0.0016 | -- | -- | 0.0000 |
| 34 | Electrical Power Equipment CMU Building | -- | -- | 0.0016 | 0.0016 | 0.0016 | 0.0016 | 0.0016 | -- | -- | 0.0000 |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | 0.0016 | 0.0016 | -- | -- | 0.0000 |
| | 20 -Permanent Ope | -- | 0.0008 | 0.0064 | 0.0064 | 0.0064 | 0.0080 | 0.0080 | 0.0008 | -- | 0.0001 |
| GRAND TOTAL | | 0.0256 | 0.0232 | 0.0076 | 0.0116 | 0.0116 | 0.0116 | 0.0116 | 0.0240 | 0.0020 | 0.0020 |

Table K-152. PM10 Emissions from Construction Worker Commuting (Alternative 2)

| # | Activity | Estimated Duration, Days | Emission Factor (g/mi) | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------------|-------------------------------------------|--------------------------|------------------------|----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | 2 | 3.47E-01 | 0.2292 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2 | Fremont Weir Concrete Demo | 11 | 3.47E-01 | -- | 0.4583 | 0.4583 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3 | Levee O&M Road Regrading (6" AB) | 4 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 4 | Temporary Electrical Power | 4 | 3.47E-01 | 0.1375 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02 - Relocations Total | | | | 0.3667 | 0.4583 | 0.4583 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | 2 | 3.47E-01 | 2.4292 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 6 | Clearing and Grubbing | 18 | 3.47E-01 | -- | 0.8250 | 0.8250 | 0.8250 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 7 | Excavation (Wet Conditions) | 27 | 3.47E-01 | -- | -- | -- | -- | -- | 1.8334 | 1.8334 | 1.8334 | 1.8334 | 1.8334 | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8 | Excavation/Grading (Dry Conditions) | 36 | 3.47E-01 | -- | -- | -- | -- | 1.1000 | 1.1000 | 1.1000 | 1.1000 | 1.1000 | 1.1000 | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9 | Earthen Backfill | 2 | 3.47E-01 | -- | -- | -- | -- | -- | 0.1833 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10 | Riprap - Class 2 | 37 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.5667 | 2.5667 | 2.5667 | 2.5667 | 2.5667 | 2.5667 | 2.5667 | |
| 11 | Riprap - Class 3 | 2 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.2834 | |
| 12 | RSP Bedding Material | 41 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.5667 | 2.5667 | 2.5667 | 2.5667 | 2.5667 | 2.5667 | 2.5667 | |
| 13 | Erosion Control Seeding | 7 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals Total | | | | 2.4292 | 0.8250 | 0.8250 | 0.8250 | 1.1000 | 1.1000 | 3.1167 | 2.9334 | 2.9334 | 2.9334 | 1.8334 | 2.5667 | 5.1334 | 5.1334 | 5.1334 | 5.1334 | 5.1334 | 5.1334 | 3.8501 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | 2 | 3.47E-01 | -- | -- | 2.2917 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 | Construction Site Dewatering (TemporaryCo | 18 | 3.47E-01 | -- | -- | -- | 0.3208 | 0.3208 | 0.3208 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 16 | Construction Site Dewatering (Pumping) | 120 | 3.47E-01 | -- | -- | -- | -- | -- | 0.1375 | 0.1375 | 0.1375 | 0.1375 | 0.1375 | 0.1375 | 0.1375 | 0.1375 | 0.1375 | 0.1375 | 0.1375 | 0.1375 | 0.1375 | |
| 17 | Excavation (Wet Conditions) | 4 | 3.47E-01 | -- | -- | -- | -- | -- | 0.9167 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 18 | Sheet Pile Wall | 7 | 3.47E-01 | -- | -- | -- | -- | -- | -- | 0.3208 | 0.3208 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 | Headworks Structure Concrete Piles | 32 | 3.47E-01 | -- | -- | -- | -- | -- | -- | 0.5958 | 0.5958 | 0.5958 | 0.5958 | 0.5958 | 0.5958 | -- | -- | -- | -- | -- | -- | |
| 20 | Headworks Structure | 18 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.2375 | 1.2375 | -- | -- | -- | -- | 1.2375 | |
| 21 | Headworks Channel Transition | 10 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.7333 | 0.7333 | -- | -- | -- | |
| 22 | Hinged Bottom Gates | 24 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 - Floodway Control and Diversion Structures Total | | | | -- | -- | 2.2917 | 0.3208 | 0.3208 | 0.3208 | 1.0542 | 1.0542 | 1.0542 | 0.7333 | 0.7333 | 0.7333 | 1.9709 | 1.3750 | 0.8708 | 0.8708 | 0.1375 | 0.1375 | 1.3750 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | 2 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.2292 | -- | -- | -- | -- | |
| 24 | Pedestrian Bridge Concrete Piles | 4 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.5958 | -- | -- | -- | |
| 25 | Pedestrian Bridge Concrete Abutments and | 1 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.4125 | -- | -- | |
| 26 | Pedestrian Bridge Span Installation | 7 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.3208 | 0.3208 | |
| 08 - Roads, Railroads, and Bridges Total | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.2292 | 0.5958 | 0.4125 | 0.3208 | 0.3208 | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | 2 | 3.47E-01 | 0.4125 | -- | -- | -- | -- | 0.4125 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 28 | CMU Building and Earthwork Pad Constructi | 30 | 3.47E-01 | -- | 0.4583 | 0.4583 | 0.4583 | 0.4583 | 0.4583 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 29 | Concrete Duct Bank | 23 | 3.47E-01 | -- | -- | -- | -- | 0.4125 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 - Buildings, Grounds, and Utilities Total | | | | 0.4125 | 0.4583 | 0.4583 | 0.4583 | 0.8708 | 0.4583 | 0.4125 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | 2 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 31 | Mechanical Hydraulic Cylinders & Housing | 30 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 32 | CMU Building Mechanical Equipment | 30 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | Electrical Control Equipment CMU Building | 30 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | Electrical Power Equipment CMU Building | 30 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 35 | Communication Equipment | 12 | 3.47E-01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment Total | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| GRAND TOTAL | | | | 3.2084 | 1.7417 | 4.0334 | 1.6042 | 2.2917 | 1.8792 | 4.5834 | 3.9876 | 3.9876 | 3.6667 | 2.5667 | 3.3000 | 7.1043 | 6.5084 | 6.2334 | 6.6001 | 5.6834 | 5.5917 | 5.5459 |

Table K-152. PM10 Emissions from C

| # | Activity | | | | | | | | | | Annual Emissions, tpy | |
|------------------------------------------------------|--------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------------|---------------|
| | | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | | |
| 02 - Relocations | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | 0.2292 | -- | 0.0002 |
| 2 | Fremont Weir Concrete Demo | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0025 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | 0.3667 | -- | -- | 0.0007 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.3667 | 0.2292 | -- | 0.0038 |
| 09 - Channels and Canals | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | 2.4292 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0024 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0074 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0248 |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0198 |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| 10 | Riprap - Class 2 | 2.5667 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0475 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0526 |
| 13 | Erosion Control Seeding | -- | -- | -- | 0.1833 | 0.1833 | -- | -- | -- | -- | -- | 0.0006 |
| | 09 - Cha | 2.5667 | 2.4292 | -- | 0.1833 | 0.1833 | -- | -- | -- | -- | -- | 0.1566 |
| 15 - Floodway Control and Diversion Structure | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 2.2917 | -- | -- | 0.0023 |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0029 |
| 16 | Construction Site Dewatering (Pumping) | 0.1375 | 0.1375 | 0.1375 | 0.1375 | 0.1375 | 0.1375 | 0.1375 | -- | -- | -- | 0.0083 |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0018 |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0011 |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0095 |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0111 |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0037 |
| 22 | Hinged Bottom Gates | -- | -- | -- | 0.2750 | 0.2750 | 0.2750 | 0.2750 | -- | -- | -- | 0.0033 |
| | 15 - Floodway Control and Div | 0.1375 | 0.1375 | 0.1375 | 0.4125 | 0.4125 | 0.4125 | 0.4125 | 2.2917 | -- | -- | 0.0440 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | 0.2292 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0012 |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0011 |
| | 08 - Roads, Railro | 0.2292 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0028 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| 28 | CMU Building and Earthwork Pad Constructi | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0069 |
| 29 | Concrete Duct Bank | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0047 |
| | 19 - Buildings, Grou | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0120 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | 0.0917 | -- | -- | -- | -- | -- | 0.0917 | -- | -- | 0.0001 |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | 0.1833 | 0.1833 | 0.1833 | 0.1833 | 0.1833 | -- | -- | -- | 0.0028 |
| 32 | CMU Building Mechanical Equipment | -- | -- | 0.1833 | 0.1833 | 0.1833 | 0.1833 | 0.1833 | -- | -- | -- | 0.0028 |
| 33 | Electrical Control Equipment CMU Building | -- | -- | 0.1833 | 0.1833 | 0.1833 | 0.1833 | 0.1833 | -- | -- | -- | 0.0028 |
| 34 | Electrical Power Equipment CMU Building | -- | -- | 0.1833 | 0.1833 | 0.1833 | 0.1833 | 0.1833 | -- | -- | -- | 0.0028 |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | 0.1833 | 0.1833 | -- | -- | -- | 0.0011 |
| | 20 -Permanent Ope | -- | 0.0917 | 0.7333 | 0.7333 | 0.7333 | 0.9167 | 0.9167 | 0.0917 | -- | -- | 0.0122 |
| GRAND TOTAL | | 2.9334 | 2.6584 | 0.8708 | 1.3292 | 1.3292 | 1.3292 | 1.3292 | 2.7500 | 0.2292 | -- | 0.2314 |

Table K-153. PM2.5 Emissions from Construction Worker Commuting (Alternative 2)

