

Greenhouse Gas and Criteria Pollutants Emission Factor Calculation Tools

Project Information

Project Name Mohave Conservation Area Backwater Project
Phase Phase One - Phase Four - Estimated Total Annual Emissions (Tons[Short US])

Estimated Fuel Consumption

Type of Fuel Ultra Low Sulfur Diesel Fuel and Gasoline Combined
Estimated Total Gallons of Fuel Used **88,633**
Estimated Gallons of Fuel Used Per Hour **81**

Criteria Pollutant Emissions

| Pollutant | Pollutant Abr. | Maximum Unmitigated Emissions (Tons/yr)¹ | Unit | Appropriate Annual Threshold Applied² | Exceeds Threshold? |
|------------------------------|-----------------------|--|-------------|---|---------------------------|
| GHG - Carbon Dioxide | CO ² e | 907.86 | Tons | 100,000.00 | No |
| Carbon Monoxide | CO | 1.13 | Tons | 100.00 | No |
| Oxides of Nitrogen | NOx | 3.48 | Tons | 25.00 | No |
| Volatile Organic Compounds | VOC | 0.17 | Tons | 25.00 | No |
| Oxides of Sulfur*** | SOx | 0.00 | Tons | 25.00 | No |
| Particulate Matter (Primary) | PM ₁₀ | 0.11 | Tons | 15.00 | No |
| Particulate Matter (Primary) | PM _{2.5} | 0.10 | Tons | 15.00 | No |
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¹ The annual emissions estimated for this project were calculated by dividing the proposed Project Totals for the life of the project by the expected duration of Phase one through Phase 3, estimated at 3 years.

Greenhous Gas and Criteria Pollutants Emission Factor Calculation Tools

Project Information

Project Name Mohave Conservation Area Backwater Project
Phase Phase One - Vegetation Clearing

Estimated Fuel Consumption

Type of Fuel Ultra Low Sulfur Diesel Fuel
Estimated Total Gallons of Fuel Used 22,193
estimated Gallons of Fuel Used Per Hour 44

Criteria Pollutant Emissions

| Pollutant | Pollutant Abr. | Emission Factor ¹ | Units | Emission Factor Conversion | Unit | Maximum Unmitigated Emissions (lbs/day) | Unit | Appropriate Threshold Applied ² | Maximum Unmitigated Emissions (Tons) ⁴ | Unit | Appropriate Threshold Applied ² | Exceeds Threshold? |
|------------------------------|-------------------|------------------------------|----------------------|----------------------------|--------------|---|---------|--|---|------|--|--------------------|
| GHG - Carbon Dioxide | CO ² e | 22,600.000000 | lbs per 1000 gallons | 22.60000000 | lbs/1 gallon | 7,955.20 | lbs/day | 548,000 | 227.504670 | Tons | 100,000.00 | No |
| Carbon Monoxide | CO | 11.600000 | lbs per 1000 gallons | 0.01160000 | lbs/1 gallon | 4.08 | lbs/day | 548 | 0.128719 | Tons | 100.00 | No |
| Oxides of Nitrogen | NOx | 260.000000 | lbs per 1000 gallons | 0.26000000 | lbs/1 gallon | 91.52 | lbs/day | 137 | 2.885090 | Tons | 25.00 | No |
| Volatile Organic Compounds | VOC | 11.500000 | lbs per 1000 gallons | 0.01150000 | lbs/1 gallon | 4.05 | lbs/day | 137 | 0.127610 | Tons | 25.00 | No |
| Oxides of Sulfur*** | SOx | 0.125038 | lbs per 1000 gallons | 0.00012504 | lbs/1 gallon | 0.04 | lbs/day | 137 | 0.001387 | Tons | 25.00 | No |
| Particulate Matter (Primary) | PM ₁₀ | 7.850000 | lbs per 1000 gallons | 0.00785000 | lbs/1 gallon | 2.76 | lbs/day | 82 | 0.087108 | Tons | 15.00 | No |
| Particulate Matter (Primary) | PM _{2.5} | 7.550000 | lbs per 1000 gallons | 0.00755000 | lbs/1 gallon | 2.66 | lbs/day | 82 | 0.083779 | Tons | 15.00 | No |
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*** Sulfur Emission Factor calculation is based on Ultra Low Sulfur Diesel Fuel (Sulfur Content is 15ppm or 0.000125038 lbs/gal³). Calculation Formua used: 1.38E2*S (S=%Sulfur Content)