| # | Activity | Estimated Duration, Days | Emission Factor (g/mi) | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------------|-------------------------------------------|--------------------------|------------------------|----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | 2 | 9.31E-02 | 0.0616 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2 | Fremont Weir Concrete Demo | 11 | 9.31E-02 | -- | 0.1232 | 0.1232 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3 | Levee O&M Road Regrading (6" AB) | 4 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 4 | Temporary Electrical Power | 4 | 9.31E-02 | 0.0369 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02 - Relocations Total | | | | 0.0985 | 0.1232 | 0.1232 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | 2 | 9.31E-02 | 0.6527 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 6 | Clearing and Grubbing | 18 | 9.31E-02 | -- | 0.2217 | 0.2217 | 0.2217 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 7 | Excavation (Wet Conditions) | 27 | 9.31E-02 | -- | -- | -- | -- | -- | 0.4926 | 0.4926 | 0.4926 | 0.4926 | 0.4926 | -- | -- | -- | -- | -- | -- | -- | -- | |
| 8 | Excavation/Grading (Dry Conditions) | 36 | 9.31E-02 | -- | -- | -- | -- | 0.2956 | 0.2956 | 0.2956 | 0.2956 | 0.2956 | 0.2956 | -- | -- | -- | -- | -- | -- | -- | -- | |
| 9 | Earthen Backfill | 2 | 9.31E-02 | -- | -- | -- | -- | -- | 0.0493 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10 | Riprap - Class 2 | 37 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.6897 | 0.6897 | 0.6897 | 0.6897 | 0.6897 | 0.6897 | 0.6897 | |
| 11 | Riprap - Class 3 | 2 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.3448 | |
| 12 | RSP Bedding Material | 41 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.6897 | 0.6897 | 0.6897 | 0.6897 | 0.6897 | 0.6897 | 0.6897 | 0.6897 | |
| 13 | Erosion Control Seeding | 7 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals Total | | | | 0.6527 | 0.2217 | 0.2217 | 0.2217 | 0.2956 | 0.2956 | 0.8375 | 0.7882 | 0.7882 | 0.7882 | 0.4926 | 0.6897 | 1.3793 | 1.3793 | 1.3793 | 1.3793 | 1.3793 | 1.3793 | 1.0345 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | 2 | 9.31E-02 | -- | -- | 0.6158 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 | Construction Site Dewatering (TemporaryCo | 18 | 9.31E-02 | -- | -- | -- | 0.0862 | 0.0862 | 0.0862 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 16 | Construction Site Dewatering (Pumping) | 120 | 9.31E-02 | -- | -- | -- | -- | -- | 0.0369 | 0.0369 | 0.0369 | 0.0369 | 0.0369 | 0.0369 | 0.0369 | 0.0369 | 0.0369 | 0.0369 | 0.0369 | 0.0369 | 0.0369 | |
| 17 | Excavation (Wet Conditions) | 4 | 9.31E-02 | -- | -- | -- | -- | -- | 0.2463 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 18 | Sheet Pile Wall | 7 | 9.31E-02 | -- | -- | -- | -- | -- | -- | 0.0862 | 0.0862 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 | Headworks Structure Concrete Piles | 32 | 9.31E-02 | -- | -- | -- | -- | -- | -- | 0.1601 | 0.1601 | 0.1601 | 0.1601 | 0.1601 | 0.1601 | -- | -- | -- | -- | -- | -- | |
| 20 | Headworks Structure | 18 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.3325 | 0.3325 | -- | -- | -- | -- | 0.3325 | |
| 21 | Headworks Channel Transition | 10 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.1970 | 0.1970 | -- | -- | -- | |
| 22 | Hinged Bottom Gates | 24 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 - Floodway Control and Diversion Structures Total | | | | -- | -- | 0.6158 | 0.0862 | 0.0862 | 0.0862 | 0.2833 | 0.2833 | 0.2833 | 0.1970 | 0.1970 | 0.1970 | 0.5296 | 0.3695 | 0.2340 | 0.2340 | 0.0369 | 0.0369 | 0.3695 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | 2 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0616 | -- | -- | -- | -- | |
| 24 | Pedestrian Bridge Concete Piles | 4 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.1601 | -- | -- | -- | |
| 25 | Pedestrian Bridge Concrete Abutments and | 1 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.1108 | -- | -- | |
| 26 | Pedestrian Bridge Span Installation | 7 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0862 | 0.0862 | |
| 08 - Roads, Railroads, and Bridges Total | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0616 | 0.1601 | 0.1108 | 0.0862 | 0.0862 | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | 2 | 9.31E-02 | 0.1108 | -- | -- | -- | -- | 0.1108 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 28 | CMU Building and Earthwork Pad Constructi | 30 | 9.31E-02 | -- | 0.1232 | 0.1232 | 0.1232 | 0.1232 | 0.1232 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 29 | Concrete Duct Bank | 23 | 9.31E-02 | -- | -- | -- | -- | 0.1108 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 - Buildings, Grounds, and Utilities Total | | | | 0.1108 | 0.1232 | 0.1232 | 0.1232 | 0.2340 | 0.1232 | 0.1108 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | 2 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 31 | Mechanical Hydraulic Cylinders & Housing | 30 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 32 | CMU Building Mechanical Equipment | 30 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | Electrical Control Equipment CMU Building | 30 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | Electrical Power Equipment CMU Building | 30 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 35 | Communication Equipment | 12 | 9.31E-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment Total | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| GRAND TOTAL | | | | 0.8621 | 0.4680 | 1.0838 | 0.4310 | 0.6158 | 0.5049 | 1.2316 | 1.0715 | 1.0715 | 0.9852 | 0.6897 | 0.8867 | 1.9089 | 1.7488 | 1.6749 | 1.7734 | 1.5271 | 1.5025 | 1.4902 |

Table K-153. PM2.5 Emissions from C

| # | Activity | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | Annual Emissions, tpy |
|-----------------------------------------------------|--------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-----------------------|
| 02 - Relocations | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | 0.0616 | 0.0001 |
| 2 | Fremont Weir Concrete Demo | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | 0.0985 | -- | 0.0002 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| | | -- | -- | -- | -- | -- | -- | -- | 0.0985 | 0.0616 | 0.0010 |
| 09 - Channels and Canals | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | 0.6527 | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0020 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0067 |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0053 |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 10 | Riprap - Class 2 | 0.6897 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0128 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| 12 | RSP Bedding Material | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0141 |
| 13 | Erosion Control Seeding | -- | -- | -- | 0.0493 | 0.0493 | -- | -- | -- | -- | 0.0002 |
| | 09 - Cha | 0.6897 | 0.6527 | -- | 0.0493 | 0.0493 | -- | -- | -- | -- | 0.0421 |
| 15 - Floodway Control and Diversion Structur | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.6158 | -- | 0.0006 |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0008 |
| 16 | Construction Site Dewatering (Pumping) | 0.0369 | 0.0369 | 0.0369 | 0.0369 | 0.0369 | 0.0369 | 0.0369 | -- | -- | 0.0022 |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0026 |
| 20 | Headworks Structure | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0030 |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0010 |
| 22 | Hinged Bottom Gates | -- | -- | -- | 0.0739 | 0.0739 | 0.0739 | 0.0739 | -- | -- | 0.0009 |
| | 15 - Floodway Control and Div | 0.0369 | 0.0369 | 0.0369 | 0.1108 | 0.1108 | 0.1108 | 0.1108 | 0.6158 | -- | 0.0118 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | 0.0616 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 24 | Pedestrian Bridge Concete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| | 08 - Roads, Railro | 0.0616 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0007 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 28 | CMU Building and Earthwork Pad Constructi | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0018 |
| 29 | Concrete Duct Bank | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| | 19 - Buildings, Grou | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0032 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | 0.0246 | -- | -- | -- | -- | -- | 0.0246 | -- | 0.0000 |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | 0.0493 | 0.0493 | 0.0493 | 0.0493 | 0.0493 | -- | -- | 0.0007 |
| 32 | CMU Building Mechanical Equipment | -- | -- | 0.0493 | 0.0493 | 0.0493 | 0.0493 | 0.0493 | -- | -- | 0.0007 |
| 33 | Electrical Control Equipment CMU Building | -- | -- | 0.0493 | 0.0493 | 0.0493 | 0.0493 | 0.0493 | -- | -- | 0.0007 |
| 34 | Electrical Power Equipment CMU Building | -- | -- | 0.0493 | 0.0493 | 0.0493 | 0.0493 | 0.0493 | -- | -- | 0.0007 |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | 0.0493 | 0.0493 | -- | -- | 0.0003 |
| | 20 -Permanent Ope | -- | 0.0246 | 0.1970 | 0.1970 | 0.1970 | 0.2463 | 0.2463 | 0.0246 | -- | 0.0033 |
| GRAND TOTAL | | 0.7882 | 0.7143 | 0.2340 | 0.3572 | 0.3572 | 0.3572 | 0.3572 | 0.7389 | 0.0616 | 0.0622 |

Table K-154. GHG Emissions from Construction Worker Commuting (Alternative 2)

| # | Activity | Estimated Duration, Days | CO2 Emission Factor, (g/mi) | Annual Emissions, MTCO2e/yr |
|-------------------------------------------------------------|--------------------------------------------|--------------------------|-----------------------------|-----------------------------|
| 02 - Relocations | | | | |
| 1 | Mobilization and Demobilization | 2 | 301.29 | 0.18 |
| 2 | Fremont Weir Concrete Demo | 11 | 301.29 | 1.99 |
| 3 | Levee O&M Road Regrading (6" AB) | 4 | 301.29 | 0.58 |
| 4 | Temporary Electrical Power | 4 | 301.29 | 0.22 |
| 02 - Relocations Total | | | | 2.96 |
| 09 - Channels and Canals | | | | |
| 5 | Mobilization and Demobilization | 2 | 301.29 | 1.92 |
| 6 | Clearing and Grubbing | 18 | 301.29 | 5.86 |
| 7 | Excavation (Wet Conditions) | 27 | 301.29 | 19.52 |
| 8 | Excavation/Grading (Dry Conditions) | 36 | 301.29 | 15.62 |
| 9 | Earthen Backfill | 2 | 301.29 | 0.14 |
| 10 | Riprap - Class 2 | 37 | 301.29 | 37.46 |
| 11 | Riprap - Class 3 | 2 | 301.29 | 1.01 |
| 12 | RSP Bedding Material | 41 | 301.29 | 41.51 |
| 13 | Erosion Control Seeding | 7 | 301.29 | 0.51 |
| 09 - Channels and Canals Total | | | | 123.54 |
| 15 - Floodway Control and Diversion Structures | | | | |
| 14 | Mobilization and Demobilization | 2 | 301.29 | 1.81 |
| 15 | Construction Site Dewatering (Temporary Co | 18 | 301.29 | 2.28 |
| 16 | Construction Site Dewatering (Pumping) | 120 | 301.29 | 6.51 |
| 17 | Excavation (Wet Conditions) | 4 | 301.29 | 1.45 |
| 18 | Sheet Pile Wall | 7 | 301.29 | 0.89 |
| 19 | Headworks Structure Concrete Piles | 32 | 301.29 | 7.52 |
| 20 | Headworks Structure | 18 | 301.29 | 8.79 |
| 21 | Headworks Channel Transition | 10 | 301.29 | 2.89 |
| 22 | Hinged Bottom Gates | 24 | 301.29 | 2.60 |
| 15 - Floodway Control and Diversion Structures Total | | | | 34.73 |
| 08 - Roads, Railroads, and Bridges | | | | |
| 23 | Mobilization and Demobilization | 2 | 301.29 | 0.18 |
| 24 | Pedestrian Bridge Concete Piles | 4 | 301.29 | 0.94 |
| 25 | Pedestrian Bridge Concrete Abutments and | 1 | 301.29 | 0.16 |
| 26 | Pedestrian Bridge Span Installation | 7 | 301.29 | 0.89 |
| 08 - Roads, Railroads, and Bridges Total | | | | 2.17 |
| 19 - Buildings, Grounds, and Utilities | | | | |
| 27 | Mobilization and Demobilization | 2 | 301.29 | 0.33 |
| 28 | CMU Building and Earthwork Pad Constructi | 30 | 301.29 | 5.42 |
| 29 | Concrete Duct Bank | 23 | 301.29 | 3.74 |
| 19 - Buildings, Grounds, and Utilities Total | | | | 9.49 |
| 20 -Permanent Operating Equipment | | | | |
| 30 | Mobilization and Demobilization | 2 | 301.29 | 0.07 |
| 31 | Mechanical Hydraulic Cylinders & Housing | 30 | 301.29 | 2.17 |
| 32 | CMU Building Mechanical Equipment | 30 | 301.29 | 2.17 |
| 33 | Electrical Control Equipment CMU Building | 30 | 301.29 | 2.17 |
| 34 | Electrical Power Equipment CMU Building | 30 | 301.29 | 2.17 |
| 35 | Communication Equipment | 12 | 301.29 | 0.87 |
| 20 -Permanent Operating Equipment Total | | | | 9.62 |
| GRAND TOTAL | | | | 182.51 |

Haul Truck Exhaust Emissions Summary

Table K-155. Maximum Daily Haul Truck Emissions (Alternative 2)

| Phase | ROG lbs/day | NOx lbs/day | CO lbs/day | SO2 lbs/day | PM10 lbs/day | PM2.5 lbs/day |
|------------------------------------------------------|----------------|----------------|---------------|----------------|-----------------|------------------|
| 02 - Relocations | 0.48 | 13.93 | 2.94 | 0.06 | 1.64 | 0.50 |
| 09 - Channels and Canals | 7.06 | 206.09 | 43.45 | 0.89 | 24.25 | 7.38 |
| 15 - Floodway Control and Diversion Structures | 0.32 | 9.48 | 2.00 | 0.04 | 1.12 | 0.34 |
| 08 - Roads, Railroads, and Bridges | 0.09 | 2.72 | 0.57 | 0.01 | 0.32 | 0.10 |
| 19 - Buildings, Grounds, and Utilities | 0.11 | 3.19 | 0.67 | 0.01 | 0.38 | 0.11 |
| 20 -Permanent Operating Equipment | 0.02 | 0.49 | 0.10 | 0.00 | 0.06 | 0.02 |
| Peak Day Construction Exhaust Emissions Total | 7.39 | 215.57 | 45.45 | 0.93 | 25.37 | 7.72 |

Notes:

Construction total will not add to the sum of each phase because not all tasks overlap on the same day.

PM10 and PM2.5 emissions include exhaust, tire wear, brake wear, and paved road dust.

Table K-156. Annual Haul Truck Emissions (Alternative 2)

| Phase | ROG tpy | NOx tpy | CO tpy | SO2 tpy | PM10 tpy | PM2.5 tpy | CO2e MT/yr |
|----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|-----------------|
| 02 - Relocations | 0.00 | 0.03 | 0.01 | 0.00 | 0.00 | 0.00 | 13.76 |
| 09 - Channels and Canals | 0.14 | 4.11 | 0.87 | 0.02 | 0.48 | 0.15 | 1,696.89 |
| 15 - Floodway Control and Diversion Structures | 0.00 | 0.13 | 0.03 | 0.00 | 0.01 | 0.00 | 52.27 |
| 08 - Roads, Railroads, and Bridges | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.24 |
| 19 - Buildings, Grounds, and Utilities | 0.00 | 0.04 | 0.01 | 0.00 | 0.00 | 0.00 | 15.90 |
| 20 -Permanent Operating Equipment | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 |
| Annual Construction Exhaust Emissions Total | 0.15 | 4.31 | 0.91 | 0.02 | 0.51 | 0.15 | 1,780.25 |

Notes:

Total may not add exactly because of rounding.

PM10 and PM2.5 emissions include exhaust, tire wear, brake wear, and paved road dust.

Table K-157. ROG Emissions from Haul Trucks (Alternative 2)

| # | Activity | Quantity | Unit | Total Truck Trips | Trip Distance (mi) | Estimated Duration, Days | Emission Factor (g/mi) | Maximum | | | | | | | | | | | | | | |
|-------------------------------------------------------------|--------------------------------------------|----------|------|-------------------|--------------------|--------------------------|------------------------|-------------|-------------|-------------|-----------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-------------|-------------|-----------|
| | | | | | | | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | | |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | 10 | 21 | 2 | 0.1207 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2 | Fremont Weir Demo | 420 | CY | 54 | 22 | 11 | 0.1207 | -- | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 276 | 26 | 4 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 4 | Temporary Electrical Power | 5,280 | LF | n/a | n/a | 4 | 0.1207 | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02 - Relocations Total | | | | | | | | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | 106 | 21 | 2 | 0.1207 | 0.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 6 | Clearing and Grubbing | 70 | ACR | 700 | 22 | 18 | 0.1207 | -- | 0.23 | 0.23 | 0.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 7 | Excavation (Wet Conditions) | 93,610 | CY | n/a | n/a | 27 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | |
| 8 | Excavation/Grading (Dry Conditions) | 372,680 | CY | n/a | n/a | 36 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | -- | -- | -- | -- | |
| 9 | Earthen Backfill | 1,010 | CY | n/a | n/a | 2 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10 | Riprap - Class 2 | 87,580 | TN | 8,110 | 66 | 37 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.85 | |
| 11 | Riprap - Class 3 | 1,530 | TN | 142 | 66 | 2 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 12 | RSP Bedding Material | 81,050 | TN | 7,506 | 66 | 41 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.22 | 3.22 | |
| 13 | Erosion Control Seeding | 13 | ACR | n/a | n/a | 7 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals Total | | | | | | | | 0.30 | 0.23 | 0.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.22 | 7.06 | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | 48 | 21 | 2 | 0.1207 | -- | -- | 0.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 | Construction Site Dewatering (Temporary Co | 21,000 | SF | n/a | n/a | 18 | 0.1207 | -- | -- | -- | n/a | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | -- | |
| 16 | Construction Site Dewatering (Pumping) | - | - | n/a | n/a | 120 | 0.1207 | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | |
| 17 | Excavation (Wet Conditions) | 6,460 | CY | n/a | n/a | 4 | 0.1207 | -- | -- | -- | -- | -- | n/a | -- | -- | -- | -- | -- | -- | -- | -- | |
| 18 | Sheet Pile Wall | 7,940 | SF | n/a | n/a | 7 | 0.1207 | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | -- | |
| 19 | Headworks Structure Concrete Piles | 5,600 | LF | n/a | n/a | 32 | 0.1207 | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | |
| 20 | Headworks Structure | 3,140 | CY | 628 | 35 | 18 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.32 | |
| 21 | Headworks Channel Transition | 1,370 | CY | 274 | 35 | 10 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 22 | Hinged Bottom Gates | 3 | EA | n/a | n/a | 24 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | -- | -- | 0.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.32 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | - | - | 20 | 21 | 2 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 24 | Pedestrian Bridge Concrete Piles | 640 | LF | n/a | n/a | 4 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 25 | Pedestrian Bridge Concrete Abutments and | 48 | CY | 10 | 35 | 1 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 26 | Pedestrian Bridge Span Installation | 2,720 | SF | n/a | n/a | 7 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | - | - | 22 | 21 | 2 | 0.1207 | 0.06 | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | |
| 28 | CMU Building | 1 | EA | n/a | n/a | 30 | 0.1207 | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | -- | |
| 29 | Concrete Duct Banc | 1,350 | CY | 270 | 35 | 23 | 0.1207 | -- | -- | -- | -- | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 - Buildings, Grounds, and Utilities Total | | | | | | | | 0.06 | -- | -- | -- | 0.11 | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | - | - | 6 | 21 | 2 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 31 | Mechanical Hydraulic Cylinders & Housing | - | - | n/a | n/a | 30 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 32 | CMU Building Mechanical Equipment | - | - | n/a | n/a | 30 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | Electrical Control Equipment CMU Building | - | - | n/a | n/a | 30 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | Electrical Power Equipment CMU Building | - | - | n/a | n/a | 30 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 35 | Communication Equipment | - | - | n/a | n/a | 12 | 0.1207 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment Total | | | | | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| GRAND TOTAL | | | | | | | | 0.39 | 0.26 | 0.39 | -- | 0.11 | -- | 0.06 | -- | -- | -- | -- | -- | 3.22 | 7.39 | |

Table K-157. ROG Emissions from Haul Tr

| # | Activity | Daily Emissions, lbs/day | | | | | | | | | | | | | | | Annual Emissions, tpy |
|-------------------------------------------------------|--------------------------------------------|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|--------|--------|--------|-------------|-------------|-------------|-----------------------|
| | | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.0000 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.48 | -- | -- | 0.0010 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.48 | 0.03 | -- | 0.0011 |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.30 | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0020 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 10 | Riprap - Class 2 | 3.85 | 3.85 | 3.85 | 3.85 | 3.85 | 3.85 | 3.85 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0712 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | 1.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0012 |
| 12 | RSP Bedding Material | 3.22 | 3.22 | 3.22 | 3.22 | 3.22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0659 |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | n/a |
| | | 7.06 | 7.06 | 7.06 | 7.06 | 7.06 | 5.10 | 3.85 | 0.30 | -- | -- | -- | -- | -- | -- | -- | 0.1407 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.13 | -- | -- | 0.0001 |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 16 | Construction Site Dewatering (Pumping) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 20 | Headworks Structure | 0.32 | -- | -- | -- | -- | 0.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0029 |
| 21 | Headworks Channel Transition | -- | 0.26 | 0.26 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| 22 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| | | 0.32 | 0.26 | 0.26 | -- | -- | 0.32 | -- | -- | -- | -- | -- | -- | 0.13 | -- | -- | 0.0043 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | 0.06 | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | 0.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| | | -- | 0.06 | -- | 0.09 | -- | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 28 | CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | 0.02 | -- | -- | 0.0000 |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 32 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 33 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 34 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | n/a |
| | | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | 0.02 | -- | -- | 0.0000 |
| GRAND TOTAL | | 7.39 | 7.38 | 7.32 | 7.16 | 7.06 | 5.42 | 3.91 | 0.31 | -- | -- | -- | -- | -- | 0.63 | 0.03 | 0.1476 |

Table K-158. NOx Emissions from Haul Trucks (Alternative 2)

| # | Activity | Quantity | Unit | Total Truck Trips | Trip Distance (mi) | Estimated Duration, Days | Emission Factor (g/mi) | Ma | | | | | | | | | | | | | |
|-------------------------------------------------------------|--------------------------------------------|----------|------|-------------------|--------------------|--------------------------|------------------------|--------------|-------------|--------------|-----------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|--------------|--------------|
| | | | | | | | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | | |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | 10 | 21 | 2 | 3.5212 | 0.82 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2 | Fremont Weir Demo | 420 | CY | 54 | 22 | 11 | 3.5212 | -- | 0.84 | 0.84 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 276 | 26 | 4 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 4 | Temporary Electrical Power | 5,280 | LF | n/a | n/a | 4 | 3.5212 | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02 - Relocations Total | | | | | | | | 0.82 | 0.84 | 0.84 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | 106 | 21 | 2 | 3.5212 | 8.64 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 6 | Clearing and Grubbing | 70 | ACR | 700 | 22 | 18 | 3.5212 | -- | 6.64 | 6.64 | 6.64 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 7 | Excavation (Wet Conditions) | 93,610 | CY | n/a | n/a | 27 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | |
| 8 | Excavation/Grading (Dry Conditions) | 372,680 | CY | n/a | n/a | 36 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | -- | -- | -- | |
| 9 | Earthen Backfill | 1,010 | CY | n/a | n/a | 2 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10 | Riprap - Class 2 | 87,580 | TN | 8,110 | 66 | 37 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 11 | Riprap - Class 3 | 1,530 | TN | 142 | 66 | 2 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 12 | RSP Bedding Material | 81,050 | TN | 7,506 | 66 | 41 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 93.80 | |
| 13 | Erosion Control Seeding | 13 | ACR | n/a | n/a | 7 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals Total | | | | | | | | 8.64 | 6.64 | 6.64 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 93.80 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | 48 | 21 | 2 | 3.5212 | -- | -- | 3.91 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 | Construction Site Dewatering (Temporary Co | 21,000 | SF | n/a | n/a | 18 | 3.5212 | -- | -- | -- | n/a | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | |
| 16 | Construction Site Dewatering (Pumping) | - | - | n/a | n/a | 120 | 3.5212 | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | |
| 17 | Excavation (Wet Conditions) | 6,460 | CY | n/a | n/a | 4 | 3.5212 | -- | -- | -- | -- | -- | n/a | -- | -- | -- | -- | -- | -- | -- | |
| 18 | Sheet Pile Wall | 7,940 | SF | n/a | n/a | 7 | 3.5212 | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | |
| 19 | Headworks Structure Concrete Piles | 5,600 | LF | n/a | n/a | 32 | 3.5212 | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | n/a | n/a | |
| 20 | Headworks Structure | 3,140 | CY | 628 | 35 | 18 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 21 | Headworks Channel Transition | 1,370 | CY | 274 | 35 | 10 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 22 | Hinged Bottom Gates | 3 | EA | n/a | n/a | 24 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | -- | -- | 3.91 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | - | - | 20 | 21 | 2 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 24 | Pedestrian Bridge Concrete Piles | 640 | LF | n/a | n/a | 4 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 25 | Pedestrian Bridge Concrete Abutments and | 48 | CY | 10 | 35 | 1 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 26 | Pedestrian Bridge Span Installation | 2,720 | SF | n/a | n/a | 7 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | - | - | 22 | 21 | 2 | 3.5212 | 1.79 | -- | -- | -- | -- | -- | -- | 1.79 | -- | -- | -- | -- | -- | |
| 28 | CMU Building | 1 | EA | n/a | n/a | 30 | 3.5212 | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | |
| 29 | Concrete Duct Banc | 1,350 | CY | 270 | 35 | 23 | 3.5212 | -- | -- | -- | -- | 3.19 | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 - Buildings, Grounds, and Utilities Total | | | | | | | | 1.79 | -- | -- | -- | 3.19 | -- | 1.79 | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | - | - | 6 | 21 | 2 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 31 | Mechanical Hydraulic Cylinders & Housing | - | - | n/a | n/a | 30 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 32 | CMU Building Mechanical Equipment | - | - | n/a | n/a | 30 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | Electrical Control Equipment CMU Building | - | - | n/a | n/a | 30 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | Electrical Power Equipment CMU Building | - | - | n/a | n/a | 30 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 35 | Communication Equipment | - | - | n/a | n/a | 12 | 3.5212 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment Total | | | | | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| GRAND TOTAL | | | | | | | | 11.25 | 7.48 | 11.39 | -- | 3.19 | -- | 1.79 | -- | -- | -- | -- | -- | 93.80 | |