¹ Citation for this Calculation Sheet: EPA, May 2015, Technology Transfer Network Clearinghouse for Inventories & Emissions Factors

² Mojave Desert Air Quality Management District

³ Accelware: Unit Converter, Parts/Million (Ppm) to Pounds/Gallon (US) Conversion Calculator

⁴ Accelware: Unit Converter, Pounds (lbs) to Tons (short US) Conversion Calculator

Greenhouse Gas and Criteria Pollutants Emission Factor Calculation Tools

Project Information

Project Name Mohave Conservation Area Backwater Project
Phase Phase Two - Excavation, Dredging, and Construction

Estimated Fuel Consumption

Type of Fuel Ultra Low Sulfur Diesel Fuel
Estimated Total Gallons of Fuel Used 13,200
estimated Gallons of Fuel Used Per Hour 30

Criteria Pollutant Emissions

| Pollutant | Pollutant Abr. | Emission Factor ¹ | Units | Emission Factor Conversion | Unit | Maximum Unmitigated Emissions (lbs/day) | Unit | Appropriate Threshold Applied ² | Maximum Unmitigated Emissions (Tons) ⁴ | Unit | Appropriate Threshold Applied ² | Exceeds Threshold? |
|------------------------------|-------------------|------------------------------|----------------------|----------------------------|--------------|---|---------|--|---|------|--|--------------------|
| Carbon Dioxide | CO ² | 22,600.000000 | lbs per 1000 gallons | 22.60000000 | lbs/1 gallon | 624.00 | lbs/day | 548,000 | 135.315714 | Tons | 100,000.00 | No |
| Carbon Monoxide | CO | 11.600000 | lbs per 1000 gallons | 0.01160000 | lbs/1 gallon | 2.78 | lbs/day | 548 | 0.076560 | Tons | 100.00 | No |
| Oxides of Nitrogen | NOx | 260.000000 | lbs per 1000 gallons | 0.26000000 | lbs/1 gallon | 62.40 | lbs/day | 137 | 1.716000 | Tons | 25.00 | No |
| Volatile Organic Compounds | VOC | 11.500000 | lbs per 1000 gallons | 0.01150000 | lbs/1 gallon | 2.76 | lbs/day | 137 | 0.075900 | Tons | 25.00 | No |
| Oxides of Sulfur*** | SOx | 0.125038 | lbs per 1000 gallons | 0.00012504 | lbs/1 gallon | 0.03 | lbs/day | 137 | 0.000825 | Tons | 25.00 | No |
| Particulate Matter (Primary) | PM ₁₀ | 7.850000 | lbs per 1000 gallons | 0.00785000 | lbs/1 gallon | 1.88 | lbs/day | 82 | 0.051810 | Tons | 15.00 | No |
| Particulate Matter (Primary) | PM _{2.5} | 7.550000 | lbs per 1000 gallons | 0.00755000 | lbs/1 gallon | 1.81 | lbs/day | 82 | 0.049830 | Tons | 15.00 | No |
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Project Information

Project Name Mohave Conservation Area Backwater Project
Phase Phase Three - Establishment/Re-Vegetation

Estimated Fuel Consumption

Type of Fuel Ultra Low Sulfur Diesel Fuel
Estimated Total Gallons of Fuel Used 2,533
estimated Gallons of Fuel Used Per Hour 15