Table K-158. NOx Emissions from Haul Tru

| # | Activity | Average Daily Emissions, lbs/day | | | | | | | | | | | | | | | | Annual Emissions, tpy |
|-------------------------------------------------------|--------------------------------------------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|-----------------------|
| | | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.82 | 0.0008 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0046 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 13.93 | -- | -- | 0.0279 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 13.93 | 0.82 | -- | 0.0333 |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | 8.64 | -- | -- | -- | -- | -- | -- | -- | 0.0086 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0598 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 10 | Riprap - Class 2 | 112.30 | 112.30 | 112.30 | 112.30 | 112.30 | 112.30 | 112.30 | 112.30 | -- | -- | -- | -- | -- | -- | -- | -- | 2.0775 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | 36.38 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0364 |
| 12 | RSP Bedding Material | 93.80 | 93.80 | 93.80 | 93.80 | 93.80 | 93.80 | 93.80 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.9228 |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | n/a |
| | | 206.09 | 206.09 | 206.09 | 206.09 | 206.09 | 206.09 | 148.68 | 112.30 | 8.64 | -- | -- | -- | -- | -- | -- | -- | 4.1051 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.91 | -- | -- | 0.0039 |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 16 | Construction Site Dewatering (Pumping) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 19 | Headworks Structure Concrete Piles | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 20 | Headworks Structure | 9.48 | 9.48 | -- | -- | -- | -- | 9.48 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0853 |
| 21 | Headworks Channel Transition | -- | -- | 7.44 | 7.44 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0372 |
| 22 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| | | 9.48 | 9.48 | 7.44 | 7.44 | -- | -- | 9.48 | -- | -- | -- | -- | -- | -- | 3.91 | -- | -- | 0.1264 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | -- | 1.63 | -- | -- | -- | -- | 1.63 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0016 |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | 2.72 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0014 |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| | | -- | -- | 1.63 | -- | 2.72 | -- | -- | 1.63 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0030 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0018 |
| 28 | CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0367 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0385 |
| 20 - Permanent Operating Equipment | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | 0.49 | -- | -- | -- | -- | 0.49 | -- | -- | 0.0005 |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 32 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 33 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 34 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | n/a |
| | | -- | -- | -- | -- | -- | -- | -- | -- | 0.49 | -- | -- | -- | -- | 0.49 | -- | -- | 0.0005 |
| GRAND TOTAL | | 215.57 | 215.57 | 215.17 | 213.54 | 208.81 | 206.09 | 158.15 | 113.93 | 9.13 | -- | -- | -- | -- | 18.33 | 0.82 | -- | 4.3068 |

Table K-159. CO Emissions from Haul Trucks (Alternative 2)

| # | Activity | Quantity | Unit | Total Truck Trips | Trip Distance (mi) | Estimated Duration, Days | Emission Factor (g/mi) | Maximum | | | | | | | | | | | | | | | | |
|-------------------------------------------------------------|--------------------------------------------|----------|------|-------------------|--------------------|--------------------------|------------------------|-------------|-------------|-------------|-----------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|--------------|--------------|--------------|-----------|-----------|
| | | | | | | | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | | | | |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | 10 | 21 | 2 | 0.7423 | 0.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 2 | Fremont Weir Demo | 420 | CY | 54 | 22 | 11 | 0.7423 | -- | 0.18 | 0.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 276 | 26 | 4 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 4 | Temporary Electrical Power | 5,280 | LF | n/a | n/a | 4 | 0.7423 | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 02 - Relocations Total | | | | | | | | 0.17 | 0.18 | 0.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | 106 | 21 | 2 | 0.7423 | 1.82 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 6 | Clearing and Grubbing | 70 | ACR | 700 | 22 | 18 | 0.7423 | -- | 1.40 | 1.40 | 1.40 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 7 | Excavation (Wet Conditions) | 93,610 | CY | n/a | n/a | 27 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | | | |
| 8 | Excavation/Grading (Dry Conditions) | 372,680 | CY | n/a | n/a | 36 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | -- | -- | -- | -- | | | |
| 9 | Earthen Backfill | 1,010 | CY | n/a | n/a | 2 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 10 | Riprap - Class 2 | 87,580 | TN | 8,110 | 66 | 37 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 23.68 | | | |
| 11 | Riprap - Class 3 | 1,530 | TN | 142 | 66 | 2 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 12 | RSP Bedding Material | 81,050 | TN | 7,506 | 66 | 41 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 19.77 | 19.77 | | | |
| 13 | Erosion Control Seeding | 13 | ACR | n/a | n/a | 7 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 09 - Channels and Canals Total | | | | | | | | 1.82 | 1.40 | 1.40 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 19.77 | 43.45 | | | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | 48 | 21 | 2 | 0.7423 | -- | -- | 0.82 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 15 | Construction Site Dewatering (Temporary Co | 21,000 | SF | n/a | n/a | 18 | 0.7423 | -- | -- | -- | n/a | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 16 | Construction Site Dewatering (Pumping) | - | - | n/a | n/a | 120 | 0.7423 | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | |
| 17 | Excavation (Wet Conditions) | 6,460 | CY | n/a | n/a | 4 | 0.7423 | -- | -- | -- | -- | -- | n/a | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 18 | Sheet Pile Wall | 7,940 | SF | n/a | n/a | 7 | 0.7423 | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | -- | | | |
| 19 | Headworks Structure Concrete Piles | 5,600 | LF | n/a | n/a | 32 | 0.7423 | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | |
| 20 | Headworks Structure | 3,140 | CY | 628 | 35 | 18 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.00 | | | |
| 21 | Headworks Channel Transition | 1,370 | CY | 274 | 35 | 10 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 22 | Hinged Bottom Gates | 3 | EA | n/a | n/a | 24 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | -- | -- | 0.82 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.00 | | | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | - | - | 20 | 21 | 2 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 24 | Pedestrian Bridge Concrete Piles | 640 | LF | n/a | n/a | 4 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 25 | Pedestrian Bridge Concrete Abutments and | 48 | CY | 10 | 35 | 1 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 26 | Pedestrian Bridge Span Installation | 2,720 | SF | n/a | n/a | 7 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | - | - | 22 | 21 | 2 | 0.7423 | 0.38 | -- | -- | -- | -- | -- | 0.38 | -- | -- | -- | -- | -- | -- | -- | | | |
| 28 | CMU Building | 1 | EA | n/a | n/a | 30 | 0.7423 | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 29 | Concrete Duct Banc | 1,350 | CY | 270 | 35 | 23 | 0.7423 | -- | -- | -- | -- | 0.67 | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 19 - Buildings, Grounds, and Utilities Total | | | | | | | | 0.38 | -- | -- | -- | 0.67 | -- | 0.38 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | - | - | 6 | 21 | 2 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 31 | Mechanical Hydraulic Cylinders & Housing | - | - | n/a | n/a | 30 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 32 | CMU Building Mechanical Equipment | - | - | n/a | n/a | 30 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 33 | Electrical Control Equipment CMU Building | - | - | n/a | n/a | 30 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 34 | Electrical Power Equipment CMU Building | - | - | n/a | n/a | 30 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 35 | Communication Equipment | - | - | n/a | n/a | 12 | 0.7423 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 20 -Permanent Operating Equipment Total | | | | | | | | -- | -- | -- | -- | -- | -- | 0.38 | -- | -- | -- | -- | -- | -- | -- | -- | | |
| GRAND TOTAL | | | | | | | | 2.37 | 1.58 | 2.40 | -- | 0.67 | -- | 0.38 | -- | -- | -- | -- | -- | -- | 19.77 | 45.45 | | |

Table K-159. CO Emissions from Haul Truc

| # | Activity | Daily Emissions, lbs/day | | | | | | | | | | | | | | | Annual Emissions, tpy |
|-------------------------------------------------------|--------------------------------------------|--------------------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------|--------|--------|--------|-------|-------------|-------------|-----------------------|
| | | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.17 | 0.0002 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0010 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.94 | -- | -- | 0.0059 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.94 | 0.17 | -- | 0.0070 |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 1.82 | -- | -- | -- | -- | -- | -- | -- | 0.0018 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0126 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 10 | Riprap - Class 2 | 23.68 | 23.68 | 23.68 | 23.68 | 23.68 | 23.68 | 23.68 | -- | -- | -- | -- | -- | -- | -- | -- | 0.4380 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | 7.67 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0077 |
| 12 | RSP Bedding Material | 19.77 | 19.77 | 19.77 | 19.77 | 19.77 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.4054 |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | n/a |
| | | 43.45 | 43.45 | 43.45 | 43.45 | 43.45 | 31.34 | 23.68 | 1.82 | -- | -- | -- | -- | -- | -- | -- | 0.8655 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.82 | -- | -- | 0.0008 |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 16 | Construction Site Dewatering (Pumping) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 20 | Headworks Structure | 2.00 | -- | -- | -- | -- | 2.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0180 |
| 21 | Headworks Channel Transition | -- | 1.57 | 1.57 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0078 |
| 22 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| | | 2.00 | 1.57 | 1.57 | -- | -- | 2.00 | -- | -- | -- | -- | -- | -- | -- | 0.82 | -- | 0.0267 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | 0.34 | -- | -- | -- | -- | 0.34 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | 0.57 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| | | -- | 0.34 | -- | 0.57 | -- | -- | 0.34 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0006 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| 28 | CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0077 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0081 |
| 20 - Permanent Operating Equipment | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.10 | -- | -- | -- | -- | 0.10 | -- | -- | 0.0001 |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 32 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 33 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 34 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | n/a |
| | | -- | -- | -- | -- | -- | -- | -- | 0.10 | -- | -- | -- | -- | -- | 0.10 | -- | 0.0001 |
| GRAND TOTAL | | 45.45 | 45.36 | 45.02 | 44.02 | 43.45 | 33.34 | 24.02 | 1.92 | -- | -- | -- | -- | -- | 3.86 | 0.17 | 0.9080 |

Table K-160. SOx Emissions from Haul Trucks (Alternative 2)

| # | Activity | Quantity | Unit | Total Truck Trips | Trip Distance (mi) | Estimated Duration, Days | Emission Factor (g/mi) | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun |
|-------------------------------------------------------------|--------------------------------------------|----------|------|-------------------|--------------------|--------------------------|------------------------|-------------|-------------|-------------|-----------|-------------|-----------|-------------|-----------|-----------|-----------|
| 02 - Relocations | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | 10 | 21 | 2 | 0.0152 | 0.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | 420 | CY | 54 | 22 | 11 | 0.0152 | -- | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 276 | 26 | 4 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 4 | Temporary Electrical Power | 5,280 | LF | n/a | n/a | 4 | 0.0152 | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 02 - Relocations Total | | | | | | | | 0.00 | 0.00 | 0.00 | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | 106 | 21 | 2 | 0.0152 | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 6 | Clearing and Grubbing | 70 | ACR | 700 | 22 | 18 | 0.0152 | -- | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- |
| 7 | Excavation (Wet Conditions) | 93,610 | CY | n/a | n/a | 27 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 8 | Excavation/Grading (Dry Conditions) | 372,680 | CY | n/a | n/a | 36 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 9 | Earthen Backfill | 1,010 | CY | n/a | n/a | 2 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10 | Riprap - Class 2 | 87,580 | TN | 8,110 | 66 | 37 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11 | Riprap - Class 3 | 1,530 | TN | 142 | 66 | 2 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12 | RSP Bedding Material | 81,050 | TN | 7,506 | 66 | 41 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13 | Erosion Control Seeding | 13 | ACR | n/a | n/a | 7 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09 - Channels and Canals Total | | | | | | | | 0.04 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | 48 | 21 | 2 | 0.0152 | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- |
| 15 | Construction Site Dewatering (Temporary Co | 21,000 | SF | n/a | n/a | 18 | 0.0152 | -- | -- | -- | n/a | n/a | n/a | -- | -- | -- | -- |
| 16 | Construction Site Dewatering (Pumping) | - | - | n/a | n/a | 120 | 0.0152 | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a |
| 17 | Excavation (Wet Conditions) | 6,460 | CY | n/a | n/a | 4 | 0.0152 | -- | -- | -- | -- | -- | n/a | -- | -- | -- | -- |
| 18 | Sheet Pile Wall | 7,940 | SF | n/a | n/a | 7 | 0.0152 | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- |
| 19 | Headworks Structure Concrete Piles | 5,600 | LF | n/a | n/a | 32 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a |
| 20 | Headworks Structure | 3,140 | CY | 628 | 35 | 18 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21 | Headworks Channel Transition | 1,370 | CY | 274 | 35 | 10 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22 | Hinged Bottom Gates | 3 | EA | n/a | n/a | 24 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | -- | -- | 0.02 | -- | -- | -- | -- | -- | -- | -- |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | - | - | 20 | 21 | 2 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24 | Pedestrian Bridge Concrete Piles | 640 | LF | n/a | n/a | 4 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25 | Pedestrian Bridge Concrete Abutments and | 48 | CY | 10 | 35 | 1 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26 | Pedestrian Bridge Span Installation | 2,720 | SF | n/a | n/a | 7 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | - | - | 22 | 21 | 2 | 0.0152 | 0.01 | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- |
| 28 | CMU Building | 1 | EA | n/a | n/a | 30 | 0.0152 | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | -- |
| 29 | Concrete Duct Banc | 1,350 | CY | 270 | 35 | 23 | 0.0152 | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- |
| 19 - Buildings, Grounds, and Utilities Total | | | | | | | | 0.01 | -- | -- | -- | 0.01 | -- | 0.01 | -- | -- | -- |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | - | - | 6 | 21 | 2 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31 | Mechanical Hydraulic Cylinders & Housing | - | - | n/a | n/a | 30 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 32 | CMU Building Mechanical Equipment | - | - | n/a | n/a | 30 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 33 | Electrical Control Equipment CMU Building | - | - | n/a | n/a | 30 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 34 | Electrical Power Equipment CMU Building | - | - | n/a | n/a | 30 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 35 | Communication Equipment | - | - | n/a | n/a | 12 | 0.0152 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment Total | | | | | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| GRAND TOTAL | | | | | | | | 0.05 | 0.03 | 0.05 | -- | 0.01 | -- | 0.01 | -- | -- | -- |

Table K-160. SOx Emissions from Haul Tru

| # | Activity | Maximum Daily Emissions, lbs/day | | | | | | | | | | | | | | | | | | Annual Emissions, tpy |
|-------------------------------------------------------|--------------------------------------------|----------------------------------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|-----------------------|
| | | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | 0.0000 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | -- | 0.0001 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.06 | 0.00 | 0.0001 |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| 7 | Excavation (Wet Conditions) | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 10 | Riprap - Class 2 | -- | -- | 0.49 | 0.49 | 0.49 | 0.49 | 0.49 | 0.49 | 0.49 | 0.49 | -- | -- | -- | -- | -- | -- | -- | 0.0090 | |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | -- | -- | 0.16 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 | |
| 12 | RSP Bedding Material | -- | 0.41 | 0.41 | 0.41 | 0.41 | 0.41 | 0.41 | 0.41 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0083 | |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | n/a | |
| | | -- | 0.41 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.64 | 0.49 | 0.04 | -- | -- | -- | -- | -- | -- | 0.0177 | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 16 | Construction Site Dewatering (Pumping) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | -- | n/a | |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 19 | Headworks Structure Concrete Piles | n/a | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 20 | Headworks Structure | -- | -- | 0.04 | 0.04 | -- | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 | |
| 21 | Headworks Channel Transition | -- | -- | -- | -- | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 | |
| 22 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | -- | -- | n/a | |
| | | -- | -- | 0.04 | 0.04 | 0.03 | 0.03 | -- | -- | 0.04 | -- | -- | -- | -- | -- | -- | -- | 0.02 | 0.0005 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | -- | -- | -- | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | -- | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| | | -- | -- | -- | -- | 0.01 | -- | 0.01 | -- | -- | 0.01 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 28 | CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| 20 - Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | -- | -- | -- | -- | -- | 0.00 | -- | 0.0000 |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 32 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 33 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 34 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | n/a |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.00 | -- | -- | -- | -- | -- | 0.00 | -- | 0.0000 |
| GRAND TOTAL | | -- | 0.41 | 0.93 | 0.93 | 0.93 | 0.92 | 0.90 | 0.89 | 0.68 | 0.49 | 0.04 | -- | -- | -- | -- | -- | 0.08 | 0.00 | 0.0186 |

Table K-161. PM10 Emissions from Haul Trucks (Alternative 2)

| # | Activity | Quantity | Unit | Total Truck Trips | Trip Distance (mi) | Estimated Duration, Days | Emission Factor (g/mi) | Maximum | | | | | | | | | | | | | | | | |
|-------------------------------------------------------------|--------------------------------------------|----------|------|-------------------|--------------------|--------------------------|------------------------|-------------|-------------|-------------|-----------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|--------------|--------------|-----------|-----------|-----------|
| | | | | | | | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | | | | |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | 10 | 21 | 2 | 0.4144 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 2 | Fremont Weir Demo | 420 | CY | 54 | 22 | 11 | 0.4144 | -- | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 276 | 26 | 4 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 4 | Temporary Electrical Power | 5,280 | LF | n/a | n/a | 4 | 0.4144 | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 02 - Relocations Total | | | | | | | | 0.10 | 0.10 | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | 106 | 21 | 2 | 0.4144 | 1.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 6 | Clearing and Grubbing | 70 | ACR | 700 | 22 | 18 | 0.4144 | -- | 0.78 | 0.78 | 0.78 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 7 | Excavation (Wet Conditions) | 93,610 | CY | n/a | n/a | 27 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | | | |
| 8 | Excavation/Grading (Dry Conditions) | 372,680 | CY | n/a | n/a | 36 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | | | |
| 9 | Earthen Backfill | 1,010 | CY | n/a | n/a | 2 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 10 | Riprap - Class 2 | 87,580 | TN | 8,110 | 66 | 37 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 13.22 | | | |
| 11 | Riprap - Class 3 | 1,530 | TN | 142 | 66 | 2 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 12 | RSP Bedding Material | 81,050 | TN | 7,506 | 66 | 41 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 11.04 | 11.04 | | | |
| 13 | Erosion Control Seeding | 13 | ACR | n/a | n/a | 7 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 09 - Channels and Canals Total | | | | | | | | 1.02 | 0.78 | 0.78 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 11.04 | 24.25 | | | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | 48 | 21 | 2 | 0.4144 | -- | -- | 0.46 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 15 | Construction Site Dewatering (Temporary Co | 21,000 | SF | n/a | n/a | 18 | 0.4144 | -- | -- | -- | n/a | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 16 | Construction Site Dewatering (Pumping) | - | - | n/a | n/a | 120 | 0.4144 | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | |
| 17 | Excavation (Wet Conditions) | 6,460 | CY | n/a | n/a | 4 | 0.4144 | -- | -- | -- | -- | -- | n/a | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 18 | Sheet Pile Wall | 7,940 | SF | n/a | n/a | 7 | 0.4144 | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | -- | | | |
| 19 | Headworks Structure Concrete Piles | 5,600 | LF | n/a | n/a | 32 | 0.4144 | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | |
| 20 | Headworks Structure | 3,140 | CY | 628 | 35 | 18 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.12 | | | |
| 21 | Headworks Channel Transition | 1,370 | CY | 274 | 35 | 10 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 22 | Hinged Bottom Gates | 3 | EA | n/a | n/a | 24 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | -- | -- | 0.46 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.12 | | | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | - | - | 20 | 21 | 2 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 24 | Pedestrian Bridge Concrete Piles | 640 | LF | n/a | n/a | 4 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 25 | Pedestrian Bridge Concrete Abutments and | 48 | CY | 10 | 35 | 1 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 26 | Pedestrian Bridge Span Installation | 2,720 | SF | n/a | n/a | 7 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | - | - | 22 | 21 | 2 | 0.4144 | 0.21 | -- | -- | -- | -- | -- | 0.21 | -- | -- | -- | -- | -- | -- | -- | | | |
| 28 | CMU Building | 1 | EA | n/a | n/a | 30 | 0.4144 | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 29 | Concrete Duct Banc | 1,350 | CY | 270 | 35 | 23 | 0.4144 | -- | -- | -- | -- | 0.38 | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 19 - Buildings, Grounds, and Utilities Total | | | | | | | | 0.21 | -- | -- | -- | 0.38 | -- | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | - | - | 6 | 21 | 2 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 31 | Mechanical Hydraulic Cylinders & Housing | - | - | n/a | n/a | 30 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 32 | CMU Building Mechanical Equipment | - | - | n/a | n/a | 30 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 33 | Electrical Control Equipment CMU Building | - | - | n/a | n/a | 30 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 34 | Electrical Power Equipment CMU Building | - | - | n/a | n/a | 30 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 35 | Communication Equipment | - | - | n/a | n/a | 12 | 0.4144 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| 20 -Permanent Operating Equipment Total | | | | | | | | -- | -- | -- | -- | 0.38 | -- | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | | |
| GRAND TOTAL | | | | | | | | 1.32 | 0.88 | 1.34 | -- | 0.38 | -- | 0.21 | -- | -- | -- | -- | -- | 11.04 | 25.37 | | | |

Table K-161. PM10 Emissions from Haul Tr

| # | Activity | Daily Emissions, lbs/day | | | | | | | | | | | | | | | Annual Emissions, tpy |
|-------------------------------------------------------|--------------------------------------------|--------------------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------|--------|--------|--------|-------|-------------|-------------|-----------------------|
| | | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.10 | 0.0001 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0005 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.64 | -- | 0.0033 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.64 | 0.10 | 0.0039 |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 1.02 | -- | -- | -- | -- | -- | -- | -- | 0.0010 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0070 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 10 | Riprap - Class 2 | 13.22 | 13.22 | 13.22 | 13.22 | 13.22 | 13.22 | 13.22 | -- | -- | -- | -- | -- | -- | -- | -- | 0.2445 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | -- | 4.28 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0043 |
| 12 | RSP Bedding Material | 11.04 | 11.04 | 11.04 | 11.04 | 11.04 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.2263 |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | n/a |
| | | 24.25 | 24.25 | 24.25 | 24.25 | 24.25 | 17.50 | 13.22 | 1.02 | -- | -- | -- | -- | -- | -- | -- | 0.4831 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.46 | -- | 0.0005 |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 16 | Construction Site Dewatering (Pumping) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 20 | Headworks Structure | 1.12 | -- | -- | -- | -- | -- | 1.12 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0100 |
| 21 | Headworks Channel Transition | -- | 0.88 | 0.88 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0044 |
| 22 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| | | 1.12 | 0.88 | 0.88 | -- | -- | 1.12 | -- | -- | -- | -- | -- | -- | -- | 0.46 | -- | 0.0149 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | 0.19 | -- | -- | -- | -- | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | 0.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| | | -- | 0.19 | -- | 0.32 | -- | -- | 0.19 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0004 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| 28 | CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0043 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0045 |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | -- | 0.06 | -- | 0.0001 |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 32 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 33 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 34 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | n/a |
| | | -- | -- | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | -- | 0.06 | -- | 0.0001 |
| GRAND TOTAL | | 25.37 | 25.32 | 25.13 | 24.57 | 24.25 | 18.61 | 13.41 | 1.07 | -- | -- | -- | -- | -- | 2.16 | 0.10 | 0.5068 |