Criteria Pollutant Emissions

| Pollutant | Pollutant Abr. | Emission Factor ¹ | Units | Emission Factor Conversion | Unit | Maximum Unmitigated Emissions (lbs/day) | Unit | Appropriate Threshold Applied ² | Maximum Unmitigated Emissions (Tons) ⁴ | Unit | Appropriate Threshold Applied ² | Exceeds Threshold? |
|------------------------------|-------------------|------------------------------|----------------------|----------------------------|--------------|---|---------|--|---|------|--|--------------------|
| Carbon Dioxide | CO ² | 22,600.000000 | lbs per 1000 gallons | 22.60000000 | lbs/1 gallon | 2,712.00 | lbs/day | 548,000 | 25.966265 | Tons | 100,000.00 | No |
| Carbon Monoxide | CO | 11.600000 | lbs per 1000 gallons | 0.01160000 | lbs/1 gallon | 1.39 | lbs/day | 548 | 0.013328 | Tons | 100.00 | No |
| Oxides of Nitrogen | NOx | 260.000000 | lbs per 1000 gallons | 0.26000000 | lbs/1 gallon | 31.20 | lbs/day | 137 | 0.298727 | Tons | 25.00 | No |
| Volatile Organic Compounds | VOC | 11.500000 | lbs per 1000 gallons | 0.01150000 | lbs/1 gallon | 1.38 | lbs/day | 137 | 0.013213 | Tons | 25.00 | No |
| Oxides of Sulfur*** | SOx | 0.125038 | lbs per 1000 gallons | 0.00012504 | lbs/1 gallon | 0.02 | lbs/day | 137 | 0.000144 | Tons | 25.00 | No |
| Particulate Matter (Primary) | PM ₁₀ | 7.850000 | lbs per 1000 gallons | 0.00785000 | lbs/1 gallon | 0.94 | lbs/day | 82 | 0.009019 | Tons | 15.00 | No |
| Particulate Matter (Primary) | PM _{2.5} | 7.550000 | lbs per 1000 gallons | 0.00755000 | lbs/1 gallon | 0.91 | lbs/day | 82 | 0.008675 | Tons | 15.00 | No |
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Project Information

Project Name Mohave Conservation Area Backwater Project
Phase Phase Four - Habitat Management, Operations, and Maintenance

Estimated Fuel Consumption

Type of Fuel Ultra Low Sulfur Diesel Fuel
Estimated Total Gallons of Fuel Used 50,000
estimated Gallons of Fuel Used Per Hour 25

Criteria Pollutant Emissions

| Pollutant | Pollutant Abr. | Emission Factor ¹ | Units | Emission Factor Conversion | Unit | Maximum Unmitigated Emissions (lbs/day) | Unit | Appropriate Threshold Applied ² | Maximum Unmitigated Emissions (Tons) ⁴ | Unit | Appropriate Threshold Applied ² | Exceeds Threshold? |
|------------------------------|-------------------|------------------------------|----------------------|----------------------------|--------------|---|---------|--|---|------|--|--------------------|
| Carbon Dioxide | CO ² | 22,600.000000 | lbs per 1000 gallons | 22.60000000 | lbs/1 gallon | 4,520.00 | lbs/day | 548,000 | 512.559523 | Tons | 100,000.00 | No |
| Carbon Monoxide | CO | 11.600000 | lbs per 1000 gallons | 0.01160000 | lbs/1 gallon | 2.32 | lbs/day | 548 | 0.263084 | Tons | 100.00 | No |
| Oxides of Nitrogen | NOx | 260.000000 | lbs per 1000 gallons | 0.26000000 | lbs/1 gallon | 52.00 | lbs/day | 137 | 5.896702 | Tons | 25.00 | No |
| Volatile Organic Compounds | VOC | 11.500000 | lbs per 1000 gallons | 0.01150000 | lbs/1 gallon | 2.30 | lbs/day | 137 | 0.260816 | Tons | 25.00 | No |
| Oxides of Sulfur*** | SOx | 0.125038 | lbs per 1000 gallons | 0.00012504 | lbs/1 gallon | 0.03 | lbs/day | 137 | 0.002836 | Tons | 25.00 | No |
| Particulate Matter (Primary) | PM ₁₀ | 7.850000 | lbs per 1000 gallons | 0.00785000 | lbs/1 gallon | 1.57 | lbs/day | 82 | 0.178035 | Tons | 15.00 | No |
| Particulate Matter (Primary) | PM _{2.5} | 7.550000 | lbs per 1000 gallons | 0.00755000 | lbs/1 gallon | 1.51 | lbs/day | 82 | 0.171231 | Tons | 15.00 | No |
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Greenhous Gas and Criteria Pollutants Emission Factor Calculation Tools

Project Information

Project Name Mohave Conservation Area Backwater Project
Phase Phase One - Vegetation Clearing

Estimated Fuel Consumption

Type of Fuel Ultra Low Sulfur Diesel Fuel and Gasoline Combir
Estimated Total Gallons of Fuel Used **87,925**
Estimated Gallons of Fuel Used Per Hour **77**

Criteria Pollutant Emissions

| Pollutant | Pollutant Abr. | Emission Factor ¹ | Units | Emission Factor Conversion | Unit | Maximum Unmitigated Emissions (lbs/day) | Unit | Appropriate Threshold Applied ² | Maximum Unmitigated Emissions (Tons) ⁴ | Unit | Appropriate Threshold Applied ² | Exceeds Threshold? |
|------------------------------|-------------------|------------------------------|----------------------|----------------------------|--------------|---|------|--|---|------|--|--------------------|
| GHG - Carbon Dioxide | CO ² e | 22,600.000000 | lbs per 1000 gallons | 22.60000000 | lbs/1 gallon | | | | 901.335921 | Tons | 100,000.00 | No |
| Carbon Monoxide | CO | 11.600000 | lbs per 1000 gallons | 0.01160000 | lbs/1 gallon | | | | 0.462633 | Tons | 100.00 | No |
| Oxides of Nitrogen | NOx | 260.000000 | lbs per 1000 gallons | 0.26000000 | lbs/1 gallon | | | | 10.369351 | Tons | 25.00 | No |
| Volatile Organic Compounds | VOC | 11.500000 | lbs per 1000 gallons | 0.01150000 | lbs/1 gallon | | | | 0.458644 | Tons | 25.00 | No |
| Oxides of Sulfur*** | SOx | 0.125038 | lbs per 1000 gallons | 0.00012504 | lbs/1 gallon | | | | 0.004987 | Tons | 25.00 | No |
| Particulate Matter (Primary) | PM ₁₀ | 7.850000 | lbs per 1000 gallons | 0.00785000 | lbs/1 gallon | | | | 0.313075 | Tons | 15.00 | No |
| Particulate Matter (Primary) | PM _{2.5} | 7.550000 | lbs per 1000 gallons | 0.00755000 | lbs/1 gallon | | | | 0.301110 | Tons | 15.00 | No |
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Greenhous Gas and Criteria Pollutants Emission Factor Calculation Tools

Project Information

Project Name Mohave Conservation Area Backwater Project
Phase Phase One - Vegetation Clearing

Estimated Fuel Consumption

Type of Fuel Gasoline
Estimated Total Gallons of Fuel Used 738
estimated Gallons of Fuel Used Per Hour 4

Criteria Pollutant Emissions

| Pollutant | Pollutant Abr. | Emission Factor ¹ | Units | Emission Factor Conversion | Unit | Maximum Unmitigated Emissions (lbs/day) | Unit | Appropriate Threshold Applied ² | Maximum Unmitigated Emissions (Tons) ⁴ | Unit | Appropriate Threshold Applied ² | Exceeds Threshold? |
|------------------------------|-------------------|------------------------------|----------------------|----------------------------|--------------|---|---------|--|---|------|--|--------------------|
| GHG - Carbon Dioxide | CO ² e | 19,500.000000 | lbs per 1000 gallons | 19.50000000 | lbs/1 gallon | 624.00 | lbs/day | 548,000 | 6.527650 | Tons | 100,000.00 | No |
| Carbon Monoxide | CO | 7,900.000000 | lbs per 1000 gallons | 7.90000000 | lbs/1 gallon | 252.80 | lbs/day | 548 | 2.644535 | Tons | 100.00 | No |
| Oxides of Nitrogen | NOx | 205.000000 | lbs per 1000 gallons | 0.20500000 | lbs/1 gallon | 6.56 | lbs/day | 137 | 0.068624 | Tons | 25.00 | No |
| Volatile Organic Compounds | VOC | 148.000000 | lbs per 1000 gallons | 0.14800000 | lbs/1 gallon | 4.74 | lbs/day | 137 | 0.049543 | Tons | 25.00 | No |
| Oxides of Sulfur | SOx | 10.600000 | lbs per 1000 gallons | 0.01060000 | lbs/1 gallon | 0.34 | lbs/day | 137 | 0.003548 | Tons | 25.00 | No |
| Particulate Matter (Primary) | PM ₁₀ | 12.600000 | lbs per 1000 gallons | 0.01260000 | lbs/1 gallon | 0.40 | lbs/day | 82 | 0.004218 | Tons | 15.00 | No |
| Particulate Matter (Primary) | PM _{2.5} | 12.600000 | lbs per 1000 gallons | 0.01260000 | lbs/1 gallon | 0.40 | lbs/day | 82 | 0.004218 | Tons | 15.00 | No |
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Greenhouse Gas and Criteria Pollutants Emission Factor Calculation Tools

Project Information

Project Name Mohave Conservation Area Backwater Project
Phase Phase Two - Excavation, Dredging, and Construction

Estimated Fuel Consumption

Type of Fuel Ultra Low Sulfur Diesel Fuel
Estimated Total Gallons of Fuel Used 185
estimated Gallons of Fuel Used Per Hour 4

Criteria Pollutant Emissions

| Pollutant | Pollutant Abr. | Emission Factor ¹ | Units | Emission Factor Conversion | Unit | Maximum Unmitigated Emissions (lbs/day) | Unit | Appropriate Threshold Applied ² | Maximum Unmitigated Emissions (Tons) ⁴ | Unit | Appropriate Threshold Applied ² | Exceeds Threshold? |
|------------------------------|-------------------|------------------------------|----------------------|----------------------------|--------------|---|---------|--|---|------|--|--------------------|
| Carbon Dioxide | CO ² | 19,500.000000 | lbs per 1000 gallons | 19.50000000 | lbs/1 gallon | 624.00 | lbs/day | 548,000 | 1.636335 | Tons | 100,000.00 | No |
| Carbon Monoxide | CO | 7,900.000000 | lbs per 1000 gallons | 7.90000000 | lbs/1 gallon | 252.80 | lbs/day | 548 | 0.730750 | Tons | 100.00 | No |
| Oxides of Nitrogen | NOx | 205.000000 | lbs per 1000 gallons | 0.20500000 | lbs/1 gallon | 6.56 | lbs/day | 137 | 0.018963 | Tons | 25.00 | No |
| Volatile Organic Compounds | VOC | 148.000000 | lbs per 1000 gallons | 0.14800000 | lbs/1 gallon | 4.74 | lbs/day | 137 | 0.013690 | Tons | 25.00 | No |
| Oxides of Sulfur | SOx | 10.600000 | lbs per 1000 gallons | 0.01060000 | lbs/1 gallon | 0.34 | lbs/day | 137 | 0.000981 | Tons | 25.00 | No |
| Particulate Matter (Primary) | PM ₁₀ | 12.600000 | lbs per 1000 gallons | 0.01260000 | lbs/1 gallon | 0.40 | lbs/day | 82 | 0.001166 | Tons | 15.00 | No |
| Particulate Matter (Primary) | PM _{2.5} | 12.600000 | lbs per 1000 gallons | 0.01260000 | lbs/1 gallon | 0.40 | lbs/day | 82 | 0.001166 | Tons | 15.00 | No |
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Greenhouse Gas and Criteria Pollutants Emission Factor Calculation Tools

Project Information

Project Name Mohave Conservation Area Backwater Project
Phase Phase Three - Establishment/Re-Vegetation

Estimated Fuel Consumption

Type of Fuel Ultra Low Sulfur Diesel Fuel
Estimated Total Gallons of Fuel Used 185
estimated Gallons of Fuel Used Per Hour 4

Criteria Pollutant Emissions

| Pollutant | Pollutant Abr. | Emission Factor ¹ | Units | Emission Factor Conversion | Unit | Maximum Unmitigated Emissions (lbs/day) | Unit | Appropriate Threshold Applied ² | Maximum Unmitigated Emissions (Tons) ⁴ | Unit | Appropriate Threshold Applied ² | Exceeds Threshold? |
|------------------------------|-------------------|------------------------------|----------------------|----------------------------|--------------|---|---------|--|---|------|--|--------------------|
| Carbon Dioxide | CO ² | 19,500.000000 | lbs per 1000 gallons | 19.50000000 | lbs/1 gallon | 624.00 | lbs/day | 548,000 | 1.636335 | Tons | 100,000.00 | No |
| Carbon Monoxide | CO | 7,900.000000 | lbs per 1000 gallons | 7.90000000 | lbs/1 gallon | 252.80 | lbs/day | 548 | 0.730750 | Tons | 100.00 | No |
| Oxides of Nitrogen | NOx | 205.000000 | lbs per 1000 gallons | 0.20500000 | lbs/1 gallon | 6.56 | lbs/day | 137 | 0.018963 | Tons | 25.00 | No |
| Volatile Organic Compounds | VOC | 148.000000 | lbs per 1000 gallons | 0.14800000 | lbs/1 gallon | 4.74 | lbs/day | 137 | 0.013690 | Tons | 25.00 | No |
| Oxides of Sulfur | SOx | 10.600000 | lbs per 1000 gallons | 0.01060000 | lbs/1 gallon | 0.34 | lbs/day | 137 | 0.000981 | Tons | 25.00 | No |
| Particulate Matter (Primary) | PM ₁₀ | 12.600000 | lbs per 1000 gallons | 0.01260000 | lbs/1 gallon | 0.40 | lbs/day | 82 | 0.001166 | Tons | 15.00 | No |
| Particulate Matter (Primary) | PM _{2.5} | 12.600000 | lbs per 1000 gallons | 0.01260000 | lbs/1 gallon | 0.40 | lbs/day | 82 | 0.001166 | Tons | 15.00 | No |
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Greenhouse Gas and Criteria Pollutants Emission Factor Calculation Tools

Project Information

Project Name Mohave Conservation Area Backwater Project
Phase Phase Four - Habitat Management, Operations, and Maintenance

Estimated Fuel Consumption

Type of Fuel Ultra Low Sulfur Diesel Fuel
Estimated Total Gallons of Fuel Used 185
estimated Gallons of Fuel Used Per Hour 4

Criteria Pollutant Emissions

| Pollutant | Pollutant Abr. | Emission Factor ¹ | Units | Emission Factor Conversion | Unit | Maximum Unmitigated Emissions (lbs/day) | Unit | Appropriate Threshold Applied ² | Maximum Unmitigated Emissions (Tons) ⁴ | Unit | Appropriate Threshold Applied ² | Exceeds Threshold? |
|------------------------------|-------------------|------------------------------|----------------------|----------------------------|--------------|---|---------|--|---|------|--|--------------------|
| Carbon Dioxide | CO ² | 19,500.000000 | lbs per 1000 gallons | 19.50000000 | lbs/1 gallon | 624.00 | lbs/day | 548,000 | 1.636335 | Tons | 100,000.00 | No |
| Carbon Monoxide | CO | 7,900.000000 | lbs per 1000 gallons | 7.90000000 | lbs/1 gallon | 252.80 | lbs/day | 548 | 0.730750 | Tons | 100.00 | No |
| Oxides of Nitrogen | NOx | 205.000000 | lbs per 1000 gallons | 0.20500000 | lbs/1 gallon | 6.56 | lbs/day | 137 | 0.018963 | Tons | 25.00 | No |
| Volatile Organic Compounds | VOC | 148.000000 | lbs per 1000 gallons | 0.14800000 | lbs/1 gallon | 4.74 | lbs/day | 137 | 0.013690 | Tons | 25.00 | No |
| Oxides of Sulfur | SOx | 10.600000 | lbs per 1000 gallons | 0.01060000 | lbs/1 gallon | 0.34 | lbs/day | 137 | 0.000981 | Tons | 25.00 | No |
| Particulate Matter (Primary) | PM ₁₀ | 12.600000 | lbs per 1000 gallons | 0.01260000 | lbs/1 gallon | 0.40 | lbs/day | 82 | 0.001166 | Tons | 15.00 | No |
| Particulate Matter (Primary) | PM _{2.5} | 12.600000 | lbs per 1000 gallons | 0.01260000 | lbs/1 gallon | 0.40 | lbs/day | 82 | 0.001166 | Tons | 15.00 | No |
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Greenhouse Gas and Criteria Pollutants Emission Factor Calculation Tools

Project Information

Project Name Mohave Conservation Area Backwater Project
Phase Phase One - Vegetation Clearing

Estimated Fuel Consumption

Type of Fuel Ultra Low Sulfur Diesel Fuel
Estimated Total Gallons of Fuel Used 738
Estimated Gallons of Fuel Used Per Hour 4

Criteria Pollutant Emissions

| Pollutant | Pollutant Abr. | Emission Factor ¹ | Units | Emission Factor Conversion | Unit | Maximum Unmitigated Emissions (lbs/day) | Unit | Appropriate Threshold Applied ² | Maximum Unmitigated Emissions (Tons) ⁴ | Unit | Appropriate Threshold Applied ² | Exceeds Threshold? |
|------------------------------|-------------------|------------------------------|----------------------|----------------------------|--------------|---|------|--|---|------|--|--------------------|
| GHG - Carbon Dioxide | CO ₂ e | 19,500.000000 | lbs per 1000 gallons | 19.50000000 | lbs/1 gallon | | | | 6.527650 | Tons | 100,000.00 | No |
| Carbon Monoxide | CO | 7,900.000000 | lbs per 1000 gallons | 7.90000000 | lbs/1 gallon | | | | 2.915100 | Tons | 100.00 | No |
| Oxides of Nitrogen | NO _x | 205.000000 | lbs per 1000 gallons | 0.20500000 | lbs/1 gallon | | | | 0.075645 | Tons | 25.00 | No |
| Volatile Organic Compounds | VOC | 148.000000 | lbs per 1000 gallons | 0.14800000 | lbs/1 gallon | | | | 0.054612 | Tons | 25.00 | No |
| Oxides of Sulfur*** | SO _x | 10.600000 | lbs per 1000 gallons | 0.01060000 | lbs/1 gallon | | | | 0.003911 | Tons | 25.00 | No |
| Particulate Matter (Primary) | PM ₁₀ | 12.600000 | lbs per 1000 gallons | 0.01260000 | lbs/1 gallon | | | | 0.004649 | Tons | 15.00 | No |
| Particulate Matter (Primary) | PM _{2.5} | 12.600000 | lbs per 1000 gallons | 0.01260000 | lbs/1 gallon | | | | 0.004649 | Tons | 15.00 | No |
| | | | | | | | | | | | | |
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*** Sulfur Emission Factor calculation is based on Ultra Low Sulfur Diesel Fuel (Sulfur Content is 15ppm or 0.000125038 lbs/gal³). Calculation Formua used: 1.38E2*S (S=%Sulfur Content)

¹ Citation for this Calculation Sheet: EPA, May 2015, Technology Transfer Network Clearinghouse for Inventories & Emissions Factors

² Mojave Desert Air Quality Management District

³ Accelware: Unit Converter, Parts/Million (Ppm) to Pounds/Gallon (US) Conversion Calculator

⁴ Accelware: Unit Converter, Pounds (lbs) to Tons (short US) Conversion Calculator

Greenhouse Gas and Criteria Pollutants Emission Factor Calculation Tools

Project Information

Project Name Mohave Conservation Area Backwater Project
Phase Phase One - Vegetation Clearing

Estimated Fuel Consumption

Type of Fuel Ultra Low Sulfur Diesel Fuel and Gasoline Combined
Estimated Total Gallons of Fuel Used **22,377**
Estimated Gallons of Fuel Used Per Hour **48**

Criteria Pollutant Emissions

| Pollutant | Pollutant Abr. | Maximum Unmitigated Emissions (lbs/day) | Unit | Appropriate Threshold Applied² | Exceeds Threshold? |
|------------------------------|-----------------------|--|-------------|--|---------------------------|
| GHG - Carbon Dioxide | CO ² e | 8,579.20 | lbs/day | 548,000 | No |
| Carbon Monoxide | CO | 256.88 | lbs/day | 548 | No |
| Oxides of Nitrogen | NOx | 98.08 | lbs/day | 137 | No |
| Volatile Organic Compounds | VOC | 8.78 | lbs/day | 137 | No |
| Oxides of Sulfur*** | SOx | 0.38 | lbs/day | 137 | No |
| Particulate Matter (Primary) | PM ₁₀ | 3.17 | lbs/day | 82 | No |
| Particulate Matter (Primary) | PM _{2.5} | 3.06 | lbs/day | 82 | No |
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⁴ Accelware: Unit Converter, Pounds (lbs) to Tons (short US) Conversion Calculator

Greenhouse Gas and Criteria Pollutants Emission Factor Calculation Tools

Project Information

Project Name Mohave Conservation Area Backwater Project
Phase Phase One - Vegetation Clearing

Estimated Fuel Consumption

Type of Fuel Ultra Low Sulfur Diesel Fuel
Estimated Total Gallons of Fuel Used 13,385
Estimated Gallons of Fuel Used Per Hour 34

Criteria Pollutant Emissions

| Pollutant | Pollutant Abr. | Maximum Unmitigated Emissions (lbs/day) | Unit | Appropriate Threshold Applied² | Exceeds Threshold? |
|------------------------------|-----------------------|--|-------------|--|---------------------------|
| GHG - Carbon Dioxide | CO ² e | 1,248.00 | lbs/day | 548,000 | No |
| Carbon Monoxide | CO | 255.58 | lbs/day | 548 | No |
| Oxides of Nitrogen | NOx | 68.96 | lbs/day | 137 | No |
| Volatile Organic Compounds | VOC | 7.50 | lbs/day | 137 | No |
| Oxides of Sulfur*** | SOx | 0.37 | lbs/day | 137 | No |
| Particulate Matter (Primary) | PM ₁₀ | 2.29 | lbs/day | 82 | No |
| Particulate Matter (Primary) | PM _{2.5} | 2.22 | lbs/day | 82 | No |
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⁴ Accelware: Unit Converter, Pounds (lbs) to Metric Tons (MT) Conversion Calculator (1 MT = 2204.62262185 lbs)

Greenhouse Gas and Criteria Pollutants Emission Factor Calculation Tools

Project Information

Project Name Mohave Conservation Area Backwater Project
Phase Phase One - Vegetation Clearing

Estimated Fuel Consumption

Type of Fuel Ultra Low Sulfur Diesel Fuel
Estimated Total Gallons of Fuel Used 2,717
Estimated Gallons of Fuel Used Per Hour 19

Criteria Pollutant Emissions

| Pollutant | Pollutant Abr. | Maximum Unmitigated Emissions (lbs/day) | Unit | Appropriate Threshold Applied² | Exceeds Threshold? |
|------------------------------|-----------------------|--|-------------|--|---------------------------|
| GHG - Carbon Dioxide | CO ² e | 3,336.00 | lbs/day | 548,000 | No |
| Carbon Monoxide | CO | 254.19 | lbs/day | 548 | No |
| Oxides of Nitrogen | NOx | 37.76 | lbs/day | 137 | No |
| Volatile Organic Compounds | VOC | 6.12 | lbs/day | 137 | No |
| Oxides of Sulfur*** | SOx | 0.35 | lbs/day | 137 | No |
| Particulate Matter (Primary) | PM ₁₀ | 1.35 | lbs/day | 82 | No |
| Particulate Matter (Primary) | PM _{2.5} | 1.31 | lbs/day | 82 | No |
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⁴ Accelware: Unit Converter, Pounds (lbs) to Tons (short US) Conversion Calculator

Greenhouse Gas and Criteria Pollutants Emission Factor Calculation Tools

Project Information

Project Name Mohave Conservation Area Backwater Project
Phase Phase One - Vegetation Clearing

Estimated Fuel Consumption

Type of Fuel Ultra Low Sulfur Diesel Fuel
Estimated Total Gallons of Fuel Used 50,185
Estimated Gallons of Fuel Used Per Hour 29

Criteria Pollutant Emissions

| Pollutant | Pollutant Abr. | Maximum Unmitigated Emissions (lbs/day) | Unit | Appropriate Threshold Applied² | Exceeds Threshold? |
|------------------------------|-----------------------|--|-------------|--|---------------------------|
| GHG - Carbon Dioxide | CO ² e | 5,144.00 | lbs/day | 548,000 | No |
| Carbon Monoxide | CO | 255.12 | lbs/day | 548 | No |
| Oxides of Nitrogen | NOx | 58.56 | lbs/day | 137 | No |
| Volatile Organic Compounds | VOC | 7.04 | lbs/day | 137 | No |
| Oxides of Sulfur*** | SOx | 0.36 | lbs/day | 137 | No |
| Particulate Matter (Primary) | PM ₁₀ | 1.97 | lbs/day | 82 | No |
| Particulate Matter (Primary) | PM _{2.5} | 1.91 | lbs/day | 82 | No |
| | | | | | |
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