Table K-162. PM2.5 Emissions from Haul Trucks (Alternative 2)

| # | Activity | Quantity | Unit | Total Truck Trips | Trip Distance (mi) | Estimated Duration, Days | Emission Factor (g/mi) | Maximum | | | | | | | | | | | | | | |
|-------------------------------------------------------------|--------------------------------------------|----------|------|-------------------|--------------------|--------------------------|------------------------|-------------|-------------|-------------|-----------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-------------|-------------|-----------|
| | | | | | | | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | | |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | 10 | 21 | 2 | 0.1262 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2 | Fremont Weir Demo | 420 | CY | 54 | 22 | 11 | 0.1262 | -- | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 276 | 26 | 4 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 4 | Temporary Electrical Power | 5,280 | LF | n/a | n/a | 4 | 0.1262 | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 02 - Relocations Total | | | | | | | | 0.03 | 0.03 | 0.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | 106 | 21 | 2 | 0.1262 | 0.31 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 6 | Clearing and Grubbing | 70 | ACR | 700 | 22 | 18 | 0.1262 | -- | 0.24 | 0.24 | 0.24 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 7 | Excavation (Wet Conditions) | 93,610 | CY | n/a | n/a | 27 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | |
| 8 | Excavation/Grading (Dry Conditions) | 372,680 | CY | n/a | n/a | 36 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | -- | -- | -- | -- | |
| 9 | Earthen Backfill | 1,010 | CY | n/a | n/a | 2 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 10 | Riprap - Class 2 | 87,580 | TN | 8,110 | 66 | 37 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.02 | |
| 11 | Riprap - Class 3 | 1,530 | TN | 142 | 66 | 2 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 12 | RSP Bedding Material | 81,050 | TN | 7,506 | 66 | 41 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.36 | 3.36 | |
| 13 | Erosion Control Seeding | 13 | ACR | n/a | n/a | 7 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals Total | | | | | | | | 0.31 | 0.24 | 0.24 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.36 | 7.38 | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | 48 | 21 | 2 | 0.1262 | -- | -- | 0.14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 | Construction Site Dewatering (Temporary Co | 21,000 | SF | n/a | n/a | 18 | 0.1262 | -- | -- | -- | n/a | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | -- | |
| 16 | Construction Site Dewatering (Pumping) | - | - | n/a | n/a | 120 | 0.1262 | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | |
| 17 | Excavation (Wet Conditions) | 6,460 | CY | n/a | n/a | 4 | 0.1262 | -- | -- | -- | -- | -- | n/a | -- | -- | -- | -- | -- | -- | -- | -- | |
| 18 | Sheet Pile Wall | 7,940 | SF | n/a | n/a | 7 | 0.1262 | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | -- | |
| 19 | Headworks Structure Concrete Piles | 5,600 | LF | n/a | n/a | 32 | 0.1262 | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | |
| 20 | Headworks Structure | 3,140 | CY | 628 | 35 | 18 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.34 | |
| 21 | Headworks Channel Transition | 1,370 | CY | 274 | 35 | 10 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 22 | Hinged Bottom Gates | 3 | EA | n/a | n/a | 24 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | -- | -- | 0.14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.34 | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | - | - | 20 | 21 | 2 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 24 | Pedestrian Bridge Concrete Piles | 640 | LF | n/a | n/a | 4 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 25 | Pedestrian Bridge Concrete Abutments and | 48 | CY | 10 | 35 | 1 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 26 | Pedestrian Bridge Span Installation | 2,720 | SF | n/a | n/a | 7 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | - | - | 22 | 21 | 2 | 0.1262 | 0.06 | -- | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | |
| 28 | CMU Building | 1 | EA | n/a | n/a | 30 | 0.1262 | -- | n/a | n/a | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 29 | Concrete Duct Banc | 1,350 | CY | 270 | 35 | 23 | 0.1262 | -- | -- | -- | -- | 0.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 - Buildings, Grounds, and Utilities Total | | | | | | | | 0.06 | -- | -- | -- | 0.11 | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | - | - | 6 | 21 | 2 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 31 | Mechanical Hydraulic Cylinders & Housing | - | - | n/a | n/a | 30 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 32 | CMU Building Mechanical Equipment | - | - | n/a | n/a | 30 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 33 | Electrical Control Equipment CMU Building | - | - | n/a | n/a | 30 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 34 | Electrical Power Equipment CMU Building | - | - | n/a | n/a | 30 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 35 | Communication Equipment | - | - | n/a | n/a | 12 | 0.1262 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment Total | | | | | | | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| GRAND TOTAL | | | | | | | | 0.40 | 0.27 | 0.41 | -- | 0.11 | -- | 0.06 | -- | -- | -- | -- | -- | 3.36 | 7.72 | |

Table K-162. PM2.5 Emissions from Haul T

| # | Activity | Daily Emissions, lbs/day | | | | | | | | | | | | | | | Annual Emissions, tpy |
|-------------------------------------------------------|--------------------------------------------|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|--------|--------|--------|-------|-------------|-------------|-----------------------|
| | | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep | 16-Sep | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.03 | 0.0000 |
| 2 | Fremont Weir Demo | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0002 |
| 3 | Levee O&M Road Regrading (6" AB) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.50 | -- | -- | 0.0010 |
| 4 | Temporary Electrical Power | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.50 | 0.03 | -- | 0.0012 |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.31 | -- | -- | -- | -- | -- | -- | -- | 0.0003 |
| 6 | Clearing and Grubbing | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0021 |
| 7 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 8 | Excavation/Grading (Dry Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 9 | Earthen Backfill | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 10 | Riprap - Class 2 | 4.02 | 4.02 | 4.02 | 4.02 | 4.02 | 4.02 | 4.02 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0744 |
| 11 | Riprap - Class 3 | -- | -- | -- | -- | -- | 1.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| 12 | RSP Bedding Material | 3.36 | 3.36 | 3.36 | 3.36 | 3.36 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0689 |
| 13 | Erosion Control Seeding | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | n/a |
| | | 7.38 | 7.38 | 7.38 | 7.38 | 7.38 | 5.33 | 4.02 | 0.31 | -- | -- | -- | -- | -- | -- | -- | 0.1471 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.14 | -- | -- | 0.0001 |
| 15 | Construction Site Dewatering (Temporary Co | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 16 | Construction Site Dewatering (Pumping) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 17 | Excavation (Wet Conditions) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 18 | Sheet Pile Wall | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 19 | Headworks Structure Concrete Piles | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 20 | Headworks Structure | 0.34 | -- | -- | -- | -- | 0.34 | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0031 |
| 21 | Headworks Channel Transition | -- | 0.27 | 0.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| 22 | Hinged Bottom Gates | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| | | 0.34 | 0.27 | 0.27 | -- | -- | 0.34 | -- | -- | -- | -- | -- | -- | -- | 0.14 | -- | 0.0045 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | -- | 0.06 | -- | -- | -- | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 24 | Pedestrian Bridge Concrete Piles | -- | -- | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 25 | Pedestrian Bridge Concrete Abutments and | -- | -- | -- | 0.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0000 |
| 26 | Pedestrian Bridge Span Installation | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| | | -- | 0.06 | -- | 0.10 | -- | -- | 0.06 | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0001 |
| 28 | CMU Building | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a |
| 29 | Concrete Duct Banc | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0013 |
| | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.0014 |
| 20 - Permanent Operating Equipment | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | 0.02 | -- | -- | 0.0000 |
| 31 | Mechanical Hydraulic Cylinders & Housing | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 32 | CMU Building Mechanical Equipment | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 33 | Electrical Control Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 34 | Electrical Power Equipment CMU Building | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | n/a | n/a | n/a | -- | -- | -- | n/a |
| 35 | Communication Equipment | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | n/a | n/a | -- | -- | -- | n/a |
| | | -- | -- | -- | -- | -- | -- | -- | 0.02 | -- | -- | -- | -- | -- | 0.02 | -- | 0.0000 |
| GRAND TOTAL | | 7.72 | 7.71 | 7.65 | 7.48 | 7.38 | 5.67 | 4.08 | 0.33 | -- | -- | -- | -- | -- | 0.66 | 0.03 | 0.1543 |

Table K-163. GHG Emissions from Haul Trucks (Alternative 2)

| # | Activity | Quantity | Unit | Total Truck Trips | Trip Distance (mi) | Estimated Duration, Days | CO2 Emission Factor (g/mi) | Annual Emissions, MTCO2e/yr |
|-------------------------------------------------------------|-------------------------------------------|----------|------|-------------------------|--------------------------|--------------------------------|-------------------------------|-----------------------------------|
| 02 - Relocations | | | | | | | | |
| 1 | Mobilization and Demobilization | - | - | 10 | 21 | 2 | 1604.388845 | 0.34 |
| 2 | Fremont Weir Demo | 420 | CY | 54 | 22 | 11 | 1604.388845 | 1.91 |
| 3 | Levee O&M Road Regrading (6" AB) | 119,000 | SF | 276 | 26 | 4 | 1604.388845 | 11.51 |
| 4 | Temporary Electrical Power | 5,280 | LF | n/a | n/a | 4 | 1604.388845 | n/a |
| 02 - Relocations Total | | | | | | | | 13.76 |
| 09 - Channels and Canals | | | | | | | | |
| 5 | Mobilization and Demobilization | - | - | 106 | 21 | 2 | 1604.388845 | 3.57 |
| 6 | Clearing and Grubbing | 70 | ACR | 700 | 22 | 18 | 1604.388845 | 24.71 |
| 7 | Excavation (Wet Conditions) | 93,610 | CY | n/a | n/a | 27 | 1604.388845 | n/a |
| 8 | Excavation/Grading (Dry Conditions) | 372,680 | CY | n/a | n/a | 36 | 1604.388845 | n/a |
| 9 | Earthen Backfill | 1,010 | CY | n/a | n/a | 2 | 1604.388845 | n/a |
| 10 | Riprap - Class 2 | 87,580 | TN | 8,110 | 66 | 37 | 1604.388845 | 858.77 |
| 11 | Riprap - Class 3 | 1,530 | TN | 142 | 66 | 2 | 1604.388845 | 15.04 |
| 12 | RSP Bedding Material | 81,050 | TN | 7,506 | 66 | 41 | 1604.388845 | 794.81 |
| 13 | Erosion Control Seeding | 13 | ACR | n/a | n/a | 7 | 1604.388845 | n/a |
| 09 - Channels and Canals Total | | | | | | | | 1,696.89 |
| 15 - Floodway Control and Diversion Structures | | | | | | | | |
| 14 | Mobilization and Demobilization | - | - | 48 | 21 | 2 | 1604.388845 | 1.62 |
| 15 | Construction Site Dewatering (Temporary C | 21,000 | SF | n/a | n/a | 18 | 1604.388845 | n/a |
| 16 | Construction Site Dewatering (Pumping) | - | - | n/a | n/a | 120 | 1604.388845 | n/a |
| 17 | Excavation (Wet Conditions) | 6,460 | CY | n/a | n/a | 4 | 1604.388845 | n/a |
| 18 | Sheet Pile Wall | 7,940 | SF | n/a | n/a | 7 | 1604.388845 | n/a |
| 19 | Headworks Structure Concrete Piles | 5,600 | LF | n/a | n/a | 32 | 1604.388845 | n/a |
| 20 | Headworks Structure | 3,140 | CY | 628 | 35 | 18 | 1604.388845 | 35.26 |
| 21 | Headworks Channel Transition | 1,370 | CY | 274 | 35 | 10 | 1604.388845 | 15.39 |
| 22 | Hinged Bottom Gates | 3 | EA | n/a | n/a | 24 | 1604.388845 | n/a |
| 15 - Floodway Control and Diversion Structures Total | | | | | | | | 52.27 |
| 08 - Roads, Railroads, and Bridges | | | | | | | | |
| 23 | Mobilization and Demobilization | - | - | 20 | 21 | 2 | 1604.388845 | 0.67 |
| 24 | Pedestrian Bridge Concrete Piles | 640 | LF | n/a | n/a | 4 | 1604.388845 | n/a |
| 25 | Pedestrian Bridge Concrete Abutments and | 48 | CY | 10 | 35 | 1 | 1604.388845 | 0.56 |
| 26 | Pedestrian Bridge Span Installation | 2,720 | SF | n/a | n/a | 7 | 1604.388845 | n/a |
| 08 - Roads, Railroads, and Bridges Total | | | | | | | | 1.24 |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | |
| 27 | Mobilization and Demobilization | - | - | 22 | 21 | 2 | 1604.388845 | 0.74 |
| 28 | CMU Building | 1 | EA | n/a | n/a | 30 | 1604.388845 | n/a |
| 29 | Concrete Duct Banc | 1,350 | CY | 270 | 35 | 23 | 1604.388845 | 15.16 |
| 19 - Buildings, Grounds, and Utilities Total | | | | | | | | 15.90 |
| 20 -Permanent Operating Equipment | | | | | | | | |
| 30 | Mobilization and Demobilization | - | - | 6 | 21 | 2 | 1604.388845 | 0.20 |
| 31 | Mechanical Hydraulic Cylinders & Housing | - | - | n/a | n/a | 30 | 1604.388845 | n/a |
| 32 | CMU Building Mechanical Equipment | - | - | n/a | n/a | 30 | 1604.388845 | n/a |
| 33 | Electrical Control Equipment CMU Building | - | - | n/a | n/a | 30 | 1604.388845 | n/a |
| 34 | Electrical Power Equipment CMU Building | - | - | n/a | n/a | 30 | 1604.388845 | n/a |
| 35 | Communication Equipment | - | - | n/a | n/a | 12 | 1604.388845 | n/a |
| 20 -Permanent Operating Equipment Total | | | | | | | | 0.20 |
| GRAND TOTAL | | | | | | | | 1,780.25 |

Table K-164. PM10 Emissions Summary from Fugitive Dust (Alternative 2)

| # | Activity | PM10 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|------------------------------------------------------|---------------------------------------|-------------|-------------|-------------|--------|--------|---------------|---------------|---------------|---------------|---------------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep | 16-Sep | |
| 02 - Relocations | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Mobilization and Demobilization | n/a | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | n/a | | | | | | | | | | | | | | | | | | | | | | | |
| | Grading | n/a | | | | | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | n/a | | | | | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | n/a | | | | | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | n/a | | | | | | | | | | | | | | | | | | | | | | | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 2 | Fremont Weir Demo | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | 0.13 | 0.13 | | | | | | | | | | | | | | | | | | | | | |
| | Grading | | n/a | n/a | | | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | | n/a | n/a | | | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | n/a | n/a | | | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Fremont Weir Demo Subtotal | -- | 0.13 | 0.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 3 | Levee O&M Road Regrading (6" AB) | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | | | | | | |
| | Grading | | | | | | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Levee O&M Road Regrading (6" AB) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 4 | Temporary Electrical Power | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | n/a | | | | | | | | | | | | | | | | | | | | | | | |
| | Grading | n/a | | | | | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | n/a | | | | | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | n/a | | | | | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | n/a | | | | | | | | | | | | | | | | | | | | | | | |
| | Temporary Electrical Power Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 02 - Relocations Total | -- | 0.13 | 0.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 09 - Channels and Canals | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Mobilization and Demobilization | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | n/a | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Grading | n/a | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Bulldozing | n/a | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Unpaved Road Dust | n/a | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Paved Road Dust | n/a | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 6 | Clearing and Grubbing | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | n/a | n/a | n/a | | | | | | | | | | | | | | | | | | | | |
| | Grading | | | 1.06 | 1.06 | 1.06 | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | | n/a | n/a | n/a | | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | n/a | n/a | n/a | | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Clearing and Grubbing Subtotal | -- | 1.06 | 1.06 | 1.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 7 | Excavation (Wet Conditions) | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | | | |
| | Grading | | | | | | | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | 220.41 | 220.41 | 220.41 | 220.41 | 220.41 | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Excavation (Wet Conditions) Subtotal | -- | -- | -- | -- | -- | -- | 220.41 | 220.41 | 220.41 | 220.41 | 220.41 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |

Table K-164. PM10 Emissions Summary from Fugitive D

| # | Activity | | | | | | Annual Emissions , tpy |
|---------------------------------|------------------------------------------------------|--------|--------|-------|-------------|--------|------------------------|
| | | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 02 - Relocations | | | | | | | |
| 1 | Mobilization and Demobilization | | | | | | |
| | Material Handling | | | | n/a | n/a | n/a |
| | Grading | | | | n/a | n/a | n/a |
| | Bulldozing | | | | n/a | n/a | n/a |
| | Unpaved Road Dust | | | | n/a | n/a | n/a |
| | Paved Road Dust | | | | n/a | n/a | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- |
| 2 | Fremont Weir Demo | | | | | | 0.00 |
| | Material Handling | | | | | n/a | n/a |
| | Grading | | | | | n/a | n/a |
| | Bulldozing | | | | | n/a | n/a |
| | Unpaved Road Dust | | | | | n/a | n/a |
| | Paved Road Dust | | | | | n/a | n/a |
| | Fremont Weir Demo Subtotal | -- | -- | -- | -- | -- | 0.00 |
| 3 | Levee O&M Road Regrading (6" AB) | | | | | | 0.00 |
| | Material Handling | | | | n/a | n/a | n/a |
| | Grading | | | | 0.53 | n/a | n/a |
| | Bulldozing | | | | n/a | n/a | n/a |
| | Unpaved Road Dust | | | | n/a | n/a | n/a |
| | Paved Road Dust | | | | n/a | n/a | n/a |
| | Levee O&M Road Regrading (6" AB) Subtotal | -- | -- | -- | 0.53 | -- | 0.00 |
| 4 | Temporary Electrical Power | | | | | | |
| | Material Handling | | | | | n/a | n/a |
| | Grading | | | | | n/a | n/a |
| | Bulldozing | | | | | n/a | n/a |
| | Unpaved Road Dust | | | | | n/a | n/a |
| | Paved Road Dust | | | | | n/a | n/a |
| | Temporary Electrical Power Subtotal | -- | -- | -- | -- | -- | -- |
| | 02 - Relocations Total | -- | -- | -- | 0.53 | -- | 0.00 |
| 09 - Channels and Canals | | | | | | | |
| 5 | Mobilization and Demobilization | | | | | | |
| | Material Handling | | | | | n/a | n/a |
| | Grading | | | | | n/a | n/a |
| | Bulldozing | | | | | n/a | n/a |
| | Unpaved Road Dust | | | | | n/a | n/a |
| | Paved Road Dust | | | | | n/a | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- |
| 6 | Clearing and Grubbing | | | | | | 0.01 |
| | Material Handling | | | | | n/a | n/a |
| | Grading | | | | | n/a | n/a |
| | Bulldozing | | | | | n/a | n/a |
| | Unpaved Road Dust | | | | | n/a | n/a |
| | Paved Road Dust | | | | | n/a | n/a |
| | Clearing and Grubbing Subtotal | -- | -- | -- | -- | -- | 0.01 |
| 7 | Excavation (Wet Conditions) | | | | | | 2.87 |
| | Material Handling | | | | | n/a | n/a |
| | Grading | | | | | n/a | n/a |
| | Bulldozing | | | | | n/a | n/a |
| | Unpaved Road Dust | | | | | n/a | n/a |
| | Paved Road Dust | | | | | n/a | n/a |
| | Excavation (Wet Conditions) Subtotal | -- | -- | -- | -- | -- | 2.87 |

Table K-164. PM10 Emissions Summary from Fugitive Dust (Alternative 2)

| # | Activity | PM10 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep | 16-Sep | |
| 8 | Excavation/Grading (Dry Conditions) | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 | | | | | | | | | | | | | | |
| | Grading | | | | | 15.91 | 15.91 | 15.91 | 15.91 | 15.91 | 15.91 | | | | | | | | | | | | | | |
| | Bulldozing | | | | | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | 7.05 | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Excavation/Grading (Dry Conditions) Subtotal | -- | -- | -- | -- | 24.84 | 24.84 | 24.84 | 24.84 | 24.84 | 24.84 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 9 | Earthen Backfill | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | 0.18 | | | | | | | | | | | | | | | |
| | Grading | | | | | | | | | 0.53 | | | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | | | 2.35 | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | n/a | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Earthen Backfill Subtotal | -- | -- | -- | -- | -- | -- | 3.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 10 | Riprap - Class 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | | |
| | Grading | | | | | | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | |
| | Bulldozing | | | | | | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | |
| | Unpaved Road Dust | | | | | | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Riprap - Class 2 Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | -- | | |
| 11 | Riprap - Class 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | | 1.65 | | | | |
| | Grading | | | | | | | | | | | | | | | | | | | n/a | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | n/a | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | n/a | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Riprap - Class 3 Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.65 | -- | -- | -- | | |
| 12 | RSP Bedding Material | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | | | | | |
| | Grading | | | | | | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | | | |
| | Bulldozing | | | | | | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | | | | |
| | RSP Bedding Material Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | 3.30 | -- | -- | -- | -- | | |
| 13 | Erosion Control Seeding | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | | | | n/a | | |
| | Grading | | | | | | | | | | | | | | | | | | | | | | n/a | | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | | | | n/a | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | | | | n/a | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Erosion Control Seeding Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | 09 - Channels and Canals Total | -- | 1.06 | 1.06 | 1.06 | 24.84 | 24.84 | 248.30 | 245.25 | 245.25 | 245.25 | 220.41 | 3.30 | 6.60 | 6.60 | 6.60 | 6.60 | 6.60 | 6.60 | 4.95 | 3.30 | -- | -- | | |
| 15 - Floodway Control and Diversion Structures | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Mobilization and Demobilization | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | n/a | | | | | | | | | | | | | | | | | | | | |
| | Grading | | | | n/a | | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | | | | n/a | | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | n/a | | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 15 | Construction Site Dewatering (Temporary Cofferdam) | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | n/a | n/a | n/a | | | | | | | | | | | | | | | | | | |
| | Grading | | | | n/a | n/a | n/a | | | | | | | | | | | | | | | | | | |
| | Bulldozing | | | | n/a | n/a | n/a | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | n/a | n/a | n/a | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Construction Site Dewatering (Temporary Cofferdam) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| 16 | Construction Site Dewatering (Pumping) | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | | |

Table K-164. PM10 Emissions Summary from Fugitive D

| # | Activity | | | | | | Annual Emissions , tpy |
|-------------------------------------------------------|---------------------------------------------------------------|--------|--------|-------|--------|--------|------------------------|
| | | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| 8 | Excavation/Grading (Dry Conditions) | | | | | | |
| | Material Handling | | | | | | 0.03 |
| | Grading | | | | | | 0.29 |
| | Bulldozing | | | | | | 0.13 |
| | Unpaved Road Dust | | | | | | n/a |
| | Paved Road Dust | | | | | | n/a |
| | Excavation/Grading (Dry Conditions) Subtotal | -- | -- | -- | -- | -- | 0.45 |
| 9 | Earthen Backfill | | | | | | |
| | Material Handling | | | | | | 0.00 |
| | Grading | | | | | | 0.00 |
| | Bulldozing | | | | | | 0.00 |
| | Unpaved Road Dust | | | | | | n/a |
| | Paved Road Dust | | | | | | n/a |
| | Earthen Backfill Subtotal | -- | -- | -- | -- | -- | 0.00 |
| 10 | Riprap - Class 2 | | | | | | |
| | Material Handling | | | | | | 0.07 |
| | Grading | | | | | | n/a |
| | Bulldozing | | | | | | n/a |
| | Unpaved Road Dust | | | | | | n/a |
| | Paved Road Dust | | | | | | n/a |
| | Riprap - Class 2 Subtotal | -- | -- | -- | -- | -- | 0.07 |
| 11 | Riprap - Class 3 | | | | | | |
| | Material Handling | | | | | | 0.00 |
| | Grading | | | | | | n/a |
| | Bulldozing | | | | | | n/a |
| | Unpaved Road Dust | | | | | | n/a |
| | Paved Road Dust | | | | | | n/a |
| | Riprap - Class 3 Subtotal | -- | -- | -- | -- | -- | 0.00 |
| 12 | RSP Bedding Material | | | | | | |
| | Material Handling | | | | | | 0.07 |
| | Grading | | | | | | n/a |
| | Bulldozing | | | | | | n/a |
| | Unpaved Road Dust | | | | | | n/a |
| | Paved Road Dust | | | | | | n/a |
| | RSP Bedding Material Subtotal | -- | -- | -- | -- | -- | 0.07 |
| 13 | Erosion Control Seeding | | | | | | |
| | Material Handling | n/a | | | | | n/a |
| | Grading | n/a | | | | | n/a |
| | Bulldozing | n/a | | | | | n/a |
| | Unpaved Road Dust | n/a | | | | | n/a |
| | Paved Road Dust | | | | | | n/a |
| | Erosion Control Seeding Subtotal | -- | -- | -- | -- | -- | -- |
| | 09 - Channels and Canals Total | -- | -- | -- | -- | -- | 3.47 |
| 15 - Floodway Control and Diversion Structures | | | | | | | |
| 14 | Mobilization and Demobilization | | | | | | |
| | Material Handling | | | | n/a | | n/a |
| | Grading | | | | n/a | | n/a |
| | Bulldozing | | | | n/a | | n/a |
| | Unpaved Road Dust | | | | n/a | | n/a |
| | Paved Road Dust | | | | | | n/a |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- |
| 15 | Construction Site Dewatering (Temporary Cofferdam) | | | | | | |
| | Material Handling | | | | | | n/a |
| | Grading | | | | | | n/a |
| | Bulldozing | | | | | | n/a |
| | Unpaved Road Dust | | | | | | n/a |
| | Paved Road Dust | | | | | | n/a |
| | Construction Site Dewatering (Temporary Cofferdam) Sub | -- | -- | -- | -- | -- | -- |
| 16 | Construction Site Dewatering (Pumping) | | | | | | |
| | Material Handling | n/a | n/a | n/a | | | n/a |

Table K-164. PM10 Emissions Summary from Fugitive Dust (Alternative 2)

| # | Activity | PM10 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|-------------------------------------------------------------|---------------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep | 16-Sep | |
| | Grading | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | |
| | Bulldozing | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | |
| | Unpaved Road Dust | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Construction Site Dewatering (Pumping) Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 17 | Excavation (Wet Conditions) | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | n/a | | | | | | | | | | | | | | | | | |
| | Grading | | | | | | | n/a | | | | | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | n/a | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | 112.65 | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Excavation (Wet Conditions) Subtotal | -- | -- | -- | -- | -- | -- | 112.65 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 18 | Sheet Pile Wall | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | n/a | n/a | | | | | | | | | | | | | | | |
| | Grading | | | | | | | | n/a | n/a | | | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | | n/a | n/a | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | n/a | n/a | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Sheet Pile Wall Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 | Headworks Structure Concrete Piles | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | |
| | Grading | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | |
| | Bulldozing | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Headworks Structure Concrete Piles Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 | Headworks Structure | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | n/a | n/a | | | | | | n/a | | | | |
| | Grading | | | | | | | | | | | | | n/a | n/a | | | | | | n/a | | | | |
| | Bulldozing | | | | | | | | | | | | | n/a | n/a | | | | | | n/a | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | n/a | n/a | | | | | | n/a | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Headworks Structure Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 21 | Headworks Channel Transition | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | n/a | n/a | | | | | | | | |
| | Grading | | | | | | | | | | | | | | | n/a | n/a | | | | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | n/a | n/a | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | n/a | n/a | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Headworks Channel Transition Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 22 | Hinged Bottom Gates | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Grading | | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Hinged Bottom Gates Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 15 - Floodway Control and Diversion Structures Total | -- | -- | -- | -- | -- | -- | 112.65 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 08 - Roads, Railroads, and Bridges | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | Mobilization and Demobilization | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | | | | | | |
| | Grading | | | | | | | | | | | | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |

Table K-164. PM10 Emissions Summary from Fugitive D

| # | Activity | | | | | | Annual Emissions , tpy |
|-------------------------------------------|-------------------------------------------------------------|--------|--------|-------|--------|--------|------------------------|
| | | 23-Sep | 30-Sep | 7-Oct | 14-Oct | 21-Oct | |
| | Grading | n/a | n/a | n/a | | | n/a |
| | Bulldozing | n/a | n/a | n/a | | | n/a |
| | Unpaved Road Dust | n/a | n/a | n/a | | | n/a |
| | Paved Road Dust | | | | | | |
| | Construction Site Dewatering (Pumping) Subtotal | -- | -- | -- | -- | -- | -- |
| 17 | Excavation (Wet Conditions) | | | | | | |
| | Material Handling | | | | | | n/a |
| | Grading | | | | | | n/a |
| | Bulldozing | | | | | | n/a |
| | Unpaved Road Dust | | | | | | 0.20 |
| | Paved Road Dust | | | | | | |
| | Excavation (Wet Conditions) Subtotal | -- | -- | -- | -- | -- | 0.20 |
| 18 | Sheet Pile Wall | | | | | | |
| | Material Handling | | | | | | n/a |
| | Grading | | | | | | n/a |
| | Bulldozing | | | | | | n/a |
| | Unpaved Road Dust | | | | | | n/a |
| | Paved Road Dust | | | | | | |
| | Sheet Pile Wall Subtotal | -- | -- | -- | -- | -- | -- |
| 19 | Headworks Structure Concrete Piles | | | | | | |
| | Material Handling | | | | | | n/a |
| | Grading | | | | | | n/a |
| | Bulldozing | | | | | | n/a |
| | Unpaved Road Dust | | | | | | n/a |
| | Paved Road Dust | | | | | | |
| | Headworks Structure Concrete Piles Subtotal | -- | -- | -- | -- | -- | -- |
| 20 | Headworks Structure | | | | | | |
| | Material Handling | | | | | | n/a |
| | Grading | | | | | | n/a |
| | Bulldozing | | | | | | n/a |
| | Unpaved Road Dust | | | | | | n/a |
| | Paved Road Dust | | | | | | |
| | Headworks Structure Subtotal | -- | -- | -- | -- | -- | -- |
| 21 | Headworks Channel Transition | | | | | | |
| | Material Handling | | | | | | n/a |
| | Grading | | | | | | n/a |
| | Bulldozing | | | | | | n/a |
| | Unpaved Road Dust | | | | | | n/a |
| | Paved Road Dust | | | | | | |
| | Headworks Channel Transition Subtotal | -- | -- | -- | -- | -- | -- |
| 22 | Hinged Bottom Gates | | | | | | |
| | Material Handling | n/a | n/a | n/a | | | n/a |
| | Grading | n/a | n/a | n/a | | | n/a |
| | Bulldozing | n/a | n/a | n/a | | | n/a |
| | Unpaved Road Dust | n/a | n/a | n/a | | | n/a |
| | Paved Road Dust | | | | | | |
| | Hinged Bottom Gates Subtotal | -- | -- | -- | -- | -- | -- |
| | 15 - Floodway Control and Diversion Structures Total | -- | -- | -- | -- | -- | 0.20 |
| 08 - Roads, Railroads, and Bridges | | | | | | | |
| 23 | Mobilization and Demobilization | | | | | | |
| | Material Handling | | | | | | n/a |
| | Grading | | | | | | n/a |
| | Bulldozing | | | | | | n/a |
| | Unpaved Road Dust | | | | | | n/a |
| | Paved Road Dust | | | | | | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- |

Table K-164. PM10 Emissions Summary from Fugitive Dust (Alternative 2)

| # | Activity | PM10 Daily Emissions Summary, lbs/day | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------------------|--------------------------------------------------------------------|---------------------------------------|--------|--------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|--|
| | | 15-Apr | 22-Apr | 29-Apr | 6-May | 13-May | 20-May | 27-May | 3-Jun | 10-Jun | 17-Jun | 24-Jun | 1-Jul | 8-Jul | 15-Jul | 22-Jul | 29-Jul | 5-Aug | 12-Aug | 19-Aug | 26-Aug | 2-Sep | 9-Sep | 16-Sep | |
| 24 | Pedestrian Bridge Concrete Piles | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | n/a | | | | | | | |
| | Grading | | | | | | | | | | | | | | | | | n/a | | | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | | | n/a | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | n/a | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pedestrian Bridge Concrete Piles Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 25 | Pedestrian Bridge Concrete Abutments and Wingwalls | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | n/a | | | | | | | |
| | Grading | | | | | | | | | | | | | | | | | n/a | | | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | | | n/a | | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | n/a | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pedestrian Bridge Concrete Abutments and Wingwalls Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 26 | Pedestrian Bridge Span Installation | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | n/a | n/a | | | | | | |
| | Grading | | | | | | | | | | | | | | | | | n/a | n/a | | | | | | |
| | Bulldozing | | | | | | | | | | | | | | | | | n/a | n/a | | | | | | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | n/a | n/a | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Pedestrian Bridge Span Installation Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 08 - Roads, Railroads, and Bridges Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 19 - Buildings, Grounds, and Utilities | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | Mobilization and Demobilization | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | n/a | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Grading | n/a | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Bulldozing | n/a | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Unpaved Road Dust | n/a | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 28 | CMU Building and Earthwork Pad Construction | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | | | | | | | |
| | Grading | | 2.12 | 2.12 | 2.12 | 2.12 | 2.12 | 2.12 | | | | | | | | | | | | | | | | | |
| | Bulldozing | | 2.35 | 2.35 | 2.35 | 2.35 | 2.35 | 2.35 | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | n/a | n/a | n/a | n/a | n/a | n/a | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | CMU Building and Earthwork Pad Construction Subtotal | -- | 4.47 | 4.47 | 4.47 | 4.47 | 4.47 | 4.47 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 29 | Concrete Duct Banc | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | n/a | | | | | | | | | | | | | | | | | |
| | Grading | | | | | | | n/a | | | | | | | | | | | | | | | | | |
| | Bulldozing | | | | | | | n/a | | | | | | | | | | | | | | | | | |
| | Unpaved Road Dust | | | | | | | n/a | | | | | | | | | | | | | | | | | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Concrete Duct Banc Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 19 - Buildings, Grounds, and Utilities Total | -- | 4.47 | 4.47 | 4.47 | 4.47 | 4.47 | 4.47 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 20 -Permanent Operating Equipment | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Mobilization and Demobilization | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Grading | | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mobilization and Demobilization Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| 31 | Mechanical Hydraulic Cylinders & Housing | | | | | | | | | | | | | | | | | | | | | | | | |
| | Material Handling | | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Grading | | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Bulldozing | | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Unpaved Road Dust | | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Paved Road Dust | | | | | | | | | | | | | | | | | | | | | | | n/a | |
| | Mechanical Hydraulic Cylinders & Housing Subtotal | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |