Second Addendum to the Environmental Impact Report

Mount Umunhum Environmental Restoration and Public Access Project

SCH# 2010122037

PREPARED FOR:

Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022

August 10, 2016

1 MOUNT UMUNHUM ENVIRONMENTAL RESTORATION AND PUBLIC ACCESS PROJECT OVERVIEW

1.1 PURPOSE OF THIS DOCUMENT

In June 2012, the Midpeninsula Regional Open Space District (MROSD) Board of Directors certified the Environmental Impact Report (EIR) (State Clearinghouse No. 2010122037) for the Mount Umunhum Environmental Restoration and Public Access Project (herein referred to as the 2012 EIR). The 2012 EIR analyzed a proposed project that included demolition of most (as well as an option to demolish all) of the abandoned structures associated with the former Almaden Air Force Station (AFS), phased public access to the summit of Mount Umunhum, roadway and access improvements, environmental restoration, development of public use facilities and a range of possible amenities such as trails, observation and reflection areas, interpretive displays, picnic tables, shade structures, vault toilets, camp sites, a visitor center, and non-potable water (for horses and fire protection) contained in one or more onsite water tanks. The 2012 EIR also included longer term plans to allow public access to the summit of Mount Thayer via a trail connection from Ralph's Mountain, and landform restoration at the peak at Mount Thayer. In December of 2015, an addendum to the EIR was approved pursuant to CEQA for the proposed addition of gates, associated fencing, and an MROSD easement for road access on the private road to Mount Thayer. For details, refer to Section 1.2, 'Project History', below. Together, the 2012 EIR and 2015 addendum to the EIR is herein referred to as the approved EIR.

MROSD is currently proposing additional minor modifications to the previously approved project. These modifications include: 1) installation of a total of approximately 180 linear feet of gabion retaining walls at three locations along Mt. Umunhum Road, and 2) an increase in the number of truck haul trips and cubic yards (cy) of excavated material to Mount Thayer where the material would be used as part of the previously proposed landform restoration at Mount Thayer's peak. Refer to Section 3, 'Description of Proposed Project Modifications', of this addendum for a more detailed description of proposed project modifications. The project goals and objectives identified in Section 3.4, page 3-5, of the 2012 EIR remain unchanged.

The purpose of this proposed addendum is to consider whether these modifications to the project would result in the need for additional analysis under CEQA (Public Resources Code, section 21166; CEQA Guidelines, sections 15162, 15164).

As demonstrated in Section 4, 'Environmental Consequences of Proposed Project Modifications', below, the project modifications do not meet any of the criteria listed in section 15162 of the CEQA Guidelines (as described in Section 2, CEQA Guidance Regarding Preparation of an addendum to the EIR, below) and an addendum is, therefore, appropriate. This means the modifications would (1) not result in any new significant environmental effects or a substantial increase in severity of previously evaluated significant effects that result from either a substantial change to the project or changes to the project circumstances; (2) there is no new information of substantial importance since certification of the 2012 EIR that shows the modifications would have new significant effects or more severe previously evaluated effects; and (3) no mitigation measures or alternatives, which were found to be infeasible in the 2012 EIR and which are capable of substantially reducing a significant environmental effect, would now be feasible. Therefore, pursuant to section 15164 of the CEQA Guidelines, the differences between the approved project described in the 2012 EIR and the refined elements of the project as they are currently proposed are considered minor technical changes.

This document concludes that the proposed project modifications would not alter any of the conclusions of the approved EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result. The additions also would not affect any of the mitigation measures, including their feasibility or implementation. As mentioned above, none of the conditions listed in section 15162 of the CEQA Guidelines exist for the project modification described herein. Therefore,

pursuant to section 15164 of the CEQA Guidelines, the differences between the approved project described in the approved EIR and the modification of the project as currently proposed and described in this addendum are minor, and this addendum provides sufficient environmental documentation.

1.2 PROJECT HISTORY

In 1986, the MROSD acquired the former Almaden Air Force Station (AFS) and all remaining facilities at the site within the Sierra Azul Open Space Preserve (Preserve) (Exhibit 1-1). The ultimate intent of this purchase was to restore the area to a natural condition and provide public access; however, hazardous materials associated with the construction and operation of the former AFS had to first be removed. While a portion of hazardous materials was cleaned up by the federal government soon after the MROSD's purchase, other materials, particularly lead-based paint and asbestos-containing construction materials used on buildings fell outside the scope of the original federal cleanup program. The MROSD worked with community, state, and federal leaders to obtain federal funding to complete the remaining cleanup, and federal funds were committed in 2010 toward remediation of remaining hazardous materials. The MROSD approved the structure abatement project in August 2010, which was complete in the summer of 2011.

In June 2012, the EIR (State Clearinghouse No. 2010122037) for the Mount Umunhum Environmental Restoration and Public Access Project (i.e. 2012 EIR) was certified. The approved project area from the Certified EIR is shown in Exhibit 1-2.The 2012 EIR analyzed a proposed project that included demolition of most (with an option to demolish all) of the abandoned structures associated with the former Almaden AFS. The project included roadway and access improvements to provide phased public access to the summit of Mount Umunhum, as described above in the first paragraph of Section 1.1, *Purpose of This Document*. Facilities at the summit would be located in areas previously disturbed by the former Almaden AFS. The 2012 EIR also included longer term plans to allow public access to the summit of Mount Thayer via a trail connection from Ralph's Mountain. The project goals and objectives identified in Section 3.4, page 3-5, of the 2012 Draft EIR remain unchanged.

A series of public meetings on the project were held during preparation of the EIR, beginning in September 2010. Prior to initiation of the Draft EIR, the MROSD held a public meeting on September 30, 2010 to receive input on project features and preferences and a public open house was held on November 17, 2010, to present the results of the first meeting and obtain further public feedback. A public scoping meeting on the issues to be addressed in the Draft EIR was held on December 9, 2010. On December 12, 2011, the Draft EIR was distributed to public agencies and the general public, and a public hearing to receive comments on the Draft EIR was held on January 18, 2012. On May 25, 2012, the Final EIR was released for public review.

The project decisions have occurred in stages. On June 12, 2012, the MROSD certified the EIR and approved the demolition phase of the project, not including the radar tower that was operated as part of the Almaden AFS. The disposition of the tower generated substantial public interest, and several options were evaluated in the EIR. The MROSD hosted a public open house on July 18, 2012 to gather public input on the radar tower options; the Board did not make any decisions on the radar tower at this meeting. A second decision hearing was held on September 19, 2012, at which the MROSD's Board of Directors approved select project elements, not including the radar tower and summit area amenities, and removed consideration of the backpack camp from the project to instead include its consideration as part of the larger Preserve Plan. Project elements approved by the Board at this meeting were primarily located below the elevational summit, and included parking, vault toilets, emergency callbox, hang gliding/paragliding, non-potable water tanks for fire protection and horse troughs, environmental restoration, and avian nesting structures. At this meeting, the Board also provided direction to move forward with construction of the Bald Mountain Parking

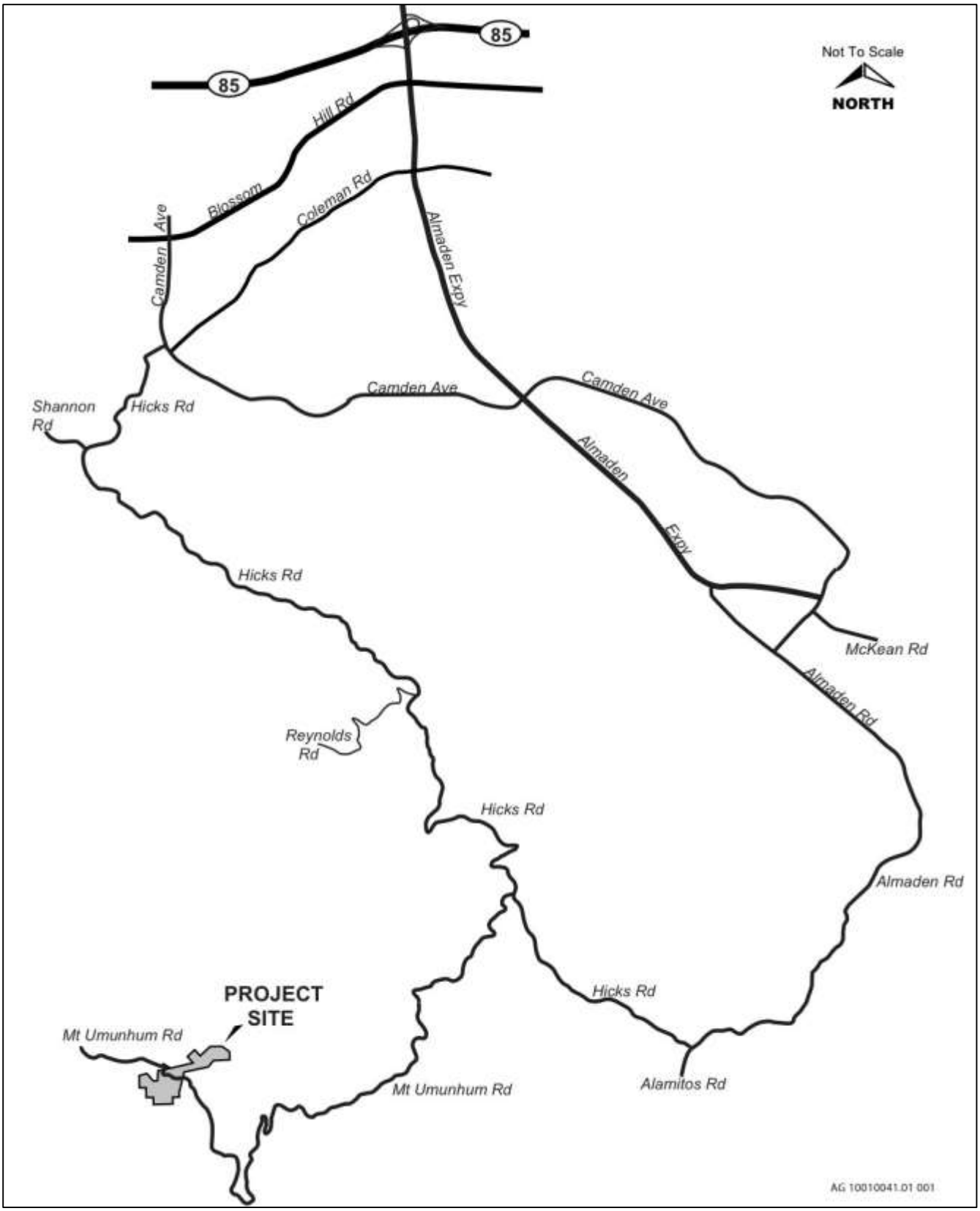

Exhibit 1 **Project Location**

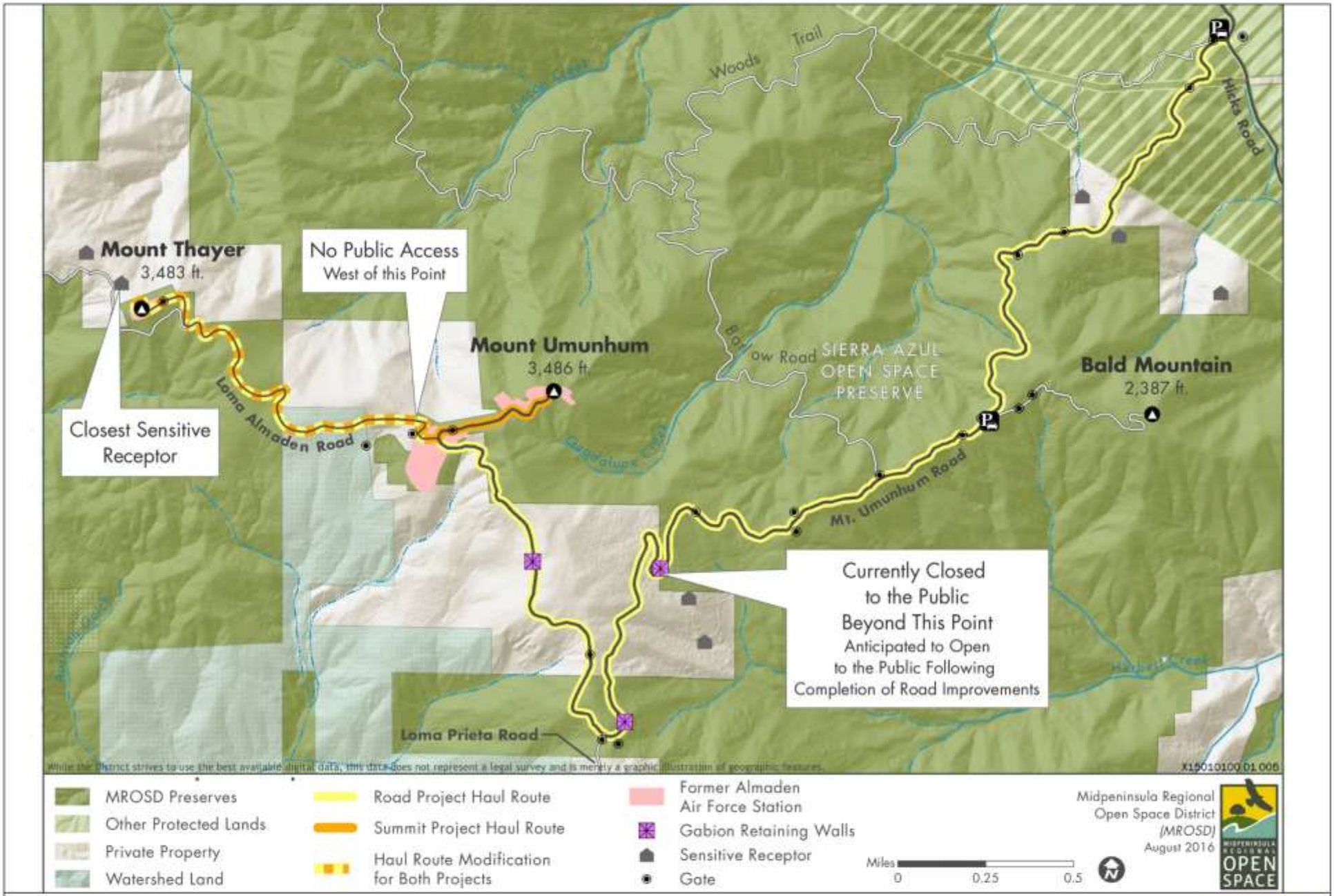

Exhibit 2 **Proposed Project Modifications**

Area, the connecting multi-use Mt. Umunhum Trail to the summit, and safety upgrades and improvements to Mt. Umunhum Road.

The final stage of project approval occurred on October 17, 2012, which included: 1) summit area amenities such as trails, observation and reflection areas, interpretive displays, picnic tables, shade structures, restrooms and a visitor center; 2) future public vehicle access to the summit via Mt. Umunhum Road; 3) iterative approach for future shuttle service; and 4) additional staff positions. Also at this hearing, the Board approved Interim Action A, allowing for short-term safety improvements to the radar tower, and deferred a decision on the radar tower option for up to five (5) years until October 2017, to allow time for the community to raise funds, if there is sufficient interest, to preserve the tower.

Since then, a number of the approved project components analyzed in the 2012 EIR have been implemented. In January 2015, MROSD approved funding to complete structural and safety repairs and improvements to the radar tower to facilitate public access around the exterior perimeter of the structure. The interim structural repairs included code-required repairs to bring the structure up to code for "collapse prevention" as well as the implementation of code and safety requirements to close and seal off all access to the interior of the structure. Completion of these early interim repairs would allow safe limited access to the exterior of the structure for a number of tours including potential donor, MROSD-led, and docent-led events prior to the opening of general public access to the summit. The interim repairs were substantially completed as of September 2015.

The Bald Mountain Parking Area was completed in fall 2014 and is open for hiking access to the Bald Mountain Trail. Construction of the new Mt. Umunhum Trail to the top of the mountain was initiated in 2013. A small crew of MROSD staff is completing the trail and bridges which are targeted for completion in 2017. Construction has begun on the Guadalupe Creek Overlook, which is located along the Mt. Umunhum Trail, and is anticipated to be completed by the spring of 2017.

In August 2015, the Board approved final design development options for the Mount Umunhum Summit Project (options do not include recommendations for the radar tower). Also at that time, the Board directed staff to look for areas for additional shade structures at the summit and proceed with final design development and production of construction documents, with construction anticipated to begin in fall 2016.

In December of 2015, an addendum to the Environmental Impact Report for the Mount Umunhum Environmental Restoration and Public Access Project was approved. This addendum addressed the addition of solar-powered electric or manual gates and associated fencing and a MROSD easement for road access on the private road to Mount Thayer.

In the first half of 2016 the District made significant progress in resolving access rights to allow full public access to the summit of Mount Umunhum along Mt Umunhum Road, and MROSD now has access for patrol and maintenance along on the road to the summit of Mount Thayer. Accordingly, MROSD is preparing to proceed with "Phase 2 construction" evaluated in the 2012 EIR which consists of safety upgrades to Mt. Umunhum Road, public access improvements, and visitor amenities are all anticipated to be substantially completed by spring 2017.

In May of 2016, the MROSD Board of Directors approved the Mt. Umunhum Road Rehabilitation Project design and bid plan set that included the road surface, road safety, road drainage and additional road improvements previously evaluated and covered in the approved EIR. In addition, three separate gabion retaining walls along Mt Umunhum Road were deemed to be a necessary part of the roadway improvements; these features and the soil required to be off-hauled and associated truck trips are evaluated as additional features in this Addendum.

In June of 2016, the MROSD Board of Directors approved the "Retain and Seal" option for the Mount Umunhum Radar Tower, which was evaluated in the 2012 EIR, and authorized the General Manager to receive public and private funds for the Radar Tower as donations to fund future repairs and maintenance activities, as determined by MROSD.

As with all other MROSD preserves, Mount Umunhum (located within the Sierra Azul Open Space Preserve) is planned to be open 365 days a year from dawn to one-half hour after sunset.

2 CEQA GUIDANCE REGARDING PREPARATION OF AN ADDENDUM TO THE EIR

If, after certification of an EIR, there are changes or additions to a project that will require new discretionary actions, CEQA provides three possible mechanisms to address these changes: a subsequent EIR, a supplement to an EIR, or an addendum to an EIR.

Section 15162 (a) of the CEQA Guidelines provides that when an EIR has been certified for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, that one or more of the following conditions is met:

(1) substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:

   (A) the project will have one or more significant effects not discussed in the previous EIR;

   (B) significant effects previously examined will be substantially more severe than shown in the previous EIR;

   (C) mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternatives; or

   (D) mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measures or alternatives.

Section 15164 of the CEQA Guidelines states that a lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary, but none of the conditions described above in section 15162(a), calling for preparation of a subsequent EIR, have occurred.

CEQA allows lead and those responsible agencies issuing additional discretionary approvals for a project to restrict their review of modifications to a previously approved project to the incremental effects associated with the proposed modifications, compared against the anticipated effects of the previously approved project at build-out. In other words, if the project under review constitutes a modification of a previously approved project which was subject to prior final environmental review, the “baseline” for purposes of CEQA is adjusted such that the originally approved project is assumed to exist.

The MROSD is proposing minor modifications to the approved project; these changes are described in Section 3 of this addendum. As demonstrated in detail below, the project modifications do not meet any of the criteria listed in section 15162. First, the modifications would not result in any new significant environmental effects or a substantial increase in severity of previously evaluated significant effects that

result from either a substantial change to the project or changes to the project circumstances. Second, there is no new information of substantial importance since certification of the 2012 EIR that shows the modifications would have new significant effects or more severe previously evaluated effects. Finally, no mitigation measures or alternatives, which were found to be infeasible in the 2012 EIR and which are capable of substantially reducing a significant environmental effect, would now be feasible. Therefore, pursuant to section 15164 of the CEQA Guidelines, the differences between the approved project described in the 2012 EIR and the refined elements of the project as they are currently proposed are considered minor technical changes. Furthermore, the approved EIR and associated mitigation monitoring and reporting program remain valid for mitigating the identified significant impacts that would result from implementation of the project, including the proposed modifications. For these reasons, an addendum to the approved EIR is the appropriate mechanism to address modifications to the project.

3 DESCRIPTION OF PROPOSED PROJECT MODIFICATIONS

MROSD's proposed modifications to the approved EIR include: 1) installation of a total of approximately 180 linear feet of retaining walls in three locations along Mt. Umunhum Road, and 2) increasing the number of truck haul trips for transporting excavated material from project construction activities, and routing excavated material haul trips to Mount Thayer where the material would be used as part of the previously proposed landform restoration. The purpose of this proposed addendum is to consider whether these modifications to the 2012 EIR would result in the need for additional analysis under CEQA (Public Resources Code, section 21166; CEQA Guidelines, sections 15162, 15164). The following provides a description of each proposed modification to the previously approved 2012 EIR. All proposed modifications are located within areas identified on previously disturbed land located within the project site analyzed in the 2012 EIR.

3.1 MT. UMUNHUM ROAD REHABILITATION PROJECT RETAINING WALL MODIFICATIONS

The road upgrades and safety improvements to Mt. Umunhum Road require the construction of retaining walls along three distinct sections of the affected roadway (see Exhibit 2). Depending on the location of the three retaining walls, each section performs a variety of functions including slope stability below the surface of the roadway, road widening, and replacement of failing retaining wall. A cumulative total of approximately 180 linear feet of retaining wall would be installed. The retaining walls would consist of gabions (welded wire mesh) filled with rock and would be approximately four feet tall (above ground surface) with approximately two additional feet below the ground. Construction of the gabion retaining walls includes demolition and disposal of existing retaining wall materials; excavation of existing asphalt and native soil related to placement of the gabions; placement of native materials over the installed gabions; and placing, spreading, and compaction of the ground up road materials removed in the process. Any loose or soft fill soil underlying the proposed gabion wall project footprint would be removed and replaced with approved native materials.

During construction of the gabion retaining walls, construction could necessitate the temporary closure of the directional travel lane closest to where the retaining wall is being installed. A nine (9) foot wide drive aisle would be maintained along Mt. Umunhum Road during the construction of the gabion retaining walls with maximum 10-minute wait time for general vehicular passage. Consistent with Impact 4.11-1 of the approved EIR, MROSD would ensure appropriate emergency vehicle access. MROSD's Traffic Control Plan for construction (required pursuant to County standards) would provide necessary safety measures for maximizing roadway safety during construction, including measures to ensure minimization of response time delays to emergency vehicle access.

The addition of the gabion retaining walls as a modification to the approved EIR would require the excavation of approximately 750 cy of material. The hauling and disposal of this material is addressed in Section 3.2, 'Construction Excavation and Haul Modifications' below.

3.2 CONSTRUCTION EXCAVATION AND HAUL MODIFICATIONS

3.2.1 Roadway Construction Modifications

As discussed above, the construction of the gabion retaining walls requires the excavation of 750 cy of material. For purposes of this analysis, it is assumed that excavated material haul trips would be performed using double-bottom semi-trucks with total capacity of 14 cy per load.

The 2012 EIR indicated that excess material from the roadway and drainage improvements (excluding materials containing noxious weeds and other unsuitable materials) would be hauled to the summit of Mount Umunhum to be used for landform restoration. Because of refinements in the construction details, it has been determined that the materials generated by the roadway and drainage construction activities would, instead, be hauled to Mount Thayer for landform restoration, rather than Mount Umunhum.

In total, these project modifications (gabion walls and materials offhaul) would result in a maximum of 20 additional one-way haul trips per day during peak construction activity over a 4- to 6-month period. These haul trips would be primarily routed to Mount Thayer, via Mt. Umunhum Road to Loma Almaden Road. Note that, as described in the 2012 EIR, unsuitable material will still be hauled offsite via Hicks Road to an appropriate landfill. This is not considered part of the proposed project modifications.

3.2.2 Mount Umunhum Summit Construction Modifications

The 2012 EIR assumed that excavated material generated by construction activities associated with the Mount Umunhum summit restoration would be reused within the Mount Umunhum summit area. The proposed modifications would increase the total amount of excavated material by a maximum of 11,000 cy, most of which would be diverted to the peak of Mount Thayer to assist in previously approved landform restoration.

For the 11,000 cy. of additional excavated material to be hauled from Mount Umunhum Summit to Mount Thayer, it is assumed for purposes of this analysis that 9,000 cy would be removed from the summit using double-bottom semi-trucks with a total capacity of 14 cy per load and the remaining 2,000 cy would be hauled using a ten-wheeler truck with a total capacity of 8 cy per load. Mount Thayer is approximately 1.7 miles driving distance west of the Mount Umunhum summit construction site. The increase in excavated material would necessitate approximately 900 one-way trips, which would be spread over a four- to six-month period.

In total, this project modification would result in a maximum of 100 one-way haul trips per day (50 inbound and 50 outbound) between Mount Umunhum and Mount Thayer. The excavated materials would be hauled and deposited on Mount Thayer where they would be used for landform restoration. The number and type of off-road construction equipment is consistent with the number and type described in the 2012 EIR. Given the anticipated timing of the summit and road project, respectively, and the expected number of haul trucks onsite, it is unlikely that the combined number of truck trips would exceed 100 one-way haul-trips per day, even if the two construction activities occurred concurrently.

The haul route includes portions of Mt. Umunhum Road between Mount Umunhum and Loma Almaden Road to the west and terminates on the peak of Mount Thayer as shown in Exhibit 2. A portion of Loma Almaden Road along the haul route is unpaved. Note that the road width does not allow for two haul trucks to pass simultaneously in all locations; therefore, truck drivers returning from Mount Thayer would be instructed to pull over in appropriate locations (to be specified prior to materials hauling) to allow oncoming loaded trucks to pass.

4 ENVIRONMENTAL CONSEQUENCES OF PROPOSED PROJECT MODIFICATIONS

The purpose of this discussion below is to evaluate the environmental issue areas in terms of any "changed condition" (i.e., changed circumstances, project changes, or new information of substantial importance) resulting from the proposed project modifications that may result in a different environmental impact significance conclusion from the approved EIR. These resource issue areas are addressed below.

4.1 AESTHETICS

The approved EIR identified less-than-significant impacts associated with impacts on scenic vistas, damage to scenic resources within a scenic highway corridor, changes in visual character, and impacts from nighttime lighting.

The MROSD's proposed modifications to the approved EIR include installation of a total of approximately 180 linear feet of retaining walls in three locations along Mt. Umunhum Road (see Exhibit 1-1). The proposed gabion (welded wire mesh) retaining walls would be approximately four feet tall (above ground surface) and filled with rock. The proposed retaining walls would not be seen by motorists or other preserve users since the walls will be located below the roadway or otherwise be out of sight from the roadway. None of the retaining walls would be visible from offsite views due to distance, intervening topography, and use of natural and naturally-colored materials.

The proposed modifications to the approved EIR would also increase the total amount of excavated material from Mount Umunhum summit (by a maximum of 11,000 cy) used for previously approved landform restoration of Mount Thayer's peak. The additional excavation material to be diverted to the peak of Mount Thayer for landform restoration would increase the height of Mount Thayer and help restore the natural landform of the peak closer to a natural looking appearance. As discussed in the approved EIR, the nearest residence to this project feature is located approximately 370 feet west of Mount Thayer. Intervening topography obstructs views of the site from this residential structure. The next nearest residence is located over 1,000 feet from the Mount Thayer site and observers from this residence would have unobstructed views of the Mount Thayer site (MROSD 2011: 4.1-3). The additional volume of excavated material for landform restoration would increase the height of the peak by a single point maximum of approximately 30 feet; however, the average height of the reconstructed peak would likely be closer to 25 feet or less. This change would be minor relative to the overall viewshed because the project would provide a more natural looking appearance to the peak that would blend in with other natural features in the area and would result in a minor change to the visual character of the project site, especially as viewed by nearby residences.

Based on the above discussion, there are no new significant effects or substantial changes to the environmental evaluation of aesthetic resources provided in the approved EIR that would occur with the implementation of the proposed project modifications. The project modifications evaluated in this addendum are visually consistent with the project as proposed in the approved EIR and would not generate any new significant impacts related to aesthetics.

4.2 AGRICULTURE AND FORESTRY RESOURCES

As discussed in Chapter 1 of the Draft EIR (MROSD 2011: p.1-5), the project site is not used for agriculture, nor does it consist of forestry land. It is designated as "hillsides" and "other public lands" in the Santa Clara County General Plan, indicating it is not intended for agricultural uses. The California Department of Conservation's Farmland Mapping and Monitoring Program identifies the project site as "urban and built-up land" and "other land" and identifies no farmland on the project site or in the project vicinity (Department of

Conservation 2008). The proposed project modifications (i.e., installation of retaining walls and construction excavation and haul modifications) would not convert agricultural or forestry uses and would therefore have no impact on these resources and would result in no change to the 2012 EIR conclusion.

4.3 AIR QUALITY

The 2012 EIR identified significant or potentially significant impacts related to increases in construction-related emissions of fugitive dust (PM_{10} and $PM_{2.5}$), and exposure of sensitive receptors to fugitive dust emissions containing naturally occurring asbestos during construction-related earth movement activities. As indicated in the 2012 EIR, these impacts would be reduced to a less-than-significant impact with implementation of Mitigation Measures 4.7-1 (Draft EIR, pp. 4.7-20). The 2012 EIR identified less-than-significant impacts associated with increases in construction-generated emissions of reactive organic gases and nitrogen oxides, PM_{10} exhaust, and $PM_{2.5}$ exhaust, long-term operational emissions of criteria air pollutant and precursors, project-generated local mobile-source carbon monoxide emissions, exposure of sensitive receptors to emissions of toxic air contaminants from on-site sources during construction and operation, and exposure to odorous emissions.

Because the area of disturbance would remain the same as identified in the 2012 Draft EIR, construction and installation of the proposed project modifications would not increase construction-related emissions of fugitive dust (PM_{10} and $PM_{2.5}$) and would not result in increased exposure of sensitive receptors to fugitive dust emissions containing naturally occurring asbestos during construction-related earth movement activities beyond the level described in the 2012 EIR. Mitigation Measure 4.7-1 of the 2012 EIR would require implementation of applicable the Bay Area Air Quality Management District Air Quality Guidelines related to basic control measures during construction and compliance with Bay Area Air Quality Management District's naturally occurring asbestos program and Air Toxic Control Measure Inspection Guidelines, Policies, and Procedures. With implementation of Mitigation Measure 4.7-1, no new or increased construction-related air quality impacts would result from implementation of the proposed project modifications evaluated in this addendum.

Construction-related emissions of the proposed project modifications were estimated using the Road Construction Emissions Model (SMAQMD 2016). The Road Construction Emissions Model is recommended to assess the emissions for linear construction projects and allows for the input of project-specific information. This model was developed by the Sacramento Metropolitan Air Quality Management District but is approved by air districts throughout California.

Table 1 summarizes the modeled construction-related emissions of criteria air pollutants and criteria air pollutants and precursors for the proposed project. Refer to Appendix A for detailed modeling input parameters and results.

Table 1 Summary of Construction Emissions of Criteria Air Pollutants and Precursors

Construction Phase	Pollutant Emissions (lb/day)					
	ROG	NO_X	PM_{10} Exhaust [1]	PM_{10} Dust	$PM_{2.5}$ Exhaust [1]	$PM_{2.5}$ Dust [1]
Phase 2 (from the 2012 Draft EIR) – Landform and Habitat Restoration; Construction of Connector Trail to Bald Mountain; Construction of parking lot at Bald Mountain; Repairs to Mt. Umunhum Road[3]	7.6	50.5	2.9	150.3	2.9	31.5
Proposed Project Modifications – Gabion retaining wall construction; Summit construction excavation and haul modifications	<1	1.9	<1	<1	<1	<1
Maximum Daily Emissions for Total Construction Phase (Phase 2)	7.7	52.4	3.0	150.3	3.0	31.5
BAAQMD Significance Thresholds (lb/day) (Average Daily Emissions)	54	54	82	—[2]	54	—[2]

Notes: BAAQMD = Bay Area Air Quality Management District; lb/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; PM_{10} = particulate matter with aerodynamic diameter less than 10 microns; $PM_{2.5}$ = particulate matter with aerodynamic diameter less than 2.5 microns.

Bold represents an exceedance of the applicable threshold.

[1] BAAQMD's construction-related thresholds for PM_{10} and $PM_{2.5}$ are for exhaust emissions of these pollutants. Therefore, PM_{10} and $PM_{2.5}$ emissions shown are only those associated with construction-related exhaust (e.g., construction worker vehicles, material delivery trucks, heavy-duty construction equipment).

[2] BAAQMD does not have a quantitative threshold of significance for fugitive PM_{10} and $PM_{2.5}$ fugitive dust. These values are provided for disclosure purposes only.

[3] Modeled in 2011 using Urbemis 2008 model.

Detailed assumptions and modeling output files are included in Appendix A.

Source: Modeling performed by Ascent Environmental, Inc. 2011, 2016.

As shown in Table 1, the increased emissions associated with the proposed addition of up to a maximum of 100 additional one-way material haul trips per day as described in detail in Section 3; *Description of Proposed Project Modifications*, combined with the project emissions identified in the 2012 EIR, would not result in exceedance of BAAQMD's respective thresholds of significance for any of the listed criteria air pollutants and precursors. For the reasons described above, no new significant effects or substantial changes to the environmental evaluation of air quality impacts evaluated in the 2012 EIR would occur with implementation of the proposed project modifications.

4.4 BIOLOGICAL RESOURCES

The 2012 EIR identified significant or potentially significant impacts related to loss of bat colonies during building demolition, loss of special-status species (i.e., including rare plants, special-status amphibians and reptiles, and nesting birds) during ground-disturbing activities (i.e., trail construction, road improvements, or other ground-disturbing activities), and loss of riparian habitat or other sensitive natural communities or fill of Waters of the U.S. during trail construction. These impacts would be reduced to a less-than-significant impact with implementation of Mitigation Measures 4.3-1 through 4.3-3 (Draft EIR, pp. 4.3-23, 4.3-25; Final 2012 EIR, pp. 3-2 through 3-3). The 2012 EIR identified a less-than-significant impact associated with effects of increased recreation on native species and interference with wildlife movement and no impact related to conflict with local policies, ordinances or an approved habitat conservation plan.

The project modifications would not increase the potential for impacts to biological resources because the area of ground disturbance associated with the proposed project modifications would be consistent with the areas of disturbance analyzed in the 2012 EIR. No additional tree removal or building demolition would occur with proposed project modifications. Segments of retaining wall totaling 180 linear feet in three separate locations along Mt. Umunhum Road would result in inconsequential interference with wildlife movement in the region. The addition of excavated materials for previously approved landform restoration at Mount Thayer is anticipated to result in no new or more severe impacts to biological resources. Mitigation

Measure 4.3-1 through 4.3-3 of the 2012 EIR require surveying, avoidance, minimization, and monitoring measures within the project footprint to reduce impacts to special-status plant and wildlife species during construction. With implementation of Mitigation Measures 4.3-1 through 4.3-3 and proposed project modifications limited to proposed areas of disturbance analyzed in the 2012 EIR, no new impacts to biological resources would result from implementation of the proposed project modifications evaluated in this addendum.

4.5 CULTURAL RESOURCES

Construction-related impacts on presently undocumented cultural resources and human remains were identified as potentially significant in the EIR. These impacts would be reduced to a less-than-significant impact with implementation of Mitigation Measure 4.2-3 and 4.2-4 (Final EIR, pp. 3-7 through 3-8; Draft EIR, 4.2-29 through 4.2-30). The 2012 EIR identified a less-than-significant impact associated with construction-related impacts on documented significant archaeological and historical resources. As described in Chapter 1 of the Draft EIR (Draft EIR, p.1-5), the potential to encounter paleontological resources is low because soil moving activities would occur within areas of disturbance that were analyzed in the 2012 EIR and grading is not expected to substantially expose native soils.

Construction of the proposed modifications would be limited to areas of disturbance that were analyzed in the 2012 EIR. No new impacts to cultural resources would result from implementation of the proposed modifications.

4.6 GEOLOGY AND SOILS

The 2012 EIR identified significant or potentially significant impacts related to risks to people and structures from seismic hazards or landslides and construction-related erosion hazards. As indicated in the 2012 EIR, these impacts would be reduced to a less-than-significant impact with implementation of Mitigation Measure 4.5-2 (Draft EIR, pp. 4.5-8 through 4.5-9), requiring consultation with the San Francisco Bay Basin Regional Water Quality Control Board, preparation of a Stormwater Pollution Prevention Plan (SWPPP), and implementation of Best Management Practices (BMPs). The 2012 EIR identified less-than-significant impacts associated with slope stability hazards.

The proposed project modifications would occur within proposed areas of disturbance analyzed in the 2012 EIR. The proposed project roadway improvement modifications (i.e. retaining walls along Mt. Umunhum Road) would be constructed within previously disturbed areas (i.e., exposed, non-vegetated soils) of the site wherever feasible. Additionally, the proposed retaining walls would improve slope stability along Mt. Umunhum Road. Thus, with implementation of Mitigation Measure 4.5-2 of the EIR, the proposed modifications would not alter the impact conclusions identified in the 2012 EIR for geology and soils.

4.7 GREENHOUSE GAS EMISSIONS

The EIR identified less-than-significant impacts associated with generation of greenhouse gas emissions and impacts of climate change on the environmental restoration and public access plan.

The proposed project modifications would include more intensive excavation and hauling construction activities that would, at the peak of hauling activities, increase the number of new two-way vehicle trips per day by 50 vehicle trips. Within the 2012 EIR, GHG emissions from construction were estimated to be 671 metric tons of CO_2 equivalent per year (MT CO_2e/year) over the construction period; however, as stated in the 2012 EIR, BAAQMD does not have an adopted significance threshold for GHG emissions from construction (the BAAQMD threshold identified for operations-related GHG emissions is 1,100 MT

CO_2e/year). The proposed project modifications would result in an increase of approximately 35 MT CO_2e/year over the construction period, which constitutes a 5 percent increase from the level of GHG emissions evaluated in the 2012 EIR for construction, bringing the total GHG emissions for the construction period to 706 MT CO_2e/year. The proposed project modifications would not result in any new long-term operational related vehicle trips. Construction would occur over a finite period of time after which all construction-related GHG emissions would cease, and the construction phase would not be the dominant source of GHG emissions from the project. The proposed project modifications would not result in new or more severe impacts because the proposed land uses remain fundamentally the same and there would not be any addition of long-term operational traffic (the primary generator of mobile source greenhouse gas emissions), and the additional construction-related GHG emissions are not a considerable amount.

4.8 HAZARDS AND HAZARDOUS MATERIALS

The 2012 EIR identified a significant impact related to exposure to existing hazardous materials, including asbestos in soil near old structures and pesticides above acceptable levels. These impacts would be reduced to a less-than-significant impact with implementation of Mitigation Measures 4.6-1 (i.e. prepare a focused pesticide soil testing and remediation program) of the Draft EIR (MROSD 2011: p.4.6-12). The 2012 EIR identified less-than-significant impacts associated with exposure to hazardous materials during project construction, use or transport of hazardous materials during project operations, potential hazards from interference with emergency response, and exposure of people or structures to wildland fires.

The proposed project modifications would not alter the area of disturbance that was analyzed in the 2012 EIR. Mitigation Measure 4.6-1 of the EIR requires focused soil testing and a remediation plan within the former Almaden AFS. Implementation of Mitigation Measure 4.6-1 would reduce potential for human exposure to any existing hazardous materials contamination that may be encountered within the former Almaden AFS as a result of the proposed project modifications. Therefore, the proposed modifications to the project would not result in new or more severe impacts

4.9 HYDROLOGY AND WATER QUALITY

The 2012 EIR identified potentially significant impacts related to potential short-term construction-related soil erosion and water quality impairment and water quality impacts. These impacts would be reduced to a less-than-significant impact with implementation of Mitigation Measures 4.4-1 and 4.4-3 of the EIR (Draft EIR, pp. 4.4-9 through 4.4-11). The 2012 EIR identified a less-than-significant impact associated with stormwater impacts (i.e., erosion, siltation, or flooding of on- or off-site areas).

The proposed modifications would result in additional excavation associated with installation of the retaining walls and the construction activities on the Mount Umunhum Summit. Although unlikely, these activities could result in potential short-term construction-related soil erosion and water quality impairment. Prior to earth-moving activities, Mitigation Measure 4.4-1 of the EIR requires consultation with the San Francisco Bay Basin Regional Water Quality Control Board to acquire appropriate regulatory approvals (ex. Section 401 water quality certification, NPDES stormwater permit for general construction activities, and any other necessary site-specific waste discharge requirements), preparation of a stormwater pollution prevention plan, and implementation of best management practices to avoid construction-related erosion and water quality impairment. Mitigation Measure 4.3-3 of the 2012 EIR requires avoidance and minimization measures related to construction that requires removal of riparian and wetland vegetation or placement of fill material into waters of the U.S. Because proposed project modifications would occur within previously disturbed areas and not within any wetlands, removal of riparian vegetation or impacts to waters of the U.S. would not occur. Implementation of Mitigation Measure 4.4-1 would reduce potential construction-related erosion and water quality impairment resulting from proposed project modifications to a less-than-significant level.

4.10 LAND USE AND PLANNING

As discussed in Chapter 1 of the Draft EIR (Draft EIR, p.1-5), land use and planning impacts would occur if the project would physically divide an established community (example: a freeway dividing a populated residential community), if it would conflict with a land use policy adopted for the purpose of avoiding an environmental impact, or if it would conflict with an applicable habitat conservation plan or natural community conservation plan. Regarding land use policies, each section of the 2012 EIR addresses the potential for conflicts between the project and relevant plans adopted for the purpose of avoiding environmental impacts.

The project site was a former air force station consisting of abandoned radar facility structures, other operational buildings, personnel housing and support facilities. The air force station was decommissioned in 1980 and since that time has not been used or populated. All buildings and structures have since been demolished with the exception of the 83-foot tall by 63-foot wide base of the former radar sail, which was removed by the military at the time of decommissioning.

The approved project and the proposed modifications (i.e., installation of retaining walls and construction excavation and haul modifications) are located on the same project site, which is located in a sparsely populated area. Therefore, the project would not divide an established community. Although the Sierra Azul Open Space Preserve abuts the Santa Clara Valley Habitat Plan, a Habitat Conservation Plan and Natural Community Conservation Plan, the project site is not included within the boundaries of the HCP or any other habitat conservation or natural community conservation plans, and therefore would not conflict with any such plans. The proposed project modifications would not alter the approved land use type or intensity; therefore; similar to the project analyzed in the 2012 EIR, the proposed project modifications would have no impact on land use.

4.11 MINERAL RESOURCES

As discussed in Chapter 1 of the Draft EIR (Draft EIR, p.1-5), the site does not have any known economic mineral resources. Therefore, the proposed project modifications are not anticipated to alter the availability of any economic mineral resources. As discussed in the 2012 EIR, the project would have no impact on mineral resources and the project modifications do not alter this conclusion.

4.12 NOISE

The EIR determined that all project-related noise impacts would be less than significant, including the long-term exposure of existing sensitive receptors to operational-related increases in stationary-source noise, and traffic noise, and groundborne vibration. The EIR also determined that short-term exposure of existing sensitive receptors to construction-generated noise and vibration would be less than significant.

The proposed project modifications would result in additional truck haul trips, as described in Section 3.2, Construction Excavation and Haul Modifications. Noise emission levels from dump trucks range from 74 to 81 dBA at 50 feet (FTA 2006). As described in the 2012 EIR, the nearest sensitive receptor to Phase 2 construction activity would be approximately 400 feet away from the haul route that trucks would use (located north of Mt Umunhum Road; see Exhibit 2 for location). At this distance, based on standard attenuation rates for vegetated areas, the level of truck noise at the receptor would range from 53 to 60 dBA. As described in the 2012 EIR, the construction activities associated with the proposed project modifications would be limited to the less noise sensitive hours of the day (7:00 am to 7:00 pm). A maximum of 50 total truck trips would take place at the peak of Phase 2 construction if the proposed project modifications were included. The truck trips would be spread throughout the day (7:00 am to 7:00 pm), equating to approximately eight to ten trips per hour.

Any noise or ground vibration produced by construction equipment associated with proposed project modifications would be minor, of short duration, intermittent, and consistent with the 2012 EIR conclusions (i.e., less-than-significant). For these reasons, the proposed modifications would not result in new or substantially more severe noise impacts. Because of the 400-foot (minimum) distance of a sensitive receptors from Mt. Umunhum Road and the private road that leads to Mount Thayer in this sparsely-populated area, the proposed addition of up to an average of ten (10) new material haul trips per hour on these roads would not result in a consequential change to traffic source noise levels. Construction and operation of proposed project modifications would not result in the exposure of off-site receptors to noise levels in excess of applicable standards. For these reasons, the proposed modifications would not result in new or more severe noise impacts.

4.13 POPULATION AND HOUSING

As discussed in Chapter 1 of the 2012 EIR (Draft EIR, p.1-5), no elements of the project would alter population growth. The project would not extend urban infrastructure into an unserved area; therefore, it would not induce population growth. Further, although the project would remove housing from the site, this housing was dedicated to military uses and was long ago abandoned and is remote from any public services needed to serve a housing development.

The proposed project modifications include installation of retaining walls and construction excavation and haul modifications. Similar to the approved project, the proposed project modifications would not necessitate the construction of replacement housing and would result in no impact related to population and housing.

4.14 SERVICES

The 2012 EIR identified less-than-significant impacts associated with increased demand for fire protection, emergency medical services, and law enforcement.

The construction phase and activities associated with the proposed project modifications would require the preparation of a Traffic Control Plan conforming to the applicable requirements of the County of Santa Clara and the California Manual of Uniform Traffic Control Devices (CA MUTCD), 2014 Edition, and is required to be submitted and approved by the MROSD. Consistent with County policy, the Traffic Control Plan would ensure that construction activities associated with the proposed project modifications would not block public service vehicle access within the site and would minimize disruption of response times or other public service standards. Consistent with Impact 4.11-1 of the approved EIR, the project would ensure appropriate emergency vehicle access.

Fire protection/first response and law enforcement staff access would be maintained at all times to ensure minimization of any delays related to emergency response times during project construction. Thus, changes to the proposed project (i.e., installation of retaining walls and construction excavation and haul modifications) since the time of prior environmental review would not result in new or more severe impacts to public services.

As discussed in Chapter 1 of the Draft EIR (Draft EIR, p.1-5), the approved project would not adversely affect park and/or open space preserve services; to the contrary, the project itself expands park and/or open space preserve services to the region and would marginally reduce pressure on other parks and open space preserves to the degree the project provides an alternative to other regional recreation. The project also would have no effects on schools because the expansion of parks and open space preserve services at the site would not bring a new residential population to the area and would therefore not affect school capacity. The proposed project modifications would not affect this conclusion.

4.15 RECREATION

As discussed in Chapter 1 of the 2012 EIR (Draft EIR, p.1-5), the project would provide a new recreational facility that includes new trails and day use visitor amenities at the Summit. The proposed project modifications include the installation of retaining walls and construction excavation and haul modifications as part of the overall project providing a new recreational facility. All proposed project modifications would occur during the construction phase of the project. Thus, the proposed project modifications would not obstruct recreational activities within the preserve or result in any increased demand for recreation, thus, resulting in no impact to recreation.

4.16 TRAFFIC AND CIRCULATION

The 2012 EIR identified significant or potentially significant impacts related to construction traffic. These impacts would be reduced to a less-than-significant impact with implementation of Mitigation Measure 4.10-1 of the EIR (Draft EIR, pp. 4.10-17 through 4.10-18). The 2012 EIR identified less-than-significant impacts associated with roadway level of service, cumulative roadway level of service (year 2020), public transit, bicycle or pedestrian facility effects, guardrails and reduced possibility of vehicle diversion from travel lanes, and roadway and drainage ongoing maintenance.

The 2012 EIR identified the demolition phase (three to six months duration) as the most traffic-intensive phase of construction, which would involve up to 60 worker trips inbound to the site each morning and outbound from the site each late afternoon (each-way) and 20 two-way truck trips per day (20 inbound and 20 outbound). A total of approximately 1,100 additional two-way truck trips would be required during Phase 2 of construction to haul the additional material. The additional truck haul trips would be spread over four to six months which would equate to an average of approximately 12 additional truck trips per day. Similar to the peak construction phase, the additional material haul trips associated with proposed project modifications would be temporary in nature and would be spread throughout the workday. Therefore, the demolition phase would remain as the worst-case, or peak construction period, and the level of service analysis for construction traffic in 2012 EIR would not be affected by the proposed project modifications.

Construction activities associated with the proposed modifications would increase the construction traffic described and analyzed in the 2012 EIR. Mitigation Measure 4.10-1 of the EIR requires implementation of measures that improve roadway conditions and operation during and after construction. Additionally, construction activities associated with the installation of the gabion retaining walls could potentially require the closing of one lane of traffic along Mt. Umunhum Road for a limited period of time, which could result in temporary traffic delays for two residences above this location on Loma Almaden Road who use Mt. Umunhum Road to access their private property. Consistent with applicable requirements of the County of Santa Clara, and the California Manual of Uniform Traffic Control Devices (CA MUTCD), a Traffic Control Plan would be completed and submitted to the MROSD for approval. Thus, the addition of traffic on the private road or the temporary lane closure would not substantially affect the traffic analysis performed in the 2012 EIR. This would constitute a less-than-significant impact related to traffic and circulation.

4.17 UTILITIES & SERVICE SYSTEMS

As discussed in Chapter 1 of the Draft EIR (Draft EIR, p.1-5), the approved project would not adversely affect utilities. All typical utilities would be self-contained. No substantial wastewater would be created; vault toilets would be used, with the septage cleaned out regularly by MROSD staff or private service providers and disposed at an approved facility. Water use would be insubstantial, and nonpotable water would occasionally be purchased either from a municipality and transported to the summit, or purchased locally from a neighboring landowner at the summit and hauled a short distance to the storage tank. Water is intended primarily for on-site use but could be utilized for wildland fire suppression as appropriate. Regarding storm

drainage, the site would be recontoured to its natural form where feasible, and no increase in storm drainage would be expected. Further, because the site would be cleared of debris and dilapidated buildings, runoff quality would improve.

The proposed project modifications include installation of retaining walls and construction excavation and haul modifications which would not affect utilities or service systems.

5 CONCLUSION

The proposed addition of gabion retaining walls in three separate locations along Mt. Umunhum Road and the proposed construction excavation and haul modifications would not alter any of the conclusions of the 2012 EIR. No new significant environmental effects or a substantial increase in the severity of previously identified significant effects would result. The additions also would not affect any of the mitigation measures, including their feasibility or implementation. As mentioned above, none of the conditions listed in section 15162 of the CEQA Guidelines exist for the project modification described herein. Therefore, pursuant to section 15164 of the CEQA Guidelines, the differences between the approved project described in the 2012 EIR and the modification of the project as currently proposed and described in this addendum are minor and this addendum provides sufficient environmental documentation.

6 REFERENCES

Department of Conservation. 2010. *Santa Clara County Important Farmland 2010*. Available: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/scl10.pdf. Accessed July 24, 2015.

Federal Transit Administration. 2006. *Transit Noise and Vibration Impact Assessment*.

Sacramento Metropolitan Air Quality Management District. 2016b (June). Road Construction Emissions Model Version 8.1.0. Available: http://www.airquality.org/ceqa.

Appendix A

Modeled Construction-Related Emissions of Criteria Air Pollutants and Precursors for the Proposed Project Modifications

Welcome to the Road Construction Emissions Model, Version 8.1.0

User Instructions

This spreadsheet system contains the following individual worksheets:

1 This worksheet of User Instructions
2 Updates
3 Emission Estimates
4 Data Entry
5 Non-default Off-road Equipment
6 EMFAC2014
7 On-road Mitigation EF
8 OFFROAD Convert
9 Off-road Tier 4 EF
10 OFFROAD HP & LF
11 OFFROAD EF
12 x-ref

The Emission Estimates worksheet calculates a project's emissions in pounds per day (and tons) by project phase and tons over the entire construction period.
The worksheet can be used to estimate emissions for both vehicle exhaust and fugitive dust. The methodology used to estimate fugitive dust emissions is a simplified methodology involving estimates of the maximum area (acreage) of land disturbed daily. Detailed fugitive dust emission estimates associated with individual materials handling operations and/or activity/vehicle types cannot be conducted with this version of the model.
The Emission Estimates worksheet cannot be modified directly, it is a protected worksheet. It can only be modified indirectly by entering information for the project in selected areas of the Data Entry worksheet.

The last seven of these worksheets - EMFAC2014, On-road Mitigation EF, OFFROAD Convert, Off-road Tier 4 EF, OFFROAD HP & LP, OFFROAD EF and x-ref - cannot be modified by the user. They are protected worksheets.

Even though all or portions of several worksheets are protected, the individual formulas used in the calculations can be seen by the user.
The Data Entry worksheet includes several areas that can be modified by the user.
User instructions in the Data Entry worksheet are highlighted in red.
On the Data Entry worksheet, the user has two options for entering project data: required data and optional data. Required data is entered in the data input section (yellow cells). That required data is then used by the worksheet to calculate default values for the project.
The user can override the default values (blue cells) calculated for a project and is encouraged to do so if project specific information is available. Due to the difficulty in developing reliable default values for road construction projects, the user is encouraged to enter as much site specific information as is available for the project being analyzed.
The Data Entry Worksheet also includes a button that allows the user to clear previously entered data. This button is found just at the top of and to the right of the data entry portion of the worksheet.
When projects are discontinuous, the user must make adjustments to the spreadsheet manually, since the program cannot be setup to anticipate unexpected project delays.

#VALUE! <- This error message may occur during use of the spreadsheets. This occurs whenever the user enters a non numeric value, including a space character, into a cell that is used to calculate a numeric value. Consequently, to erase values entered into the spreadsheets, use the delete key instead of the space bar!

Note: Information in this worksheet is based on conversations with knowledgeable individuals at the Sacramento Metropolitan Air Quality Management District, the California Department of Transportation, the California Air Resources Board, the U.S. EPA, and private industry involved in road construction. Also, the 26th edition of Walker's Building Estimator's Reference Book (1999) was used in the development of this spreadsheet. This spreadsheet was prepared by Jones & Stokes, TIAX LLC and Ramboll Environ with the financial support and direction of the Sacramento Metropolitan Air Quality Management District.

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Road Construction Emissions Model, Version 8.1.0

Updates Log

Changes from previous version of Road Construction Emissions Model

(Version 7.1.5 to 8.1.0) (updated by SMAQMD 05/09/16 with assistance from Ramboll ENVIRON US Corporation)

1) Project length changed to include calendar years 2014 through 2025.
2) Added a new project type: Type 4: Other Linear Project Type. Note that there are no default vehicle or equipment activities available for
3) Emissions estimates were extended to include SOx, CH4, N2O and CO2e.
4) Updated off-road equipment emission factors and default average horsepower by equipment type to be consistent with CalEEMod (vers
5) On-road vehicle emission factors have been updated to EMFAC2014.
6) Revised pollutant order for consistency throughout the calculator.
7) Added flexibility for users to specify a non-default number of working days per month.
8) Modified soil hauling import and export quantity and haul truck capacity data requests to allow users to specify soil hauling activity by ph
9) Soil hauling emissions are now estimated separately for each construction phase.
10) Added a new feature to allow users to provide asphalt hauling quantities by phase in the "Data Entry" tab.
11) New component added where the user can specify construction start date and duration by phase.
12) The maximum daily emissions calculation was modified to sum emissions from overlapping construction phases.
13) Water truck activity can be specified and emissions estimated for the paving phase.
14) Mitigation options were added for on-road vehicles and off-road equipment. Emissions calculations include the effects of mitigations if
15) Model allows user to estimate emissions from non-default off-road equipment for all phases and for all project types. Non-default off-ro
equipment type for horsepower, number of equipment, load factor, hours of operation and emission factors in the "Non-default Off-road Eq
16) New table of total project emissions with units of tons/phase was added in the "Emission Estimates" tab.
17) Removed table of daily emissions in metric units from the "Emission Estimates" tab.
18) Removed unnecessary data from all tabs.

(Version 7.1.4 to 7.1.5) (updated by SMAQMD 12/11/13 with assistance from ENVIRON Corporation)

1) Grubbing and Land Clearing Phase calculation of active months in 2007, 2017, 2019 fixed.
2) Soil Hauling Emissions calculation to select override if it exists for round trips/day.
3) Worker Commute Emissions calculation of starting and hot soak emissions; drainage phase PM_{10} emission rate.
4) Water Truck Emissions calculation to select number of months for Grubbing and Land Clearing Phase; maximum acreage/day after 202

(Version 6.3.2 to Version 7.1.0, 7.1.1, 7.1.2, 7.1.3 & 7.1.4) (updated by SMAQMD 8/2/13)

1) EMFAC2011 emission factors added (previous EMFAC versions dropped).
2) OFFROAD2011 emission factors added (and fixed error).
3) OFFROAD2007 for categories not in OFFROAD2011 (and fixed error)
4) Project length changed to include calendar years 2009 through 2025.
5) Average Offroad HP by Equipment Type calculation updated and corrected
6) Load Factor Adjustment deactivated (default load factors already incorporated in ARB's calculation of emission factors)
7) Crawler Tractor equipment added to model
8) Air Compressors ROG & Default Excavators calculation on Data Entry sheet corrected.
9) Default equipment list updated
10) Corrections to Worker Commute Emissions calculations

the Project Type 4.

sion 2013.2.2).

nase.

a mitigation option is selected by the user.
ad equipment specification must be included by
quipment" tab.

25.

Orange highlighted cells shows overlapped project phases, maximum daily emissions shown below have been adjusted to account for phase ove

The maximum pounds per day in row 11 is summed over overlapping phases, but the maximum tons per phase in row 34 is not summed over overlapping phases.

Road Construction Emissions Model, Version 8.1.0

Daily Emission Estimates for ->

Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)	Overlap?
Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Yes
Grading/Excavation	0.08	0.42	1.93	0.12	0.12	0.00	0.05	0.05	0.00	0.02	1,964.18	0.00	0.06	1,983.53	Yes
Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	No
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	No
Maximum (pounds/day)	0.08	0.42	1.93	0.12	0.12	0.00	0.05	0.05	0.00	0.02	1,964.18	0.00	0.06	1,983.53	
Total (tons/construction project)	0.00	0.02	0.09	0.01	0.01	0.00	0.00	0.00	0.00	0.00	94.28	0.00	0.00	95.21	

Notes:

Project Start Year ->	2016
Project Length (months) ->	4
Total Project Area (acres) ->	0
Maximum Area Disturbed/Day (acres) ->	0
Water Truck Used? ->	No

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	0	0
Grading/Excavation	700	0	550	0	0	0
Drainage/Utilities/Sub-Grade	0	0	0	0	0	0
Paving	0	0	0	0	0	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for ->

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation	0.00	0.02	0.09	0.01	0.01	0.00	0.00	0.00	0.00	0.00	94.28	0.00	0.00	86.37
Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum (tons/phase)	0.00	0.02	0.09	0.01	0.01	0.00	0.00	0.00	0.00	0.00	94.28	0.00	0.00	86.37
Total (tons/construction project)	0.00	0.02	0.09	0.01	0.01	0.00	0.00	0.00	0.00	0.00	94.28	0.00	0.00	86.37

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model **Version 8.1.0**

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

	Months
Grubbing/Lan	0.00
Grading/Exca	4.00
Drainage/Utili	0.00
Paving	0.00

Input Type

Project Name		
Construction Start Year	2016	Enter a Year between 2014 and 2025 (inclusive)
Project Type	2	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	4.00	months
Working Days per Month	24.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	1	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length		miles
Total Project Area		acres
Maximum Area Disturbed/Day		acres
Water Trucks Used?	2	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing			
	Grading/Excavation	14.00	0.00	700.00
	Drainage/Utilities/Sub-Grade			
	Paving			
Asphalt	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving			

Mitigation Options

On-road Fleet Emissions Mitigation		Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation		Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/ceqa/mitigation.shtml). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing	0.00	0.40		1/1/2016
Grading/Excavation	4.00	1.60		1/1/2016
Drainage/Utilities/Sub-Grade	0.00	1.40		5/2/2016
Paving	0.00	0.60		5/2/2016
Totals (Months)	4			

Program Calculated Activity Frac	
start date	end date
1/1/2016	12/31/2015
1/1/2016	5/1/2016
5/2/2016	5/1/2016
5/2/2016	5/1/2016

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions **User Input**	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation	11.00	30.00		50	550.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		0	0.00
Miles/round trip: Paving		30.00		0	0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/mile)	0.07	0.35	1.60	0.10	0.04	0.02	1,619.88	0.00	0.05	1,635.84
Draining/Utilities/Sub-Grade (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.08	0.42	1.93	0.12	0.05	0.02	1,964.18	0.00	0.06	1,983.53
Tons per const. Period - Grading/Excavation	0.00	0.02	0.09	0.01	0.00	0.00	94.28	0.00	0.00	95.21
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.02	0.09	0.01	0.00	0.00	94.28	0.00	0.00	95.21

Note: Asphalt Hauling emission default values can be overridden in cells D87 through D90, and F87 through F90.

Asphalt Hauling Emissions **User Input**	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		0	0.00
Miles/round trip: Paving		30.00		0	0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/mile)	0.07	0.35	1.60	0.10	0.04	0.02	1,619.88	0.00	0.05	1,635.84
Draining/Utilities/Sub-Grade (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D113 through D118.

Worker Commute Emissions	User Override of Worker Commute Default Values	Default Values		
User Input				
Miles/ one-way trip		20	Calculated Daily Trips	Calculated Daily VMT
One-way trips/day		2		
No. of employees: Grubbing/Land Clearing		0	0	0.00
No. of employees: Grading/Excavation		0	0	0.00
No. of employees: Drainage/Utilities/Sub-Grade		0	0	0.00
No. of employees: Paving		0	0	0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/mile)	0.05	1.73	0.19	0.05	0.02	0.00	413.07	0.01	0.01	415.82
Draining/Utilities/Sub-Grade (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grubbing/Land Clearing (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	1.41	4.06	0.34	0.00	0.00	0.00	91.22	0.02	0.01	95.97
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Water Truck default values can be overridden in cells D145 through D148, and F145 through F148.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Miles Traveled/Vehicle/Day	Default Values Miles Traveled/Vehicle/Day	Calculated Daily VMT
User Input					
Grubbing/Land Clearing - Exhaust		0		40.00	0.00
Grading/Excavation - Exhaust		0		40.00	0.00
Drainage/Utilities/Subgrade		0		40.00	0.00
Paving		0		40.00	0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/mile)	0.07	0.35	1.60	0.10	0.04	0.02	1,619.88	0.00	0.05	1,635.84
Draining/Utilities/Sub-Grade (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Fugitive dust default values can be overridden in cells D171 through D173.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		0.00	0.00	0.00	0.00	0.00
Fugitive Dust - Grading/Excavation		0.00	0.00	0.00	0.00	0.00
Fugitive Dust - Drainage/Utilities/Subgrade		0.00	0.00	0.00	0.00	0.00

Off-Road Equipment Emissions

Grubbing/Land Clearing Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing	pounds per day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grubbing/Land Clearing	tons per phase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment

If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grading/Excavation		pounds per day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation		tons per phase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment

If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
	Drainage/Utilities/Sub-Grade	pounds per day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage/Utilities/Sub-Grade	tons per phase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
	Paving	pounds per day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	tons per phase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Emissions all Phases (tons per construction period) =>			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Equipment default values for horsepower and hours/day can be overridden in cells D391 through D424 and F391 through F424.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day	Horsepower	Load Factor adju
Aerial Lifts		63		8	63.00	0.31
Air Compressors		78		8	78.00	0.48
Bore/Drill Rigs		206		8	206.00	0.50
Cement and Mortar Mixers		9		8	9.00	0.56
Concrete/Industrial Saws		81		8	81.00	0.73
Cranes		226		8	226.00	0.29
Crawler Tractors		208		8	208.00	0.43
Crushing/Proc. Equipment		85		8	85.00	0.78
Excavators		163		8	163.00	0.38
Forklifts		89		8	89.00	0.20
Generator Sets		84		8	84.00	0.74
Graders		175		8	175.00	0.41
Off-Highway Tractors		123		8	123.00	0.44
Off-Highway Trucks		400		8	400.00	0.38
Other Construction Equipment		172		8	172.00	0.42
Other General Industrial Equipment		88		8	88.00	0.34
Other Material Handling Equipment		167		8	167.00	0.40
Pavers		126		8	126.00	0.42

Paving Equipment		131		8	131.00	0.36
Plate Compactors		8		8	8.00	0.43
Pressure Washers		13		8	13.00	0.30
Pumps		84		8	84.00	0.74
Rollers		81		8	81.00	0.38
Rough Terrain Forklifts		100		8	100.00	0.40
Rubber Tired Dozers		255		8	255.00	0.40
Rubber Tired Loaders		200		8	200.00	0.36
Scrapers		362		8	362.00	0.48
Signal Boards		6		8	6.00	0.82
Skid Steer Loaders		65		8	65.00	0.37
Surfacing Equipment		254		8	254.00	0.30
Sweepers/Scrubbers		64		8	64.00	0.46
Tractors/Loaders/Backhoes		98		8	98.00	0.37
Trenchers		81		8	81.00	0.50
Welders		46		8	46.00	0.45

Grubbing/Land Clearing

Equipment Type	Number of Vehicles	Tier	HP	Load Factor (%)	Hours Per Day	Emission Factor (g/bhp-hr) ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	Emission Factor Data Source

Grading/Excavation

Equipment Type	Number of Vehicles	Tier	HP	Load Factor (%)	Hours Per Day	Emission Factor (g/bhp-hr) ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	Emission Factor Data Source

Drainage/Utilities/Subgrade

Equipment Type	Number of Vehicles	Tier	HP	Load Factor (%)	Hours Per Day	Emission Factor (g/bhp-hr) ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	Emission Factor Data Source

Paving

Equipment Type	Number of Vehicles	Tier	HP	Load Factor (%)	Hours Per Day	Emission Factor (g/bhp-hr) ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	Emission Factor Data Source

Light Duty Truck

Worker Commute Truck Emissions (Emfac2014 - web 1.0.7, weighted LDT1 and LDT2 emission factor based on VMT and trips)

Year	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx	Weighted - Grubbing
2014	0.0642	-	-	-	-	2.2203	-	-	-	-	0.2535	-
2015	0.0542	-	-	-	-	1.9680	-	-	-	-	0.2228	-
2016	0.0451	-	0.0451	-	-	1.7328	-	1.7328	-	-	0.1945	-
2017	0.0362	-	-	-	-	1.5134	-	-	-	-	0.1685	-
2018	0.0290	-	-	-	-	1.3269	-	-	-	-	0.1463	-
2019	0.0242	-	-	-	-	1.1906	-	-	-	-	0.1280	-
2020	0.0210	-	-	-	-	1.0764	-	-	-	-	0.1134	-
2021	0.0190	-	-	-	-	0.9903	-	-	-	-	0.1016	-
2022	0.0172	-	-	-	-	0.9178	-	-	-	-	0.0915	-
2023	0.0156	-	-	-	-	0.8529	-	-	-	-	0.0825	-
2024	0.0142	-	-	-	-	0.8010	-	-	-	-	0.0748	-
2025	0.0130	-	-	-	-	0.7506	-	-	-	-	0.0681	-
Total		-	0.0451	-	-		-	1.7328	-	-		-

Heavy-Heavy Duty Diesel Truck

Water Truck Commute Emissions (EMFAC2014- web 1.0.7, T7 Single Unit Construction Truck)

Model Year	ROG	Weighted- Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted- Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx	Weighted- Grubbing
2014	0.4443	-	-	-	-	1.5669	-	-	-	-	10.5435	-
2015	0.3630	-	-	-	-	1.2778	-	-	-	-	9.2817	-
2016	0.2888	-	0.2888	-	-	1.0218	-	1.0218	-	-	7.9708	-
2017	0.2042	-	-	-	-	0.7425	-	-	-	-	6.5368	-
2018	0.1428	-	-	-	-	0.5447	-	-	-	-	5.4026	-
2019	0.1341	-	-	-	-	0.5235	-	-	-	-	4.9686	-
2020	0.1053	-	-	-	-	0.4360	-	-	-	-	4.1285	-
2021	0.1016	-	-	-	-	0.4327	-	-	-	-	3.6453	-
2022	0.0978	-	-	-	-	0.4291	-	-	-	-	3.2324	-
2023	0.0637	-	-	-	-	0.3718	-	-	-	-	1.3091	-
2024	0.0640	-	-	-	-	0.3746	-	-	-	-	1.2913	-
2025	0.0644	-	-	-	-	0.3774	-	-	-	-	1.2796	-
Total		-	0.2888	-	-		-	1.0218	-	-		-

Light Duty T

											Running Exhaust (g/mi)	
Year	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
2014	-	-	-	0.0026	-	-	-	-	0.0024	-	-	-
2015	-	-	-	0.0024	-	-	-	-	0.0022	-	-	-
2016	0.1945	-	-	0.0022	-	0.0022	-	-	0.0020	-	0.0020	-
2017	-	-	-	0.0021	-	-	-	-	0.0019	-	-	-
2018	-	-	-	0.0020	-	-	-	-	0.0019	-	-	-
2019	-	-	-	0.0020	-	-	-	-	0.0018	-	-	-
2020	-	-	-	0.0020	-	-	-	-	0.0018	-	-	-
2021	-	-	-	0.0019	-	-	-	-	0.0018	-	-	-
2022	-	-	-	0.0019	-	-	-	-	0.0017	-	-	-
2023	-	-	-	0.0019	-	-	-	-	0.0017	-	-	-
2024	-	-	-	0.0018	-	-	-	-	0.0017	-	-	-
2025	-	-	-	0.0018	-	-	-	-	0.0017	-	-	-
Total	0.1945	-	-		-	0.0022	-	-		-	0.0020	-

Heavy-Heav

											Running Exhaust (g/mi)	
Model Year	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted- Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
2014	-	-	-	0.2047	-	-	-	-	0.1959	-	-	-
2015	-	-	-	0.1560	-	-	-	-	0.1492	-	-	-
2016	7.9708	-	-	0.1157	-	0.1157	-	-	0.1107	-	0.1107	-
2017	-	-	-	0.0702	-	-	-	-	0.0671	-	-	-
2018	-	-	-	0.0373	-	-	-	-	0.0357	-	-	-
2019	-	-	-	0.0329	-	-	-	-	0.0315	-	-	-
2020	-	-	-	0.0190	-	-	-	-	0.0182	-	-	-
2021	-	-	-	0.0170	-	-	-	-	0.0162	-	-	-
2022	-	-	-	0.0146	-	-	-	-	0.0139	-	-	-
2023	-	-	-	0.0047	-	-	-	-	0.0045	-	-	-
2024	-	-	-	0.0046	-	-	-	-	0.0044	-	-	-
2025	-	-	-	0.0046	-	-	-	-	0.0044	-	-	-
Total	7.9708	-	-		-	0.1157	-	-		-	0.1107	-

Light Duty T

Year	Weighted - Paving	SOx	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0043	-	-	-	-	430.3721	-	-	-	-
2015	-	0.0043	-	-	-	-	422.5311	-	-	-	-
2016	-	0.0042	-	0.0042	-	-	413.0664	-	413.0664	-	-
2017	-	0.0041	-	-	-	-	403.7337	-	-	-	-
2018	-	0.0040	-	-	-	-	393.8281	-	-	-	-
2019	-	0.0038	-	-	-	-	381.7068	-	-	-	-
2020	-	0.0037	-	-	-	-	371.4636	-	-	-	-
2021	-	0.0036	-	-	-	-	360.0317	-	-	-	-
2022	-	0.0035	-	-	-	-	348.2869	-	-	-	-
2023	-	0.0034	-	-	-	-	336.2742	-	-	-	-
2024	-	0.0032	-	-	-	-	324.2122	-	-	-	-
2025	-	0.0031	-	-	-	-	312.2161	-	-	-	-
Total	-		-	0.0042	-	-		-	413.0664	-	-

Heavy-Heav

Model Year	Weighted - Paving	SOx	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0166	-	-	-	-	1,738.2287	-	-	-	-
2015	-	0.0164	-	-	-	-	1,717.2870	-	-	-	-
2016	-	0.0163	-	0.0163	-	-	1,704.0279	-	1,704.0279	-	-
2017	-	0.0161	-	-	-	-	1,684.1223	-	-	-	-
2018	-	0.0159	-	-	-	-	1,663.7913	-	-	-	-
2019	-	0.0157	-	-	-	-	1,647.2885	-	-	-	-
2020	-	0.0156	-	-	-	-	1,631.7101	-	-	-	-
2021	-	0.0154	-	-	-	-	1,614.4982	-	-	-	-
2022	-	0.0152	-	-	-	-	1,596.6115	-	-	-	-
2023	-	0.0147	-	-	-	-	1,541.9038	-	-	-	-
2024	-	0.0146	-	-	-	-	1,535.0540	-	-	-	-
2025	-	0.0146	-	-	-	-	1,529.5190	-	-	-	-
Total	-		-	0.0163	-	-		-	1,704.0279	-	-

Light Duty T

Year	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing
2014	0.0178	-	-	-	-	0.0105	-	-	-	-	0.0080	-
2015	0.0158	-	-	-	-	0.0092	-	-	-	-	0.0080	-
2016	0.0139	-	0.0139	-	-	0.0081	-	0.0081	-	-	0.0080	-
2017	0.0122	-	-	-	-	0.0070	-	-	-	-	0.0080	-
2018	0.0107	-	-	-	-	0.0061	-	-	-	-	0.0080	-
2019	0.0095	-	-	-	-	0.0053	-	-	-	-	0.0080	-
2020	0.0084	-	-	-	-	0.0047	-	-	-	-	0.0080	-
2021	0.0076	-	-	-	-	0.0042	-	-	-	-	0.0080	-
2022	0.0069	-	-	-	-	0.0038	-	-	-	-	0.0080	-
2023	0.0063	-	-	-	-	0.0034	-	-	-	-	0.0080	-
2024	0.0057	-	-	-	-	0.0031	-	-	-	-	0.0080	-
2025	0.0052	-	-	-	-	0.0028	-	-	-	-	0.0080	-
Total		-	0.0139	-	-		-	0.0081	-	-		-

Heavy-Heavy

Model Year	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted- Grubbing
2014	0.0206	-	-	-	-	0.0585	-	-	-	-	0.0360	-
2015	0.0169	-	-	-	-	0.0579	-	-	-	-	0.0360	-
2016	0.0134	-	0.0134	-	-	0.0575	-	0.0575	-	-	0.0360	-
2017	0.0095	-	-	-	-	0.0569	-	-	-	-	0.0360	-
2018	0.0066	-	-	-	-	0.0562	-	-	-	-	0.0360	-
2019	0.0062	-	-	-	-	0.0556	-	-	-	-	0.0360	-
2020	0.0049	-	-	-	-	0.0553	-	-	-	-	0.0360	-
2021	0.0047	-	-	-	-	0.0547	-	-	-	-	0.0360	-
2022	0.0045	-	-	-	-	0.0541	-	-	-	-	0.0360	-
2023	0.0030	-	-	-	-	0.0523	-	-	-	-	0.0360	-
2024	0.0030	-	-	-	-	0.0521	-	-	-	-	0.0360	-
2025	0.0030	-	-	-	-	0.0519	-	-	-	-	0.0360	-
Total		-	0.0134	-	-		-	0.0575	-	-		-

Light Duty T

	Tire Wear (g/mi)										
Year	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading
2014	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2015	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2016	0.0080	-	-	0.0020	-	0.0020	-	-	0.0368	-	0.0368
2017	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2018	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2019	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2020	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2021	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2022	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2023	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2024	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2025	-	-	-	0.0020	-	-	-	-	0.0368	-	-
Total	0.0080	-	-		-	0.0020	-	-		-	0.0368

Heavy-Heavy

	Tire Wear (g/mi)										
Model Year	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted- Grubbing	Weighted - Grading
2014	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2015	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2016	0.0360	-	-	0.0090	-	0.0090	-	-	0.0617	-	0.0617
2017	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2018	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2019	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2020	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2021	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2022	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2023	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2024	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2025	-	-	-	0.0090	-	-	-	-	0.0617	-	-
Total	0.0360	-	-		-	0.0090	-	-		-	0.0617

Light Duty T

Year	Break Wear (g/mi)												
	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	-	0.0158	-	-	-	-	0.3878	-	-	-	-
2015	-	-	0.0158	-	-	-	-	0.3437	-	-	-	-
2016	-	-	0.0158	-	0.0158	-	-	0.3018	-	0.3018	-	-
2017	-	-	0.0158	-	-	-	-	0.2616	-	-	-	-
2018	-	-	0.0158	-	-	-	-	0.2260	-	-	-	-
2019	-	-	0.0158	-	-	-	-	0.1969	-	-	-	-
2020	-	-	0.0158	-	-	-	-	0.1716	-	-	-	-
2021	-	-	0.0158	-	-	-	-	0.1516	-	-	-	-
2022	-	-	0.0158	-	-	-	-	0.1342	-	-	-	-
2023	-	-	0.0158	-	-	-	-	0.1189	-	-	-	-
2024	-	-	0.0158	-	-	-	-	0.1059	-	-	-	-
2025	-	-	0.0158	-	-	-	-	0.0947	-	-	-	-
Total	-	-		-	0.0158	-	-		-	0.3018	-	-

Heavy-Heavy

There are no start emissions for heavy-duty diesel trucks, so trips are n
ARB didn't make assumptions on the numbers of trips for the vehicle ca

Model Year	Break Wear (g/mi)												
	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	ROG	Weighted- Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	-	0.0265	-	-	-	-	-	-	-	-	-
2015	-	-	0.0265	-	-	-	-	-	-	-	-	-
2016	-	-	0.0265	-	0.0265	-	-	-	-	-	-	-
2017	-	-	0.0265	-	-	-	-	-	-	-	-	-
2018	-	-	0.0265	-	-	-	-	-	-	-	-	-
2019	-	-	0.0265	-	-	-	-	-	-	-	-	-
2020	-	-	0.0265	-	-	-	-	-	-	-	-	-
2021	-	-	0.0265	-	-	-	-	-	-	-	-	-
2022	-	-	0.0265	-	-	-	-	-	-	-	-	-
2023	-	-	0.0265	-	-	-	-	-	-	-	-	-
2024	-	-	0.0265	-	-	-	-	-	-	-	-	-
2025	-	-	0.0265	-	-	-	-	-	-	-	-	-
Total	-	-		-	0.0265	-	-		-	-	-	-

Light Duty T

Year	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing
2014	5.0128	-	-	-	-	0.4207	-	-	-	-	0.0037	-
2015	4.5316	-	-	-	-	0.3791	-	-	-	-	0.0034	-
2016	4.0649	-	4.0649	-	-	0.3380	-	0.3380	-	-	0.0031	-
2017	3.6180	-	-	-	-	0.2983	-	-	-	-	0.0029	-
2018	3.2123	-	-	-	-	0.2617	-	-	-	-	0.0027	-
2019	2.8607	-	-	-	-	0.2290	-	-	-	-	0.0027	-
2020	2.5452	-	-	-	-	0.2007	-	-	-	-	0.0026	-
2021	2.2839	-	-	-	-	0.1763	-	-	-	-	0.0026	-
2022	2.0565	-	-	-	-	0.1553	-	-	-	-	0.0025	-
2023	1.8573	-	-	-	-	0.1371	-	-	-	-	0.0025	-
2024	1.6970	-	-	-	-	0.1215	-	-	-	-	0.0025	-
2025	1.5553	-	-	-	-	0.1079	-	-	-	-	0.0025	-
Total		-	4.0649	-	-		-	0.3380	-	-		-

Heavy-Heavt necessary for the emissions calculation.
tegories in EMFAC2011-HD.

Model Year	CO	Wieghted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx	Wieghted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Wieghted - Grubbing
2014	-	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-	-	-	-	-
Total		-	-	-	-		-	-	-	-		-

Light Duty T

	Start Emission Rate (g/trip)											
Year	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	SOx	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
2014	-	-	-	0.0034	-	-	-	-	0.0010	-	-	-
2015	-	-	-	0.0031	-	-	-	-	0.0010	-	-	-
2016	0.0031	-	-	0.0029	-	0.0029	-	-	0.0010	-	0.0010	-
2017	-	-	-	0.0027	-	-	-	-	0.0010	-	-	-
2018	-	-	-	0.0025	-	-	-	-	0.0009	-	-	-
2019	-	-	-	0.0024	-	-	-	-	0.0009	-	-	-
2020	-	-	-	0.0024	-	-	-	-	0.0009	-	-	-
2021	-	-	-	0.0024	-	-	-	-	0.0009	-	-	-
2022	-	-	-	0.0023	-	-	-	-	0.0008	-	-	-
2023	-	-	-	0.0023	-	-	-	-	0.0008	-	-	-
2024	-	-	-	0.0023	-	-	-	-	0.0008	-	-	-
2025	-	-	-	0.0023	-	-	-	-	0.0007	-	-	-
Total	0.0031	-	-		-	0.0029	-	-		-	0.0010	-

Heavy-Heavy

	Start Emission Rate (g/trip)											
Model Year	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	SOx	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
2014	-	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-		-	-	-	-		-	-	-

Light Duty T

Year	Weighted - Paving	CO2	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O
2014	-	93.8282	-	-	-	-	0.0287	-	-	-	-	0.0175
2015	-	92.6850	-	-	-	-	0.0254	-	-	-	-	0.0158
2016	-	91.2204	-	91.2204	-	-	0.0223	-	0.0223	-	-	0.0141
2017	-	89.6035	-	-	-	-	0.0194	-	-	-	-	0.0124
2018	-	87.8312	-	-	-	-	0.0168	-	-	-	-	0.0109
2019	-	85.9704	-	-	-	-	0.0146	-	-	-	-	0.0095
2020	-	84.0346	-	-	-	-	0.0127	-	-	-	-	0.0083
2021	-	81.8846	-	-	-	-	0.0112	-	-	-	-	0.0073
2022	-	79.5914	-	-	-	-	0.0099	-	-	-	-	0.0065
2023	-	77.1981	-	-	-	-	0.0088	-	-	-	-	0.0057
2024	-	74.7453	-	-	-	-	0.0079	-	-	-	-	0.0051
2025	-	72.2594	-	-	-	-	0.0070	-	-	-	-	0.0045
Total	-		-	91.2204	-	-		-	0.0223	-	-	

Heavy-Heav

Model Year	Weighted - Paving	CO2	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O
2014	-	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-	-	-	-	-
Total	-		-	-	-	-		-	-	-	-	

Light Duty T

Year					Hot Soak (g/trip)					Evaporati	
	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	ROG	Weighted - Grubbing
2014	-	-	-	-	0.2838	-	-	-	-	0.9753	-
2015	-	-	-	-	0.2699	-	-	-	-	0.9148	-
2016	-	0.0141	-	-	0.2542	-	0.2542	-	-	0.8509	-
2017	-	-	-	-	0.2365	-	-	-	-	0.7852	-
2018	-	-	-	-	0.2189	-	-	-	-	0.7258	-
2019	-	-	-	-	0.2034	-	-	-	-	0.6771	-
2020	-	-	-	-	0.1897	-	-	-	-	0.6348	-
2021	-	-	-	-	0.1775	-	-	-	-	0.5983	-
2022	-	-	-	-	0.1660	-	-	-	-	0.5668	-
2023	-	-	-	-	0.1554	-	-	-	-	0.5393	-
2024	-	-	-	-	0.1456	-	-	-	-	0.5153	-
2025	-	-	-	-	0.1368	-	-	-	-	0.4931	-
Total	-	0.0141	-	-		-	0.2542	-	-		-

Heavy-Heav

Model Year					Hot Soak (g/trip)					Evaporati	
	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	ROG	Weighted- Grubbing
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-		-	-	-	-		-

Light Duty T

Year	ve Running Loss (g/trip) Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	-	-
2015	-	-	-
2016	0.8509	-	-
2017	-	-	-
2018	-	-	-
2019	-	-	-
2020	-	-	-
2021	-	-	-
2022	-	-	-
2023	-	-	-
2024	-	-	-
2025	-	-	-
Total	0.8509	-	-

Heavy-Heav

Model Year	ve Running Loss (g/trip) Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	-	-
2015	-	-	-
2016	-	-	-
2017	-	-	-
2018	-	-	-
2019	-	-	-
2020	-	-	-
2021	-	-	-
2022	-	-	-
2023	-	-	-
2024	-	-	-
2025	-	-	-
Total	-	-	-

Light Duty Truck

Worker Commute Truck Emissions (Emfac2014 - web 1.0.7, weighted LDT1 and LDT2 emission factor based on VMT and trips)

Year	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx	Weighted - Grubbing
name in EMF	ROG	ROG	ROG	ROG	ROG	CO	CO	CO	CO	CO	NOx	NOx
vlookup	ROG_RUNE	ROG_RUNE	ROG_RUNE	ROG_RUNE	ROG_RUNE	CO_RUNEX	CO_RUNEX	CO_RUNEX	CO_RUNEX	CO_RUNEX	NOx_RUNEX	NOx_RUNEX
index	13					27					30	
2014	0.0090	-	-	-	-	0.4347	-	-	-	-	0.0459	-
2015	0.0092	-	-	-	-	0.4481	-	-	-	-	0.0466	-
2016	0.0093	-	0.0093	-	-	0.4619	-	0.4619	-	-	0.0471	-
2017	0.0093	-	-	-	-	0.4754	-	-	-	-	0.0470	-
2018	0.0093	-	-	-	-	0.4880	-	-	-	-	0.0470	-
2019	0.0092	-	-	-	-	0.5028	-	-	-	-	0.0467	-
2020	0.0092	-	-	-	-	0.5135	-	-	-	-	0.0463	-
2021	0.0091	-	-	-	-	0.5231	-	-	-	-	0.0456	-
2022	0.0089	-	-	-	-	0.5316	-	-	-	-	0.0447	-
2023	0.0087	-	-	-	-	0.5357	-	-	-	-	0.0434	-
2024	0.0084	-	-	-	-	0.5363	-	-	-	-	0.0418	-
2025	0.0081	-	-	-	-	0.5275	-	-	-	-	0.0402	-
Total		-	0.0093	-	-		-	0.4619	-	-		-

Heavy-Heavy Duty Diesel Truck

Water Truck Commute Emissions (EMFAC2014- web 1.0.7, T7 Single Unit Construction Truck)

Model Year	ROG	Weighted-Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted-Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx	Weighted-Grubbing
2014	0.0708	-	-	-	-	0.3424	-	-	-	-	1.9074	-
2015	0.0681	-	-	-	-	0.3440	-	-	-	-	1.7034	-
2016	0.0670	-	0.0670	-	-	0.3476	-	0.3476	-	-	1.5954	-
2017	0.0667	-	-	-	-	0.3529	-	-	-	-	1.5424	-
2018	0.0668	-	-	-	-	0.3579	-	-	-	-	1.5083	-
2019	0.0668	-	-	-	-	0.3617	-	-	-	-	1.4760	-
2020	0.0670	-	-	-	-	0.3671	-	-	-	-	1.4633	-
2021	0.0669	-	-	-	-	0.3698	-	-	-	-	1.4282	-
2022	0.0668	-	-	-	-	0.3717	-	-	-	-	1.3902	-
2023	0.0627	-	-	-	-	0.3699	-	-	-	-	1.2003	-
2024	0.0632	-	-	-	-	0.3728	-	-	-	-	1.1998	-
2025	0.0637	-	-	-	-	0.3759	-	-	-	-	1.2027	-
Total		-	0.0670	-	-		-	0.3476	-	-		-

Light Duty T

											Running Exhaust (g/mi)		
Year	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
name in EMF	NOx	NOx	NOx	PM10	PM10	PM10	PM10	PM10	PM2_5	PM2_5	PM2_5	PM2_5
vlookup	NOx_RUNEX	NOx_RUNEX	NOx_RUNEX	PM10_RUNE	PM10_RUNE	PM10_RUNE	PM10_RUNE	PM10_RUNE	PM2_5_RUN	PM2_5_RUN	PM2_5_RUN	PM2_5_RUN
index				36					41			
2014	-	-	-	0.0008	-	-	-	-	0.0008	-	-	-
2015	-	-	-	0.0010	-	-	-	-	0.0009	-	-	-
2016	0.0471	-	-	0.0012	-	0.0012	-	-	0.0011	-	0.0011	-
2017	-	-	-	0.0014	-	-	-	-	0.0013	-	-	-
2018	-	-	-	0.0015	-	-	-	-	0.0014	-	-	-
2019	-	-	-	0.0016	-	-	-	-	0.0015	-	-	-
2020	-	-	-	0.0017	-	-	-	-	0.0015	-	-	-
2021	-	-	-	0.0017	-	-	-	-	0.0015	-	-	-
2022	-	-	-	0.0017	-	-	-	-	0.0016	-	-	-
2023	-	-	-	0.0017	-	-	-	-	0.0016	-	-	-
2024	-	-	-	0.0017	-	-	-	-	0.0016	-	-	-
2025	-	-	-	0.0017	-	-	-	-	0.0016	-	-	-
Total	0.0471	-	-		-	0.0012	-	-		-	0.0011	-

Heavy-Heav

										Running Exhaust (g/mi)		
Model Year	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted- Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
2014	-	-	-	0.0060	-	-	-	-	0.0058	-	-	-
2015	-	-	-	0.0055	-	-	-	-	0.0053	-	-	-
2016	1.5954	-	-	0.0053	-	0.0053	-	-	0.0051	-	0.0051	-
2017	-	-	-	0.0052	-	-	-	-	0.0049	-	-	-
2018	-	-	-	0.0051	-	-	-	-	0.0049	-	-	-
2019	-	-	-	0.0051	-	-	-	-	0.0048	-	-	-
2020	-	-	-	0.0050	-	-	-	-	0.0048	-	-	-
2021	-	-	-	0.0049	-	-	-	-	0.0047	-	-	-
2022	-	-	-	0.0049	-	-	-	-	0.0047	-	-	-
2023	-	-	-	0.0041	-	-	-	-	0.0039	-	-	-
2024	-	-	-	0.0042	-	-	-	-	0.0040	-	-	-
2025	-	-	-	0.0042	-	-	-	-	0.0040	-	-	-
Total	1.5954	-	-		-	0.0053	-	-		-	0.0051	-

Light Duty T

Year	Weighted - Paving	SOx	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
name in EMF	PM2_5	SOx	SOx	SOx	SOx	SOx	CO2	CO2	CO2	CO2	CO2
vlookup	PM2_5_RUN	SOx_RUNEX	SOx_RUNEX	SOx_RUNEX	SOx_RUNEX	SOx_RUNEX	CO2_RUNEX	CO2_RUNEX	CO2_RUNEX	CO2_RUNEX	CO2_RUNEX
index		46					33				
2014	-	0.0040	-	-	-	-	402.5104	-	-	-	-
2015	-	0.0039	-	-	-	-	390.7341	-	-	-	-
2016	-	0.0038	-	0.0038	-	-	379.0643	-	379.0643	-	-
2017	-	0.0037	-	-	-	-	370.2552	-	-	-	-
2018	-	0.0036	-	-	-	-	361.8963	-	-	-	-
2019	-	0.0035	-	-	-	-	352.2482	-	-	-	-
2020	-	0.0034	-	-	-	-	344.5975	-	-	-	-
2021	-	0.0034	-	-	-	-	335.5136	-	-	-	-
2022	-	0.0033	-	-	-	-	326.1215	-	-	-	-
2023	-	0.0032	-	-	-	-	316.4558	-	-	-	-
2024	-	0.0031	-	-	-	-	306.6314	-	-	-	-
2025	-	0.0030	-	-	-	-	296.7097	-	-	-	-
Total	-		-	0.0038	-	-		-	379.0643	-	-

Heavy-Heav

Model Year	Weighted - Paving	SOx	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0160	-	-	-	-	1,678.6496	-	-	-	-
2015	-	0.0157	-	-	-	-	1,642.1229	-	-	-	-
2016	-	0.0155	-	0.0155	-	-	1,619.8816	-	1,619.8816	-	-
2017	-	0.0153	-	-	-	-	1,604.2555	-	-	-	-
2018	-	0.0152	-	-	-	-	1,590.2622	-	-	-	-
2019	-	0.0150	-	-	-	-	1,576.7884	-	-	-	-
2020	-	0.0150	-	-	-	-	1,571.3050	-	-	-	-
2021	-	0.0149	-	-	-	-	1,559.5673	-	-	-	-
2022	-	0.0148	-	-	-	-	1,548.7119	-	-	-	-
2023	-	0.0147	-	-	-	-	1,540.1347	-	-	-	-
2024	-	0.0146	-	-	-	-	1,533.5157	-	-	-	-
2025	-	0.0146	-	-	-	-	1,528.1937	-	-	-	-
Total	-		-	0.0155	-	-		-	1,619.8816	-	-

Light Duty T

Year	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing
name in EMF	CH4	CH4	CH4	CH4	CH4	N2O	N2O	N2O	N2O	N2O	PM10	PM10
vlookup	CH4_RUNEX	CH4_RUNEX	CH4_RUNEX	CH4_RUNEX	CH4_RUNEX	N2O_RUNEX	N2O_RUNEX	N2O_RUNEX	N2O_RUNEX	N2O_RUNEX	PM10_PMTV	PM10_PMTV
index	49					51					39	
2014	0.0036	-	-	-	-	0.0019	-	-	-	-	0.0080	-
2015	0.0037	-	-	-	-	0.0020	-	-	-	-	0.0080	-
2016	0.0037	-	0.0037	-	-	0.0020	-	0.0020	-	-	0.0080	-
2017	0.0037	-	-	-	-	0.0020	-	-	-	-	0.0080	-
2018	0.0038	-	-	-	-	0.0020	-	-	-	-	0.0080	-
2019	0.0037	-	-	-	-	0.0020	-	-	-	-	0.0080	-
2020	0.0037	-	-	-	-	0.0019	-	-	-	-	0.0080	-
2021	0.0037	-	-	-	-	0.0019	-	-	-	-	0.0080	-
2022	0.0036	-	-	-	-	0.0019	-	-	-	-	0.0080	-
2023	0.0035	-	-	-	-	0.0018	-	-	-	-	0.0080	-
2024	0.0034	-	-	-	-	0.0018	-	-	-	-	0.0080	-
2025	0.0033	-	-	-	-	0.0017	-	-	-	-	0.0080	-
Total		-	0.0037	-	-		-	0.0020	-	-		-

Heavy-Heav

Model Year	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted- Grubbing
2014	0.0033	-	-	-	-	0.0552	-	-	-	-	0.0360	-
2015	0.0032	-	-	-	-	0.0540	-	-	-	-	0.0360	-
2016	0.0031	-	0.0031	-	-	0.0533	-	0.0533	-	-	0.0360	-
2017	0.0031	-	-	-	-	0.0528	-	-	-	-	0.0360	-
2018	0.0031	-	-	-	-	0.0523	-	-	-	-	0.0360	-
2019	0.0031	-	-	-	-	0.0519	-	-	-	-	0.0360	-
2020	0.0031	-	-	-	-	0.0517	-	-	-	-	0.0360	-
2021	0.0031	-	-	-	-	0.0513	-	-	-	-	0.0360	-
2022	0.0031	-	-	-	-	0.0509	-	-	-	-	0.0360	-
2023	0.0029	-	-	-	-	0.0507	-	-	-	-	0.0360	-
2024	0.0029	-	-	-	-	0.0504	-	-	-	-	0.0360	-
2025	0.0030	-	-	-	-	0.0503	-	-	-	-	0.0360	-
Total		-	0.0031	-	-		-	0.0533	-	-		-

Light Duty T

	Tire Wear (g/mi)										
Year	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading
name in EMF	PM10	PM10	PM10	PM2_5	PM2_5	PM2_5	PM2_5	PM2_5	PM10	PM10	PM10
vlookup	PM10_PMTW	PM10_PMTW	PM10_PMTW	PM2_5_PMT	PM2_5_PMT	PM2_5_PMT	PM2_5_PMT	PM2_5_PMT	PM10_PMBV	PM10_PMBV	PM10_PMBV
index				44					40		
2014	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2015	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2016	0.0080	-	-	0.0020	-	0.0020	-	-	0.0368	-	0.0368
2017	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2018	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2019	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2020	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2021	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2022	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2023	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2024	-	-	-	0.0020	-	-	-	-	0.0368	-	-
2025	-	-	-	0.0020	-	-	-	-	0.0368	-	-
Total	0.0080	-	-		-	0.0020	-	-		-	0.0368

Heavy-Heavy

	Tire Wear (g/mi)										
Model Year	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted- Grubbing	Weighted - Grading
2014	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2015	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2016	0.0360	-	-	0.0090	-	0.0090	-	-	0.0617	-	0.0617
2017	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2018	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2019	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2020	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2021	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2022	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2023	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2024	-	-	-	0.0090	-	-	-	-	0.0617	-	-
2025	-	-	-	0.0090	-	-	-	-	0.0617	-	-
Total	0.0360	-	-		-	0.0090	-	-		-	0.0617

Light Duty T

	Break Wear (g/mi)												
Year	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
name in EMF	PM10	PM10	PM2_5	PM2_5	PM2_5	PM2_5	PM2_5	ROG	ROG	ROG	ROG	ROG
vlookup	PM10_PMBV	PM10_PMBV	PM2_5_PMB	PM2_5_PMB	PM2_5_PMB	PM2_5_PMB	PM2_5_PMB	ROG_STREX	ROG_STREX	ROG_STREX	ROG_STREX	ROG_STREX
index			45					15				
2014	-	-	0.0158	-	-	-	-	0.0397	-	-	-	-
2015	-	-	0.0158	-	-	-	-	0.0403	-	-	-	-
2016	-	-	0.0158	-	0.0158	-	-	0.0407	-	0.0407	-	-
2017	-	-	0.0158	-	-	-	-	0.0407	-	-	-	-
2018	-	-	0.0158	-	-	-	-	0.0407	-	-	-	-
2019	-	-	0.0158	-	-	-	-	0.0406	-	-	-	-
2020	-	-	0.0158	-	-	-	-	0.0403	-	-	-	-
2021	-	-	0.0158	-	-	-	-	0.0399	-	-	-	-
2022	-	-	0.0158	-	-	-	-	0.0392	-	-	-	-
2023	-	-	0.0158	-	-	-	-	0.0380	-	-	-	-
2024	-	-	0.0158	-	-	-	-	0.0364	-	-	-	-
2025	-	-	0.0158	-	-	-	-	0.0342	-	-	-	-
Total	-	-		-	0.0158	-	-		-	0.0407	-	-

Heavy-Heav

There are no start emissions for heavy-duty diesel trucks, so trips are n
ARB didn't make assumptions on the numbers of trips for the vehicle ca

	Break Wear (g/mi)												
Model Year	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	ROG	Weighted- Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	-	0.0265	-	-	-	-	-	-	-	-	-
2015	-	-	0.0265	-	-	-	-	-	-	-	-	-
2016	-	-	0.0265	-	0.0265	-	-	-	-	-	-	-
2017	-	-	0.0265	-	-	-	-	-	-	-	-	-
2018	-	-	0.0265	-	-	-	-	-	-	-	-	-
2019	-	-	0.0265	-	-	-	-	-	-	-	-	-
2020	-	-	0.0265	-	-	-	-	-	-	-	-	-
2021	-	-	0.0265	-	-	-	-	-	-	-	-	-
2022	-	-	0.0265	-	-	-	-	-	-	-	-	-
2023	-	-	0.0265	-	-	-	-	-	-	-	-	-
2024	-	-	0.0265	-	-	-	-	-	-	-	-	-
2025	-	-	0.0265	-	-	-	-	-	-	-	-	-
Total	-	-		-	0.0265	-	-		-	-	-	-

Light Duty T

Year	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing
name in EMF	CO	CO	CO	CO	CO	NOx	NOx	NOx	NOx	NOx	PM10	PM10
vlookup	CO_STREX	CO_STREX	CO_STREX	CO_STREX	CO_STREX	NOx_STREX	NOx_STREX	NOx_STREX	NOx_STREX	NOx_STREX	PM10_STRE	PM10_STRE
index	29					32					38	
2014	0.5893	-	-	-	-	0.0376	-	-	-	-	0.0011	-
2015	0.6116	-	-	-	-	0.0392	-	-	-	-	0.0014	-
2016	0.6348	-	0.6348	-	-	0.0404	-	0.0404	-	-	0.0017	-
2017	0.6575	-	-	-	-	0.0411	-	-	-	-	0.0019	-
2018	0.6790	-	-	-	-	0.0417	-	-	-	-	0.0021	-
2019	0.6989	-	-	-	-	0.0421	-	-	-	-	0.0023	-
2020	0.7170	-	-	-	-	0.0423	-	-	-	-	0.0023	-
2021	0.7332	-	-	-	-	0.0421	-	-	-	-	0.0024	-
2022	0.7477	-	-	-	-	0.0417	-	-	-	-	0.0024	-
2023	0.7540	-	-	-	-	0.0407	-	-	-	-	0.0024	-
2024	0.7540	-	-	-	-	0.0394	-	-	-	-	0.0024	-
2025	0.7364	-	-	-	-	0.0375	-	-	-	-	0.0024	-
Total		-	0.6348	-	-		-	0.0404	-	-		-

Heavy-Heavot necessary for the emissions calculation.
tegories in EMFAC2011-HD.

Model Year	CO	Wieghted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx	Wieghted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Wieghted - Grubbing
2014	-	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-	-	-	-	-
Total		-	-	-	-		-	-	-	-		-

Light Duty T

	Start Emission Rate (g/trip)											
Year	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	SOx	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
name in EMF	PM10	PM10	PM10	PM2_5	PM2_5	PM2_5	PM2_5	PM2_5	SOx	SOx	SOx	SOx
vlookup	PM10_STRE	PM10_STRE	PM10_STRE	PM2_5_STR	PM2_5_STR	PM2_5_STR	PM2_5_STR	PM2_5_STR	SOx_STREX	SOx_STREX	SOx_STREX	SOx_STREX
index				43					48			
2014	-	-	-	0.0010	-	-	-	-	0.0009	-	-	-
2015	-	-	-	0.0013	-	-	-	-	0.0009	-	-	-
2016	0.0017	-	-	0.0015	-	0.0015	-	-	0.0008	-	0.0008	-
2017	-	-	-	0.0017	-	-	-	-	0.0008	-	-	-
2018	-	-	-	0.0019	-	-	-	-	0.0008	-	-	-
2019	-	-	-	0.0021	-	-	-	-	0.0008	-	-	-
2020	-	-	-	0.0022	-	-	-	-	0.0008	-	-	-
2021	-	-	-	0.0022	-	-	-	-	0.0007	-	-	-
2022	-	-	-	0.0022	-	-	-	-	0.0007	-	-	-
2023	-	-	-	0.0022	-	-	-	-	0.0007	-	-	-
2024	-	-	-	0.0022	-	-	-	-	0.0007	-	-	-
2025	-	-	-	0.0022	-	-	-	-	0.0007	-	-	-
Total	0.0017	-	-		-	0.0015	-	-		-	0.0008	-

Heavy-Heav

	Start Emission Rate (g/trip)											
Model Year	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	SOx	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
2014	-	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-		-	-	-	-		-	-	-

Light Duty T

Year	Weighted - Paving	CO2	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O
name in EMF	SOx	CO2	CO2	CO2	CO2	CO2	CH4	CH4	CH4	CH4	CH4	N2O
vlookup	SOx_STREX	CO2_STREX	CO2_STREX	CO2_STREX	CO2_STREX	CO2_STREX	CH4_STREX	CH4_STREX	CH4_STREX	CH4_STREX	CH4_STREX	N2O_STREX
index		35					50					53
2014	-	87.5242	-	-	-	-	0.0029	-	-	-	-	0.0016
2015	-	84.9803	-	-	-	-	0.0030	-	-	-	-	0.0016
2016	-	82.4573	-	82.4573	-	-	0.0030	-	0.0030	-	-	0.0017
2017	-	80.5555	-	-	-	-	0.0030	-	-	-	-	0.0017
2018	-	78.7512	-	-	-	-	0.0030	-	-	-	-	0.0017
2019	-	77.0593	-	-	-	-	0.0030	-	-	-	-	0.0018
2020	-	75.3950	-	-	-	-	0.0030	-	-	-	-	0.0018
2021	-	73.4161	-	-	-	-	0.0030	-	-	-	-	0.0018
2022	-	71.3687	-	-	-	-	0.0029	-	-	-	-	0.0017
2023	-	69.2600	-	-	-	-	0.0028	-	-	-	-	0.0017
2024	-	67.1154	-	-	-	-	0.0027	-	-	-	-	0.0016
2025	-	64.9483	-	-	-	-	0.0025	-	-	-	-	0.0016
Total	-		-	82.4573	-	-		-	0.0030	-	-	

Heavy-Heav

Model Year	Weighted - Paving	CO2	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O
2014	-	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-	-	-	-	-
Total	-		-	-	-	-		-	-	-	-	

Light Duty T

					Hot Soak (g/trip)					Evaporati	
Year	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	ROG	Weighted - Grubbing
name in EMF	N2O	N2O	N2O	N2O	ROG	ROG	ROG	ROG	ROG	ROG	ROG
vlookup	N2O_STREX	N2O_STREX	N2O_STREX	N2O_STREX	ROG_HOTSOAK	ROG_HOTSOAK	ROG_HOTS	ROG_HOTS	ROG_HOTS	ROG_RUNL	ROG_RUNL
index					16					17	
2014	-	-	-	-	0.0138	-	-	-	-	0.0468	-
2015	-	-	-	-	0.0156	-	-	-	-	0.0535	-
2016	-	0.0017	-	-	0.0178	-	0.0178	-	-	0.0608	-
2017	-	-	-	-	0.0205	-	-	-	-	0.0720	-
2018	-	-	-	-	0.0232	-	-	-	-	0.0906	-
2019	-	-	-	-	0.0261	-	-	-	-	0.1078	-
2020	-	-	-	-	0.0289	-	-	-	-	0.1250	-
2021	-	-	-	-	0.0316	-	-	-	-	0.1406	-
2022	-	-	-	-	0.0341	-	-	-	-	0.1560	-
2023	-	-	-	-	0.0364	-	-	-	-	0.1694	-
2024	-	-	-	-	0.0382	-	-	-	-	0.1806	-
2025	-	-	-	-	0.0395	-	-	-	-	0.1882	-
Total	-	0.0017	-	-		-	0.0178	-	-		-

Heavy-Heav

					Hot Soak (g/trip)					Evaporati	
Model Year	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	ROG	Weighted-Grubbing
2014	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-
2023	-	-	-	-	-	-	-	-	-	-	-
2024	-	-	-	-	-	-	-	-	-	-	-
2025	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-		-	-	-	-		-

Light Duty T

	ve Running Loss (g/trip)		
Year	Weighted - Grading	Weighted - Drainage	Weighted - Paving
name in EMF	ROG	ROG	ROG
vlookup	ROG_RUNL(	ROG_RUNL(	ROG_RUNL(
index			
2014	-	-	-
2015	-	-	-
2016	0.0608	-	-
2017	-	-	-
2018	-	-	-
2019	-	-	-
2020	-	-	-
2021	-	-	-
2022	-	-	-
2023	-	-	-
2024	-	-	-
2025	-	-	-
Total	0.0608	-	-

Heavy-Heav

	ve Running Loss (g/trip)		
Model Year	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	-	-
2015	-	-	-
2016	-	-	-
2017	-	-	-
2018	-	-	-
2019	-	-	-
2020	-	-	-
2021	-	-	-
2022	-	-	-
2023	-	-	-
2024	-	-	-
2025	-	-	-
Total	-	-	-

The following emission rates by equipment type and year cannot be directly edited. The rates shown below, however, will change when changes are made to the default values for horsepower and/or hours per day.

Note: Years 2005 through 2008 were not updated and are not used in the current model

Emissions (g/bhp-hr)		ROG	ROG	ROG	ROG		CO	CO	CO	CO	
Aerial Lifts	ROG		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
	2014	0.2023	-	-	-	-	3.2195	-	-	-	-	3.3728
	2015	0.1906	-	-	-	-	3.2178	-	-	-	-	3.1134
	2016	0.1655	-	0.1655	-	-	3.2010	-	3.2010	-	-	2.7222
	2017	0.1427	-	-	-	-	3.1843	-	-	-	-	2.3637
	2018	0.1219	-	-	-	-	3.1669	-	-	-	-	2.0636
	2019	0.1182	-	-	-	-	3.1725	-	-	-	-	1.9766
	2020	0.1149	-	-	-	-	3.1768	-	-	-	-	1.8686
	2021	0.1088	-	-	-	-	3.1762	-	-	-	-	1.7437
	2022	0.1047	-	-	-	-	3.1760	-	-	-	-	1.6266
	2023	0.1005	-	-	-	-	3.1703	-	-	-	-	1.5481
	2024	0.1005	-	-	-	-	3.1726	-	-	-	-	1.5279
	2025	0.0988	-	-	-	-	3.1674	-	-	-	-	1.5108
Aerial Lifts Total			-	0.1655	-	-		-	3.2010	-	-	

Air Compressors			Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	
	ROG						CO					NOx
	2014	0.9010	-	-	-	-	3.8800	-	-	-	-	5.6080
	2015	0.8210	-	-	-	-	3.8400	-	-	-	-	5.1900
	2016	0.7440	-	0.7440	-	-	3.8040	-	3.8040	-	-	4.7900
	2017	0.6710	-	-	-	-	3.7720	-	-	-	-	4.4120
	2018	0.6030	-	-	-	-	3.7440	-	-	-	-	4.0500
	2019	0.5380	-	-	-	-	3.7180	-	-	-	-	3.7060
	2020	0.4890	-	-	-	-	3.6980	-	-	-	-	3.4000
	2021	0.4420	-	-	-	-	3.6700	-	-	-	-	3.0830
	2022	0.4130	-	-	-	-	3.6620	-	-	-	-	2.8440
	2023	0.3870	-	-	-	-	3.6570	-	-	-	-	2.6310
	2024	0.3650	-	-	-	-	3.6550	-	-	-	-	2.4610
	2025	0.3450	-	-	-	-	3.6530	-	-	-	-	2.3130
Air Compressors Total			-	0.7440	-	-		-	3.8040	-	-	

Bore/Drill Rigs			Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	
	ROG						CO					NOx
	2014	0.2173	-	-	-	-	1.1744	-	-	-	-	3.5245
	2015	0.2133	-	-	-	-	1.1783	-	-	-	-	3.3245
	2016	0.1925	-	0.1925	-	-	1.1330	-	1.1330	-	-	2.9021
	2017	0.1735	-	-	-	-	1.1021	-	-	-	-	2.5215
	2018	0.1545	-	-	-	-	1.0733	-	-	-	-	2.1531
	2019	0.1434	-	-	-	-	1.0606	-	-	-	-	1.8943
	2020	0.1424	-	-	-	-	1.0677	-	-	-	-	1.8073
	2021	0.1325	-	-	-	-	1.0642	-	-	-	-	1.5510
	2022	0.1150	-	-	-	-	1.0473	-	-	-	-	1.1629
	2023	0.1104	-	-	-	-	1.0431	-	-	-	-	1.0465
	2024	0.1080	-	-	-	-	1.0459	-	-	-	-	0.9754
	2025	0.1074	-	-	-	-	1.0448	-	-	-	-	0.9572
Bore/Drill Rigs Total			-	0.1925	-	-		-	1.1330	-	-	

The following emission rates by
however, will change when char

Note: Years 2005 through 2008 were nc

92 % of PM2.5 in PM10 (from CEIDARS)

Emissions (g/bhp-hr)		NOx	NOx	NOx	NOx		PM10	PM10	PM10	PM10		PM2.5	PM2.5	PM2.5	PM2.5	
Aerial Lifts		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.1608	-	-	-	-	0.1479	-	-	-	-	516.7028
	2015	-	-	-	-	0.1431	-	-	-	-	0.1316	-	-	-	-	511.4570
	2016	-	2.7222	-	-	0.1119	-	0.1119	-	-	0.1030	-	0.1030	-	-	506.2113
	2017	-	-	-	-	0.0834	-	-	-	-	0.0768	-	-	-	-	498.3428
	2018	-	-	-	-	0.0571	-	-	-	-	0.0525	-	-	-	-	490.4742
	2019	-	-	-	-	0.0485	-	-	-	-	0.0446	-	-	-	-	482.6056
	2020	-	-	-	-	0.0416	-	-	-	-	0.0382	-	-	-	-	472.1142
	2021	-	-	-	-	0.0333	-	-	-	-	0.0306	-	-	-	-	472.1142
	2022	-	-	-	-	0.0302	-	-	-	-	0.0278	-	-	-	-	472.1142
	2023	-	-	-	-	0.0267	-	-	-	-	0.0246	-	-	-	-	472.1142
	2024	-	-	-	-	0.0265	-	-	-	-	0.0244	-	-	-	-	472.1142
	2025	-	-	-	-	0.0259	-	-	-	-	0.0238	-	-	-	-	472.1142
Aerial Lifts Total		-	2.7222	-	-		-	0.1119	-	-		-	0.1030	-	-	

Air Compressors		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.4950	-	-	-	-	0.4950	-	-	-	-	568.2990
	2015	-	-	-	-	0.4460	-	-	-	-	0.4460	-	-	-	-	568.2990
	2016	-	4.7900	-	-	0.3970	-	0.3970	-	-	0.3970	-	0.3970	-	-	568.2990
	2017	-	-	-	-	0.3500	-	-	-	-	0.3500	-	-	-	-	568.2990
	2018	-	-	-	-	0.3040	-	-	-	-	0.3040	-	-	-	-	568.3000
	2019	-	-	-	-	0.2600	-	-	-	-	0.2600	-	-	-	-	568.2990
	2020	-	-	-	-	0.2240	-	-	-	-	0.2240	-	-	-	-	568.2990
	2021	-	-	-	-	0.1900	-	-	-	-	0.1900	-	-	-	-	568.2990
	2022	-	-	-	-	0.1650	-	-	-	-	0.1650	-	-	-	-	568.2990
	2023	-	-	-	-	0.1430	-	-	-	-	0.1430	-	-	-	-	568.2990
	2024	-	-	-	-	0.1230	-	-	-	-	0.1230	-	-	-	-	568.2990
	2025	-	-	-	-	0.1040	-	-	-	-	0.1040	-	-	-	-	568.2990
Air Compressors Total		-	4.7900	-	-		-	0.3970	-	-		-	0.3970	-	-	

Bore/Drill Rigs		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.1049	-	-	-	-	0.0965	-	-	-	-	512.3362
	2015	-	-	-	-	0.0996	-	-	-	-	0.0916	-	-	-	-	506.5047
	2016	-	2.9021	-	-	0.0852	-	0.0852	-	-	0.0784	-	0.0784	-	-	502.1280
	2017	-	-	-	-	0.0725	-	-	-	-	0.0667	-	-	-	-	494.1381
	2018	-	-	-	-	0.0608	-	-	-	-	0.0560	-	-	-	-	484.5605
	2019	-	-	-	-	0.0537	-	-	-	-	0.0494	-	-	-	-	475.7896
	2020	-	-	-	-	0.0521	-	-	-	-	0.0479	-	-	-	-	466.8342
	2021	-	-	-	-	0.0470	-	-	-	-	0.0433	-	-	-	-	467.9916
	2022	-	-	-	-	0.0373	-	-	-	-	0.0343	-	-	-	-	468.7604
	2023	-	-	-	-	0.0339	-	-	-	-	0.0312	-	-	-	-	469.7058
	2024	-	-	-	-	0.0321	-	-	-	-	0.0296	-	-	-	-	470.7115
	2025	-	-	-	-	0.0314	-	-	-	-	0.0289	-	-	-	-	470.6535
Bore/Drill Rigs Total		-	2.9021	-	-		-	0.0852	-	-		-	0.0784	-	-	

The following emission rates by
however, will change when cha
Note: Years 2005 through 2008 were nc

Emissions (g/bhp-hr)		CO2	CO2	CO2
Aerial Lifts		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	506.2113	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Aerial Lifts Total		-	506.2113	-

Air Compressors		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	568.2990	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Air Compressors Total		-	568.2990	-

Bore/Drill Rigs		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	502.1280	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Bore/Drill Rigs Total		-	502.1280	-

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2		Sox	Sox	Sox	Sox		CH4	CH4	CH4	CH4		N2O	N2O	N2O	N2O
Aerial Lifts		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2015	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2016	-	0.0049	-	0.0049	-	-	0.1527	-	0.1527	-	-	0.0043	-	0.0043	-	-
	2017	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2018	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2019	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2020	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2021	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2022	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2023	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2024	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2025	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
Aerial Lifts Total		-		-	0.0049	-	-		-	0.1527	-	-		-	0.0043	-	-

Air Compressors		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0060	-	-	-	-	0.0810	-	-	-	-	0.0043	-	-	-	-
	2015	-	0.0060	-	-	-	-	0.0740	-	-	-	-	0.0043	-	-	-	-
	2016	-	0.0060	-	0.0060	-	-	0.0670	-	0.0670	-	-	0.0043	-	0.0043	-	-
	2017	-	0.0060	-	-	-	-	0.0600	-	-	-	-	0.0043	-	-	-	-
	2018	-	0.0060	-	-	-	-	0.0540	-	-	-	-	0.0043	-	-	-	-
	2019	-	0.0060	-	-	-	-	0.0480	-	-	-	-	0.0043	-	-	-	-
	2020	-	0.0060	-	-	-	-	0.0440	-	-	-	-	0.0043	-	-	-	-
	2021	-	0.0060	-	-	-	-	0.0390	-	-	-	-	0.0043	-	-	-	-
	2022	-	0.0060	-	-	-	-	0.0370	-	-	-	-	0.0043	-	-	-	-
	2023	-	0.0060	-	-	-	-	0.0340	-	-	-	-	0.0043	-	-	-	-
	2024	-	0.0060	-	-	-	-	0.0320	-	-	-	-	0.0043	-	-	-	-
	2025	-	0.0060	-	-	-	-	0.0310	-	-	-	-	0.0043	-	-	-	-
Air Compressors Total		-		-	0.0060	-	-		-	0.0670	-	-		-	0.0043	-	-

Bore/Drill Rigs		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0048	-	-	-	-	0.1514	-	-	-	-	0.0043	-	-	-	-
	2015	-	0.0048	-	-	-	-	0.1512	-	-	-	-	0.0043	-	-	-	-
	2016	-	0.0048	-	0.0048	-	-	0.1515	-	0.1515	-	-	0.0043	-	0.0043	-	-
	2017	-	0.0048	-	-	-	-	0.1514	-	-	-	-	0.0043	-	-	-	-
	2018	-	0.0048	-	-	-	-	0.1509	-	-	-	-	0.0043	-	-	-	-
	2019	-	0.0048	-	-	-	-	0.1505	-	-	-	-	0.0043	-	-	-	-
	2020	-	0.0048	-	-	-	-	0.1510	-	-	-	-	0.0043	-	-	-	-
	2021	-	0.0048	-	-	-	-	0.1514	-	-	-	-	0.0043	-	-	-	-
	2022	-	0.0048	-	-	-	-	0.1516	-	-	-	-	0.0043	-	-	-	-
	2023	-	0.0049	-	-	-	-	0.1519	-	-	-	-	0.0043	-	-	-	-
	2024	-	0.0049	-	-	-	-	0.1522	-	-	-	-	0.0043	-	-	-	-
	2025	-	0.0049	-	-	-	-	0.1522	-	-	-	-	0.0043	-	-	-	-
Bore/Drill Rigs Total		-		-	0.0048	-	-		-	0.1515	-	-		-	0.0043	-	-

The following emission rates by equipment type and year cannot be directly edited. The rates shown below, however, will change when changes are made to the default values for horsepower and/or hours per day.

Note: Years 2005 through 2008 were not updated and are not used in the current model

Emissions (g/bhp-hr)

	ROG	ROG	ROG	ROG		CO	CO	CO	CO	
Cement and Mortar Mixers	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.6660	-	-	-	-	3.4690	-	-	-	-	4.1910
2015	0.6630	-	-	-	-	3.4690	-	-	-	-	4.1680
2016	0.6620	-	0.6620	-	-	3.4690	-	3.4690	-	-	4.1530
2017	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1450
2018	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2019	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2020	0.6610	-	-	-	-	3.4700	-	-	-	-	4.1420
2021	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2022	0.6610	-	-	-	-	3.4700	-	-	-	-	4.1420
2023	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2024	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2025	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
Cement and Mortar Mixers Total		-	0.6620	-	-		-	3.4690	-	-	

	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
Concrete/Industrial Saws											
2014	0.7490	-	-	-	-	3.6750	-	-	-	-	5.1600
2015	0.6830	-	-	-	-	3.6470	-	-	-	-	4.7890
2016	0.6200	-	0.6200	-	-	3.6200	-	3.6200	-	-	4.4320
2017	0.5570	-	-	-	-	3.5950	-	-	-	-	4.0860
2018	0.4980	-	-	-	-	3.5710	-	-	-	-	3.7540
2019	0.4430	-	-	-	-	3.5500	-	-	-	-	3.4410
2020	0.4010	-	-	-	-	3.5350	-	-	-	-	3.1630
2021	0.3690	-	-	-	-	3.5230	-	-	-	-	2.9130
2022	0.3430	-	-	-	-	3.5140	-	-	-	-	2.6860
2023	0.3200	-	-	-	-	3.5070	-	-	-	-	2.4780
2024	0.3000	-	-	-	-	3.5000	-	-	-	-	2.3150
2025	0.2830	-	-	-	-	3.4950	-	-	-	-	2.1760
Concrete/Industrial Saws Total		-	0.6200	-	-		-	3.6200	-	-	

	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
Cranes											
2014	0.6607	-	-	-	-	2.7263	-	-	-	-	7.8603
2015	0.6422	-	-	-	-	2.6533	-	-	-	-	7.6216
2016	0.6229	-	0.6229	-	-	2.5822	-	2.5822	-	-	7.3807
2017	0.5606	-	-	-	-	2.3845	-	-	-	-	6.6553
2018	0.4831	-	-	-	-	2.1345	-	-	-	-	5.7730
2019	0.4266	-	-	-	-	1.9408	-	-	-	-	5.0842
2020	0.3837	-	-	-	-	1.7904	-	-	-	-	4.5633
2021	0.3495	-	-	-	-	1.6782	-	-	-	-	4.1044
2022	0.3157	-	-	-	-	1.6016	-	-	-	-	3.5415
2023	0.2974	-	-	-	-	1.5526	-	-	-	-	3.2294
2024	0.2808	-	-	-	-	1.5021	-	-	-	-	2.9660
2025	0.2648	-	-	-	-	1.4697	-	-	-	-	2.6813
Cranes Total		-	0.6229	-	-		-	2.5822	-	-	

The following emission rates by
however, will change when char

Note: Years 2005 through 2008 were nc

92 % of PM2.5 in PM10 (from CEIDARS)

Emissions (g/bhp-hr)	NOx	NOx	NOx	NOx		PM10	PM10	PM10	PM10		PM2.5	PM2.5	PM2.5	PM2.5	
Cement and Mortar Mixers	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.1770	-	-	-	-	0.1770	-	-	-	-	568.2990
2015	-	-	-	-	0.1710	-	-	-	-	0.1710	-	-	-	-	568.3000
2016	-	4.1530	-	-	0.1670	-	0.1670	-	-	0.1670	-	0.1670	-	-	568.3000
2017	-	-	-	-	0.1650	-	-	-	-	0.1650	-	-	-	-	568.2990
2018	-	-	-	-	0.1630	-	-	-	-	0.1630	-	-	-	-	568.2990
2019	-	-	-	-	0.1620	-	-	-	-	0.1620	-	-	-	-	568.2990
2020	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
2021	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
2022	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
2023	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
2024	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
2025	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
Cement and Mortar Mixers Total	-	4.1530	-	-		-	0.1670	-	-		-	0.1670	-	-	

Concrete/Industrial Saws	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.4120	-	-	-	-	0.4120	-	-	-	-	568.2990
2015	-	-	-	-	0.3720	-	-	-	-	0.3720	-	-	-	-	568.3000
2016	-	4.4320	-	-	0.3330	-	0.3330	-	-	0.3330	-	0.3330	-	-	568.3000
2017	-	-	-	-	0.2940	-	-	-	-	0.2940	-	-	-	-	568.2990
2018	-	-	-	-	0.2560	-	-	-	-	0.2560	-	-	-	-	568.2990
2019	-	-	-	-	0.2200	-	-	-	-	0.2200	-	-	-	-	568.3000
2020	-	-	-	-	0.1900	-	-	-	-	0.1900	-	-	-	-	568.2990
2021	-	-	-	-	0.1660	-	-	-	-	0.1660	-	-	-	-	568.2990
2022	-	-	-	-	0.1440	-	-	-	-	0.1440	-	-	-	-	568.2990
2023	-	-	-	-	0.1230	-	-	-	-	0.1230	-	-	-	-	568.3000
2024	-	-	-	-	0.1060	-	-	-	-	0.1060	-	-	-	-	568.2990
2025	-	-	-	-	0.0890	-	-	-	-	0.0890	-	-	-	-	568.3000
Concrete/Industrial Saws Total	-	4.4320	-	-		-	0.3330	-	-		-	0.3330	-	-	

Cranes	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.3603	-	-	-	-	0.3314	-	-	-	-	517.6833
2015	-	-	-	-	0.3479	-	-	-	-	0.3201	-	-	-	-	512.4484
2016	-	7.3807	-	-	0.3349	-	0.3349	-	-	0.3081	-	0.3081	-	-	507.1552
2017	-	-	-	-	0.2967	-	-	-	-	0.2730	-	-	-	-	499.3721
2018	-	-	-	-	0.2499	-	-	-	-	0.2299	-	-	-	-	491.4069
2019	-	-	-	-	0.2155	-	-	-	-	0.1983	-	-	-	-	483.4616
2020	-	-	-	-	0.1881	-	-	-	-	0.1731	-	-	-	-	472.9488
2021	-	-	-	-	0.1666	-	-	-	-	0.1533	-	-	-	-	472.9057
2022	-	-	-	-	0.1470	-	-	-	-	0.1353	-	-	-	-	472.9832
2023	-	-	-	-	0.1349	-	-	-	-	0.1241	-	-	-	-	472.9738
2024	-	-	-	-	0.1234	-	-	-	-	0.1135	-	-	-	-	472.9638
2025	-	-	-	-	0.1140	-	-	-	-	0.1049	-	-	-	-	472.9798
Cranes Total	-	7.3807	-	-		-	0.3349	-	-		-	0.3081	-	-	

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2	CO2	CO2
Cement and Mortar Mixers		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	568.3000	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Cement and Mortar Mixers Total		-	568.3000	-

Concrete/Industrial Saws		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	568.3000	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Concrete/Industrial Saws Total		-	568.3000	-

Cranes		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	507.1552	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Cranes Total		-	507.1552	-

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)	CO2		Sox	Sox	Sox	Sox		CH4	CH4	CH4	CH4		N2O	N2O	N2O	N2O
Cement and Mortar Mixers	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0080	-	-	-	-	0.0600	-	-	-	-	0.0048	-	-	-	-
2015	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2016	-	0.0080	-	0.0080	-	-	0.0590	-	0.0590	-	-	0.0048	-	0.0048	-	-
2017	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2018	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2019	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2020	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2021	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2022	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2023	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2024	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2025	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
Cement and Mortar Mixers Total	-		-	0.0080	-	-		-	0.0590	-	-		-	0.0048	-	-

Concrete/Industrial Saws	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0060	-	-	-	-	0.0670	-	-	-	-	0.0043	-	-	-	-
2015	-	0.0060	-	-	-	-	0.0610	-	-	-	-	0.0043	-	-	-	-
2016	-	0.0060	-	0.0060	-	-	0.0550	-	0.0550	-	-	0.0043	-	0.0043	-	-
2017	-	0.0060	-	-	-	-	0.0500	-	-	-	-	0.0043	-	-	-	-
2018	-	0.0060	-	-	-	-	0.0440	-	-	-	-	0.0043	-	-	-	-
2019	-	0.0060	-	-	-	-	0.0400	-	-	-	-	0.0043	-	-	-	-
2020	-	0.0060	-	-	-	-	0.0360	-	-	-	-	0.0043	-	-	-	-
2021	-	0.0060	-	-	-	-	0.0330	-	-	-	-	0.0043	-	-	-	-
2022	-	0.0060	-	-	-	-	0.0310	-	-	-	-	0.0043	-	-	-	-
2023	-	0.0060	-	-	-	-	0.0280	-	-	-	-	0.0043	-	-	-	-
2024	-	0.0060	-	-	-	-	0.0270	-	-	-	-	0.0043	-	-	-	-
2025	-	0.0060	-	-	-	-	0.0250	-	-	-	-	0.0043	-	-	-	-
Concrete/Industrial Saws Total	-		-	0.0060	-	-		-	0.0550	-	-		-	0.0043	-	-

Cranes	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2015	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2016	-	0.0049	-	0.0049	-	-	0.1530	-	0.1530	-	-	0.0043	-	0.0043	-	-
2017	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2018	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2019	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2020	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2021	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
2022	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2023	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2024	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2025	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
Cranes Total	-		-	0.0049	-	-		-	0.1530	-	-		-	0.0043	-	-

The following emission rates by equipment type and year cannot be directly edited. The rates shown below, however, will change when changes are made to the default values for horsepower and/or hours per day.

Note: Years 2005 through 2008 were not updated and are not used in the current model

Emissions (g/bhp-hr)		ROG	ROG	ROG	ROG		CO	CO	CO	CO	
Crawler Tractors	ROG		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014		0.4540	-	-	-	-	1.8377	-	-	-	-	6.2375
2015		0.4511	-	-	-	-	1.8159	-	-	-	-	6.1431
2016		0.4487	-	0.4487	-	-	1.8030	-	1.8030	-	-	6.0475
2017		0.4295	-	-	-	-	1.7418	-	-	-	-	5.7597
2018		0.3983	-	-	-	-	1.6535	-	-	-	-	5.2896
2019		0.3796	-	-	-	-	1.6045	-	-	-	-	4.9721
2020		0.3600	-	-	-	-	1.5549	-	-	-	-	4.6323
2021		0.3427	-	-	-	-	1.5146	-	-	-	-	4.3339
2022		0.3060	-	-	-	-	1.4398	-	-	-	-	3.7367
2023		0.2763	-	-	-	-	1.3955	-	-	-	-	3.1874
2024		0.2638	-	-	-	-	1.3699	-	-	-	-	2.9532
2025		0.2324	-	-	-	-	1.3085	-	-	-	-	2.4616
Crawler Tractors Total			-	0.4487	-	-		-	1.8030	-	-	

The following emission rates by
however, will change when chai

Note: Years 2005 through 2008 were nc

92 % of PM2.5 in PM10 (from CEIDARS)

Emissions (g/bhp-hr)	NOx	NOx	NOx	NOx		PM10	PM10	PM10	PM10		PM2.5	PM2.5	PM2.5	PM2.5	
Crawler Tractors	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.2411	-	-	-	-	0.2218	-	-	-	-	518.0363
2015	-	-	-	-	0.2369	-	-	-	-	0.2179	-	-	-	-	512.8973
2016	-	6.0475	-	-	0.2332	-	0.2332	-	-	0.2145	-	0.2145	-	-	507.3550
2017	-	-	-	-	0.2199	-	-	-	-	0.2023	-	-	-	-	499.8320
2018	-	-	-	-	0.2001	-	-	-	-	0.1841	-	-	-	-	491.6060
2019	-	-	-	-	0.1875	-	-	-	-	0.1725	-	-	-	-	483.4489
2020	-	-	-	-	0.1746	-	-	-	-	0.1606	-	-	-	-	472.9410
2021	-	-	-	-	0.1631	-	-	-	-	0.1500	-	-	-	-	472.9246
2022	-	-	-	-	0.1410	-	-	-	-	0.1297	-	-	-	-	472.0975
2023	-	-	-	-	0.1236	-	-	-	-	0.1137	-	-	-	-	471.6244
2024	-	-	-	-	0.1146	-	-	-	-	0.1055	-	-	-	-	471.8603
2025	-	-	-	-	0.0961	-	-	-	-	0.0884	-	-	-	-	471.6224
Crawler Tractors Total	-	6.0475	-	-		-	0.2332	-	-		-	0.2145	-	-	

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2	CO2	CO2
Crawler Tractors		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	507.3550	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Crawler Tractors Total		-	507.3550	-

The following emission rates by
however, will change when char

Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2		Sox	Sox	Sox	Sox		CH4	CH4	CH4	CH4		N2O	N2O	N2O	N2O
Crawler Tractors		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0049	-	-	-	-	0.1531	-	-	-	-	0.0043	-	-	-	-
	2015	-	0.0049	-	-	-	-	0.1531	-	-	-	-	0.0043	-	-	-	-
	2016	-	0.0049	-	0.0049	-	-	0.1530	-	0.1530	-	-	0.0043	-	0.0043	-	-
	2017	-	0.0049	-	-	-	-	0.1531	-	-	-	-	0.0043	-	-	-	-
	2018	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
	2019	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
	2020	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
	2021	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
	2022	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2023	-	0.0049	-	-	-	-	0.1525	-	-	-	-	0.0043	-	-	-	-
	2024	-	0.0049	-	-	-	-	0.1526	-	-	-	-	0.0043	-	-	-	-
	2025	-	0.0049	-	-	-	-	0.1525	-	-	-	-	0.0043	-	-	-	-
Crawler Tractors Total		-		-	0.0049	-	-		-	0.1530	-	-		-	0.0043	-	-

The following emission rates by equipment type and year cannot be directly edited. The rates shown below, however, will change when changes are made to the default values for horsepower and/or hours per day.

Note: Years 2005 through 2008 were not updated and are not used in the current model

Emissions (g/bhp-hr)		ROG	ROG	ROG	ROG		CO	CO	CO	CO	
Crushing/Proc. Equipment	ROG		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
	2014	0.8770	-	-	-	-	3.8980	-	-	-	-	5.4680
	2015	0.7970	-	-	-	-	3.8590	-	-	-	-	5.0400
	2016	0.7200	-	0.7200	-	-	3.8230	-	3.8230	-	-	4.6310
	2017	0.6470	-	-	-	-	3.7910	-	-	-	-	4.2440
	2018	0.5800	-	-	-	-	3.7630	-	-	-	-	3.8810
	2019	0.5190	-	-	-	-	3.7390	-	-	-	-	3.5440
	2020	0.4730	-	-	-	-	3.7220	-	-	-	-	3.2490
	2021	0.4380	-	-	-	-	3.7110	-	-	-	-	2.9890
	2022	0.4100	-	-	-	-	3.7040	-	-	-	-	2.7580
	2023	0.3850	-	-	-	-	3.7000	-	-	-	-	2.5520
	2024	0.3640	-	-	-	-	3.6970	-	-	-	-	2.3890
	2025	0.3450	-	-	-	-	3.6940	-	-	-	-	2.2480
Crushing/Proc. Equipment Total			-	0.7200	-	-		-	3.8230	-	-	

Excavators			Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	
	ROG						CO					NOx
	2014	0.3900	-	-	-	-	3.1544	-	-	-	-	4.6570
	2015	0.3837	-	-	-	-	3.1676	-	-	-	-	4.4807
	2016	0.3575	-	0.3575	-	-	3.1577	-	3.1577	-	-	4.0810
	2017	0.3336	-	-	-	-	3.1509	-	-	-	-	3.6997
	2018	0.2731	-	-	-	-	3.0934	-	-	-	-	2.9236
	2019	0.2462	-	-	-	-	3.0816	-	-	-	-	2.5326
	2020	0.2314	-	-	-	-	3.0860	-	-	-	-	2.2784
	2021	0.2164	-	-	-	-	3.0898	-	-	-	-	2.0336
	2022	0.1912	-	-	-	-	3.0740	-	-	-	-	1.6781
	2023	0.1782	-	-	-	-	3.0765	-	-	-	-	1.4625
	2024	0.1702	-	-	-	-	3.0834	-	-	-	-	1.3248
	2025	0.1578	-	-	-	-	3.0780	-	-	-	-	1.1537
Excavators Total			-	0.3575	-	-		-	3.1577	-	-	

The following emission rates by
however, will change when cha

Note: Years 2005 through 2008 were nc

92 % of PM2.5 in PM10 (from CEIDARS)

Emissions (g/bhp-hr)	NOx	NOx	NOx	NOx		PM10	PM10	PM10	PM10		PM2.5	PM2.5	PM2.5	PM2.5	
Crushing/Proc. Equipment	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.4810	-	-	-	-	0.4810	-	-	-	-	568.2990
2015	-	-	-	-	0.4300	-	-	-	-	0.4300	-	-	-	-	568.2990
2016	-	4.6310	-	-	0.3790	-	0.3790	-	-	0.3790	-	0.3790	-	-	568.2990
2017	-	-	-	-	0.3300	-	-	-	-	0.3300	-	-	-	-	568.2990
2018	-	-	-	-	0.2840	-	-	-	-	0.2840	-	-	-	-	568.2990
2019	-	-	-	-	0.2410	-	-	-	-	0.2410	-	-	-	-	568.2990
2020	-	-	-	-	0.2060	-	-	-	-	0.2060	-	-	-	-	568.2990
2021	-	-	-	-	0.1780	-	-	-	-	0.1780	-	-	-	-	568.2990
2022	-	-	-	-	0.1540	-	-	-	-	0.1540	-	-	-	-	568.2990
2023	-	-	-	-	0.1320	-	-	-	-	0.1320	-	-	-	-	568.2990
2024	-	-	-	-	0.1120	-	-	-	-	0.1120	-	-	-	-	568.2990
2025	-	-	-	-	0.0950	-	-	-	-	0.0950	-	-	-	-	568.2990
Crushing/Proc. Equipment Total	-	4.6310	-	-		-	0.3790	-	-		-	0.3790	-	-	

Excavators	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.2289	-	-	-	-	0.2106	-	-	-	-	516.9066
2015	-	-	-	-	0.2212	-	-	-	-	0.2035	-	-	-	-	511.6869
2016	-	4.0810	-	-	0.2008	-	0.2008	-	-	0.1847	-	0.1847	-	-	506.4950
2017	-	-	-	-	0.1820	-	-	-	-	0.1675	-	-	-	-	498.5222
2018	-	-	-	-	0.1418	-	-	-	-	0.1304	-	-	-	-	490.6725
2019	-	-	-	-	0.1221	-	-	-	-	0.1124	-	-	-	-	482.6838
2020	-	-	-	-	0.1104	-	-	-	-	0.1015	-	-	-	-	472.2891
2021	-	-	-	-	0.0986	-	-	-	-	0.0907	-	-	-	-	472.3586
2022	-	-	-	-	0.0811	-	-	-	-	0.0746	-	-	-	-	472.1917
2023	-	-	-	-	0.0716	-	-	-	-	0.0659	-	-	-	-	472.2770
2024	-	-	-	-	0.0653	-	-	-	-	0.0600	-	-	-	-	472.4279
2025	-	-	-	-	0.0566	-	-	-	-	0.0520	-	-	-	-	472.4964
Excavators Total	-	4.0810	-	-		-	0.2008	-	-		-	0.1847	-	-	

The following emission rates by
however, will change when cha
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2	CO2	CO2
Crushing/Proc. Equipment		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	568.2990	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Crushing/Proc. Equipment Total		-	568.2990	-

Excavators		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	506.4950	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Excavators Total		-	506.4950	-

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr) Crushing/Proc. Equipment	CO2 Weighted - Paving	SOX	Sox Weighted - Grubbing	Sox Weighted - Grading	Sox Weighted - Drainage	Sox Weighted - Paving	CH4	CH4 Weighted - Grubbing	CH4 Weighted - Grading	CH4 Weighted - Drainage	CH4 Weighted - Paving	N2O	N2O Weighted - Grubbing	N2O Weighted - Grading	N2O Weighted - Drainage	N2O Weighted - Paving
2014	-	0.0060	-	-	-	-	0.0790	-	-	-	-	0.0043	-	-	-	-
2015	-	0.0060	-	-	-	-	0.0710	-	-	-	-	0.0043	-	-	-	-
2016	-	0.0060	-	0.0060	-	-	0.0650	-	0.0650	-	-	0.0043	-	0.0043	-	-
2017	-	0.0060	-	-	-	-	0.0580	-	-	-	-	0.0043	-	-	-	-
2018	-	0.0060	-	-	-	-	0.0520	-	-	-	-	0.0043	-	-	-	-
2019	-	0.0060	-	-	-	-	0.0460	-	-	-	-	0.0043	-	-	-	-
2020	-	0.0060	-	-	-	-	0.0420	-	-	-	-	0.0043	-	-	-	-
2021	-	0.0060	-	-	-	-	0.0390	-	-	-	-	0.0043	-	-	-	-
2022	-	0.0060	-	-	-	-	0.0370	-	-	-	-	0.0043	-	-	-	-
2023	-	0.0060	-	-	-	-	0.0340	-	-	-	-	0.0043	-	-	-	-
2024	-	0.0060	-	-	-	-	0.0320	-	-	-	-	0.0043	-	-	-	-
2025	-	0.0060	-	-	-	-	0.0310	-	-	-	-	0.0043	-	-	-	-
Crushing/Proc. Equipment Total	-		-	0.0060	-	-		-	0.0650	-	-		-	0.0043	-	-

Excavators	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0049	-	-	-	-	0.1528	-	-	-	-	0.0043	-	-	-	-
2015	-	0.0049	-	-	-	-	0.1528	-	-	-	-	0.0043	-	-	-	-
2016	-	0.0049	-	0.0049	-	-	0.1528	-	0.1528	-	-	0.0043	-	0.0043	-	-
2017	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2018	-	0.0049	-	-	-	-	0.1528	-	-	-	-	0.0043	-	-	-	-
2019	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2020	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2021	-	0.0049	-	-	-	-	0.1528	-	-	-	-	0.0043	-	-	-	-
2022	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2023	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2024	-	0.0049	-	-	-	-	0.1528	-	-	-	-	0.0043	-	-	-	-
2025	-	0.0049	-	-	-	-	0.1528	-	-	-	-	0.0043	-	-	-	-
Excavators Total	-		-	0.0049	-	-		-	0.1528	-	-		-	0.0043	-	-

The following emission rates by equipment type and year cannot be directly edited. The rates shown below, however, will change when changes are made to the default values for horsepower and/or hours per day.

Note: Years 2005 through 2008 were not updated and are not used in the current model

Emissions (g/bhp-hr)		ROG	ROG	ROG	ROG		CO	CO	CO	CO	
Forklifts	ROG		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
	2014	0.7945	-	-	-	-	4.0794	-	-	-	-	6.8483
	2015	0.7684	-	-	-	-	4.0635	-	-	-	-	6.6009
	2016	0.7229	-	0.7229	-	-	4.0231	-	4.0231	-	-	6.2219
	2017	0.6719	-	-	-	-	3.9788	-	-	-	-	5.8177
	2018	0.5674	-	-	-	-	3.8582	-	-	-	-	5.0153
	2019	0.5095	-	-	-	-	3.8039	-	-	-	-	4.5497
	2020	0.4587	-	-	-	-	3.7595	-	-	-	-	4.1330
	2021	0.4120	-	-	-	-	3.7200	-	-	-	-	3.7559
	2022	0.3618	-	-	-	-	3.6751	-	-	-	-	3.3602
	2023	0.3266	-	-	-	-	3.6466	-	-	-	-	3.0569
	2024	0.3000	-	-	-	-	3.6291	-	-	-	-	2.8143
	2025	0.2768	-	-	-	-	3.6114	-	-	-	-	2.6073
Forklifts Total			-	0.7229	-	-		-	4.0231	-	-	

Generator Sets			Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	
	ROG						CO					NOx
	2014	0.7210	-	-	-	-	3.5320	-	-	-	-	5.1470
	2015	0.6510	-	-	-	-	3.4990	-	-	-	-	4.7690
	2016	0.5830	-	0.5830	-	-	3.4690	-	3.4690	-	-	4.4100
	2017	0.5200	-	-	-	-	3.4420	-	-	-	-	4.0720
	2018	0.4610	-	-	-	-	3.4180	-	-	-	-	3.7520
	2019	0.4050	-	-	-	-	3.3960	-	-	-	-	3.4460
	2020	0.3640	-	-	-	-	3.3800	-	-	-	-	3.1730
	2021	0.3260	-	-	-	-	3.3610	-	-	-	-	2.8880
	2022	0.3010	-	-	-	-	3.3530	-	-	-	-	2.6710
	2023	0.2790	-	-	-	-	3.3470	-	-	-	-	2.4770
	2024	0.2600	-	-	-	-	3.3420	-	-	-	-	2.3210
	2025	0.2430	-	-	-	-	3.3380	-	-	-	-	2.1850
Generator Sets Total			-	0.5830	-	-		-	3.4690	-	-	

Graders			Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	
	ROG						CO					NOx
	2014	0.8469	-	-	-	-	3.9508	-	-	-	-	8.7021
	2015	0.8439	-	-	-	-	3.9585	-	-	-	-	8.6374
	2016	0.8097	-	0.8097	-	-	3.9162	-	3.9162	-	-	8.2497
	2017	0.7571	-	-	-	-	3.8452	-	-	-	-	7.6627
	2018	0.6614	-	-	-	-	3.7096	-	-	-	-	6.6047
	2019	0.6088	-	-	-	-	3.6559	-	-	-	-	6.0135
	2020	0.5667	-	-	-	-	3.6210	-	-	-	-	5.5305
	2021	0.5053	-	-	-	-	3.5590	-	-	-	-	4.8395
	2022	0.4403	-	-	-	-	3.4928	-	-	-	-	4.1249
	2023	0.3898	-	-	-	-	3.4501	-	-	-	-	3.5479
	2024	0.3638	-	-	-	-	3.4324	-	-	-	-	3.2022
	2025	0.3288	-	-	-	-	3.4176	-	-	-	-	2.7740
Graders Total			-	0.8097	-	-		-	3.9162	-	-	

The following emission rates by
however, will change when chai

Note: Years 2005 through 2008 were nc

92 % of PM2.5 in PM10 (from CEIDARS)

Emissions (g/bhp-hr)		NOx	NOx	NOx	NOx		PM10	PM10	PM10	PM10		PM2.5	PM2.5	PM2.5	PM2.5	
Forklifts		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.5737	-	-	-	-	0.5278	-	-	-	-	516.0617
	2015	-	-	-	-	0.5545	-	-	-	-	0.5101	-	-	-	-	510.8225
	2016	-	6.2219	-	-	0.5203	-	0.5203	-	-	0.4786	-	0.4786	-	-	505.5833
	2017	-	-	-	-	0.4800	-	-	-	-	0.4416	-	-	-	-	497.7245
	2018	-	-	-	-	0.4002	-	-	-	-	0.3682	-	-	-	-	489.8657
	2019	-	-	-	-	0.3525	-	-	-	-	0.3243	-	-	-	-	482.0069
	2020	-	-	-	-	0.3079	-	-	-	-	0.2833	-	-	-	-	471.5285
	2021	-	-	-	-	0.2666	-	-	-	-	0.2453	-	-	-	-	471.5285
	2022	-	-	-	-	0.2226	-	-	-	-	0.2048	-	-	-	-	471.5285
	2023	-	-	-	-	0.1889	-	-	-	-	0.1738	-	-	-	-	471.5285
	2024	-	-	-	-	0.1625	-	-	-	-	0.1495	-	-	-	-	471.5285
	2025	-	-	-	-	0.1396	-	-	-	-	0.1284	-	-	-	-	471.5285
Forklifts Total		-	6.2219	-	-		-	0.5203	-	-		-	0.4786	-	-	

Generator Sets		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.3850	-	-	-	-	0.3850	-	-	-	-	568.2990
	2015	-	-	-	-	0.3470	-	-	-	-	0.3470	-	-	-	-	568.2990
	2016	-	4.4100	-	-	0.3090	-	0.3090	-	-	0.3090	-	0.3090	-	-	568.2990
	2017	-	-	-	-	0.2740	-	-	-	-	0.2740	-	-	-	-	568.2990
	2018	-	-	-	-	0.2390	-	-	-	-	0.2390	-	-	-	-	568.2990
	2019	-	-	-	-	0.2060	-	-	-	-	0.2060	-	-	-	-	568.2990
	2020	-	-	-	-	0.1790	-	-	-	-	0.1790	-	-	-	-	568.2990
	2021	-	-	-	-	0.1530	-	-	-	-	0.1530	-	-	-	-	568.2990
	2022	-	-	-	-	0.1340	-	-	-	-	0.1340	-	-	-	-	568.2990
	2023	-	-	-	-	0.1170	-	-	-	-	0.1170	-	-	-	-	568.2990
	2024	-	-	-	-	0.1010	-	-	-	-	0.1010	-	-	-	-	568.2990
	2025	-	-	-	-	0.0870	-	-	-	-	0.0870	-	-	-	-	568.2990
Generator Sets Total		-	4.4100	-	-		-	0.3090	-	-		-	0.3090	-	-	

Graders		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.4884	-	-	-	-	0.4493	-	-	-	-	527.8337
	2015	-	-	-	-	0.4857	-	-	-	-	0.4468	-	-	-	-	522.2182
	2016	-	8.2497	-	-	0.4635	-	0.4635	-	-	0.4264	-	0.4264	-	-	516.1305
	2017	-	-	-	-	0.4304	-	-	-	-	0.3960	-	-	-	-	506.7478
	2018	-	-	-	-	0.3713	-	-	-	-	0.3416	-	-	-	-	497.3767
	2019	-	-	-	-	0.3365	-	-	-	-	0.3096	-	-	-	-	489.0419
	2020	-	-	-	-	0.3085	-	-	-	-	0.2838	-	-	-	-	478.0403
	2021	-	-	-	-	0.2700	-	-	-	-	0.2484	-	-	-	-	478.5289
	2022	-	-	-	-	0.2293	-	-	-	-	0.2109	-	-	-	-	478.5664
	2023	-	-	-	-	0.1953	-	-	-	-	0.1797	-	-	-	-	478.4629
	2024	-	-	-	-	0.1768	-	-	-	-	0.1626	-	-	-	-	478.4966
	2025	-	-	-	-	0.1521	-	-	-	-	0.1399	-	-	-	-	478.5084
Graders Total		-	8.2497	-	-		-	0.4635	-	-		-	0.4264	-	-	

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2	CO2	CO2
Forklifts		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	505.5833	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Forklifts Total		-	505.5833	-

Generator Sets		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	568.2990	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Generator Sets Total		-	568.2990	-

Graders		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	516.1305	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Graders Total		-	516.1305	-

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2		Sox	Sox	Sox	Sox		CH4	CH4	CH4	CH4		N2O	N2O	N2O	N2O
Forklifts		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0049	-	-	-	-	0.1525	-	-	-	-	0.0043	-	-	-	-
	2015	-	0.0049	-	-	-	-	0.1525	-	-	-	-	0.0043	-	-	-	-
	2016	-	0.0049	-	0.0049	-	-	0.1525	-	0.1525	-	-	0.0043	-	0.0043	-	-
	2017	-	0.0049	-	-	-	-	0.1525	-	-	-	-	0.0043	-	-	-	-
	2018	-	0.0049	-	-	-	-	0.1525	-	-	-	-	0.0043	-	-	-	-
	2019	-	0.0049	-	-	-	-	0.1525	-	-	-	-	0.0043	-	-	-	-
	2020	-	0.0049	-	-	-	-	0.1525	-	-	-	-	0.0043	-	-	-	-
	2021	-	0.0049	-	-	-	-	0.1525	-	-	-	-	0.0043	-	-	-	-
	2022	-	0.0049	-	-	-	-	0.1525	-	-	-	-	0.0043	-	-	-	-
	2023	-	0.0049	-	-	-	-	0.1525	-	-	-	-	0.0043	-	-	-	-
	2024	-	0.0049	-	-	-	-	0.1525	-	-	-	-	0.0043	-	-	-	-
	2025	-	0.0049	-	-	-	-	0.1525	-	-	-	-	0.0043	-	-	-	-
Forklifts Total		-		-	0.0049	-	-		-	0.1525	-	-		-	0.0043	-	-

Generator Sets		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0060	-	-	-	-	0.0650	-	-	-	-	0.0043	-	-	-	-
	2015	-	0.0060	-	-	-	-	0.0580	-	-	-	-	0.0043	-	-	-	-
	2016	-	0.0060	-	0.0060	-	-	0.0520	-	0.0520	-	-	0.0043	-	0.0043	-	-
	2017	-	0.0060	-	-	-	-	0.0460	-	-	-	-	0.0043	-	-	-	-
	2018	-	0.0060	-	-	-	-	0.0410	-	-	-	-	0.0043	-	-	-	-
	2019	-	0.0060	-	-	-	-	0.0360	-	-	-	-	0.0043	-	-	-	-
	2020	-	0.0060	-	-	-	-	0.0320	-	-	-	-	0.0043	-	-	-	-
	2021	-	0.0060	-	-	-	-	0.0290	-	-	-	-	0.0043	-	-	-	-
	2022	-	0.0060	-	-	-	-	0.0270	-	-	-	-	0.0043	-	-	-	-
	2023	-	0.0060	-	-	-	-	0.0250	-	-	-	-	0.0043	-	-	-	-
	2024	-	0.0060	-	-	-	-	0.0230	-	-	-	-	0.0043	-	-	-	-
	2025	-	0.0060	-	-	-	-	0.0210	-	-	-	-	0.0043	-	-	-	-
Generator Sets Total		-		-	0.0060	-	-		-	0.0520	-	-		-	0.0043	-	-

Graders		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0050	-	-	-	-	0.1560	-	-	-	-	0.0043	-	-	-	-
	2015	-	0.0050	-	-	-	-	0.1559	-	-	-	-	0.0043	-	-	-	-
	2016	-	0.0050	-	0.0050	-	-	0.1557	-	0.1557	-	-	0.0043	-	0.0043	-	-
	2017	-	0.0049	-	-	-	-	0.1553	-	-	-	-	0.0043	-	-	-	-
	2018	-	0.0049	-	-	-	-	0.1548	-	-	-	-	0.0043	-	-	-	-
	2019	-	0.0049	-	-	-	-	0.1547	-	-	-	-	0.0043	-	-	-	-
	2020	-	0.0049	-	-	-	-	0.1546	-	-	-	-	0.0043	-	-	-	-
	2021	-	0.0049	-	-	-	-	0.1548	-	-	-	-	0.0043	-	-	-	-
	2022	-	0.0049	-	-	-	-	0.1548	-	-	-	-	0.0043	-	-	-	-
	2023	-	0.0049	-	-	-	-	0.1547	-	-	-	-	0.0043	-	-	-	-
	2024	-	0.0049	-	-	-	-	0.1548	-	-	-	-	0.0043	-	-	-	-
	2025	-	0.0049	-	-	-	-	0.1548	-	-	-	-	0.0043	-	-	-	-
Graders Total		-		-	0.0050	-	-		-	0.1557	-	-		-	0.0043	-	-

The following emission rates by equipment type and year cannot be directly edited. The rates shown below, however, will change when changes are made to the default values for horsepower and/or hours per day.

Note: Years 2005 through 2008 were not updated and are not used in the current model

Emissions (g/bhp-hr)	ROG	ROG	ROG	ROG	CO	CO	CO	CO	
Off-Highway Tractors	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.4242	-	-	-	-	3.2651	-	-	-	-	5.0253
2015	0.4017	-	-	-	-	3.2642	-	-	-	-	4.7237
2016	0.3910	-	0.3910	-	-	3.2781	-	3.2781	-	-	4.5109
2017	0.3559	-	-	-	-	3.2589	-	-	-	-	4.0259
2018	0.3149	-	-	-	-	3.2191	-	-	-	-	3.4976
2019	0.2941	-	-	-	-	3.2190	-	-	-	-	3.2076
2020	0.2710	-	-	-	-	3.2151	-	-	-	-	2.8903
2021	0.2587	-	-	-	-	3.2195	-	-	-	-	2.6596
2022	0.2312	-	-	-	-	3.1859	-	-	-	-	2.2388
2023	0.2010	-	-	-	-	3.1433	-	-	-	-	1.7848
2024	0.1826	-	-	-	-	3.1328	-	-	-	-	1.4958
2025	0.1752	-	-	-	-	3.1425	-	-	-	-	1.3486
Off-Highway Tractors Total		-	0.3910	-	-		-	3.2781	-	-	

Off-Highway Trucks	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.3934	-	-	-	-	2.0752	-	-	-	-	4.6858
2015	0.3845	-	-	-	-	2.0367	-	-	-	-	4.5279
2016	0.3514	-	0.3514	-	-	1.8852	-	1.8852	-	-	4.0480
2017	0.3253	-	-	-	-	1.7477	-	-	-	-	3.6684
2018	0.2870	-	-	-	-	1.5595	-	-	-	-	3.0900
2019	0.2635	-	-	-	-	1.4835	-	-	-	-	2.6685
2020	0.2461	-	-	-	-	1.4142	-	-	-	-	2.3468
2021	0.2249	-	-	-	-	1.3378	-	-	-	-	1.9536
2022	0.1961	-	-	-	-	1.2466	-	-	-	-	1.4898
2023	0.1870	-	-	-	-	1.2206	-	-	-	-	1.3243
2024	0.1845	-	-	-	-	1.2064	-	-	-	-	1.2352
2025	0.1773	-	-	-	-	1.1823	-	-	-	-	1.0638
Off-Highway Trucks Total		-	0.3514	-	-		-	1.8852	-	-	

Other Construction Equipment	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.5665	-	-	-	-	3.3852	-	-	-	-	6.3719
2015	0.5571	-	-	-	-	3.3818	-	-	-	-	6.2305
2016	0.5244	-	0.5244	-	-	3.3567	-	3.3567	-	-	5.8176
2017	0.5004	-	-	-	-	3.3377	-	-	-	-	5.4942
2018	0.4364	-	-	-	-	3.2635	-	-	-	-	4.7550
2019	0.4121	-	-	-	-	3.2562	-	-	-	-	4.4331
2020	0.3877	-	-	-	-	3.2353	-	-	-	-	4.1120
2021	0.3295	-	-	-	-	3.1828	-	-	-	-	3.4385
2022	0.2951	-	-	-	-	3.1554	-	-	-	-	2.9944
2023	0.2735	-	-	-	-	3.1415	-	-	-	-	2.6982
2024	0.2605	-	-	-	-	3.1495	-	-	-	-	2.5202
2025	0.2347	-	-	-	-	3.1365	-	-	-	-	2.1674
Other Construction Equipment Total		-	0.5244	-	-		-	3.3567	-	-	

The following emission rates by
however, will change when chai

Note: Years 2005 through 2008 were nc

92 % of PM2.5 in PM10 (from CEIDARS)

Emissions (g/bhp-hr)	NOx	NOx	NOx	NOx		PM10	PM10	PM10	PM10		PM2.5	PM2.5	PM2.5	PM2.5	
Off-Highway Tractors	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.2577	-	-	-	-	0.2371	-	-	-	-	518.1639
2015	-	-	-	-	0.2393	-	-	-	-	0.2201	-	-	-	-	512.6079
2016	-	4.5109	-	-	0.2290	-	0.2290	-	-	0.2106	-	0.2106	-	-	507.6294
2017	-	-	-	-	0.2049	-	-	-	-	0.1885	-	-	-	-	499.2446
2018	-	-	-	-	0.1756	-	-	-	-	0.1616	-	-	-	-	491.3128
2019	-	-	-	-	0.1586	-	-	-	-	0.1459	-	-	-	-	483.4306
2020	-	-	-	-	0.1402	-	-	-	-	0.1290	-	-	-	-	472.9169
2021	-	-	-	-	0.1286	-	-	-	-	0.1183	-	-	-	-	472.9236
2022	-	-	-	-	0.1073	-	-	-	-	0.0987	-	-	-	-	472.8111
2023	-	-	-	-	0.0854	-	-	-	-	0.0785	-	-	-	-	472.9962
2024	-	-	-	-	0.0715	-	-	-	-	0.0658	-	-	-	-	473.0970
2025	-	-	-	-	0.0647	-	-	-	-	0.0595	-	-	-	-	473.3021
Off-Highway Tractors Total	-	4.5109	-	-		-	0.2290	-	-		-	0.2106	-	-	

Off-Highway Trucks	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.1795	-	-	-	-	0.1652	-	-	-	-	521.0573
2015	-	-	-	-	0.1730	-	-	-	-	0.1591	-	-	-	-	515.8419
2016	-	4.0480	-	-	0.1527	-	0.1527	-	-	0.1405	-	0.1405	-	-	509.8604
2017	-	-	-	-	0.1362	-	-	-	-	0.1253	-	-	-	-	501.4368
2018	-	-	-	-	0.1128	-	-	-	-	0.1038	-	-	-	-	493.5059
2019	-	-	-	-	0.0970	-	-	-	-	0.0893	-	-	-	-	485.3832
2020	-	-	-	-	0.0855	-	-	-	-	0.0787	-	-	-	-	474.5787
2021	-	-	-	-	0.0717	-	-	-	-	0.0659	-	-	-	-	474.5420
2022	-	-	-	-	0.0542	-	-	-	-	0.0498	-	-	-	-	474.7136
2023	-	-	-	-	0.0479	-	-	-	-	0.0441	-	-	-	-	475.0488
2024	-	-	-	-	0.0445	-	-	-	-	0.0409	-	-	-	-	475.2203
2025	-	-	-	-	0.0380	-	-	-	-	0.0350	-	-	-	-	474.9697
Off-Highway Trucks Total	-	4.0480	-	-		-	0.1527	-	-		-	0.1405	-	-	

Other Construction Equipment	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.3332	-	-	-	-	0.3065	-	-	-	-	514.5518
2015	-	-	-	-	0.3264	-	-	-	-	0.3003	-	-	-	-	509.3069
2016	-	5.8176	-	-	0.3059	-	0.3059	-	-	0.2815	-	0.2815	-	-	503.9641
2017	-	-	-	-	0.2903	-	-	-	-	0.2671	-	-	-	-	495.9311
2018	-	-	-	-	0.2502	-	-	-	-	0.2302	-	-	-	-	487.9859
2019	-	-	-	-	0.2335	-	-	-	-	0.2148	-	-	-	-	480.4518
2020	-	-	-	-	0.2170	-	-	-	-	0.1996	-	-	-	-	469.9837
2021	-	-	-	-	0.1798	-	-	-	-	0.1654	-	-	-	-	469.7642
2022	-	-	-	-	0.1562	-	-	-	-	0.1437	-	-	-	-	469.6126
2023	-	-	-	-	0.1405	-	-	-	-	0.1292	-	-	-	-	469.5579
2024	-	-	-	-	0.1300	-	-	-	-	0.1196	-	-	-	-	469.5445
2025	-	-	-	-	0.1121	-	-	-	-	0.1031	-	-	-	-	469.8430
Other Construction Equipment Total	-	5.8176	-	-		-	0.3059	-	-		-	0.2815	-	-	

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2	CO2	CO2
Off-Highway Tractors		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	507.6294	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Off-Highway Tractors Total		-	507.6294	-

Off-Highway Trucks		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	509.8604	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Off-Highway Trucks Total		-	509.8604	-

Other Construction Equipment		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	503.9641	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Other Construction Equipment Total		-	503.9641	-

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)	CO2		Sox	Sox	Sox	Sox		CH4	CH4	CH4	CH4		N2O	N2O	N2O	N2O
Off-Highway Tractors	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0049	-	-	-	-	0.1531	-	-	-	-	0.0043	-	-	-	-
2015	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2016	-	0.0049	-	0.0049	-	-	0.1531	-	0.1531	-	-	0.0043	-	0.0043	-	-
2017	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2018	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2019	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2020	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2021	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2022	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
2023	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2024	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2025	-	0.0049	-	-	-	-	0.1531	-	-	-	-	0.0043	-	-	-	-
Off-Highway Tractors Total	-		-	0.0049	-	-		-	0.1531	-	-		-	0.0043	-	-

Off-Highway Trucks	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0049	-	-	-	-	0.1540	-	-	-	-	0.0043	-	-	-	-
2015	-	0.0049	-	-	-	-	0.1540	-	-	-	-	0.0043	-	-	-	-
2016	-	0.0049	-	0.0049	-	-	0.1538	-	0.1538	-	-	0.0043	-	0.0043	-	-
2017	-	0.0049	-	-	-	-	0.1536	-	-	-	-	0.0043	-	-	-	-
2018	-	0.0049	-	-	-	-	0.1536	-	-	-	-	0.0043	-	-	-	-
2019	-	0.0049	-	-	-	-	0.1536	-	-	-	-	0.0043	-	-	-	-
2020	-	0.0049	-	-	-	-	0.1535	-	-	-	-	0.0043	-	-	-	-
2021	-	0.0049	-	-	-	-	0.1535	-	-	-	-	0.0043	-	-	-	-
2022	-	0.0049	-	-	-	-	0.1535	-	-	-	-	0.0043	-	-	-	-
2023	-	0.0049	-	-	-	-	0.1536	-	-	-	-	0.0043	-	-	-	-
2024	-	0.0049	-	-	-	-	0.1537	-	-	-	-	0.0043	-	-	-	-
2025	-	0.0049	-	-	-	-	0.1536	-	-	-	-	0.0043	-	-	-	-
Off-Highway Trucks Total	-		-	0.0049	-	-		-	0.1538	-	-		-	0.0043	-	-

Other Construction Equipment	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0048	-	-	-	-	0.1521	-	-	-	-	0.0043	-	-	-	-
2015	-	0.0048	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
2016	-	0.0048	-	0.0048	-	-	0.1520	-	0.1520	-	-	0.0043	-	0.0043	-	-
2017	-	0.0048	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
2018	-	0.0048	-	-	-	-	0.1519	-	-	-	-	0.0043	-	-	-	-
2019	-	0.0049	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
2020	-	0.0049	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
2021	-	0.0048	-	-	-	-	0.1519	-	-	-	-	0.0043	-	-	-	-
2022	-	0.0048	-	-	-	-	0.1519	-	-	-	-	0.0043	-	-	-	-
2023	-	0.0048	-	-	-	-	0.1519	-	-	-	-	0.0043	-	-	-	-
2024	-	0.0048	-	-	-	-	0.1519	-	-	-	-	0.0043	-	-	-	-
2025	-	0.0049	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
Other Construction Equipment Total	-		-	0.0048	-	-		-	0.1520	-	-		-	0.0043	-	-

The following emission rates by equipment type and year cannot be directly edited. The rates shown below, however, will change when changes are made to the default values for horsepower and/or hours per day.

Note: Years 2005 through 2008 were not updated and are not used in the current model

Emissions (g/bhp-hr)

	ROG	ROG	ROG	ROG		CO	CO	CO	CO	
Other General Industrial Equipment	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.7887	-	-	-	-	4.0901	-	-	-	-	6.7228
2015	0.7607	-	-	-	-	4.0811	-	-	-	-	6.5016
2016	0.7155	-	0.7155	-	-	4.0454	-	4.0454	-	-	6.1441
2017	0.6600	-	-	-	-	3.9981	-	-	-	-	5.7214
2018	0.5573	-	-	-	-	3.8763	-	-	-	-	4.9546
2019	0.4997	-	-	-	-	3.8213	-	-	-	-	4.4967
2020	0.4460	-	-	-	-	3.7707	-	-	-	-	4.0608
2021	0.4037	-	-	-	-	3.7403	-	-	-	-	3.7177
2022	0.3387	-	-	-	-	3.6682	-	-	-	-	3.1997
2023	0.3076	-	-	-	-	3.6470	-	-	-	-	2.9239
2024	0.2872	-	-	-	-	3.6393	-	-	-	-	2.7078
2025	0.2575	-	-	-	-	3.6120	-	-	-	-	2.4389
Other General Industrial Equipment Total		-	0.7155	-	-		-	4.0454	-	-	

Other Material Handling Equipment	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.5283	-	-	-	-	3.4306	-	-	-	-	5.7976
2015	0.5251	-	-	-	-	3.4330	-	-	-	-	5.6445
2016	0.4888	-	0.4888	-	-	3.4182	-	3.4182	-	-	5.2115
2017	0.4269	-	-	-	-	3.3512	-	-	-	-	4.4881
2018	0.3265	-	-	-	-	3.2180	-	-	-	-	3.3323
2019	0.2796	-	-	-	-	3.1852	-	-	-	-	2.7737
2020	0.2520	-	-	-	-	3.1709	-	-	-	-	2.3665
2021	0.2488	-	-	-	-	3.1964	-	-	-	-	2.2463
2022	0.2256	-	-	-	-	3.1761	-	-	-	-	1.8938
2023	0.2169	-	-	-	-	3.1707	-	-	-	-	1.7690
2024	0.2083	-	-	-	-	3.1811	-	-	-	-	1.6386
2025	0.1892	-	-	-	-	3.1679	-	-	-	-	1.3958
Other Material Handling Equipment Total		-	0.4888	-	-		-	3.4182	-	-	

Pavers	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.5024	-	-	-	-	3.1146	-	-	-	-	5.7363
2015	0.4894	-	-	-	-	3.1155	-	-	-	-	5.5367
2016	0.4332	-	0.4332	-	-	3.0802	-	3.0802	-	-	4.8740
2017	0.3889	-	-	-	-	3.0628	-	-	-	-	4.3531
2018	0.3387	-	-	-	-	3.0391	-	-	-	-	3.7472
2019	0.2988	-	-	-	-	3.0132	-	-	-	-	3.2447
2020	0.2728	-	-	-	-	3.0097	-	-	-	-	2.9183
2021	0.2557	-	-	-	-	3.0165	-	-	-	-	2.6948
2022	0.2148	-	-	-	-	2.9948	-	-	-	-	2.1796
2023	0.1993	-	-	-	-	2.9940	-	-	-	-	1.9552
2024	0.1907	-	-	-	-	3.0042	-	-	-	-	1.8088
2025	0.1805	-	-	-	-	3.0071	-	-	-	-	1.6440
Pavers Total		-	0.4332	-	-		-	3.0802	-	-	

The following emission rates by
however, will change when chai

Note: Years 2005 through 2008 were nc

92 % of PM2.5 in PM10 (from CEIDARS)

Emissions (g/bhp-hr)	NOx	NOx	NOx	NOx		PM10	PM10	PM10	PM10		PM2.5	PM2.5	PM2.5	PM2.5	
Other General Industrial Equipment	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.5739	-	-	-	-	0.5280	-	-	-	-	514.3886
2015	-	-	-	-	0.5528	-	-	-	-	0.5086	-	-	-	-	509.1664
2016	-	6.1441	-	-	0.5178	-	0.5178	-	-	0.4764	-	0.4764	-	-	503.9442
2017	-	-	-	-	0.4705	-	-	-	-	0.4328	-	-	-	-	496.1109
2018	-	-	-	-	0.3917	-	-	-	-	0.3604	-	-	-	-	488.2775
2019	-	-	-	-	0.3429	-	-	-	-	0.3155	-	-	-	-	480.4442
2020	-	-	-	-	0.2959	-	-	-	-	0.2722	-	-	-	-	469.9998
2021	-	-	-	-	0.2559	-	-	-	-	0.2354	-	-	-	-	469.9998
2022	-	-	-	-	0.1991	-	-	-	-	0.1831	-	-	-	-	469.9998
2023	-	-	-	-	0.1685	-	-	-	-	0.1550	-	-	-	-	469.9998
2024	-	-	-	-	0.1459	-	-	-	-	0.1342	-	-	-	-	469.9998
2025	-	-	-	-	0.1181	-	-	-	-	0.1086	-	-	-	-	469.9998
Other General Industrial Equipment Tota	-	6.1441	-	-		-	0.5178	-	-		-	0.4764	-	-	

Other Material Handling Equipment	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.3128	-	-	-	-	0.2877	-	-	-	-	516.8178
2015	-	-	-	-	0.3060	-	-	-	-	0.2815	-	-	-	-	511.5709
2016	-	5.2115	-	-	0.2795	-	0.2795	-	-	0.2571	-	0.2571	-	-	506.3240
2017	-	-	-	-	0.2379	-	-	-	-	0.2189	-	-	-	-	498.4537
2018	-	-	-	-	0.1725	-	-	-	-	0.1587	-	-	-	-	490.5834
2019	-	-	-	-	0.1388	-	-	-	-	0.1277	-	-	-	-	482.7131
2020	-	-	-	-	0.1181	-	-	-	-	0.1086	-	-	-	-	472.2193
2021	-	-	-	-	0.1138	-	-	-	-	0.1047	-	-	-	-	472.2193
2022	-	-	-	-	0.1028	-	-	-	-	0.0945	-	-	-	-	472.2193
2023	-	-	-	-	0.0959	-	-	-	-	0.0882	-	-	-	-	472.2193
2024	-	-	-	-	0.0880	-	-	-	-	0.0809	-	-	-	-	472.2193
2025	-	-	-	-	0.0724	-	-	-	-	0.0666	-	-	-	-	472.2193
Other Material Handling Equipment Tota	-	5.2115	-	-		-	0.2795	-	-		-	0.2571	-	-	

Pavers	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.2869	-	-	-	-	0.2639	-	-	-	-	516.7450
2015	-	-	-	-	0.2774	-	-	-	-	0.2552	-	-	-	-	511.6457
2016	-	4.8740	-	-	0.2422	-	0.2422	-	-	0.2228	-	0.2228	-	-	506.5401
2017	-	-	-	-	0.2142	-	-	-	-	0.1971	-	-	-	-	498.9670
2018	-	-	-	-	0.1831	-	-	-	-	0.1684	-	-	-	-	491.3220
2019	-	-	-	-	0.1589	-	-	-	-	0.1462	-	-	-	-	483.3938
2020	-	-	-	-	0.1419	-	-	-	-	0.1305	-	-	-	-	472.7746
2021	-	-	-	-	0.1302	-	-	-	-	0.1198	-	-	-	-	472.5552
2022	-	-	-	-	0.1036	-	-	-	-	0.0953	-	-	-	-	472.7599
2023	-	-	-	-	0.0920	-	-	-	-	0.0846	-	-	-	-	472.7178
2024	-	-	-	-	0.0845	-	-	-	-	0.0777	-	-	-	-	472.6605
2025	-	-	-	-	0.0770	-	-	-	-	0.0708	-	-	-	-	472.4850
Pavers Total	-	4.8740	-	-		-	0.2422	-	-		-	0.2228	-	-	

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)	CO2	CO2	CO2
Other General Industrial Equipment	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
2014	-	-	-
2015	-	-	-
2016	-	503.9442	-
2017	-	-	-
2018	-	-	-
2019	-	-	-
2020	-	-	-
2021	-	-	-
2022	-	-	-
2023	-	-	-
2024	-	-	-
2025	-	-	-
Other General Industrial Equipment Tota	-	503.9442	-

Other Material Handling Equipment	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
2014	-	-	-
2015	-	-	-
2016	-	506.3240	-
2017	-	-	-
2018	-	-	-
2019	-	-	-
2020	-	-	-
2021	-	-	-
2022	-	-	-
2023	-	-	-
2024	-	-	-
2025	-	-	-
Other Material Handling Equipment Tota	-	506.3240	-

Pavers	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
2014	-	-	-
2015	-	-	-
2016	-	506.5401	-
2017	-	-	-
2018	-	-	-
2019	-	-	-
2020	-	-	-
2021	-	-	-
2022	-	-	-
2023	-	-	-
2024	-	-	-
2025	-	-	-
Pavers Total	-	506.5401	-

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)	CO2		Sox	Sox	Sox	Sox		CH4	CH4	CH4	CH4		N2O	N2O	N2O	N2O
Other General Industrial Equipment	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0048	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
2015	-	0.0048	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
2016	-	0.0048	-	0.0048	-	-	0.1520	-	0.1520	-	-	0.0043	-	0.0043	-	-
2017	-	0.0048	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
2018	-	0.0048	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
2019	-	0.0048	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
2020	-	0.0048	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
2021	-	0.0049	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
2022	-	0.0049	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
2023	-	0.0049	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
2024	-	0.0049	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
2025	-	0.0049	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
Other General Industrial Equipment Tota	-		-	0.0048	-	-		-	0.1520	-	-		-	0.0043	-	-

Other Material Handling Equipment	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2015	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2016	-	0.0049	-	0.0049	-	-	0.1527	-	0.1527	-	-	0.0043	-	0.0043	-	-
2017	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2018	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2019	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2020	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2021	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2022	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2023	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2024	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2025	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
Other Material Handling Equipment Tota	-		-	0.0049	-	-		-	0.1527	-	-		-	0.0043	-	-

Pavers	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2015	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
2016	-	0.0049	-	0.0049	-	-	0.1528	-	0.1528	-	-	0.0043	-	0.0043	-	-
2017	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
2018	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
2019	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
2020	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
2021	-	0.0049	-	-	-	-	0.1528	-	-	-	-	0.0043	-	-	-	-
2022	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
2023	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
2024	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
2025	-	0.0049	-	-	-	-	0.1528	-	-	-	-	0.0043	-	-	-	-
Pavers Total	-		-	0.0049	-	-		-	0.1528	-	-		-	0.0043	-	-

The following emission rates by equipment type and year cannot be directly edited. The rates shown below, however, will change when changes are made to the default values for horsepower and/or hours per day.

Note: Years 2005 through 2008 were not updated and are not used in the current model

Emissions (g/bhp-hr)

	ROG	ROG	ROG	ROG		CO	CO	CO	CO	
Paving Equipment	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.4151	-	-	-	-	3.0969	-	-	-	-	5.2157
2015	0.4108	-	-	-	-	3.1040	-	-	-	-	4.9656
2016	0.3718	-	0.3718	-	-	3.0811	-	3.0811	-	-	4.3217
2017	0.3425	-	-	-	-	3.0732	-	-	-	-	3.8963
2018	0.2837	-	-	-	-	3.0260	-	-	-	-	3.1721
2019	0.2541	-	-	-	-	3.0109	-	-	-	-	2.6924
2020	0.2475	-	-	-	-	3.0239	-	-	-	-	2.5550
2021	0.2291	-	-	-	-	3.0323	-	-	-	-	2.3151
2022	0.2127	-	-	-	-	3.0378	-	-	-	-	2.0733
2023	0.2037	-	-	-	-	3.0506	-	-	-	-	1.9126
2024	0.1966	-	-	-	-	3.0662	-	-	-	-	1.7851
2025	0.1752	-	-	-	-	3.0384	-	-	-	-	1.5090
Paving Equipment Total		-	0.3718	-	-		-	3.0811	-	-	

	ROG					CO					
Plate Compactors	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2015	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2016	0.6610	-	0.6610	-	-	3.4690	-	3.4690	-	-	4.1420
2017	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2018	0.6610	-	-	-	-	3.4700	-	-	-	-	4.1420
2019	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2020	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2021	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2022	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2023	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2024	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2025	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
Plate Compactors Total		-	0.6610	-	-		-	3.4690	-	-	

	ROG					CO					
Pressure Washers	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.7830	-	-	-	-	3.7230	-	-	-	-	5.3690
2015	0.7470	-	-	-	-	3.6570	-	-	-	-	5.1410
2016	0.7200	-	0.7200	-	-	3.6220	-	3.6220	-	-	4.9780
2017	0.6990	-	-	-	-	3.5990	-	-	-	-	4.8470
2018	0.6790	-	-	-	-	3.5800	-	-	-	-	4.7280
2019	0.6620	-	-	-	-	3.5620	-	-	-	-	4.6170
2020	0.6460	-	-	-	-	3.5460	-	-	-	-	4.5160
2021	0.6340	-	-	-	-	3.5310	-	-	-	-	4.4410
2022	0.6260	-	-	-	-	3.5190	-	-	-	-	4.3900
2023	0.6180	-	-	-	-	3.5080	-	-	-	-	4.3450
2024	0.6120	-	-	-	-	3.4990	-	-	-	-	4.3050
2025	0.6070	-	-	-	-	3.4910	-	-	-	-	4.2690
Pressure Washers Total		-	0.7200	-	-		-	3.6220	-	-	

The following emission rates by
however, will change when char

Note: Years 2005 through 2008 were nc

92 % of PM2.5 in PM10 (from CEIDARS)

Emissions (g/bhp-hr)		NOx	NOx	NOx	NOx		PM10	PM10	PM10	PM10		PM2.5	PM2.5	PM2.5	PM2.5	
Paving Equipment		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.2488	-	-	-	-	0.2289	-	-	-	-	515.0343
	2015	-	-	-	-	0.2423	-	-	-	-	0.2229	-	-	-	-	509.8942
	2016	-	4.3217	-	-	0.2145	-	0.2145	-	-	0.1973	-	0.1973	-	-	504.8201
	2017	-	-	-	-	0.1946	-	-	-	-	0.1791	-	-	-	-	497.1480
	2018	-	-	-	-	0.1553	-	-	-	-	0.1429	-	-	-	-	489.2024
	2019	-	-	-	-	0.1336	-	-	-	-	0.1229	-	-	-	-	481.2251
	2020	-	-	-	-	0.1278	-	-	-	-	0.1176	-	-	-	-	470.7359
	2021	-	-	-	-	0.1143	-	-	-	-	0.1052	-	-	-	-	470.6495
	2022	-	-	-	-	0.1011	-	-	-	-	0.0930	-	-	-	-	470.6646
	2023	-	-	-	-	0.0930	-	-	-	-	0.0856	-	-	-	-	470.6630
	2024	-	-	-	-	0.0862	-	-	-	-	0.0793	-	-	-	-	470.6614
	2025	-	-	-	-	0.0746	-	-	-	-	0.0687	-	-	-	-	470.4844
Paving Equipment Total		-	4.3217	-	-		-	0.2145	-	-		-	0.1973	-	-	

Plate Compactors		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2015	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2016	-	4.1420	-	-	0.1610	-	0.1610	-	-	0.1610	-	0.1610	-	-	568.2990
	2017	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2018	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.3000
	2019	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2020	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2021	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2022	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2023	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2024	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2025	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
Plate Compactors Total		-	4.1420	-	-		-	0.1610	-	-		-	0.1610	-	-	

Pressure Washers		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.2980	-	-	-	-	0.2980	-	-	-	-	568.2990
	2015	-	-	-	-	0.2800	-	-	-	-	0.2800	-	-	-	-	568.2990
	2016	-	4.9780	-	-	0.2640	-	0.2640	-	-	0.2640	-	0.2640	-	-	568.2990
	2017	-	-	-	-	0.2500	-	-	-	-	0.2500	-	-	-	-	568.2990
	2018	-	-	-	-	0.2370	-	-	-	-	0.2370	-	-	-	-	568.2990
	2019	-	-	-	-	0.2240	-	-	-	-	0.2240	-	-	-	-	568.2990
	2020	-	-	-	-	0.2120	-	-	-	-	0.2120	-	-	-	-	568.2990
	2021	-	-	-	-	0.2010	-	-	-	-	0.2010	-	-	-	-	568.2990
	2022	-	-	-	-	0.1930	-	-	-	-	0.1930	-	-	-	-	568.2990
	2023	-	-	-	-	0.1860	-	-	-	-	0.1860	-	-	-	-	568.2990
	2024	-	-	-	-	0.1810	-	-	-	-	0.1810	-	-	-	-	568.2990
	2025	-	-	-	-	0.1780	-	-	-	-	0.1780	-	-	-	-	568.2990
Pressure Washers Total		-	4.9780	-	-		-	0.2640	-	-		-	0.2640	-	-	

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2	CO2	CO2
Paving Equipment		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	504.8201	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Paving Equipment Total		-	504.8201	-

Plate Compactors		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	568.2990	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Plate Compactors Total		-	568.2990	-

Pressure Washers		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	568.2990	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Pressure Washers Total		-	568.2990	-

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)	CO2		Sox	Sox	Sox	Sox		CH4	CH4	CH4	CH4		N2O	N2O	N2O	N2O
Paving Equipment	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0049	-	-	-	-	0.1522	-	-	-	-	0.0043	-	-	-	-
2015	-	0.0049	-	-	-	-	0.1522	-	-	-	-	0.0043	-	-	-	-
2016	-	0.0049	-	0.0049	-	-	0.1523	-	0.1523	-	-	0.0043	-	0.0043	-	-
2017	-	0.0049	-	-	-	-	0.1523	-	-	-	-	0.0043	-	-	-	-
2018	-	0.0049	-	-	-	-	0.1523	-	-	-	-	0.0043	-	-	-	-
2019	-	0.0049	-	-	-	-	0.1523	-	-	-	-	0.0043	-	-	-	-
2020	-	0.0049	-	-	-	-	0.1522	-	-	-	-	0.0043	-	-	-	-
2021	-	0.0049	-	-	-	-	0.1522	-	-	-	-	0.0043	-	-	-	-
2022	-	0.0049	-	-	-	-	0.1522	-	-	-	-	0.0043	-	-	-	-
2023	-	0.0049	-	-	-	-	0.1522	-	-	-	-	0.0043	-	-	-	-
2024	-	0.0049	-	-	-	-	0.1522	-	-	-	-	0.0043	-	-	-	-
2025	-	0.0049	-	-	-	-	0.1522	-	-	-	-	0.0043	-	-	-	-
Paving Equipment Total	-		-	0.0049	-	-		-	0.1523	-	-		-	0.0043	-	-

Plate Compactors	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2015	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2016	-	0.0080	-	0.0080	-	-	0.0590	-	0.0590	-	-	0.0048	-	0.0048	-	-
2017	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2018	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2019	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2020	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2021	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2022	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2023	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2024	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2025	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
Plate Compactors Total	-		-	0.0080	-	-		-	0.0590	-	-		-	0.0048	-	-

Pressure Washers	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0080	-	-	-	-	0.0700	-	-	-	-	0.0048	-	-	-	-
2015	-	0.0080	-	-	-	-	0.0670	-	-	-	-	0.0048	-	-	-	-
2016	-	0.0080	-	0.0080	-	-	0.0650	-	0.0650	-	-	0.0048	-	0.0048	-	-
2017	-	0.0080	-	-	-	-	0.0630	-	-	-	-	0.0048	-	-	-	-
2018	-	0.0080	-	-	-	-	0.0610	-	-	-	-	0.0048	-	-	-	-
2019	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
2020	-	0.0080	-	-	-	-	0.0580	-	-	-	-	0.0048	-	-	-	-
2021	-	0.0080	-	-	-	-	0.0570	-	-	-	-	0.0048	-	-	-	-
2022	-	0.0080	-	-	-	-	0.0560	-	-	-	-	0.0048	-	-	-	-
2023	-	0.0080	-	-	-	-	0.0550	-	-	-	-	0.0048	-	-	-	-
2024	-	0.0080	-	-	-	-	0.0550	-	-	-	-	0.0048	-	-	-	-
2025	-	0.0080	-	-	-	-	0.0540	-	-	-	-	0.0048	-	-	-	-
Pressure Washers Total	-		-	0.0080	-	-		-	0.0650	-	-		-	0.0048	-	-

The following emission rates by equipment type and year cannot be directly edited. The rates shown below, however, will change when changes are made to the default values for horsepower and/or hours per day.

Note: Years 2005 through 2008 were not updated and are not used in the current model

Emissions (g/bhp-hr)

Pumps	ROG	ROG Weighted - Grubbing	ROG Weighted - Grading	ROG Weighted - Drainage	ROG Weighted - Paving	CO	CO Weighted - Grubbing	CO Weighted - Grading	CO Weighted - Drainage	CO Weighted - Paving	NOx
2014	0.7510	-	-	-	-	3.5870	-	-	-	-	5.2260
2015	0.6790	-	-	-	-	3.5540	-	-	-	-	4.8420
2016	0.6100	-	0.6100	-	-	3.5230	-	3.5230	-	-	4.4780
2017	0.5460	-	-	-	-	3.4950	-	-	-	-	4.1340
2018	0.4850	-	-	-	-	3.4710	-	-	-	-	3.8080
2019	0.4290	-	-	-	-	3.4490	-	-	-	-	3.4970
2020	0.3860	-	-	-	-	3.4320	-	-	-	-	3.2190
2021	0.3470	-	-	-	-	3.4120	-	-	-	-	2.9280
2022	0.3210	-	-	-	-	3.4040	-	-	-	-	2.7080
2023	0.2990	-	-	-	-	3.3980	-	-	-	-	2.5110
2024	0.2790	-	-	-	-	3.3930	-	-	-	-	2.3520
2025	0.2610	-	-	-	-	3.3890	-	-	-	-	2.2130
Pumps Total		-	0.6100	-	-		-	3.5230	-	-	

Rollers	ROG	ROG Weighted - Grubbing	ROG Weighted - Grading	ROG Weighted - Drainage	ROG Weighted - Paving	CO	CO Weighted - Grubbing	CO Weighted - Grading	CO Weighted - Drainage	CO Weighted - Paving	NOx
2014	0.6950	-	-	-	-	3.8092	-	-	-	-	6.3904
2015	0.6833	-	-	-	-	3.8089	-	-	-	-	6.2716
2016	0.6282	-	0.6282	-	-	3.7554	-	3.7554	-	-	5.8056
2017	0.5799	-	-	-	-	3.7132	-	-	-	-	5.4114
2018	0.4810	-	-	-	-	3.6098	-	-	-	-	4.6505
2019	0.4225	-	-	-	-	3.5573	-	-	-	-	4.1795
2020	0.3882	-	-	-	-	3.5314	-	-	-	-	3.8815
2021	0.3534	-	-	-	-	3.5072	-	-	-	-	3.5889
2022	0.3101	-	-	-	-	3.4697	-	-	-	-	3.2190
2023	0.2867	-	-	-	-	3.4546	-	-	-	-	3.0030
2024	0.2718	-	-	-	-	3.4506	-	-	-	-	2.8430
2025	0.2554	-	-	-	-	3.4443	-	-	-	-	2.6914
Rollers Total		-	0.6282	-	-		-	3.7554	-	-	

Rough Terrain Forklifts	ROG	ROG Weighted - Grubbing	ROG Weighted - Grading	ROG Weighted - Drainage	ROG Weighted - Paving	CO	CO Weighted - Grubbing	CO Weighted - Grading	CO Weighted - Drainage	CO Weighted - Paving	NOx
2014	0.3507	-	-	-	-	3.3671	-	-	-	-	4.4673
2015	0.3377	-	-	-	-	3.3662	-	-	-	-	4.2800
2016	0.3016	-	0.3016	-	-	3.3417	-	3.3417	-	-	3.8401
2017	0.2710	-	-	-	-	3.3178	-	-	-	-	3.4176
2018	0.2222	-	-	-	-	3.2698	-	-	-	-	2.8450
2019	0.2019	-	-	-	-	3.2585	-	-	-	-	2.6222
2020	0.1892	-	-	-	-	3.2558	-	-	-	-	2.4522
2021	0.1746	-	-	-	-	3.2519	-	-	-	-	2.2853
2022	0.1586	-	-	-	-	3.2437	-	-	-	-	2.0983
2023	0.1499	-	-	-	-	3.2422	-	-	-	-	1.9836
2024	0.1451	-	-	-	-	3.2447	-	-	-	-	1.9139
2025	0.1374	-	-	-	-	3.2397	-	-	-	-	1.8205
Rough Terrain Forklifts Total		-	0.3016	-	-		-	3.3417	-	-	

The following emission rates by
however, will change when chai

Note: Years 2005 through 2008 were nc

92 % of PM2.5 in PM10 (from CEIDARS)

Emissions (g/bhp-hr)		NOx	NOx	NOx	NOx		PM10	PM10	PM10	PM10		PM2.5	PM2.5	PM2.5	PM2.5	
Pumps		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.4030	-	-	-	-	0.4030	-	-	-	-	568.2990
	2015	-	-	-	-	0.3640	-	-	-	-	0.3640	-	-	-	-	568.3000
	2016	-	4.4780	-	-	0.3250	-	0.3250	-	-	0.3250	-	0.3250	-	-	568.2990
	2017	-	-	-	-	0.2870	-	-	-	-	0.2870	-	-	-	-	568.2990
	2018	-	-	-	-	0.2520	-	-	-	-	0.2520	-	-	-	-	568.2990
	2019	-	-	-	-	0.2170	-	-	-	-	0.2170	-	-	-	-	568.2990
	2020	-	-	-	-	0.1890	-	-	-	-	0.1890	-	-	-	-	568.2990
	2021	-	-	-	-	0.1620	-	-	-	-	0.1620	-	-	-	-	568.3000
	2022	-	-	-	-	0.1420	-	-	-	-	0.1420	-	-	-	-	568.2990
	2023	-	-	-	-	0.1230	-	-	-	-	0.1230	-	-	-	-	568.2990
	2024	-	-	-	-	0.1070	-	-	-	-	0.1070	-	-	-	-	568.2990
	2025	-	-	-	-	0.0920	-	-	-	-	0.0920	-	-	-	-	568.2990
Pumps Total		-	4.4780	-	-		-	0.3250	-	-		-	0.3250	-	-	

Rollers		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.4759	-	-	-	-	0.4378	-	-	-	-	518.7866
	2015	-	-	-	-	0.4674	-	-	-	-	0.4300	-	-	-	-	513.5052
	2016	-	5.8056	-	-	0.4275	-	0.4275	-	-	0.3933	-	0.3933	-	-	508.1987
	2017	-	-	-	-	0.3921	-	-	-	-	0.3607	-	-	-	-	500.1525
	2018	-	-	-	-	0.3200	-	-	-	-	0.2944	-	-	-	-	492.2118
	2019	-	-	-	-	0.2748	-	-	-	-	0.2528	-	-	-	-	484.3362
	2020	-	-	-	-	0.2475	-	-	-	-	0.2277	-	-	-	-	473.8594
	2021	-	-	-	-	0.2194	-	-	-	-	0.2018	-	-	-	-	473.9012
	2022	-	-	-	-	0.1855	-	-	-	-	0.1707	-	-	-	-	473.9291
	2023	-	-	-	-	0.1652	-	-	-	-	0.1520	-	-	-	-	473.9363
	2024	-	-	-	-	0.1505	-	-	-	-	0.1384	-	-	-	-	474.0072
	2025	-	-	-	-	0.1354	-	-	-	-	0.1245	-	-	-	-	473.8510
Rollers Total		-	5.8056	-	-		-	0.4275	-	-		-	0.3933	-	-	

Rough Terrain Forklifts		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.2610	-	-	-	-	0.2401	-	-	-	-	517.2602
	2015	-	-	-	-	0.2474	-	-	-	-	0.2276	-	-	-	-	512.0859
	2016	-	3.8401	-	-	0.2131	-	0.2131	-	-	0.1961	-	0.1961	-	-	507.0659
	2017	-	-	-	-	0.1816	-	-	-	-	0.1671	-	-	-	-	499.1682
	2018	-	-	-	-	0.1360	-	-	-	-	0.1251	-	-	-	-	491.2107
	2019	-	-	-	-	0.1168	-	-	-	-	0.1075	-	-	-	-	483.3105
	2020	-	-	-	-	0.1026	-	-	-	-	0.0944	-	-	-	-	472.9842
	2021	-	-	-	-	0.0885	-	-	-	-	0.0815	-	-	-	-	473.1100
	2022	-	-	-	-	0.0732	-	-	-	-	0.0673	-	-	-	-	473.0890
	2023	-	-	-	-	0.0637	-	-	-	-	0.0586	-	-	-	-	473.1584
	2024	-	-	-	-	0.0583	-	-	-	-	0.0536	-	-	-	-	473.0631
	2025	-	-	-	-	0.0511	-	-	-	-	0.0470	-	-	-	-	473.0366
Rough Terrain Forklifts Total		-	3.8401	-	-		-	0.2131	-	-		-	0.1961	-	-	

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2	CO2	CO2
Pumps		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	568.2990	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Pumps Total		-	568.2990	-

Rollers		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	508.1987	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Rollers Total		-	508.1987	-

Rough Terrain Forklifts		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	507.0659	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Rough Terrain Forklifts Total		-	507.0659	-

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2		Sox	Sox	Sox	Sox		CH4	CH4	CH4	CH4		N2O	N2O	N2O	N2O
Pumps		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0060	-	-	-	-	0.0670	-	-	-	-	0.0043	-	-	-	-
	2015	-	0.0060	-	-	-	-	0.0610	-	-	-	-	0.0043	-	-	-	-
	2016	-	0.0060	-	0.0060	-	-	0.0550	-	0.0550	-	-	0.0043	-	0.0043	-	-
	2017	-	0.0060	-	-	-	-	0.0490	-	-	-	-	0.0043	-	-	-	-
	2018	-	0.0060	-	-	-	-	0.0430	-	-	-	-	0.0043	-	-	-	-
	2019	-	0.0060	-	-	-	-	0.0380	-	-	-	-	0.0043	-	-	-	-
	2020	-	0.0060	-	-	-	-	0.0340	-	-	-	-	0.0043	-	-	-	-
	2021	-	0.0060	-	-	-	-	0.0310	-	-	-	-	0.0043	-	-	-	-
	2022	-	0.0060	-	-	-	-	0.0290	-	-	-	-	0.0043	-	-	-	-
	2023	-	0.0060	-	-	-	-	0.0260	-	-	-	-	0.0043	-	-	-	-
	2024	-	0.0060	-	-	-	-	0.0250	-	-	-	-	0.0043	-	-	-	-
	2025	-	0.0060	-	-	-	-	0.0230	-	-	-	-	0.0043	-	-	-	-
Pumps Total		-		-	0.0060	-	-		-	0.0550	-	-		-	0.0043	-	-

Rollers		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
	2015	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
	2016	-	0.0049	-	0.0049	-	-	0.1533	-	0.1533	-	-	0.0043	-	0.0043	-	-
	2017	-	0.0049	-	-	-	-	0.1532	-	-	-	-	0.0043	-	-	-	-
	2018	-	0.0049	-	-	-	-	0.1532	-	-	-	-	0.0043	-	-	-	-
	2019	-	0.0049	-	-	-	-	0.1532	-	-	-	-	0.0043	-	-	-	-
	2020	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
	2021	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
	2022	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
	2023	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
	2024	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
	2025	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
Rollers Total		-		-	0.0049	-	-		-	0.1533	-	-		-	0.0043	-	-

Rough Terrain Forklifts		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
	2015	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
	2016	-	0.0049	-	0.0049	-	-	0.1529	-	0.1529	-	-	0.0043	-	0.0043	-	-
	2017	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
	2018	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
	2019	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
	2020	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
	2021	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
	2022	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
	2023	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
	2024	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
	2025	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
Rough Terrain Forklifts Total		-		-	0.0049	-	-		-	0.1529	-	-		-	0.0043	-	-

The following emission rates by equipment type and year cannot be directly edited. The rates shown below, however, will change when changes are made to the default values for horsepower and/or hours per day.

Note: Years 2005 through 2008 were not updated and are not used in the current model

Emissions (g/bhp-hr)		ROG	ROG	ROG	ROG		CO	CO	CO	CO	
Rubber Tired Dozers	ROG		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
	2014	0.7073	-	-	-	-	6.1647		-	-	-	-	8.0582
	2015	0.7077	-	-	-	-	6.1015		-	-	-	-	7.9974
	2016	0.6883	-	0.6883	-	-	5.8283		-	5.8283	-	-	7.7103
	2017	0.6617	-	-	-	-	5.5257		-	-	-	-	7.3335
	2018	0.5981	-	-	-	-	4.9821		-	-	-	-	6.5018
	2019	0.5721	-	-	-	-	4.7431		-	-	-	-	6.1434
	2020	0.5349	-	-	-	-	4.4113		-	-	-	-	5.6409
	2021	0.4922	-	-	-	-	4.0411		-	-	-	-	5.0810
	2022	0.4748	-	-	-	-	3.8949		-	-	-	-	4.8078
	2023	0.4466	-	-	-	-	3.6862		-	-	-	-	4.4084
	2024	0.4165	-	-	-	-	3.4575		-	-	-	-	4.0305
	2025	0.3668	-	-	-	-	2.9590		-	-	-	-	3.3696
Rubber Tired Dozers Total			-	0.6883	-	-			-	5.8283	-	-	

Rubber Tired Loaders	ROG		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
	2014	0.4066	-	-	-	-	1.4855		-	-	-	-	5.4954
	2015	0.4056	-	-	-	-	1.4799		-	-	-	-	5.3693
	2016	0.3933	-	0.3933	-	-	1.4521		-	1.4521	-	-	5.1151
	2017	0.3727	-	-	-	-	1.4172		-	-	-	-	4.7547
	2018	0.3335	-	-	-	-	1.3464		-	-	-	-	4.1313
	2019	0.3094	-	-	-	-	1.3025		-	-	-	-	3.7445
	2020	0.2902	-	-	-	-	1.2689		-	-	-	-	3.4212
	2021	0.2661	-	-	-	-	1.2403		-	-	-	-	2.9977
	2022	0.2261	-	-	-	-	1.1880		-	-	-	-	2.3469
	2023	0.2099	-	-	-	-	1.1714		-	-	-	-	2.0596
	2024	0.1971	-	-	-	-	1.1607		-	-	-	-	1.8060
	2025	0.1774	-	-	-	-	1.1417		-	-	-	-	1.4421
Rubber Tired Loaders Total			-	0.3933	-	-			-	1.4521	-	-	

Scrapers	ROG		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
	2014	0.4787	-	-	-	-	3.8982		-	-	-	-	6.2330
	2015	0.4722	-	-	-	-	3.7880		-	-	-	-	6.0858
	2016	0.4524	-	0.4524	-	-	3.6063		-	3.6063	-	-	5.7575
	2017	0.4251	-	-	-	-	3.3370		-	-	-	-	5.3395
	2018	0.3691	-	-	-	-	2.8281		-	-	-	-	4.5677
	2019	0.3429	-	-	-	-	2.5947		-	-	-	-	4.1565
	2020	0.3196	-	-	-	-	2.4006		-	-	-	-	3.7825
	2021	0.2992	-	-	-	-	2.2545		-	-	-	-	3.4448
	2022	0.2637	-	-	-	-	2.0521		-	-	-	-	2.8786
	2023	0.2532	-	-	-	-	1.9753		-	-	-	-	2.6661
	2024	0.2446	-	-	-	-	1.9206		-	-	-	-	2.4769
	2025	0.2162	-	-	-	-	1.7318		-	-	-	-	2.0505
Scrapers Total			-	0.4524	-	-			-	3.6063	-	-	

The following emission rates by
however, will change when char

Note: Years 2005 through 2008 were nc

92 % of PM2.5 in PM10 (from CEIDARS)

Emissions (g/bhp-hr)		NOx	NOx	NOx	NOx		PM10	PM10	PM10	PM10		PM2.5	PM2.5	PM2.5	PM2.5	
Rubber Tired Dozers		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.3757	-	-	-	-	0.3457	-	-	-	-	524.6758
	2015	-	-	-	-	0.3731	-	-	-	-	0.3433	-	-	-	-	519.1472
	2016	-	7.7103	-	-	0.3588	-	0.3588	-	-	0.3301	-	0.3301	-	-	513.3109
	2017	-	-	-	-	0.3407	-	-	-	-	0.3134	-	-	-	-	505.8493
	2018	-	-	-	-	0.3002	-	-	-	-	0.2762	-	-	-	-	498.1862
	2019	-	-	-	-	0.2828	-	-	-	-	0.2602	-	-	-	-	490.3830
	2020	-	-	-	-	0.2591	-	-	-	-	0.2384	-	-	-	-	479.7569
	2021	-	-	-	-	0.2321	-	-	-	-	0.2135	-	-	-	-	478.9868
	2022	-	-	-	-	0.2199	-	-	-	-	0.2023	-	-	-	-	479.3107
	2023	-	-	-	-	0.2015	-	-	-	-	0.1854	-	-	-	-	479.4678
	2024	-	-	-	-	0.1823	-	-	-	-	0.1677	-	-	-	-	479.3938
	2025	-	-	-	-	0.1506	-	-	-	-	0.1386	-	-	-	-	479.0915
Rubber Tired Dozers Total		-	7.7103	-	-		-	0.3588	-	-		-	0.3301	-	-	

Rubber Tired Loaders		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.1868	-	-	-	-	0.1719	-	-	-	-	514.2167
	2015	-	-	-	-	0.1833	-	-	-	-	0.1686	-	-	-	-	508.9127
	2016	-	5.1151	-	-	0.1745	-	0.1745	-	-	0.1605	-	0.1605	-	-	503.6542
	2017	-	-	-	-	0.1620	-	-	-	-	0.1490	-	-	-	-	495.9499
	2018	-	-	-	-	0.1401	-	-	-	-	0.1289	-	-	-	-	487.9023
	2019	-	-	-	-	0.1255	-	-	-	-	0.1155	-	-	-	-	480.0997
	2020	-	-	-	-	0.1136	-	-	-	-	0.1045	-	-	-	-	469.5127
	2021	-	-	-	-	0.1000	-	-	-	-	0.0920	-	-	-	-	469.5642
	2022	-	-	-	-	0.0787	-	-	-	-	0.0724	-	-	-	-	469.9041
	2023	-	-	-	-	0.0690	-	-	-	-	0.0635	-	-	-	-	469.8240
	2024	-	-	-	-	0.0604	-	-	-	-	0.0556	-	-	-	-	469.7875
	2025	-	-	-	-	0.0484	-	-	-	-	0.0446	-	-	-	-	469.8711
Rubber Tired Loaders Total		-	5.1151	-	-		-	0.1745	-	-		-	0.1605	-	-	

Scrapers		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.2514	-	-	-	-	0.2313	-	-	-	-	517.3608
	2015	-	-	-	-	0.2458	-	-	-	-	0.2261	-	-	-	-	511.9471
	2016	-	5.7575	-	-	0.2321	-	0.2321	-	-	0.2135	-	0.2135	-	-	506.3503
	2017	-	-	-	-	0.2143	-	-	-	-	0.1971	-	-	-	-	498.4571
	2018	-	-	-	-	0.1800	-	-	-	-	0.1656	-	-	-	-	490.7734
	2019	-	-	-	-	0.1629	-	-	-	-	0.1498	-	-	-	-	482.7319
	2020	-	-	-	-	0.1475	-	-	-	-	0.1357	-	-	-	-	472.1751
	2021	-	-	-	-	0.1340	-	-	-	-	0.1233	-	-	-	-	472.4636
	2022	-	-	-	-	0.1124	-	-	-	-	0.1034	-	-	-	-	473.2304
	2023	-	-	-	-	0.1045	-	-	-	-	0.0962	-	-	-	-	473.1772
	2024	-	-	-	-	0.0979	-	-	-	-	0.0901	-	-	-	-	472.8455
	2025	-	-	-	-	0.0807	-	-	-	-	0.0743	-	-	-	-	472.5394
Scrapers Total		-	5.7575	-	-		-	0.2321	-	-		-	0.2135	-	-	

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2	CO2	CO2
Rubber Tired Dozers		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	513.3109	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Rubber Tired Dozers Total		-	513.3109	-

Rubber Tired Loaders		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	503.6542	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Rubber Tired Loaders Total		-	503.6542	-

Scrapers		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	506.3503	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Scrapers Total		-	506.3503	-

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2		Sox	Sox	Sox	Sox		CH4	CH4	CH4	CH4		N2O	N2O	N2O	N2O
Rubber Tired Dozers		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0049	-	-	-	-	0.1550	-	-	-	-	0.0043	-	-	-	-
	2015	-	0.0049	-	-	-	-	0.1550	-	-	-	-	0.0043	-	-	-	-
	2016	-	0.0049	-	0.0049	-	-	0.1548	-	0.1548	-	-	0.0043	-	0.0043	-	-
	2017	-	0.0049	-	-	-	-	0.1550	-	-	-	-	0.0043	-	-	-	-
	2018	-	0.0049	-	-	-	-	0.1551	-	-	-	-	0.0043	-	-	-	-
	2019	-	0.0049	-	-	-	-	0.1552	-	-	-	-	0.0043	-	-	-	-
	2020	-	0.0049	-	-	-	-	0.1552	-	-	-	-	0.0043	-	-	-	-
	2021	-	0.0049	-	-	-	-	0.1549	-	-	-	-	0.0043	-	-	-	-
	2022	-	0.0049	-	-	-	-	0.1550	-	-	-	-	0.0043	-	-	-	-
	2023	-	0.0049	-	-	-	-	0.1551	-	-	-	-	0.0043	-	-	-	-
	2024	-	0.0049	-	-	-	-	0.1550	-	-	-	-	0.0043	-	-	-	-
	2025	-	0.0049	-	-	-	-	0.1549	-	-	-	-	0.0043	-	-	-	-
Rubber Tired Dozers Total		-		-	0.0049	-	-		-	0.1548	-	-		-	0.0043	-	-

Rubber Tired Loaders		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0048	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
	2015	-	0.0048	-	-	-	-	0.1519	-	-	-	-	0.0043	-	-	-	-
	2016	-	0.0048	-	0.0048	-	-	0.1519	-	0.1519	-	-	0.0043	-	0.0043	-	-
	2017	-	0.0048	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
	2018	-	0.0048	-	-	-	-	0.1519	-	-	-	-	0.0043	-	-	-	-
	2019	-	0.0048	-	-	-	-	0.1519	-	-	-	-	0.0043	-	-	-	-
	2020	-	0.0048	-	-	-	-	0.1518	-	-	-	-	0.0043	-	-	-	-
	2021	-	0.0048	-	-	-	-	0.1519	-	-	-	-	0.0043	-	-	-	-
	2022	-	0.0049	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
	2023	-	0.0049	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
	2024	-	0.0049	-	-	-	-	0.1519	-	-	-	-	0.0043	-	-	-	-
	2025	-	0.0049	-	-	-	-	0.1520	-	-	-	-	0.0043	-	-	-	-
Rubber Tired Loaders Total		-		-	0.0048	-	-		-	0.1519	-	-		-	0.0043	-	-

Scrapers		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
	2015	-	0.0049	-	-	-	-	0.1528	-	-	-	-	0.0043	-	-	-	-
	2016	-	0.0049	-	0.0049	-	-	0.1527	-	0.1527	-	-	0.0043	-	0.0043	-	-
	2017	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2018	-	0.0049	-	-	-	-	0.1528	-	-	-	-	0.0043	-	-	-	-
	2019	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2020	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2021	-	0.0049	-	-	-	-	0.1528	-	-	-	-	0.0043	-	-	-	-
	2022	-	0.0049	-	-	-	-	0.1531	-	-	-	-	0.0043	-	-	-	-
	2023	-	0.0049	-	-	-	-	0.1530	-	-	-	-	0.0043	-	-	-	-
	2024	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
	2025	-	0.0049	-	-	-	-	0.1528	-	-	-	-	0.0043	-	-	-	-
Scrapers Total		-		-	0.0049	-	-		-	0.1527	-	-		-	0.0043	-	-

The following emission rates by equipment type and year cannot be directly edited. The rates shown below, however, will change when changes are made to the default values for horsepower and/or hours per day.

Note: Years 2005 through 2008 were not updated and are not used in the current model

Emissions (g/bhp-hr)	ROG	ROG	ROG	ROG	CO	CO	CO	CO	
Signal Boards	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2015	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2016	0.6610	-	0.6610	-	-	3.4690	-	3.4690	-	-	4.1420
2017	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2018	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2019	0.6610	-	-	-	-	3.4700	-	-	-	-	4.1420
2020	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2021	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2022	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2023	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2024	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
2025	0.6610	-	-	-	-	3.4690	-	-	-	-	4.1420
Signal Boards Total		-	0.6610	-	-		-	3.4690	-	-	

Skid Steer Loaders	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.3041	-	-	-	-	3.3383	-	-	-	-	4.0133
2015	0.2939	-	-	-	-	3.3375	-	-	-	-	3.8106
2016	0.2731	-	0.2731	-	-	3.3277	-	3.3277	-	-	3.5344
2017	0.2553	-	-	-	-	3.3186	-	-	-	-	3.2862
2018	0.2158	-	-	-	-	3.2820	-	-	-	-	2.8600
2019	0.1994	-	-	-	-	3.2774	-	-	-	-	2.6559
2020	0.1884	-	-	-	-	3.2771	-	-	-	-	2.5046
2021	0.1780	-	-	-	-	3.2769	-	-	-	-	2.3659
2022	0.1641	-	-	-	-	3.2704	-	-	-	-	2.1892
2023	0.1534	-	-	-	-	3.2661	-	-	-	-	2.0385
2024	0.1469	-	-	-	-	3.2640	-	-	-	-	1.9484
2025	0.1398	-	-	-	-	3.2516	-	-	-	-	1.8674
Skid Steer Loaders Total		-	0.2731	-	-		-	3.3277	-	-	

Surfacing Equipment	ROG	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	NOx
2014	0.2370	-	-	-	-	1.5015	-	-	-	-	3.8952
2015	0.2408	-	-	-	-	1.5130	-	-	-	-	3.9004
2016	0.2171	-	0.2171	-	-	1.4248	-	1.4248	-	-	3.4682
2017	0.2037	-	-	-	-	1.3962	-	-	-	-	3.1064
2018	0.1574	-	-	-	-	1.2256	-	-	-	-	2.2039
2019	0.1455	-	-	-	-	1.2143	-	-	-	-	1.8994
2020	0.1455	-	-	-	-	1.2190	-	-	-	-	1.8376
2021	0.1408	-	-	-	-	1.2023	-	-	-	-	1.7528
2022	0.1323	-	-	-	-	1.1605	-	-	-	-	1.5573
2023	0.1315	-	-	-	-	1.1633	-	-	-	-	1.4756
2024	0.1338	-	-	-	-	1.1677	-	-	-	-	1.4777
2025	0.1279	-	-	-	-	1.1686	-	-	-	-	1.3268
Surfacing Equipment Total		-	0.2171	-	-		-	1.4248	-	-	

The following emission rates by
however, will change when char

Note: Years 2005 through 2008 were nc

92 % of PM2.5 in PM10 (from CEIDARS)

Emissions (g/bhp-hr)		NOx	NOx	NOx	NOx		PM10	PM10	PM10	PM10		PM2.5	PM2.5	PM2.5	PM2.5	
Signal Boards		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2015	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2016	-	4.1420	-	-	0.1610	-	0.1610	-	-	0.1610	-	0.1610	-	-	568.2990
	2017	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2018	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2019	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2020	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2021	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2022	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.3000
	2023	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2024	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
	2025	-	-	-	-	0.1610	-	-	-	-	0.1610	-	-	-	-	568.2990
Signal Boards Total		-	4.1420	-	-		-	0.1610	-	-		-	0.1610	-	-	
Skid Steer Loaders		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.2345	-	-	-	-	0.2158	-	-	-	-	517.0621
	2015	-	-	-	-	0.2202	-	-	-	-	0.2026	-	-	-	-	511.5950
	2016	-	3.5344	-	-	0.1974	-	0.1974	-	-	0.1816	-	0.1816	-	-	506.2971
	2017	-	-	-	-	0.1766	-	-	-	-	0.1625	-	-	-	-	498.3256
	2018	-	-	-	-	0.1398	-	-	-	-	0.1286	-	-	-	-	490.0935
	2019	-	-	-	-	0.1217	-	-	-	-	0.1119	-	-	-	-	482.3844
	2020	-	-	-	-	0.1084	-	-	-	-	0.0997	-	-	-	-	471.9075
	2021	-	-	-	-	0.0963	-	-	-	-	0.0886	-	-	-	-	471.9774
	2022	-	-	-	-	0.0814	-	-	-	-	0.0748	-	-	-	-	472.4321
	2023	-	-	-	-	0.0690	-	-	-	-	0.0634	-	-	-	-	472.6560
	2024	-	-	-	-	0.0626	-	-	-	-	0.0576	-	-	-	-	472.8470
	2025	-	-	-	-	0.0567	-	-	-	-	0.0521	-	-	-	-	472.6295
Skid Steer Loaders Total		-	3.5344	-	-		-	0.1974	-	-		-	0.1816	-	-	
Surfacing Equipment		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
	2014	-	-	-	-	0.1255	-	-	-	-	0.1155	-	-	-	-	513.6157
	2015	-	-	-	-	0.1265	-	-	-	-	0.1164	-	-	-	-	508.3985
	2016	-	3.4682	-	-	0.1111	-	0.1111	-	-	0.1022	-	0.1022	-	-	502.4709
	2017	-	-	-	-	0.1026	-	-	-	-	0.0944	-	-	-	-	496.8850
	2018	-	-	-	-	0.0761	-	-	-	-	0.0700	-	-	-	-	487.8722
	2019	-	-	-	-	0.0681	-	-	-	-	0.0626	-	-	-	-	481.8965
	2020	-	-	-	-	0.0669	-	-	-	-	0.0615	-	-	-	-	471.6331
	2021	-	-	-	-	0.0635	-	-	-	-	0.0584	-	-	-	-	471.7484
	2022	-	-	-	-	0.0574	-	-	-	-	0.0528	-	-	-	-	470.5248
	2023	-	-	-	-	0.0556	-	-	-	-	0.0512	-	-	-	-	470.3746
	2024	-	-	-	-	0.0559	-	-	-	-	0.0514	-	-	-	-	470.2521
	2025	-	-	-	-	0.0510	-	-	-	-	0.0469	-	-	-	-	470.2827
Surfacing Equipment Total		-	3.4682	-	-		-	0.1111	-	-		-	0.1022	-	-	

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2	CO2	CO2
Signal Boards		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	568.2990	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Signal Boards Total		-	568.2990	-

Skid Steer Loaders		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	506.2971	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Skid Steer Loaders Total		-	506.2971	-

Surfacing Equipment		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	502.4709	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Surfacing Equipment Total		-	502.4709	-

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2		Sox	Sox	Sox	Sox		CH4	CH4	CH4	CH4		N2O	N2O	N2O	N2O
Signal Boards		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
	2015	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
	2016	-	0.0080	-	0.0080	-	-	0.0590	-	0.0590	-	-	0.0048	-	0.0048	-	-
	2017	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
	2018	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
	2019	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
	2020	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
	2021	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
	2022	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
	2023	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
	2024	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
	2025	-	0.0080	-	-	-	-	0.0590	-	-	-	-	0.0048	-	-	-	-
Signal Boards Total		-		-	0.0080	-	-		-	0.0590	-	-		-	0.0048	-	-

Skid Steer Loaders		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0049	-	-	-	-	0.1528	-	-	-	-	0.0043	-	-	-	-
	2015	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2016	-	0.0049	-	0.0049	-	-	0.1527	-	0.1527	-	-	0.0043	-	0.0043	-	-
	2017	-	0.0049	-	-	-	-	0.1527	-	-	-	-	0.0043	-	-	-	-
	2018	-	0.0049	-	-	-	-	0.1526	-	-	-	-	0.0043	-	-	-	-
	2019	-	0.0049	-	-	-	-	0.1526	-	-	-	-	0.0043	-	-	-	-
	2020	-	0.0049	-	-	-	-	0.1526	-	-	-	-	0.0043	-	-	-	-
	2021	-	0.0049	-	-	-	-	0.1526	-	-	-	-	0.0043	-	-	-	-
	2022	-	0.0049	-	-	-	-	0.1528	-	-	-	-	0.0043	-	-	-	-
	2023	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
	2024	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
	2025	-	0.0049	-	-	-	-	0.1529	-	-	-	-	0.0043	-	-	-	-
Skid Steer Loaders Total		-		-	0.0049	-	-		-	0.1527	-	-		-	0.0043	-	-

Surfacing Equipment		Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
	2014	-	0.0048	-	-	-	-	0.1518	-	-	-	-	0.0043	-	-	-	-
	2015	-	0.0048	-	-	-	-	0.1518	-	-	-	-	0.0043	-	-	-	-
	2016	-	0.0048	-	0.0048	-	-	0.1516	-	0.1516	-	-	0.0043	-	0.0043	-	-
	2017	-	0.0049	-	-	-	-	0.1522	-	-	-	-	0.0043	-	-	-	-
	2018	-	0.0049	-	-	-	-	0.1519	-	-	-	-	0.0043	-	-	-	-
	2019	-	0.0049	-	-	-	-	0.1525	-	-	-	-	0.0043	-	-	-	-
	2020	-	0.0049	-	-	-	-	0.1525	-	-	-	-	0.0043	-	-	-	-
	2021	-	0.0049	-	-	-	-	0.1526	-	-	-	-	0.0043	-	-	-	-
	2022	-	0.0049	-	-	-	-	0.1522	-	-	-	-	0.0043	-	-	-	-
	2023	-	0.0049	-	-	-	-	0.1521	-	-	-	-	0.0043	-	-	-	-
	2024	-	0.0049	-	-	-	-	0.1521	-	-	-	-	0.0043	-	-	-	-
	2025	-	0.0049	-	-	-	-	0.1521	-	-	-	-	0.0043	-	-	-	-
Surfacing Equipment Total		-		-	0.0048	-	-		-	0.1516	-	-		-	0.0043	-	-

The following emission rates by equipment type and year cannot be directly edited. The rates shown below, however, will change when changes are made to the default values for horsepower and/or hours per day.

Note: Years 2005 through 2008 were not updated and are not used in the current model

Emissions (g/bhp-hr)

Sweepers/Scrubbers	ROG	ROG Weighted - Grubbing	ROG Weighted - Grading	ROG Weighted - Drainage	ROG Weighted - Paving	CO	CO Weighted - Grubbing	CO Weighted - Grading	CO Weighted - Drainage	CO Weighted - Paving	NOx
2014	0.8326	-	-	-	-	4.0709	-	-	-	-	6.9339
2015	0.8334	-	-	-	-	4.0968	-	-	-	-	6.8863
2016	0.7826	-	0.7826	-	-	4.0592	-	4.0592	-	-	6.4541
2017	0.7205	-	-	-	-	4.0101	-	-	-	-	6.0202
2018	0.5995	-	-	-	-	3.8817	-	-	-	-	5.1360
2019	0.5496	-	-	-	-	3.8460	-	-	-	-	4.7726
2020	0.5199	-	-	-	-	3.8275	-	-	-	-	4.4821
2021	0.4402	-	-	-	-	3.7575	-	-	-	-	3.9619
2022	0.3724	-	-	-	-	3.6920	-	-	-	-	3.4722
2023	0.3506	-	-	-	-	3.6950	-	-	-	-	3.2854
2024	0.3320	-	-	-	-	3.6929	-	-	-	-	3.0985
2025	0.3031	-	-	-	-	3.6640	-	-	-	-	2.8173
Sweepers/Scrubbers Total		-	0.7826	-	-		-	4.0592	-	-	

Tractors/Loaders/Backhoes	ROG	ROG Weighted - Grubbing	ROG Weighted - Grading	ROG Weighted - Drainage	ROG Weighted - Paving	CO	CO Weighted - Grubbing	CO Weighted - Grading	CO Weighted - Drainage	CO Weighted - Paving	NOx
2014	0.5822	-	-	-	-	3.8272	-	-	-	-	5.5808
2015	0.5693	-	-	-	-	3.8320	-	-	-	-	5.4221
2016	0.5380	-	0.5380	-	-	3.8115	-	3.8115	-	-	5.1424
2017	0.5005	-	-	-	-	3.7818	-	-	-	-	4.8087
2018	0.4204	-	-	-	-	3.6916	-	-	-	-	4.1544
2019	0.3678	-	-	-	-	3.6378	-	-	-	-	3.6926
2020	0.3310	-	-	-	-	3.6015	-	-	-	-	3.3257
2021	0.2959	-	-	-	-	3.5707	-	-	-	-	2.9950
2022	0.2602	-	-	-	-	3.5355	-	-	-	-	2.6472
2023	0.2391	-	-	-	-	3.5250	-	-	-	-	2.4261
2024	0.2274	-	-	-	-	3.5318	-	-	-	-	2.2880
2025	0.2087	-	-	-	-	3.5224	-	-	-	-	2.1092
Tractors/Loaders/Backhoes Total		-	0.5380	-	-		-	3.8115	-	-	

Trenchers	ROG	ROG Weighted - Grubbing	ROG Weighted - Grading	ROG Weighted - Drainage	ROG Weighted - Paving	CO	CO Weighted - Grubbing	CO Weighted - Grading	CO Weighted - Drainage	CO Weighted - Paving	NOx
2014	0.8181	-	-	-	-	3.9988	-	-	-	-	7.2172
2015	0.8171	-	-	-	-	4.0143	-	-	-	-	7.1786
2016	0.7880	-	0.7880	-	-	3.9882	-	3.9882	-	-	6.9022
2017	0.7615	-	-	-	-	3.9683	-	-	-	-	6.6788
2018	0.6581	-	-	-	-	3.8549	-	-	-	-	5.9153
2019	0.6314	-	-	-	-	3.8368	-	-	-	-	5.6951
2020	0.6102	-	-	-	-	3.8327	-	-	-	-	5.5195
2021	0.5560	-	-	-	-	3.7891	-	-	-	-	5.1059
2022	0.5290	-	-	-	-	3.7784	-	-	-	-	4.9135
2023	0.5040	-	-	-	-	3.7684	-	-	-	-	4.7005
2024	0.4943	-	-	-	-	3.7685	-	-	-	-	4.5932
2025	0.4565	-	-	-	-	3.7344	-	-	-	-	4.2790
Trenchers Total		-	0.7880	-	-		-	3.9882	-	-	

The following emission rates by
however, will change when chai

Note: Years 2005 through 2008 were nc

92 % of PM2.5 in PM10 (from CEIDARS)

Emissions (g/bhp-hr)	NOx	NOx	NOx	NOx		PM10	PM10	PM10	PM10		PM2.5	PM2.5	PM2.5	PM2.5	
Sweepers/Scrubbers	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.6104	-	-	-	-	0.5615	-	-	-	-	518.8933
2015	-	-	-	-	0.6103	-	-	-	-	0.5614	-	-	-	-	513.6254
2016	-	6.4541	-	-	0.5707	-	0.5707	-	-	0.5250	-	0.5250	-	-	508.3574
2017	-	-	-	-	0.5202	-	-	-	-	0.4786	-	-	-	-	500.4555
2018	-	-	-	-	0.4283	-	-	-	-	0.3941	-	-	-	-	492.5536
2019	-	-	-	-	0.3872	-	-	-	-	0.3563	-	-	-	-	484.6516
2020	-	-	-	-	0.3601	-	-	-	-	0.3313	-	-	-	-	474.1157
2021	-	-	-	-	0.2914	-	-	-	-	0.2681	-	-	-	-	474.1157
2022	-	-	-	-	0.2321	-	-	-	-	0.2135	-	-	-	-	474.1157
2023	-	-	-	-	0.2095	-	-	-	-	0.1928	-	-	-	-	474.1157
2024	-	-	-	-	0.1885	-	-	-	-	0.1734	-	-	-	-	474.1157
2025	-	-	-	-	0.1597	-	-	-	-	0.1469	-	-	-	-	474.1157
Sweepers/Scrubbers Total	-	6.4541	-	-		-	0.5707	-	-		-	0.5250	-	-	

Tractors/Loaders/Backhoes	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.4384	-	-	-	-	0.4033	-	-	-	-	523.0168
2015	-	-	-	-	0.4244	-	-	-	-	0.3904	-	-	-	-	517.3652
2016	-	5.1424	-	-	0.3959	-	0.3959	-	-	0.3643	-	0.3643	-	-	511.3456
2017	-	-	-	-	0.3616	-	-	-	-	0.3327	-	-	-	-	502.7952
2018	-	-	-	-	0.2943	-	-	-	-	0.2708	-	-	-	-	494.1237
2019	-	-	-	-	0.2465	-	-	-	-	0.2268	-	-	-	-	485.8548
2020	-	-	-	-	0.2103	-	-	-	-	0.1935	-	-	-	-	475.1543
2021	-	-	-	-	0.1766	-	-	-	-	0.1625	-	-	-	-	475.3621
2022	-	-	-	-	0.1424	-	-	-	-	0.1310	-	-	-	-	475.8975
2023	-	-	-	-	0.1198	-	-	-	-	0.1102	-	-	-	-	476.4307
2024	-	-	-	-	0.1050	-	-	-	-	0.0966	-	-	-	-	476.7313
2025	-	-	-	-	0.0855	-	-	-	-	0.0786	-	-	-	-	477.1880
Tractors/Loaders/Backhoes Total	-	5.1424	-	-		-	0.3959	-	-		-	0.3643	-	-	

Trenchers	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.5629	-	-	-	-	0.5179	-	-	-	-	520.7658
2015	-	-	-	-	0.5616	-	-	-	-	0.5167	-	-	-	-	515.3955
2016	-	6.9022	-	-	0.5413	-	0.5413	-	-	0.4980	-	0.4980	-	-	509.9027
2017	-	-	-	-	0.5232	-	-	-	-	0.4813	-	-	-	-	501.9916
2018	-	-	-	-	0.4500	-	-	-	-	0.4140	-	-	-	-	493.7150
2019	-	-	-	-	0.4306	-	-	-	-	0.3961	-	-	-	-	485.3635
2020	-	-	-	-	0.4132	-	-	-	-	0.3802	-	-	-	-	475.1265
2021	-	-	-	-	0.3707	-	-	-	-	0.3411	-	-	-	-	475.2870
2022	-	-	-	-	0.3481	-	-	-	-	0.3203	-	-	-	-	475.3262
2023	-	-	-	-	0.3261	-	-	-	-	0.3000	-	-	-	-	475.6903
2024	-	-	-	-	0.3178	-	-	-	-	0.2924	-	-	-	-	475.6324
2025	-	-	-	-	0.2850	-	-	-	-	0.2622	-	-	-	-	475.9014
Trenchers Total	-	6.9022	-	-		-	0.5413	-	-		-	0.4980	-	-	

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2	CO2	CO2
Sweepers/Scrubbers		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	508.3574	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Sweepers/Scrubbers Total		-	508.3574	-

Tractors/Loaders/Backhoes		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	511.3456	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Tractors/Loaders/Backhoes Total		-	511.3456	-

Trenchers		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	509.9027	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Trenchers Total		-	509.9027	-

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)	CO2		Sox	Sox	Sox	Sox		CH4	CH4	CH4	CH4		N2O	N2O	N2O	N2O
Sweepers/Scrubbers	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
2015	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
2016	-	0.0049	-	0.0049	-	-	0.1533	-	0.1533	-	-	0.0043	-	0.0043	-	-
2017	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
2018	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
2019	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
2020	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
2021	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
2022	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
2023	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
2024	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
2025	-	0.0049	-	-	-	-	0.1533	-	-	-	-	0.0043	-	-	-	-
Sweepers/Scrubbers Total	-		-	0.0049	-	-		-	0.1533	-	-		-	0.0043	-	-

Tractors/Loaders/Backhoes	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0049	-	-	-	-	0.1546	-	-	-	-	0.0043	-	-	-	-
2015	-	0.0049	-	-	-	-	0.1545	-	-	-	-	0.0043	-	-	-	-
2016	-	0.0049	-	0.0049	-	-	0.1542	-	0.1542	-	-	0.0043	-	0.0043	-	-
2017	-	0.0049	-	-	-	-	0.1541	-	-	-	-	0.0043	-	-	-	-
2018	-	0.0049	-	-	-	-	0.1538	-	-	-	-	0.0043	-	-	-	-
2019	-	0.0049	-	-	-	-	0.1537	-	-	-	-	0.0043	-	-	-	-
2020	-	0.0049	-	-	-	-	0.1537	-	-	-	-	0.0043	-	-	-	-
2021	-	0.0049	-	-	-	-	0.1537	-	-	-	-	0.0043	-	-	-	-
2022	-	0.0049	-	-	-	-	0.1539	-	-	-	-	0.0043	-	-	-	-
2023	-	0.0049	-	-	-	-	0.1541	-	-	-	-	0.0043	-	-	-	-
2024	-	0.0049	-	-	-	-	0.1542	-	-	-	-	0.0043	-	-	-	-
2025	-	0.0049	-	-	-	-	0.1543	-	-	-	-	0.0043	-	-	-	-
Tractors/Loaders/Backhoes Total	-		-	0.0049	-	-		-	0.1542	-	-		-	0.0043	-	-

Trenchers	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0049	-	-	-	-	0.1539	-	-	-	-	0.0043	-	-	-	-
2015	-	0.0049	-	-	-	-	0.1539	-	-	-	-	0.0043	-	-	-	-
2016	-	0.0049	-	0.0049	-	-	0.1538	-	0.1538	-	-	0.0043	-	0.0043	-	-
2017	-	0.0049	-	-	-	-	0.1538	-	-	-	-	0.0043	-	-	-	-
2018	-	0.0049	-	-	-	-	0.1537	-	-	-	-	0.0043	-	-	-	-
2019	-	0.0049	-	-	-	-	0.1536	-	-	-	-	0.0043	-	-	-	-
2020	-	0.0049	-	-	-	-	0.1537	-	-	-	-	0.0043	-	-	-	-
2021	-	0.0049	-	-	-	-	0.1537	-	-	-	-	0.0043	-	-	-	-
2022	-	0.0049	-	-	-	-	0.1537	-	-	-	-	0.0043	-	-	-	-
2023	-	0.0049	-	-	-	-	0.1538	-	-	-	-	0.0043	-	-	-	-
2024	-	0.0049	-	-	-	-	0.1538	-	-	-	-	0.0043	-	-	-	-
2025	-	0.0049	-	-	-	-	0.1539	-	-	-	-	0.0043	-	-	-	-
Trenchers Total	-		-	0.0049	-	-		-	0.1538	-	-		-	0.0043	-	-

The following emission rates by equipment type and year cannot be directly edited. The rates shown below, however, will change when changes are made to the default values for horsepower and/or hours per day.

Note: Years 2005 through 2008 were not updated and are not used in the current model

Emissions (g/bhp-hr)

Welders	ROG	ROG Weighted - Grubbing	ROG Weighted - Grading	ROG Weighted - Drainage	ROG Weighted - Paving	CO	CO Weighted - Grubbing	CO Weighted - Grading	CO Weighted - Drainage	CO Weighted - Paving	NOx
2014	1.9000	-	-	-	-	5.7490	-	-	-	-	5.3080
2015	1.7150	-	-	-	-	5.5620	-	-	-	-	5.1130
2016	1.5400	-	1.5400	-	-	5.3950	-	5.3950	-	-	4.9360
2017	1.3720	-	-	-	-	5.2390	-	-	-	-	4.7680
2018	1.2100	-	-	-	-	5.0920	-	-	-	-	4.6070
2019	1.0550	-	-	-	-	4.9500	-	-	-	-	4.4490
2020	0.9370	-	-	-	-	4.8400	-	-	-	-	4.3040
2021	0.8290	-	-	-	-	4.7080	-	-	-	-	4.1330
2022	0.7580	-	-	-	-	4.6450	-	-	-	-	4.0070
2023	0.6970	-	-	-	-	4.5960	-	-	-	-	3.8910
2024	0.6460	-	-	-	-	4.5570	-	-	-	-	3.7820
2025	0.6020	-	-	-	-	4.5240	-	-	-	-	3.6760
Welders Total		-	1.5400	-	-		-	5.3950	-	-	

The following emission rates by
however, will change when chai

Note: Years 2005 through 2008 were nc

92 % of PM2.5 in PM10 (from CEIDARS)

Emissions (g/bhp-hr)	NOx	NOx	NOx	NOx		PM10	PM10	PM10	PM10		PM2.5	PM2.5	PM2.5	PM2.5	
Welders	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM10	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	PM2.5	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CO2
2014	-	-	-	-	0.4730	-	-	-	-	0.4730	-	-	-	-	568.3000
2015	-	-	-	-	0.4300	-	-	-	-	0.4300	-	-	-	-	568.3000
2016	-	4.9360	-	-	0.3890	-	0.3890	-	-	0.3890	-	0.3890	-	-	568.2990
2017	-	-	-	-	0.3500	-	-	-	-	0.3500	-	-	-	-	568.2990
2018	-	-	-	-	0.3110	-	-	-	-	0.3110	-	-	-	-	568.2990
2019	-	-	-	-	0.2730	-	-	-	-	0.2730	-	-	-	-	568.2990
2020	-	-	-	-	0.2380	-	-	-	-	0.2380	-	-	-	-	568.2990
2021	-	-	-	-	0.2030	-	-	-	-	0.2030	-	-	-	-	568.2990
2022	-	-	-	-	0.1750	-	-	-	-	0.1750	-	-	-	-	568.2990
2023	-	-	-	-	0.1510	-	-	-	-	0.1510	-	-	-	-	568.2990
2024	-	-	-	-	0.1300	-	-	-	-	0.1300	-	-	-	-	568.2990
2025	-	-	-	-	0.1120	-	-	-	-	0.1120	-	-	-	-	568.2990
Welders Total	-	4.9360	-	-		-	0.3890	-	-		-	0.3890	-	-	

The following emission rates by
however, will change when cha

Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)		CO2	CO2	CO2
Welders		Weighted - Grubbing	Weighted - Grading	Weighted - Drainage
	2014	-	-	-
	2015	-	-	-
	2016	-	568.2990	-
	2017	-	-	-
	2018	-	-	-
	2019	-	-	-
	2020	-	-	-
	2021	-	-	-
	2022	-	-	-
	2023	-	-	-
	2024	-	-	-
	2025	-	-	-
Welders Total		-	568.2990	-

The following emission rates by
however, will change when char
Note: Years 2005 through 2008 were no

Emissions (g/bhp-hr)	CO2		Sox	Sox	Sox	Sox		CH4	CH4	CH4	CH4		N2O	N2O	N2O	N2O
Welders	Weighted - Paving	SOX	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	CH4	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving	N2O	Weighted - Grubbing	Weighted - Grading	Weighted - Drainage	Weighted - Paving
2014	-	0.0070	-	-	-	-	0.1710	-	-	-	-	0.0048	-	-	-	-
2015	-	0.0070	-	-	-	-	0.1540	-	-	-	-	0.0048	-	-	-	-
2016	-	0.0070	-	0.0070	-	-	0.1380	-	0.1380	-	-	0.0048	-	0.0048	-	-
2017	-	0.0070	-	-	-	-	0.1230	-	-	-	-	0.0048	-	-	-	-
2018	-	0.0070	-	-	-	-	0.1090	-	-	-	-	0.0048	-	-	-	-
2019	-	0.0070	-	-	-	-	0.0950	-	-	-	-	0.0048	-	-	-	-
2020	-	0.0070	-	-	-	-	0.0840	-	-	-	-	0.0048	-	-	-	-
2021	-	0.0070	-	-	-	-	0.0740	-	-	-	-	0.0048	-	-	-	-
2022	-	0.0070	-	-	-	-	0.0680	-	-	-	-	0.0048	-	-	-	-
2023	-	0.0070	-	-	-	-	0.0620	-	-	-	-	0.0048	-	-	-	-
2024	-	0.0070	-	-	-	-	0.0580	-	-	-	-	0.0048	-	-	-	-
2025	-	0.0070	-	-	-	-	0.0540	-	-	-	-	0.0048	-	-	-	-
Welders Total	-		-	0.0070	-	-		-	0.1380	-	-		-	0.0048	-	-

Off-road Equipment Tier 4 Emission Factors

HP Bin		Emission Factor (g/bhp-hr)				
Low HP	High HP	ROG	CO	NOx	PM10	PM2.5
0	11	0.30	6.00	5.32	0.30	0.28
11	25	0.30	4.90	5.32	0.30	0.28
25	50	0.19	4.10	3.33	0.02	0.02
50	75	0.19	3.70	3.33	0.02	0.02
75	100	0.15	3.70	0.30	0.02	0.01
100	175	0.15	3.70	0.30	0.02	0.01
175	300	0.15	2.60	0.30	0.02	0.01
300	600	0.15	2.60	0.30	0.02	0.01
600	750	0.15	2.60	0.30	0.02	0.01
750	1200	0.15	2.60	2.60	0.03	0.03
1200	9999	0.15	2.60	2.60	0.03	0.03

92 % of PM2.5 in PM10 (from CEIDARS)
95 % of NOx in NMHC+NOx (from http://www.arb.ca.gov/msprog/moyer/guidelines/2005_Carl_Moyer_Guidelines_Part4.pdf)
1.07 VOC/NMHC

Note:
1. Tier 4 Emission Factors are converted from EPA Non-road Diesel Engine Standards. Available at www.arb.ca.gov/msprog/ordiesel/documents/Off-Road_Diesel_Stds.xls
2. Assume PM2.5 is 92% of PM10.

Default Horsepower and Load Factor

OFFROAD Equipment Type	Horsepower	Load Factor
Aerial Lifts	63	0.31
Air Compressors	78	0.48
Bore/Drill Rigs	206	0.5
Cement and Mortar Mixers	9	0.56
Concrete/Industrial Saws	81	0.73
Cranes	226	0.29
Crawler Tractors	208	0.43
Crushing/Proc. Equipment	85	0.78
Excavators	163	0.38
Forklifts	89	0.2
Generator Sets	84	0.74
Graders	175	0.41
Off-Highway Tractors	123	0.44
Off-Highway Trucks	400	0.38
Other Construction Equipment	172	0.42
Other General Industrial Equipment	88	0.34
Other Material Handling Equipment	167	0.4
Pavers	126	0.42
Paving Equipment	131	0.36
Plate Compactors	8	0.43
Pressure Washers	13	0.3
Pumps	84	0.74
Rollers	81	0.38
Rough Terrain Forklifts	100	0.4
Rubber Tired Dozers	255	0.4
Rubber Tired Loaders	200	0.36
Scrapers	362	0.48
Signal Boards	6	0.82
Skid Steer Loaders	65	0.37
Surfacing Equipment	254	0.3
Sweepers/Scrubbers	64	0.46
Tractors/Loaders/Backhoes	98	0.37
Trenchers	81	0.5
Welders	46	0.45

Default Horsepower and Load Factor from CalEEMod Appendix D: Table 3.3

Sacramento Valley Air Basin Fleet Average Emission Factors (Diesel)

2014

2014		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Aerial Lifts	15	0.261	3.233	4.096	0.005	0.158	0.145	574.665	0.170	0.005
Aerial Lifts	25	0.261	3.233	4.096	0.005	0.158	0.145	574.665	0.170	0.005
Aerial Lifts	50	0.261	3.233	4.096	0.005	0.158	0.145	574.665	0.170	0.005
Aerial Lifts	120	0.202	3.220	3.373	0.005	0.161	0.148	516.703	0.153	0.004
Aerial Lifts	500	0.236	0.983	4.602	0.005	0.101	0.093	516.638	0.153	0.004
Aerial Lifts	750	0.299	1.178	3.761	0.005	0.109	0.109	568.299	0.027	0.004
Air Compressors	15	0.891	3.723	5.445	0.008	0.341	0.341	568.300	0.080	0.005
Air Compressors	25	0.960	2.780	5.000	0.007	0.291	0.291	568.299	0.086	0.005
Air Compressors	50	2.076	6.181	5.421	0.007	0.505	0.505	568.299	0.187	0.005
Air Compressors	120	0.901	3.880	5.608	0.006	0.495	0.495	568.299	0.081	0.004
Air Compressors	175	0.621	3.227	4.973	0.006	0.272	0.272	568.299	0.056	0.004
Air Compressors	250	0.405	1.237	4.399	0.006	0.134	0.134	568.299	0.036	0.004
Air Compressors	500	0.373	1.249	3.855	0.005	0.125	0.125	568.299	0.033	0.004
Air Compressors	750	0.378	1.249	3.991	0.005	0.128	0.128	568.299	0.034	0.004
Air Compressors	1000	0.445	1.493	5.512	0.005	0.157	0.157	568.300	0.040	0.004
Bore/Drill Rigs	15	0.834	4.691	5.332	0.006	0.382	0.351	591.442	0.175	0.005
Bore/Drill Rigs	25	0.834	4.691	5.332	0.006	0.382	0.351	591.442	0.175	0.005
Bore/Drill Rigs	50	0.834	4.691	5.332	0.006	0.382	0.351	591.442	0.175	0.005
Bore/Drill Rigs	120	0.319	3.327	4.195	0.005	0.249	0.229	501.365	0.148	0.004
Bore/Drill Rigs	175	0.308	3.040	4.066	0.005	0.186	0.171	524.052	0.155	0.004
Bore/Drill Rigs	250	0.217	1.174	3.525	0.005	0.105	0.097	512.336	0.151	0.004
Bore/Drill Rigs	500	0.202	1.239	3.186	0.005	0.101	0.093	506.154	0.150	0.004
Bore/Drill Rigs	750	0.157	1.087	2.373	0.005	0.081	0.074	525.240	0.155	0.004
Bore/Drill Rigs	1000	0.105	0.951	2.984	0.005	0.058	0.054	516.600	0.153	0.004
Cement and Mortar Mixers	15	0.666	3.469	4.191	0.008	0.177	0.177	568.299	0.060	0.005
Cement and Mortar Mixers	25	0.837	2.570	4.793	0.007	0.253	0.253	568.299	0.075	0.005
Concrete/Industrial Saws	25	0.685	2.339	4.332	0.007	0.164	0.164	568.299	0.061	0.005
Concrete/Industrial Saws	50	1.626	5.313	5.172	0.007	0.424	0.424	568.299	0.146	0.005
Concrete/Industrial Saws	120	0.749	3.675	5.160	0.006	0.412	0.412	568.299	0.067	0.004
Concrete/Industrial Saws	175	0.517	3.080	4.531	0.006	0.228	0.228	568.299	0.046	0.004
Cranes	50	2.115	7.126	6.093	0.005	0.607	0.559	567.006	0.168	0.005
Cranes	120	1.245	4.923	10.302	0.005	0.765	0.704	514.029	0.152	0.004
Cranes	175	0.793	3.932	8.471	0.005	0.457	0.421	519.511	0.154	0.004
Cranes	250	0.661	2.726	7.860	0.005	0.360	0.331	517.683	0.153	0.004
Cranes	500	0.483	4.177	6.264	0.005	0.260	0.239	516.578	0.153	0.004
Cranes	750	0.280	1.635	4.327	0.005	0.151	0.139	515.607	0.152	0.004
Cranes	9999	0.120	0.948	2.281	0.005	0.054	0.050	516.638	0.153	0.004
Crawler Tractors	50	2.521	8.047	6.396	0.005	0.743	0.684	564.564	0.167	0.005
Crawler Tractors	120	0.884	4.168	7.524	0.005	0.629	0.578	522.119	0.154	0.004
Crawler Tractors	175	0.629	3.459	6.875	0.005	0.374	0.344	516.404	0.153	0.004
Crawler Tractors	250	0.454	1.838	6.238	0.005	0.241	0.222	518.036	0.153	0.004
Crawler Tractors	500	0.412	2.911	5.616	0.005	0.217	0.200	520.515	0.154	0.004
Crawler Tractors	750	0.347	1.675	4.895	0.005	0.179	0.164	517.861	0.153	0.004
Crawler Tractors	1000	0.475	2.080	7.426	0.005	0.218	0.201	520.005	0.154	0.004
Crushing/Proc. Equipment	50	2.012	6.212	5.399	0.007	0.494	0.494	568.299	0.181	0.005

2014

2014		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Crushing/Proc. Equipment	120	0.877	3.898	5.468	0.006	0.481	0.481	568.299	0.079	0.004
Crushing/Proc. Equipment	175	0.612	3.256	4.823	0.006	0.265	0.265	568.299	0.055	0.004
Crushing/Proc. Equipment	250	0.405	1.228	4.239	0.006	0.130	0.130	568.299	0.036	0.004
Crushing/Proc. Equipment	500	0.377	1.230	3.702	0.005	0.121	0.121	568.299	0.034	0.004
Crushing/Proc. Equipment	750	0.378	1.218	3.844	0.005	0.123	0.123	568.299	0.034	0.004
Crushing/Proc. Equipment	9999	0.456	1.460	5.391	0.005	0.155	0.155	568.299	0.041	0.004
Dumpers/Tenders	25	0.705	2.364	4.433	0.007	0.200	0.200	568.300	0.063	0.005
Excavators	25	0.825	4.844	4.965	0.005	0.380	0.350	575.267	0.170	0.005
Excavators	50	0.825	4.844	4.965	0.005	0.380	0.350	575.267	0.170	0.005
Excavators	120	0.513	3.663	5.131	0.005	0.382	0.352	511.306	0.151	0.004
Excavators	175	0.390	3.154	4.657	0.005	0.229	0.211	516.907	0.153	0.004
Excavators	250	0.294	1.346	4.374	0.005	0.139	0.128	517.323	0.153	0.004
Excavators	500	0.233	1.327	3.353	0.005	0.108	0.099	515.215	0.152	0.004
Excavators	750	0.239	1.347	3.541	0.005	0.114	0.105	511.945	0.151	0.004
Forklifts	50	2.114	7.321	6.006	0.005	0.656	0.604	575.112	0.170	0.005
Forklifts	120	0.795	4.079	6.848	0.005	0.574	0.528	516.062	0.153	0.004
Forklifts	175	0.578	3.521	6.352	0.005	0.345	0.318	516.694	0.153	0.004
Forklifts	250	0.615	2.501	7.276	0.005	0.330	0.304	518.028	0.153	0.004
Forklifts	500	0.541	4.252	6.353	0.005	0.289	0.266	518.345	0.153	0.004
Generator Sets	15	0.783	3.723	5.369	0.008	0.298	0.298	568.299	0.070	0.005
Generator Sets	25	0.821	2.780	5.000	0.007	0.272	0.272	568.299	0.074	0.005
Generator Sets	50	1.427	4.683	5.048	0.007	0.389	0.389	568.299	0.128	0.005
Generator Sets	120	0.721	3.532	5.147	0.006	0.385	0.385	568.299	0.065	0.004
Generator Sets	175	0.486	2.945	4.565	0.006	0.212	0.212	568.299	0.043	0.004
Generator Sets	250	0.311	1.130	4.025	0.006	0.111	0.111	568.300	0.028	0.004
Generator Sets	500	0.279	1.157	3.603	0.005	0.104	0.104	568.299	0.025	0.004
Generator Sets	750	0.289	1.157	3.724	0.005	0.106	0.106	568.299	0.026	0.004
Generator Sets	9999	0.389	1.377	5.150	0.005	0.138	0.138	568.299	0.035	0.004
Graders	50	3.094	9.065	6.550	0.005	0.867	0.798	539.122	0.159	0.005
Graders	120	1.269	4.920	9.986	0.005	0.832	0.765	515.382	0.152	0.004
Graders	175	0.847	3.951	8.702	0.005	0.488	0.449	527.834	0.156	0.004
Graders	250	0.390	1.462	5.740	0.005	0.185	0.171	522.330	0.154	0.004
Graders	500	0.314	1.791	3.714	0.005	0.143	0.131	517.377	0.153	0.004
Graders	750	0.437	1.483	3.876	0.005	0.138	0.138	568.299	0.039	0.004
Off-Highway Tractors	120	0.698	3.972	6.281	0.005	0.513	0.472	520.824	0.154	0.004
Off-Highway Tractors	175	0.424	3.265	5.025	0.005	0.258	0.237	518.164	0.153	0.004
Off-Highway Tractors	250	0.405	1.628	5.661	0.005	0.203	0.187	514.370	0.152	0.004
Off-Highway Tractors	750	0.267	1.334	4.007	0.005	0.133	0.122	516.904	0.153	0.004
Off-Highway Tractors	1000	0.085	0.947	2.279	0.005	0.054	0.050	516.638	0.153	0.004
Off-Highway Trucks	175	0.513	3.473	5.219	0.005	0.292	0.269	514.057	0.152	0.004
Off-Highway Trucks	250	0.483	1.932	5.441	0.005	0.236	0.217	512.833	0.152	0.004
Off-Highway Trucks	500	0.393	2.075	4.686	0.005	0.180	0.165	521.057	0.154	0.004
Off-Highway Trucks	750	0.485	2.953	5.578	0.005	0.231	0.212	521.230	0.154	0.004
Off-Highway Trucks	1000	0.415	1.779	6.365	0.005	0.187	0.172	516.939	0.153	0.004
Other Construction Equipment	15	1.301	5.602	5.565	0.005	0.502	0.462	578.959	0.171	0.005
Other Construction Equipment	25	1.301	5.602	5.565	0.005	0.502	0.462	578.959	0.171	0.005

2014

2014		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Other Construction Equipment	50	1.301	5.602	5.565	0.005	0.502	0.462	578.959	0.171	0.005
Other Construction Equipment	120	0.729	3.906	6.633	0.005	0.518	0.476	515.285	0.152	0.004
Other Construction Equipment	175	0.567	3.385	6.372	0.005	0.333	0.307	514.552	0.152	0.004
Other Construction Equipment	500	0.330	2.476	4.561	0.005	0.168	0.155	520.944	0.154	0.004
Other General Industrial Equipment	15	1.521	6.288	5.584	0.005	0.544	0.500	575.871	0.170	0.005
Other General Industrial Equipment	25	1.521	6.288	5.584	0.005	0.544	0.500	575.871	0.170	0.005
Other General Industrial Equipment	50	1.521	6.288	5.584	0.005	0.544	0.500	575.871	0.170	0.005
Other General Industrial Equipment	120	0.789	4.090	6.723	0.005	0.574	0.528	514.389	0.152	0.004
Other General Industrial Equipment	175	0.523	3.469	5.792	0.005	0.312	0.287	516.414	0.153	0.004
Other General Industrial Equipment	250	0.488	2.054	6.153	0.005	0.255	0.234	517.916	0.153	0.004
Other General Industrial Equipment	500	0.355	2.499	4.565	0.005	0.172	0.159	517.595	0.153	0.004
Other General Industrial Equipment	750	0.256	1.489	3.622	0.005	0.115	0.106	518.180	0.153	0.004
Other General Industrial Equipment	1000	0.346	1.080	6.379	0.005	0.167	0.153	516.638	0.153	0.004
Other Material Handling Equipment	50	1.695	6.590	5.751	0.005	0.575	0.529	573.170	0.169	0.005
Other Material Handling Equipment	120	0.558	3.779	5.372	0.005	0.412	0.379	518.316	0.153	0.004
Other Material Handling Equipment	175	0.528	3.431	5.798	0.005	0.313	0.288	516.818	0.153	0.004
Other Material Handling Equipment	250	0.475	1.936	6.173	0.005	0.242	0.223	516.011	0.153	0.004
Other Material Handling Equipment	500	0.331	1.927	4.357	0.005	0.169	0.155	514.714	0.152	0.004
Other Material Handling Equipment	9999	0.141	0.978	3.436	0.005	0.067	0.061	516.638	0.153	0.004
Pavers	25	1.898	6.381	5.717	0.005	0.595	0.547	577.016	0.171	0.005
Pavers	50	1.898	6.381	5.717	0.005	0.595	0.547	577.016	0.171	0.005
Pavers	120	0.683	3.773	6.199	0.005	0.483	0.444	514.377	0.152	0.004
Pavers	175	0.502	3.115	5.736	0.005	0.287	0.264	516.745	0.153	0.004
Pavers	250	0.208	1.023	4.140	0.005	0.105	0.097	518.723	0.153	0.004
Pavers	500	0.180	1.005	3.047	0.005	0.101	0.093	512.191	0.151	0.004
Paving Equipment	25	1.053	4.952	5.184	0.005	0.437	0.402	569.482	0.168	0.005
Paving Equipment	50	1.053	4.952	5.184	0.005	0.437	0.402	569.482	0.168	0.005
Paving Equipment	120	0.677	3.837	6.370	0.005	0.486	0.447	518.076	0.153	0.004
Paving Equipment	175	0.415	3.097	5.216	0.005	0.249	0.229	515.034	0.152	0.004
Paving Equipment	250	0.310	1.370	4.782	0.005	0.158	0.146	516.900	0.153	0.004
Plate Compactors	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005

2014

2014		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Pressure Washers	15	0.783	3.723	5.369	0.008	0.298	0.298	568.299	0.070	0.005
Pressure Washers	25	0.821	2.780	5.000	0.007	0.272	0.272	568.299	0.074	0.005
Pressure Washers	50	1.096	3.951	4.873	0.007	0.332	0.332	568.299	0.098	0.005
Pressure Washers	120	0.634	3.367	4.912	0.006	0.332	0.332	568.299	0.057	0.004
Pressure Washers	175	0.469	2.923	4.513	0.006	0.206	0.206	568.299	0.042	0.004
Pressure Washers	250	0.137	0.986	1.047	0.006	0.014	0.014	568.299	0.012	0.004
Pumps	15	0.891	3.723	5.445	0.008	0.341	0.341	568.299	0.080	0.005
Pumps	25	0.960	2.780	5.000	0.007	0.291	0.291	568.299	0.086	0.005
Pumps	50	1.538	4.929	5.107	0.007	0.409	0.409	568.299	0.138	0.005
Pumps	120	0.751	3.587	5.226	0.006	0.403	0.403	568.299	0.067	0.004
Pumps	175	0.508	2.989	4.635	0.006	0.222	0.222	568.299	0.045	0.004
Pumps	250	0.326	1.149	4.090	0.006	0.115	0.115	568.299	0.029	0.004
Pumps	500	0.294	1.181	3.648	0.005	0.108	0.108	568.299	0.026	0.004
Pumps	750	0.303	1.181	3.770	0.005	0.110	0.110	568.299	0.027	0.004
Pumps	9999	0.399	1.406	5.210	0.005	0.141	0.141	568.299	0.036	0.004
Rollers	15	1.308	5.243	5.393	0.005	0.484	0.445	575.795	0.170	0.005
Rollers	25	1.308	5.243	5.393	0.005	0.484	0.445	575.795	0.170	0.005
Rollers	50	1.308	5.243	5.393	0.005	0.484	0.445	575.795	0.170	0.005
Rollers	120	0.695	3.809	6.390	0.005	0.476	0.438	518.787	0.153	0.004
Rollers	175	0.368	2.998	4.724	0.005	0.219	0.202	516.591	0.153	0.004
Rollers	250	0.381	1.760	5.403	0.005	0.191	0.176	517.811	0.153	0.004
Rollers	500	0.378	3.318	5.183	0.005	0.202	0.185	522.052	0.154	0.004
Rough Terrain Forklifts	50	1.182	4.887	5.226	0.005	0.436	0.401	575.353	0.170	0.005
Rough Terrain Forklifts	120	0.351	3.367	4.467	0.005	0.261	0.240	517.260	0.153	0.004
Rough Terrain Forklifts	175	0.221	2.852	3.594	0.005	0.140	0.128	516.091	0.153	0.004
Rough Terrain Forklifts	250	0.186	1.212	2.984	0.005	0.087	0.080	517.766	0.153	0.004
Rough Terrain Forklifts	500	0.170	0.954	3.500	0.005	0.076	0.070	511.657	0.151	0.004
Rubber Tired Dozers	175	0.961	4.226	9.834	0.005	0.563	0.518	518.335	0.153	0.004
Rubber Tired Dozers	250	0.721	2.712	7.972	0.005	0.393	0.361	520.011	0.154	0.004
Rubber Tired Dozers	500	0.707	6.165	8.058	0.005	0.376	0.346	524.676	0.155	0.004
Rubber Tired Dozers	750	0.513	2.756	7.147	0.005	0.258	0.237	517.790	0.153	0.004
Rubber Tired Dozers	1000	0.691	3.096	6.849	0.005	0.236	0.236	568.300	0.062	0.004
Rubber Tired Loaders	25	2.115	7.770	6.103	0.005	0.676	0.622	573.522	0.170	0.005
Rubber Tired Loaders	50	2.115	7.770	6.103	0.005	0.676	0.622	573.522	0.170	0.005
Rubber Tired Loaders	120	0.868	4.268	7.129	0.005	0.619	0.569	510.010	0.151	0.004
Rubber Tired Loaders	175	0.605	3.585	6.272	0.005	0.350	0.322	515.769	0.152	0.004
Rubber Tired Loaders	250	0.407	1.486	5.495	0.005	0.187	0.172	514.217	0.152	0.004
Rubber Tired Loaders	500	0.421	2.407	5.194	0.005	0.196	0.180	512.510	0.152	0.004
Rubber Tired Loaders	750	0.406	1.946	4.810	0.005	0.190	0.175	499.695	0.148	0.004
Rubber Tired Loaders	1000	0.414	1.457	6.692	0.005	0.195	0.179	515.307	0.152	0.004
Scrapers	120	0.719	4.100	7.065	0.005	0.526	0.484	529.945	0.157	0.004
Scrapers	175	0.718	3.807	7.907	0.005	0.419	0.385	524.171	0.155	0.004
Scrapers	250	0.742	3.061	8.815	0.005	0.403	0.371	512.853	0.152	0.004
Scrapers	500	0.479	3.898	6.233	0.005	0.251	0.231	517.361	0.153	0.004
Scrapers	750	0.369	2.846	5.012	0.005	0.190	0.174	517.394	0.153	0.004
Signal Boards	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Signal Boards	50	1.625	5.231	5.139	0.007	0.422	0.422	568.299	0.146	0.005
Signal Boards	120	0.759	3.658	5.186	0.006	0.414	0.414	568.299	0.068	0.004

2014

2014		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Signal Boards	175	0.520	3.058	4.582	0.006	0.228	0.228	568.299	0.046	0.004
Signal Boards	250	0.408	1.402	4.857	0.007	0.141	0.141	686.695	0.036	0.004
Skid Steer Loaders	25	0.664	4.016	4.541	0.005	0.286	0.263	577.076	0.171	0.005
Skid Steer Loaders	50	0.664	4.016	4.541	0.005	0.286	0.263	577.076	0.171	0.005
Skid Steer Loaders	120	0.304	3.338	4.013	0.005	0.235	0.216	517.062	0.153	0.004
Surfacing Equipment	50	1.141	4.877	5.425	0.006	0.434	0.400	582.725	0.172	0.005
Surfacing Equipment	120	0.559	3.580	5.520	0.005	0.391	0.360	516.338	0.153	0.004
Surfacing Equipment	175	0.472	3.012	5.711	0.005	0.273	0.251	515.820	0.152	0.004
Surfacing Equipment	250	0.306	1.434	5.102	0.005	0.149	0.137	521.452	0.154	0.004
Surfacing Equipment	500	0.237	1.501	3.895	0.005	0.126	0.116	513.616	0.152	0.004
Surfacing Equipment	750	0.174	1.020	3.284	0.005	0.103	0.095	516.321	0.153	0.004
Sweepers/Scrubbers	15	1.767	6.592	5.752	0.005	0.603	0.555	574.943	0.170	0.005
Sweepers/Scrubbers	25	1.767	6.592	5.752	0.005	0.603	0.555	574.943	0.170	0.005
Sweepers/Scrubbers	50	1.767	6.592	5.752	0.005	0.603	0.555	574.943	0.170	0.005
Sweepers/Scrubbers	120	0.833	4.071	6.934	0.005	0.610	0.562	518.893	0.153	0.004
Sweepers/Scrubbers	175	0.875	4.042	9.108	0.005	0.503	0.463	517.806	0.153	0.004
Sweepers/Scrubbers	250	0.505	2.066	6.704	0.005	0.265	0.244	514.527	0.152	0.004
Tractors/Loaders/Backhoes	25	1.336	5.772	5.369	0.005	0.488	0.449	564.042	0.167	0.005
Tractors/Loaders/Backhoes	50	1.336	5.772	5.369	0.005	0.488	0.449	564.042	0.167	0.005
Tractors/Loaders/Backhoes	120	0.582	3.827	5.581	0.005	0.438	0.403	523.017	0.155	0.004
Tractors/Loaders/Backhoes	175	0.423	3.239	4.938	0.005	0.248	0.229	513.890	0.152	0.004
Tractors/Loaders/Backhoes	250	0.327	1.376	4.922	0.005	0.159	0.146	515.175	0.152	0.004
Tractors/Loaders/Backhoes	500	0.312	1.878	4.488	0.005	0.152	0.140	517.124	0.153	0.004
Tractors/Loaders/Backhoes	750	0.305	1.833	4.243	0.005	0.154	0.141	511.337	0.151	0.004
Trenchers	15	1.268	5.293	5.455	0.005	0.501	0.461	577.728	0.171	0.005
Trenchers	25	1.268	5.293	5.455	0.005	0.501	0.461	577.728	0.171	0.005
Trenchers	50	1.268	5.293	5.455	0.005	0.501	0.461	577.728	0.171	0.005
Trenchers	120	0.818	3.999	7.217	0.005	0.563	0.518	520.766	0.154	0.004
Trenchers	175	0.693	3.668	7.699	0.005	0.395	0.364	512.148	0.151	0.004
Trenchers	250	0.497	2.070	6.484	0.005	0.258	0.237	517.719	0.153	0.004
Trenchers	500	0.306	2.035	4.370	0.005	0.161	0.148	513.744	0.152	0.004
Trenchers	750	0.118	0.964	1.825	0.005	0.061	0.056	519.658	0.154	0.004
Welders	15	0.891	3.723	5.445	0.008	0.341	0.341	568.300	0.080	0.005
Welders	25	0.960	2.780	5.000	0.007	0.291	0.291	568.299	0.086	0.005
Welders	50	1.900	5.749	5.308	0.007	0.473	0.473	568.300	0.171	0.005
Welders	120	0.849	3.774	5.481	0.006	0.464	0.464	568.299	0.076	0.004
Welders	175	0.581	3.141	4.862	0.006	0.255	0.255	568.299	0.052	0.004
Welders	250	0.376	1.207	4.297	0.006	0.128	0.128	568.299	0.034	0.004
Welders	500	0.343	1.227	3.788	0.005	0.119	0.119	568.299	0.031	0.004
Water Trucks	175	0.513	3.473	5.219	0.005	0.292	0.269	514.057	0.152	0.004
Water Trucks	250	0.483	1.932	5.441	0.005	0.236	0.217	512.833	0.152	0.004
Water Trucks	500	0.393	2.075	4.686	0.005	0.180	0.165	521.057	0.154	0.004
Water Trucks	750	0.485	2.953	5.578	0.005	0.231	0.212	521.230	0.154	0.004
Water Trucks	1000	0.415	1.779	6.365	0.005	0.187	0.172	516.939	0.153	0.004

2015

2015		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Aerial Lifts	15	0.248	3.233	3.933	0.005	0.136	0.125	568.831	0.170	0.005
Aerial Lifts	25	0.248	3.233	3.933	0.005	0.136	0.125	568.831	0.170	0.005
Aerial Lifts	50	0.248	3.233	3.933	0.005	0.136	0.125	568.831	0.170	0.005
Aerial Lifts	120	0.191	3.218	3.113	0.005	0.143	0.132	511.457	0.153	0.004
Aerial Lifts	500	0.239	0.988	4.621	0.005	0.102	0.094	511.392	0.153	0.004
Aerial Lifts	750	0.278	1.130	3.380	0.005	0.098	0.098	568.299	0.025	0.004
Air Compressors	15	0.840	3.658	5.196	0.008	0.311	0.311	568.299	0.075	0.005
Air Compressors	25	0.894	2.666	4.890	0.007	0.270	0.270	568.299	0.080	0.005
Air Compressors	50	1.868	5.968	5.223	0.007	0.459	0.459	568.299	0.168	0.005
Air Compressors	120	0.821	3.840	5.190	0.006	0.446	0.446	568.299	0.074	0.004
Air Compressors	175	0.571	3.218	4.504	0.006	0.245	0.245	568.299	0.051	0.004
Air Compressors	250	0.381	1.207	3.967	0.006	0.121	0.121	568.299	0.034	0.004
Air Compressors	500	0.354	1.198	3.455	0.005	0.113	0.113	568.300	0.032	0.004
Air Compressors	750	0.358	1.198	3.586	0.005	0.116	0.116	568.299	0.032	0.004
Air Compressors	1000	0.409	1.370	5.157	0.005	0.142	0.142	568.299	0.036	0.004
Bore/Drill Rigs	15	0.847	4.735	5.303	0.006	0.379	0.349	585.171	0.175	0.005
Bore/Drill Rigs	25	0.847	4.735	5.303	0.006	0.379	0.349	585.171	0.175	0.005
Bore/Drill Rigs	50	0.847	4.735	5.303	0.006	0.379	0.349	585.171	0.175	0.005
Bore/Drill Rigs	120	0.318	3.335	4.028	0.005	0.239	0.220	496.949	0.148	0.004
Bore/Drill Rigs	175	0.302	3.035	3.904	0.005	0.176	0.162	517.207	0.154	0.004
Bore/Drill Rigs	250	0.213	1.178	3.325	0.005	0.100	0.092	506.505	0.151	0.004
Bore/Drill Rigs	500	0.199	1.256	3.003	0.005	0.096	0.088	499.902	0.149	0.004
Bore/Drill Rigs	750	0.162	1.105	2.376	0.005	0.081	0.074	520.473	0.155	0.004
Bore/Drill Rigs	1000	0.109	0.956	2.994	0.005	0.059	0.054	511.253	0.153	0.004
Cement and Mortar Mixers	15	0.663	3.469	4.168	0.008	0.171	0.171	568.300	0.059	0.005
Cement and Mortar Mixers	25	0.811	2.531	4.712	0.007	0.240	0.240	568.299	0.073	0.005
Concrete/Industrial Saws	25	0.685	2.339	4.332	0.007	0.162	0.162	568.299	0.061	0.005
Concrete/Industrial Saws	50	1.470	5.165	4.989	0.007	0.386	0.386	568.299	0.132	0.005
Concrete/Industrial Saws	120	0.683	3.647	4.789	0.006	0.372	0.372	568.300	0.061	0.004
Concrete/Industrial Saws	175	0.475	3.077	4.112	0.006	0.207	0.207	568.299	0.042	0.004
Cranes	50	2.087	7.125	6.075	0.005	0.601	0.553	561.224	0.168	0.005
Cranes	120	1.214	4.884	10.060	0.005	0.747	0.687	508.837	0.152	0.004
Cranes	175	0.782	3.918	8.325	0.005	0.450	0.414	514.260	0.154	0.004
Cranes	250	0.642	2.653	7.622	0.005	0.348	0.320	512.448	0.153	0.004
Cranes	500	0.475	4.110	6.124	0.005	0.253	0.233	511.197	0.153	0.004
Cranes	750	0.286	1.643	4.312	0.005	0.152	0.140	510.334	0.152	0.004
Cranes	9999	0.131	0.957	2.295	0.005	0.055	0.051	511.392	0.153	0.004
Crawler Tractors	50	2.513	8.076	6.377	0.005	0.741	0.682	558.888	0.167	0.005
Crawler Tractors	120	0.885	4.189	7.494	0.005	0.630	0.580	516.843	0.154	0.004
Crawler Tractors	175	0.632	3.479	6.849	0.005	0.376	0.346	511.306	0.153	0.004
Crawler Tractors	250	0.451	1.816	6.143	0.005	0.237	0.218	512.897	0.153	0.004
Crawler Tractors	500	0.408	2.845	5.483	0.005	0.212	0.195	515.373	0.154	0.004
Crawler Tractors	750	0.351	1.664	4.883	0.005	0.179	0.165	512.540	0.153	0.004
Crawler Tractors	1000	0.479	2.088	7.463	0.005	0.220	0.202	514.830	0.154	0.004
Crushing/Proc. Equipment	50	1.796	5.996	5.195	0.007	0.446	0.446	568.299	0.162	0.005

2015

2015		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Crushing/Proc. Equipment	120	0.797	3.859	5.040	0.006	0.430	0.430	568.299	0.071	0.004
Crushing/Proc. Equipment	175	0.562	3.247	4.343	0.006	0.237	0.237	568.299	0.050	0.004
Crushing/Proc. Equipment	250	0.382	1.201	3.801	0.006	0.117	0.117	568.299	0.034	0.004
Crushing/Proc. Equipment	500	0.358	1.184	3.304	0.005	0.109	0.109	568.299	0.032	0.004
Crushing/Proc. Equipment	750	0.358	1.176	3.422	0.005	0.111	0.111	568.299	0.032	0.004
Crushing/Proc. Equipment	9999	0.422	1.343	5.019	0.005	0.140	0.140	568.299	0.038	0.004
Dumpers/Tenders	25	0.696	2.350	4.402	0.007	0.187	0.187	568.299	0.062	0.005
Excavators	25	0.833	4.925	4.918	0.005	0.375	0.345	569.512	0.170	0.005
Excavators	50	0.833	4.925	4.918	0.005	0.375	0.345	569.512	0.170	0.005
Excavators	120	0.507	3.679	5.019	0.005	0.374	0.344	506.173	0.151	0.004
Excavators	175	0.384	3.168	4.481	0.005	0.221	0.204	511.687	0.153	0.004
Excavators	250	0.289	1.331	4.182	0.005	0.133	0.122	512.056	0.153	0.004
Excavators	500	0.232	1.317	3.214	0.005	0.104	0.096	509.868	0.152	0.004
Excavators	750	0.242	1.354	3.473	0.005	0.113	0.104	506.682	0.151	0.004
Forklifts	50	2.073	7.300	5.931	0.005	0.643	0.591	569.274	0.170	0.005
Forklifts	120	0.768	4.063	6.601	0.005	0.555	0.510	510.823	0.153	0.004
Forklifts	175	0.566	3.520	6.135	0.005	0.335	0.308	511.448	0.153	0.004
Forklifts	250	0.565	2.325	6.697	0.005	0.298	0.274	512.769	0.153	0.004
Forklifts	500	0.454	3.300	5.332	0.005	0.237	0.218	513.083	0.153	0.004
Generator Sets	15	0.747	3.658	5.141	0.008	0.280	0.280	568.299	0.067	0.005
Generator Sets	25	0.793	2.666	4.890	0.007	0.256	0.256	568.299	0.071	0.005
Generator Sets	50	1.281	4.538	4.858	0.007	0.353	0.353	568.299	0.115	0.005
Generator Sets	120	0.651	3.499	4.769	0.006	0.347	0.347	568.299	0.058	0.004
Generator Sets	175	0.440	2.938	4.138	0.006	0.191	0.191	568.299	0.039	0.004
Generator Sets	250	0.287	1.104	3.633	0.006	0.100	0.100	568.300	0.025	0.004
Generator Sets	500	0.258	1.114	3.231	0.005	0.094	0.094	568.299	0.023	0.004
Generator Sets	750	0.267	1.114	3.347	0.005	0.096	0.096	568.299	0.024	0.004
Generator Sets	9999	0.351	1.269	4.822	0.005	0.124	0.124	568.299	0.031	0.004
Graders	50	3.119	9.144	6.570	0.005	0.874	0.804	533.681	0.159	0.005
Graders	120	1.239	4.884	9.738	0.005	0.813	0.748	509.597	0.152	0.004
Graders	175	0.844	3.958	8.637	0.005	0.486	0.447	522.218	0.156	0.004
Graders	250	0.396	1.466	5.728	0.005	0.186	0.171	517.128	0.154	0.004
Graders	500	0.326	1.791	3.721	0.005	0.144	0.133	512.098	0.153	0.004
Graders	750	0.414	1.420	3.501	0.005	0.124	0.124	568.299	0.037	0.004
Off-Highway Tractors	120	0.674	3.965	6.067	0.005	0.494	0.455	515.320	0.154	0.004
Off-Highway Tractors	175	0.402	3.264	4.724	0.005	0.239	0.220	512.608	0.153	0.004
Off-Highway Tractors	250	0.400	1.605	5.528	0.005	0.199	0.183	509.190	0.152	0.004
Off-Highway Tractors	750	0.262	1.172	3.874	0.005	0.126	0.116	511.081	0.153	0.004
Off-Highway Tractors	1000	0.096	0.960	2.300	0.005	0.056	0.051	511.392	0.153	0.004
Off-Highway Trucks	175	0.508	3.489	5.104	0.005	0.284	0.262	508.701	0.152	0.004
Off-Highway Trucks	250	0.473	1.900	5.242	0.005	0.227	0.209	507.809	0.152	0.004
Off-Highway Trucks	500	0.385	2.037	4.528	0.005	0.173	0.159	515.842	0.154	0.004
Off-Highway Trucks	750	0.452	2.620	5.124	0.005	0.209	0.192	514.644	0.154	0.004
Off-Highway Trucks	1000	0.411	1.772	6.280	0.005	0.185	0.170	511.137	0.153	0.004
Other Construction Equipment	15	1.309	5.681	5.564	0.005	0.503	0.463	573.020	0.171	0.005
Other Construction Equipment	25	1.309	5.681	5.564	0.005	0.503	0.463	573.020	0.171	0.005

2015

2015		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Other Construction Equipment	50	1.309	5.681	5.564	0.005	0.503	0.463	573.020	0.171	0.005
Other Construction Equipment	120	0.723	3.916	6.536	0.005	0.512	0.471	510.171	0.152	0.004
Other Construction Equipment	175	0.557	3.382	6.231	0.005	0.326	0.300	509.307	0.152	0.004
Other Construction Equipment	500	0.324	2.407	4.415	0.005	0.163	0.150	515.195	0.154	0.004
Other General Industrial Equipment	15	1.495	6.325	5.524	0.005	0.532	0.490	570.024	0.170	0.005
Other General Industrial Equipment	25	1.495	6.325	5.524	0.005	0.532	0.490	570.024	0.170	0.005
Other General Industrial Equipment	50	1.495	6.325	5.524	0.005	0.532	0.490	570.024	0.170	0.005
Other General Industrial Equipment	120	0.761	4.081	6.502	0.005	0.553	0.509	509.166	0.152	0.004
Other General Industrial Equipment	175	0.495	3.454	5.397	0.005	0.294	0.270	511.171	0.153	0.004
Other General Industrial Equipment	250	0.452	1.926	5.643	0.005	0.230	0.211	512.658	0.153	0.004
Other General Industrial Equipment	500	0.353	2.436	4.425	0.005	0.167	0.154	512.340	0.153	0.004
Other General Industrial Equipment	750	0.251	1.491	3.365	0.005	0.109	0.100	512.919	0.153	0.004
Other General Industrial Equipment	1000	0.355	1.094	6.448	0.005	0.171	0.158	511.392	0.153	0.004
Other Material Handling Equipment	50	1.733	6.756	5.799	0.005	0.586	0.539	567.351	0.169	0.005
Other Material Handling Equipment	120	0.528	3.758	4.983	0.005	0.383	0.352	513.054	0.153	0.004
Other Material Handling Equipment	175	0.525	3.433	5.645	0.005	0.306	0.282	511.571	0.153	0.004
Other Material Handling Equipment	250	0.423	1.742	5.532	0.005	0.207	0.191	510.772	0.153	0.004
Other Material Handling Equipment	500	0.333	1.918	4.272	0.005	0.166	0.152	509.489	0.152	0.004
Other Material Handling Equipment	9999	0.148	0.984	3.458	0.005	0.068	0.063	511.392	0.153	0.004
Pavers	25	1.853	6.340	5.637	0.005	0.579	0.533	571.086	0.171	0.005
Pavers	50	1.853	6.340	5.637	0.005	0.579	0.533	571.086	0.171	0.005
Pavers	120	0.680	3.788	6.141	0.005	0.479	0.441	509.377	0.152	0.004
Pavers	175	0.489	3.115	5.537	0.005	0.277	0.255	511.646	0.153	0.004
Pavers	250	0.214	1.031	4.161	0.005	0.107	0.098	513.468	0.153	0.004
Pavers	500	0.176	0.978	2.917	0.005	0.097	0.089	506.097	0.151	0.004
Paving Equipment	25	0.981	4.869	5.028	0.005	0.407	0.374	563.553	0.168	0.005
Paving Equipment	50	0.981	4.869	5.028	0.005	0.407	0.374	563.553	0.168	0.005
Paving Equipment	120	0.661	3.833	6.145	0.005	0.471	0.433	513.167	0.153	0.004
Paving Equipment	175	0.411	3.104	4.966	0.005	0.242	0.223	509.894	0.152	0.004
Paving Equipment	250	0.315	1.379	4.772	0.005	0.159	0.146	511.654	0.153	0.004
Plate Compactors	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005

2015

2015		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Pressure Washers	15	0.747	3.657	5.141	0.008	0.280	0.280	568.299	0.067	0.005
Pressure Washers	25	0.793	2.666	4.890	0.007	0.256	0.256	568.299	0.071	0.005
Pressure Washers	50	0.976	3.833	4.685	0.007	0.300	0.300	568.299	0.088	0.005
Pressure Washers	120	0.567	3.336	4.551	0.006	0.297	0.297	568.299	0.051	0.004
Pressure Washers	175	0.427	2.917	4.115	0.006	0.187	0.187	568.299	0.038	0.004
Pressure Washers	250	0.121	0.986	0.690	0.006	0.010	0.010	568.299	0.010	0.004
Pumps	15	0.840	3.658	5.196	0.008	0.311	0.311	568.299	0.075	0.005
Pumps	25	0.894	2.666	4.890	0.007	0.270	0.270	568.299	0.080	0.005
Pumps	50	1.384	4.775	4.916	0.007	0.371	0.371	568.300	0.124	0.005
Pumps	120	0.679	3.554	4.842	0.006	0.364	0.364	568.300	0.061	0.004
Pumps	175	0.461	2.983	4.202	0.006	0.200	0.200	568.299	0.041	0.004
Pumps	250	0.302	1.122	3.693	0.006	0.104	0.104	568.299	0.027	0.004
Pumps	500	0.273	1.134	3.272	0.005	0.097	0.097	568.299	0.024	0.004
Pumps	750	0.281	1.134	3.389	0.005	0.099	0.099	568.299	0.025	0.004
Pumps	9999	0.363	1.293	4.878	0.005	0.127	0.127	568.299	0.032	0.004
Rollers	15	1.311	5.290	5.365	0.005	0.481	0.443	569.921	0.170	0.005
Rollers	25	1.311	5.290	5.365	0.005	0.481	0.443	569.921	0.170	0.005
Rollers	50	1.311	5.290	5.365	0.005	0.481	0.443	569.921	0.170	0.005
Rollers	120	0.683	3.809	6.272	0.005	0.467	0.430	513.505	0.153	0.004
Rollers	175	0.364	3.006	4.630	0.005	0.216	0.198	511.394	0.153	0.004
Rollers	250	0.347	1.650	4.932	0.005	0.171	0.157	512.823	0.153	0.004
Rollers	500	0.371	3.245	5.031	0.005	0.195	0.179	517.285	0.154	0.004
Rough Terrain Forklifts	50	1.189	4.933	5.190	0.005	0.431	0.397	569.488	0.170	0.005
Rough Terrain Forklifts	120	0.338	3.366	4.280	0.005	0.247	0.228	512.086	0.153	0.004
Rough Terrain Forklifts	175	0.217	2.859	3.420	0.005	0.133	0.122	510.854	0.153	0.004
Rough Terrain Forklifts	250	0.140	1.012	2.463	0.005	0.058	0.054	512.164	0.153	0.004
Rough Terrain Forklifts	500	0.174	0.958	3.521	0.005	0.077	0.071	506.435	0.151	0.004
Rubber Tired Dozers	175	0.965	4.238	9.844	0.005	0.564	0.519	513.055	0.153	0.004
Rubber Tired Dozers	250	0.728	2.720	7.984	0.005	0.394	0.362	514.736	0.154	0.004
Rubber Tired Dozers	500	0.708	6.102	7.997	0.005	0.373	0.343	519.147	0.155	0.004
Rubber Tired Dozers	750	0.518	2.761	7.158	0.005	0.259	0.238	512.525	0.153	0.004
Rubber Tired Dozers	1000	0.661	2.901	6.556	0.005	0.222	0.222	568.299	0.059	0.004
Rubber Tired Loaders	25	2.108	7.834	6.112	0.005	0.675	0.621	567.672	0.170	0.005
Rubber Tired Loaders	50	2.108	7.834	6.112	0.005	0.675	0.621	567.672	0.170	0.005
Rubber Tired Loaders	120	0.856	4.274	7.012	0.005	0.606	0.558	505.023	0.151	0.004
Rubber Tired Loaders	175	0.595	3.588	6.097	0.005	0.341	0.313	510.468	0.152	0.004
Rubber Tired Loaders	250	0.406	1.480	5.369	0.005	0.183	0.169	508.913	0.152	0.004
Rubber Tired Loaders	500	0.415	2.332	5.020	0.005	0.190	0.174	506.372	0.151	0.004
Rubber Tired Loaders	750	0.395	1.789	4.556	0.005	0.179	0.165	495.310	0.148	0.004
Rubber Tired Loaders	1000	0.420	1.462	6.713	0.005	0.197	0.181	510.045	0.152	0.004
Scrapers	120	0.731	4.137	7.105	0.005	0.535	0.492	524.560	0.157	0.004
Scrapers	175	0.714	3.809	7.765	0.005	0.415	0.382	518.829	0.155	0.004
Scrapers	250	0.730	3.008	8.663	0.005	0.395	0.364	507.570	0.152	0.004
Scrapers	500	0.472	3.788	6.086	0.005	0.246	0.226	511.947	0.153	0.004
Scrapers	750	0.360	2.685	4.839	0.005	0.182	0.167	512.084	0.153	0.004
Signal Boards	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Signal Boards	50	1.461	5.068	4.943	0.007	0.382	0.382	568.299	0.131	0.005
Signal Boards	120	0.687	3.624	4.791	0.006	0.371	0.371	568.299	0.062	0.004

2015

2015		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Signal Boards	175	0.474	3.052	4.136	0.006	0.205	0.205	568.299	0.042	0.004
Signal Boards	250	0.380	1.371	4.365	0.007	0.127	0.127	686.695	0.034	0.004
Skid Steer Loaders	25	0.639	4.004	4.436	0.005	0.267	0.246	571.420	0.171	0.005
Skid Steer Loaders	50	0.639	4.004	4.436	0.005	0.267	0.246	571.420	0.171	0.005
Skid Steer Loaders	120	0.294	3.338	3.811	0.005	0.220	0.203	511.595	0.153	0.004
Surfacing Equipment	50	1.028	4.692	5.255	0.006	0.402	0.370	576.771	0.172	0.005
Surfacing Equipment	120	0.548	3.575	5.374	0.005	0.378	0.348	510.142	0.152	0.004
Surfacing Equipment	175	0.477	3.027	5.733	0.005	0.276	0.254	510.548	0.152	0.004
Surfacing Equipment	250	0.310	1.442	5.112	0.005	0.151	0.139	516.058	0.154	0.004
Surfacing Equipment	500	0.241	1.513	3.900	0.005	0.127	0.116	508.399	0.152	0.004
Surfacing Equipment	750	0.178	1.024	3.287	0.005	0.104	0.096	511.116	0.153	0.004
Sweepers/Scrubbers	15	1.808	6.754	5.772	0.005	0.611	0.562	569.106	0.170	0.005
Sweepers/Scrubbers	25	1.808	6.754	5.772	0.005	0.611	0.562	569.106	0.170	0.005
Sweepers/Scrubbers	50	1.808	6.754	5.772	0.005	0.611	0.562	569.106	0.170	0.005
Sweepers/Scrubbers	120	0.833	4.097	6.886	0.005	0.610	0.561	513.625	0.153	0.004
Sweepers/Scrubbers	175	0.839	3.982	8.697	0.005	0.479	0.441	512.549	0.153	0.004
Sweepers/Scrubbers	250	0.513	2.078	6.745	0.005	0.268	0.246	509.304	0.152	0.004
Tractors/Loaders/Backhoes	25	1.307	5.791	5.320	0.005	0.477	0.439	558.709	0.167	0.005
Tractors/Loaders/Backhoes	50	1.307	5.791	5.320	0.005	0.477	0.439	558.709	0.167	0.005
Tractors/Loaders/Backhoes	120	0.569	3.832	5.422	0.005	0.424	0.390	517.365	0.155	0.004
Tractors/Loaders/Backhoes	175	0.421	3.256	4.836	0.005	0.244	0.225	508.682	0.152	0.004
Tractors/Loaders/Backhoes	250	0.326	1.374	4.783	0.005	0.155	0.143	509.627	0.152	0.004
Tractors/Loaders/Backhoes	500	0.312	1.884	4.348	0.005	0.149	0.137	511.869	0.153	0.004
Tractors/Loaders/Backhoes	750	0.308	1.823	4.185	0.005	0.152	0.140	506.147	0.151	0.004
Trenchers	15	1.259	5.323	5.406	0.005	0.493	0.454	571.667	0.171	0.005
Trenchers	25	1.259	5.323	5.406	0.005	0.493	0.454	571.667	0.171	0.005
Trenchers	50	1.259	5.323	5.406	0.005	0.493	0.454	571.667	0.171	0.005
Trenchers	120	0.817	4.014	7.179	0.005	0.562	0.517	515.396	0.154	0.004
Trenchers	175	0.697	3.684	7.674	0.005	0.396	0.364	506.943	0.151	0.004
Trenchers	250	0.502	2.080	6.510	0.005	0.260	0.239	512.433	0.153	0.004
Trenchers	500	0.311	2.051	4.383	0.005	0.163	0.150	508.330	0.152	0.004
Trenchers	750	0.114	0.965	1.623	0.005	0.053	0.049	514.400	0.154	0.004
Welders	15	0.840	3.658	5.196	0.008	0.311	0.311	568.299	0.075	0.005
Welders	25	0.894	2.666	4.890	0.007	0.270	0.270	568.299	0.080	0.005
Welders	50	1.715	5.562	5.113	0.007	0.430	0.430	568.300	0.154	0.005
Welders	120	0.772	3.738	5.077	0.006	0.419	0.419	568.299	0.069	0.004
Welders	175	0.532	3.133	4.408	0.006	0.230	0.230	568.299	0.048	0.004
Welders	250	0.352	1.178	3.880	0.006	0.116	0.116	568.299	0.031	0.004
Welders	500	0.324	1.176	3.398	0.005	0.108	0.108	568.299	0.029	0.004
Water Trucks	175	0.508	3.489	5.104	0.005	0.284	0.262	508.701	0.152	0.004
Water Trucks	250	0.473	1.900	5.242	0.005	0.227	0.209	507.809	0.152	0.004
Water Trucks	500	0.385	2.037	4.528	0.005	0.173	0.159	515.842	0.154	0.004
Water Trucks	750	0.452	2.620	5.124	0.005	0.209	0.192	514.644	0.154	0.004
Water Trucks	1000	0.411	1.772	6.280	0.005	0.185	0.170	511.137	0.153	0.004

2016

2016		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Aerial Lifts	15	0.228	3.197	3.676	0.005	0.105	0.096	562.996	0.170	0.005
Aerial Lifts	25	0.228	3.197	3.676	0.005	0.105	0.096	562.996	0.170	0.005
Aerial Lifts	50	0.228	3.197	3.676	0.005	0.105	0.096	562.996	0.170	0.005
Aerial Lifts	120	0.166	3.201	2.722	0.005	0.112	0.103	506.211	0.153	0.004
Aerial Lifts	500	0.243	0.992	4.639	0.005	0.103	0.095	506.147	0.153	0.004
Aerial Lifts	750	0.257	1.089	3.015	0.005	0.088	0.088	568.299	0.023	0.004
Air Compressors	15	0.809	3.622	5.023	0.008	0.289	0.289	568.299	0.073	0.005
Air Compressors	25	0.855	2.604	4.803	0.007	0.255	0.255	568.299	0.077	0.005
Air Compressors	50	1.670	5.779	5.042	0.007	0.415	0.415	568.299	0.150	0.005
Air Compressors	120	0.744	3.804	4.790	0.006	0.397	0.397	568.299	0.067	0.004
Air Compressors	175	0.522	3.211	4.052	0.006	0.219	0.219	568.299	0.047	0.004
Air Compressors	250	0.359	1.182	3.553	0.006	0.109	0.109	568.299	0.032	0.004
Air Compressors	500	0.337	1.155	3.080	0.005	0.102	0.102	568.299	0.030	0.004
Air Compressors	750	0.340	1.155	3.201	0.005	0.104	0.104	568.299	0.030	0.004
Air Compressors	1000	0.383	1.295	4.854	0.005	0.131	0.131	568.299	0.034	0.004
Bore/Drill Rigs	15	0.869	4.797	5.298	0.006	0.383	0.352	579.326	0.175	0.005
Bore/Drill Rigs	25	0.869	4.797	5.298	0.006	0.383	0.352	579.326	0.175	0.005
Bore/Drill Rigs	50	0.869	4.797	5.298	0.006	0.383	0.352	579.326	0.175	0.005
Bore/Drill Rigs	120	0.307	3.326	3.821	0.005	0.221	0.204	491.655	0.148	0.004
Bore/Drill Rigs	175	0.286	3.023	3.616	0.005	0.162	0.149	511.433	0.154	0.004
Bore/Drill Rigs	250	0.193	1.133	2.902	0.005	0.085	0.078	502.128	0.152	0.004
Bore/Drill Rigs	500	0.171	1.133	2.510	0.005	0.077	0.071	494.761	0.149	0.004
Bore/Drill Rigs	750	0.153	1.120	2.166	0.005	0.072	0.066	514.883	0.155	0.004
Bore/Drill Rigs	1000	0.115	0.964	3.008	0.005	0.059	0.055	506.000	0.153	0.004
Cement and Mortar Mixers	15	0.662	3.469	4.153	0.008	0.167	0.167	568.300	0.059	0.005
Cement and Mortar Mixers	25	0.788	2.496	4.636	0.007	0.227	0.227	568.299	0.071	0.005
Concrete/Industrial Saws	25	0.685	2.339	4.332	0.007	0.161	0.161	568.299	0.061	0.005
Concrete/Industrial Saws	50	1.322	5.029	4.818	0.007	0.350	0.350	568.300	0.119	0.005
Concrete/Industrial Saws	120	0.620	3.620	4.432	0.006	0.333	0.333	568.300	0.055	0.004
Concrete/Industrial Saws	175	0.435	3.074	3.708	0.006	0.186	0.186	568.299	0.039	0.004
Cranes	50	2.130	7.268	6.110	0.005	0.610	0.561	555.441	0.168	0.005
Cranes	120	1.154	4.797	9.608	0.005	0.710	0.653	503.599	0.152	0.004
Cranes	175	0.744	3.862	7.887	0.005	0.427	0.393	508.952	0.154	0.004
Cranes	250	0.623	2.582	7.381	0.005	0.335	0.308	507.155	0.153	0.004
Cranes	500	0.443	3.834	5.649	0.005	0.233	0.215	506.088	0.153	0.004
Cranes	750	0.292	1.650	4.314	0.005	0.153	0.141	505.070	0.152	0.004
Cranes	9999	0.142	0.966	2.309	0.005	0.057	0.052	506.147	0.153	0.004
Crawler Tractors	50	2.519	8.104	6.317	0.005	0.733	0.674	553.214	0.167	0.005
Crawler Tractors	120	0.869	4.185	7.346	0.005	0.619	0.570	511.268	0.154	0.004
Crawler Tractors	175	0.624	3.482	6.721	0.005	0.371	0.341	506.034	0.153	0.004
Crawler Tractors	250	0.449	1.803	6.047	0.005	0.233	0.215	507.355	0.153	0.004
Crawler Tractors	500	0.398	2.744	5.279	0.005	0.205	0.188	510.339	0.154	0.004
Crawler Tractors	750	0.346	1.621	4.724	0.005	0.174	0.160	507.253	0.153	0.004
Crawler Tractors	1000	0.483	2.094	7.499	0.005	0.222	0.204	509.667	0.154	0.004
Crushing/Proc. Equipment	50	1.593	5.801	5.006	0.007	0.399	0.399	568.299	0.143	0.005

2016

2016		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Crushing/Proc. Equipment	120	0.720	3.823	4.631	0.006	0.379	0.379	568.299	0.065	0.004
Crushing/Proc. Equipment	175	0.513	3.241	3.883	0.006	0.210	0.210	568.299	0.046	0.004
Crushing/Proc. Equipment	250	0.360	1.178	3.381	0.006	0.105	0.105	568.299	0.032	0.004
Crushing/Proc. Equipment	500	0.340	1.146	2.928	0.005	0.098	0.098	568.299	0.030	0.004
Crushing/Proc. Equipment	750	0.339	1.140	3.021	0.005	0.099	0.099	568.299	0.030	0.004
Crushing/Proc. Equipment	9999	0.397	1.274	4.700	0.005	0.127	0.127	568.299	0.035	0.004
Dumpers/Tenders	25	0.690	2.342	4.378	0.007	0.175	0.175	568.299	0.062	0.005
Excavators	25	0.815	4.942	4.824	0.005	0.359	0.330	563.803	0.170	0.005
Excavators	50	0.815	4.942	4.824	0.005	0.359	0.330	563.803	0.170	0.005
Excavators	120	0.476	3.661	4.708	0.005	0.344	0.317	500.966	0.151	0.004
Excavators	175	0.358	3.158	4.081	0.005	0.201	0.185	506.495	0.153	0.004
Excavators	250	0.262	1.277	3.667	0.005	0.116	0.107	506.544	0.153	0.004
Excavators	500	0.213	1.233	2.815	0.005	0.091	0.083	504.290	0.152	0.004
Excavators	750	0.242	1.349	3.358	0.005	0.110	0.101	501.660	0.151	0.004
Forklifts	50	1.864	6.935	5.662	0.005	0.583	0.537	563.435	0.170	0.005
Forklifts	120	0.723	4.023	6.222	0.005	0.520	0.479	505.583	0.153	0.004
Forklifts	175	0.530	3.473	5.675	0.005	0.310	0.285	506.203	0.153	0.004
Forklifts	250	0.539	2.226	6.353	0.005	0.280	0.258	507.510	0.153	0.004
Forklifts	500	0.353	2.572	4.042	0.005	0.174	0.160	507.821	0.153	0.004
Generator Sets	15	0.720	3.622	4.978	0.008	0.264	0.264	568.299	0.065	0.005
Generator Sets	25	0.773	2.604	4.803	0.007	0.244	0.244	568.299	0.069	0.005
Generator Sets	50	1.146	4.410	4.685	0.007	0.318	0.318	568.299	0.103	0.005
Generator Sets	120	0.583	3.469	4.410	0.006	0.309	0.309	568.299	0.052	0.004
Generator Sets	175	0.396	2.934	3.731	0.006	0.170	0.170	568.299	0.035	0.004
Generator Sets	250	0.265	1.081	3.259	0.006	0.090	0.090	568.299	0.023	0.004
Generator Sets	500	0.239	1.077	2.882	0.005	0.084	0.084	568.299	0.021	0.004
Generator Sets	750	0.247	1.077	2.989	0.005	0.086	0.086	568.300	0.022	0.004
Generator Sets	9999	0.324	1.204	4.542	0.005	0.113	0.113	568.299	0.029	0.004
Graders	50	3.085	9.106	6.520	0.005	0.864	0.795	528.244	0.159	0.005
Graders	120	1.193	4.829	9.415	0.005	0.780	0.718	503.161	0.152	0.004
Graders	175	0.810	3.916	8.250	0.005	0.464	0.426	516.131	0.156	0.004
Graders	250	0.398	1.459	5.663	0.005	0.184	0.169	511.696	0.154	0.004
Graders	500	0.334	1.774	3.686	0.005	0.144	0.133	506.506	0.153	0.004
Graders	750	0.393	1.367	3.154	0.005	0.112	0.112	568.299	0.035	0.004
Off-Highway Tractors	120	0.625	3.925	5.647	0.005	0.454	0.418	509.447	0.154	0.004
Off-Highway Tractors	175	0.391	3.278	4.511	0.005	0.229	0.211	507.629	0.153	0.004
Off-Highway Tractors	250	0.359	1.472	4.930	0.005	0.171	0.157	504.123	0.152	0.004
Off-Highway Tractors	750	0.252	1.143	3.573	0.005	0.117	0.108	505.762	0.153	0.004
Off-Highway Tractors	1000	0.107	0.973	2.320	0.005	0.057	0.053	506.147	0.153	0.004
Off-Highway Trucks	175	0.473	3.459	4.647	0.005	0.258	0.237	503.552	0.152	0.004
Off-Highway Trucks	250	0.446	1.824	4.826	0.005	0.208	0.191	502.473	0.152	0.004
Off-Highway Trucks	500	0.351	1.885	4.048	0.005	0.153	0.141	509.860	0.154	0.004
Off-Highway Trucks	750	0.418	2.436	4.642	0.005	0.187	0.172	508.392	0.153	0.004
Off-Highway Trucks	1000	0.393	1.707	6.035	0.005	0.175	0.161	505.722	0.153	0.004
Other Construction Equipment	15	1.281	5.677	5.499	0.005	0.492	0.453	566.978	0.171	0.005
Other Construction Equipment	25	1.281	5.677	5.499	0.005	0.492	0.453	566.978	0.171	0.005

2016

2016		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Other Construction Equipment	50	1.281	5.677	5.499	0.005	0.492	0.453	566.978	0.171	0.005
Other Construction Equipment	120	0.703	3.909	6.325	0.005	0.496	0.456	505.349	0.152	0.004
Other Construction Equipment	175	0.524	3.357	5.818	0.005	0.306	0.282	503.964	0.152	0.004
Other Construction Equipment	500	0.308	2.285	4.090	0.005	0.151	0.139	509.706	0.154	0.004
Other General Industrial Equipment	15	1.421	6.259	5.407	0.005	0.507	0.466	564.178	0.170	0.005
Other General Industrial Equipment	25	1.421	6.259	5.407	0.005	0.507	0.466	564.178	0.170	0.005
Other General Industrial Equipment	50	1.421	6.259	5.407	0.005	0.507	0.466	564.178	0.170	0.005
Other General Industrial Equipment	120	0.716	4.045	6.144	0.005	0.518	0.476	503.944	0.152	0.004
Other General Industrial Equipment	175	0.470	3.437	5.055	0.005	0.276	0.254	505.928	0.153	0.004
Other General Industrial Equipment	250	0.437	1.867	5.407	0.005	0.217	0.200	507.400	0.153	0.004
Other General Industrial Equipment	500	0.342	2.367	4.150	0.005	0.159	0.146	507.085	0.153	0.004
Other General Industrial Equipment	750	0.243	1.491	3.102	0.005	0.100	0.092	507.658	0.153	0.004
Other General Industrial Equipment	1000	0.242	1.045	4.746	0.005	0.112	0.103	506.147	0.153	0.004
Other Material Handling Equipment	50	1.765	6.892	5.802	0.005	0.593	0.546	561.532	0.169	0.005
Other Material Handling Equipment	120	0.514	3.766	4.798	0.005	0.367	0.338	507.792	0.153	0.004
Other Material Handling Equipment	175	0.489	3.418	5.212	0.005	0.280	0.257	506.324	0.153	0.004
Other Material Handling Equipment	250	0.398	1.643	5.196	0.005	0.189	0.174	505.534	0.153	0.004
Other Material Handling Equipment	500	0.323	1.871	4.053	0.005	0.156	0.143	504.263	0.152	0.004
Other Material Handling Equipment	9999	0.159	0.997	3.489	0.005	0.070	0.065	506.147	0.153	0.004
Pavers	25	1.827	6.340	5.579	0.005	0.569	0.523	565.234	0.171	0.005
Pavers	50	1.827	6.340	5.579	0.005	0.569	0.523	565.234	0.171	0.005
Pavers	120	0.650	3.769	5.886	0.005	0.457	0.420	503.780	0.152	0.004
Pavers	175	0.433	3.080	4.874	0.005	0.242	0.223	506.540	0.153	0.004
Pavers	250	0.214	1.036	4.024	0.005	0.104	0.096	508.070	0.153	0.004
Pavers	500	0.180	0.983	2.885	0.005	0.096	0.089	500.936	0.151	0.004
Paving Equipment	25	0.991	4.937	4.985	0.005	0.404	0.371	557.706	0.168	0.005
Paving Equipment	50	0.991	4.937	4.985	0.005	0.404	0.371	557.706	0.168	0.005
Paving Equipment	120	0.623	3.796	5.733	0.005	0.438	0.403	507.910	0.153	0.004
Paving Equipment	175	0.372	3.081	4.322	0.005	0.215	0.197	504.820	0.152	0.004
Paving Equipment	250	0.297	1.331	4.428	0.005	0.148	0.136	506.197	0.153	0.004
Plate Compactors	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005

2016

2016		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Pressure Washers	15	0.720	3.622	4.978	0.008	0.264	0.264	568.299	0.065	0.005
Pressure Washers	25	0.773	2.604	4.803	0.007	0.244	0.244	568.299	0.069	0.005
Pressure Washers	50	0.865	3.729	4.515	0.007	0.269	0.269	568.299	0.078	0.005
Pressure Washers	120	0.504	3.308	4.209	0.006	0.264	0.264	568.299	0.045	0.004
Pressure Washers	175	0.386	2.913	3.726	0.006	0.168	0.168	568.299	0.034	0.004
Pressure Washers	250	0.107	0.986	0.399	0.006	0.009	0.009	568.299	0.009	0.004
Pumps	15	0.809	3.622	5.023	0.008	0.289	0.289	568.299	0.073	0.005
Pumps	25	0.855	2.604	4.803	0.007	0.255	0.255	568.299	0.077	0.005
Pumps	50	1.240	4.640	4.742	0.007	0.335	0.335	568.299	0.111	0.005
Pumps	120	0.610	3.523	4.478	0.006	0.325	0.325	568.299	0.055	0.004
Pumps	175	0.417	2.978	3.789	0.006	0.179	0.179	568.299	0.037	0.004
Pumps	250	0.280	1.099	3.313	0.006	0.094	0.094	568.299	0.025	0.004
Pumps	500	0.254	1.093	2.919	0.005	0.088	0.088	568.299	0.022	0.004
Pumps	750	0.262	1.093	3.028	0.005	0.089	0.089	568.299	0.023	0.004
Pumps	9999	0.335	1.223	4.596	0.005	0.116	0.116	568.300	0.030	0.004
Rollers	15	1.259	5.231	5.236	0.005	0.459	0.423	563.972	0.170	0.005
Rollers	25	1.259	5.231	5.236	0.005	0.459	0.423	563.972	0.170	0.005
Rollers	50	1.259	5.231	5.236	0.005	0.459	0.423	563.972	0.170	0.005
Rollers	120	0.628	3.755	5.806	0.005	0.428	0.393	508.199	0.153	0.004
Rollers	175	0.338	2.993	4.239	0.005	0.197	0.181	505.904	0.153	0.004
Rollers	250	0.308	1.507	4.395	0.005	0.150	0.138	507.694	0.153	0.004
Rollers	500	0.334	2.956	4.456	0.005	0.173	0.159	513.415	0.155	0.004
Rough Terrain Forklifts	50	1.159	4.918	5.099	0.005	0.415	0.382	563.360	0.170	0.005
Rough Terrain Forklifts	120	0.302	3.342	3.840	0.005	0.213	0.196	507.066	0.153	0.004
Rough Terrain Forklifts	175	0.209	2.865	3.209	0.005	0.124	0.115	505.596	0.153	0.004
Rough Terrain Forklifts	250	0.144	1.018	2.468	0.005	0.059	0.054	506.896	0.153	0.004
Rough Terrain Forklifts	500	0.178	0.962	3.542	0.005	0.078	0.072	501.213	0.151	0.004
Rubber Tired Dozers	175	0.968	4.249	9.853	0.005	0.566	0.521	507.774	0.153	0.004
Rubber Tired Dozers	250	0.736	2.729	7.995	0.005	0.395	0.364	509.462	0.154	0.004
Rubber Tired Dozers	500	0.688	5.828	7.710	0.005	0.359	0.330	513.311	0.155	0.004
Rubber Tired Dozers	750	0.523	2.765	7.168	0.005	0.260	0.239	507.260	0.153	0.004
Rubber Tired Dozers	1000	0.631	2.723	6.277	0.005	0.208	0.208	568.300	0.057	0.004
Rubber Tired Loaders	25	2.055	7.791	6.053	0.005	0.660	0.607	561.903	0.170	0.005
Rubber Tired Loaders	50	2.055	7.791	6.053	0.005	0.660	0.607	561.903	0.170	0.005
Rubber Tired Loaders	120	0.803	4.212	6.583	0.005	0.565	0.520	499.594	0.151	0.004
Rubber Tired Loaders	175	0.565	3.562	5.726	0.005	0.319	0.294	505.131	0.152	0.004
Rubber Tired Loaders	250	0.393	1.452	5.115	0.005	0.175	0.161	503.654	0.152	0.004
Rubber Tired Loaders	500	0.391	2.155	4.627	0.005	0.174	0.160	500.431	0.151	0.004
Rubber Tired Loaders	750	0.373	1.703	4.172	0.005	0.164	0.151	491.918	0.148	0.004
Rubber Tired Loaders	1000	0.425	1.464	6.724	0.005	0.198	0.182	504.780	0.152	0.004
Scrapers	120	0.742	4.173	7.143	0.005	0.543	0.500	519.167	0.157	0.004
Scrapers	175	0.688	3.781	7.384	0.005	0.397	0.365	513.436	0.155	0.004
Scrapers	250	0.684	2.840	8.109	0.005	0.367	0.338	502.255	0.152	0.004
Scrapers	500	0.452	3.606	5.757	0.005	0.232	0.214	506.350	0.153	0.004
Scrapers	750	0.340	2.482	4.484	0.005	0.168	0.154	506.638	0.153	0.004
Signal Boards	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Signal Boards	50	1.306	4.921	4.761	0.007	0.343	0.343	568.299	0.117	0.005
Signal Boards	120	0.618	3.594	4.414	0.006	0.330	0.330	568.299	0.055	0.004

2016

2016		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Signal Boards	175	0.430	3.047	3.708	0.006	0.183	0.183	568.299	0.038	0.004
Signal Boards	250	0.354	1.344	3.894	0.007	0.114	0.114	686.695	0.031	0.004
Skid Steer Loaders	25	0.599	3.957	4.268	0.005	0.241	0.221	565.228	0.171	0.005
Skid Steer Loaders	50	0.599	3.957	4.268	0.005	0.241	0.221	565.228	0.171	0.005
Skid Steer Loaders	120	0.273	3.328	3.534	0.005	0.197	0.182	506.297	0.153	0.004
Surfacing Equipment	50	1.045	4.763	5.273	0.006	0.406	0.374	570.815	0.172	0.005
Surfacing Equipment	120	0.522	3.550	5.051	0.005	0.349	0.321	505.087	0.152	0.004
Surfacing Equipment	175	0.458	3.006	5.458	0.005	0.265	0.244	504.558	0.152	0.004
Surfacing Equipment	250	0.307	1.429	5.048	0.005	0.148	0.137	510.706	0.154	0.004
Surfacing Equipment	500	0.217	1.425	3.468	0.005	0.111	0.102	502.471	0.152	0.004
Surfacing Equipment	750	0.162	1.000	2.880	0.005	0.093	0.085	506.967	0.153	0.004
Sweepers/Scrubbers	15	1.781	6.785	5.726	0.005	0.603	0.555	563.269	0.170	0.005
Sweepers/Scrubbers	25	1.781	6.785	5.726	0.005	0.603	0.555	563.269	0.170	0.005
Sweepers/Scrubbers	50	1.781	6.785	5.726	0.005	0.603	0.555	563.269	0.170	0.005
Sweepers/Scrubbers	120	0.783	4.059	6.454	0.005	0.571	0.525	508.357	0.153	0.004
Sweepers/Scrubbers	175	0.746	3.839	7.787	0.005	0.419	0.385	507.292	0.153	0.004
Sweepers/Scrubbers	250	0.521	2.089	6.782	0.005	0.270	0.248	504.080	0.152	0.004
Tractors/Loaders/Backhoes	25	1.250	5.741	5.214	0.005	0.455	0.418	553.400	0.167	0.005
Tractors/Loaders/Backhoes	50	1.250	5.741	5.214	0.005	0.455	0.418	553.400	0.167	0.005
Tractors/Loaders/Backhoes	120	0.538	3.811	5.142	0.005	0.396	0.364	511.346	0.154	0.004
Tractors/Loaders/Backhoes	175	0.389	3.232	4.379	0.005	0.222	0.204	502.629	0.152	0.004
Tractors/Loaders/Backhoes	250	0.311	1.347	4.426	0.005	0.145	0.133	504.401	0.152	0.004
Tractors/Loaders/Backhoes	500	0.284	1.786	3.787	0.005	0.131	0.121	505.270	0.152	0.004
Tractors/Loaders/Backhoes	750	0.300	1.674	4.022	0.005	0.144	0.133	500.955	0.151	0.004
Trenchers	15	1.219	5.285	5.298	0.005	0.475	0.437	565.994	0.171	0.005
Trenchers	25	1.219	5.285	5.298	0.005	0.475	0.437	565.994	0.171	0.005
Trenchers	50	1.219	5.285	5.298	0.005	0.475	0.437	565.994	0.171	0.005
Trenchers	120	0.788	3.988	6.902	0.005	0.541	0.498	509.903	0.154	0.004
Trenchers	175	0.583	3.507	6.503	0.005	0.328	0.302	501.781	0.151	0.004
Trenchers	250	0.487	2.030	6.312	0.005	0.251	0.231	507.145	0.153	0.004
Trenchers	500	0.296	1.966	4.099	0.005	0.150	0.138	504.410	0.152	0.004
Trenchers	750	0.120	0.971	1.630	0.005	0.054	0.050	509.143	0.154	0.004
Welders	15	0.809	3.622	5.023	0.008	0.289	0.289	568.299	0.073	0.005
Welders	25	0.855	2.604	4.803	0.007	0.255	0.255	568.299	0.077	0.005
Welders	50	1.540	5.395	4.936	0.007	0.389	0.389	568.299	0.138	0.005
Welders	120	0.699	3.705	4.692	0.006	0.375	0.375	568.300	0.063	0.004
Welders	175	0.486	3.128	3.973	0.006	0.206	0.206	568.299	0.043	0.004
Welders	250	0.330	1.153	3.481	0.006	0.104	0.104	568.299	0.029	0.004
Welders	500	0.306	1.134	3.032	0.005	0.097	0.097	568.299	0.027	0.004
Water Trucks	175	0.473	3.459	4.647	0.005	0.258	0.237	503.552	0.152	0.004
Water Trucks	250	0.446	1.824	4.826	0.005	0.208	0.191	502.473	0.152	0.004
Water Trucks	500	0.351	1.885	4.048	0.005	0.153	0.141	509.860	0.154	0.004
Water Trucks	750	0.418	2.436	4.642	0.005	0.187	0.172	508.392	0.153	0.004
Water Trucks	1000	0.393	1.707	6.035	0.005	0.175	0.161	505.722	0.153	0.004

2017

2017		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Aerial Lifts	15	0.209	3.169	3.470	0.005	0.079	0.073	554.245	0.170	0.005
Aerial Lifts	25	0.209	3.169	3.470	0.005	0.079	0.073	554.245	0.170	0.005
Aerial Lifts	50	0.209	3.169	3.470	0.005	0.079	0.073	554.245	0.170	0.005
Aerial Lifts	120	0.143	3.184	2.364	0.005	0.083	0.077	498.343	0.153	0.004
Aerial Lifts	500	0.246	0.997	4.658	0.005	0.105	0.096	498.280	0.153	0.004
Aerial Lifts	750	0.239	1.059	2.680	0.005	0.079	0.079	568.299	0.021	0.004
Air Compressors	15	0.786	3.599	4.887	0.008	0.272	0.272	568.299	0.070	0.005
Air Compressors	25	0.830	2.564	4.729	0.007	0.243	0.243	568.299	0.074	0.005
Air Compressors	50	1.481	5.604	4.871	0.007	0.371	0.371	568.299	0.133	0.005
Air Compressors	120	0.671	3.772	4.412	0.006	0.350	0.350	568.299	0.060	0.004
Air Compressors	175	0.477	3.207	3.627	0.006	0.194	0.194	568.299	0.043	0.004
Air Compressors	250	0.339	1.162	3.163	0.006	0.098	0.098	568.299	0.030	0.004
Air Compressors	500	0.321	1.123	2.755	0.005	0.092	0.092	568.299	0.029	0.004
Air Compressors	750	0.323	1.123	2.845	0.005	0.094	0.094	568.299	0.029	0.004
Air Compressors	1000	0.362	1.246	4.583	0.005	0.121	0.121	568.299	0.032	0.004
Bore/Drill Rigs	15	0.804	4.652	5.063	0.006	0.351	0.323	563.917	0.173	0.005
Bore/Drill Rigs	25	0.804	4.652	5.063	0.006	0.351	0.323	563.917	0.173	0.005
Bore/Drill Rigs	50	0.804	4.652	5.063	0.006	0.351	0.323	563.917	0.173	0.005
Bore/Drill Rigs	120	0.298	3.331	3.685	0.005	0.211	0.194	485.322	0.149	0.004
Bore/Drill Rigs	175	0.245	3.001	2.982	0.005	0.131	0.121	503.770	0.154	0.004
Bore/Drill Rigs	250	0.174	1.102	2.522	0.005	0.073	0.067	494.138	0.151	0.004
Bore/Drill Rigs	500	0.166	1.119	2.367	0.005	0.072	0.067	489.461	0.150	0.004
Bore/Drill Rigs	750	0.155	1.137	2.157	0.005	0.072	0.066	505.125	0.155	0.004
Bore/Drill Rigs	1000	0.121	0.971	3.021	0.005	0.060	0.055	498.123	0.153	0.004
Cement and Mortar Mixers	15	0.661	3.469	4.145	0.008	0.165	0.165	568.299	0.059	0.005
Cement and Mortar Mixers	25	0.767	2.466	4.567	0.007	0.216	0.216	568.299	0.069	0.005
Concrete/Industrial Saws	25	0.685	2.340	4.332	0.007	0.161	0.161	568.299	0.061	0.005
Concrete/Industrial Saws	50	1.175	4.894	4.652	0.007	0.313	0.313	568.299	0.106	0.005
Concrete/Industrial Saws	120	0.557	3.595	4.086	0.006	0.294	0.294	568.299	0.050	0.004
Concrete/Industrial Saws	175	0.395	3.073	3.316	0.006	0.165	0.165	568.299	0.035	0.004
Cranes	50	2.173	7.408	6.145	0.005	0.620	0.570	546.782	0.168	0.005
Cranes	120	1.097	4.710	9.154	0.005	0.678	0.624	495.753	0.152	0.004
Cranes	175	0.696	3.787	7.360	0.005	0.397	0.366	501.093	0.154	0.004
Cranes	250	0.561	2.385	6.655	0.005	0.297	0.273	499.372	0.153	0.004
Cranes	500	0.410	3.547	5.232	0.005	0.212	0.195	498.439	0.153	0.004
Cranes	750	0.287	1.633	4.158	0.005	0.147	0.135	497.187	0.152	0.004
Cranes	9999	0.152	0.974	2.322	0.005	0.058	0.053	498.280	0.153	0.004
Crawler Tractors	50	2.459	8.006	6.208	0.005	0.712	0.655	544.676	0.167	0.005
Crawler Tractors	120	0.849	4.176	7.141	0.005	0.604	0.555	503.279	0.154	0.004
Crawler Tractors	175	0.614	3.483	6.552	0.005	0.364	0.335	498.125	0.153	0.004
Crawler Tractors	250	0.430	1.742	5.760	0.005	0.220	0.202	499.832	0.153	0.004
Crawler Tractors	500	0.385	2.635	5.029	0.005	0.195	0.179	502.422	0.154	0.004
Crawler Tractors	750	0.324	1.522	4.361	0.005	0.160	0.147	499.105	0.153	0.004
Crawler Tractors	1000	0.486	2.100	7.532	0.005	0.223	0.206	501.878	0.154	0.004
Crushing/Proc. Equipment	50	1.402	5.623	4.827	0.007	0.354	0.354	568.299	0.126	0.005

2017

2017		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Crushing/Proc. Equipment	120	0.647	3.791	4.244	0.006	0.330	0.330	568.299	0.058	0.004
Crushing/Proc. Equipment	175	0.468	3.236	3.450	0.006	0.185	0.185	568.299	0.042	0.004
Crushing/Proc. Equipment	250	0.340	1.160	2.987	0.006	0.094	0.094	568.299	0.030	0.004
Crushing/Proc. Equipment	500	0.324	1.118	2.602	0.005	0.088	0.088	568.299	0.029	0.004
Crushing/Proc. Equipment	750	0.323	1.114	2.664	0.005	0.088	0.088	568.299	0.029	0.004
Crushing/Proc. Equipment	9999	0.378	1.231	4.423	0.005	0.117	0.117	568.299	0.034	0.004
Dumpers/Tenders	25	0.687	2.340	4.362	0.007	0.171	0.171	568.299	0.062	0.005
Excavators	25	0.771	4.889	4.678	0.005	0.332	0.305	554.910	0.170	0.005
Excavators	50	0.771	4.889	4.678	0.005	0.332	0.305	554.910	0.170	0.005
Excavators	120	0.440	3.639	4.380	0.005	0.310	0.286	493.409	0.151	0.004
Excavators	175	0.334	3.151	3.700	0.005	0.182	0.168	498.522	0.153	0.004
Excavators	250	0.247	1.249	3.319	0.005	0.105	0.097	498.436	0.153	0.004
Excavators	500	0.200	1.199	2.507	0.005	0.081	0.075	496.810	0.152	0.004
Excavators	750	0.210	1.228	2.719	0.005	0.090	0.083	494.550	0.152	0.004
Forklifts	50	1.703	6.673	5.450	0.005	0.536	0.493	554.677	0.170	0.005
Forklifts	120	0.672	3.979	5.818	0.005	0.480	0.442	497.725	0.153	0.004
Forklifts	175	0.508	3.452	5.362	0.005	0.294	0.270	498.334	0.153	0.004
Forklifts	250	0.496	2.092	5.751	0.005	0.252	0.232	499.621	0.153	0.004
Forklifts	500	0.338	2.508	3.780	0.005	0.161	0.148	499.927	0.153	0.004
Generator Sets	15	0.699	3.599	4.847	0.008	0.250	0.250	568.299	0.063	0.005
Generator Sets	25	0.757	2.564	4.729	0.007	0.233	0.233	568.299	0.068	0.005
Generator Sets	50	1.017	4.292	4.522	0.007	0.285	0.285	568.299	0.091	0.005
Generator Sets	120	0.520	3.442	4.072	0.006	0.274	0.274	568.299	0.046	0.004
Generator Sets	175	0.356	2.931	3.347	0.006	0.151	0.151	568.299	0.032	0.004
Generator Sets	250	0.245	1.063	2.910	0.006	0.081	0.081	568.299	0.022	0.004
Generator Sets	500	0.224	1.048	2.579	0.005	0.076	0.076	568.299	0.020	0.004
Generator Sets	750	0.230	1.048	2.660	0.005	0.077	0.077	568.299	0.020	0.004
Generator Sets	9999	0.301	1.161	4.293	0.005	0.104	0.104	568.299	0.027	0.004
Graders	50	3.007	8.978	6.423	0.005	0.843	0.776	520.075	0.159	0.005
Graders	120	1.164	4.810	9.191	0.005	0.759	0.698	495.919	0.152	0.004
Graders	175	0.757	3.845	7.663	0.005	0.430	0.396	506.748	0.155	0.004
Graders	250	0.396	1.449	5.525	0.005	0.180	0.166	503.802	0.154	0.004
Graders	500	0.334	1.707	3.557	0.005	0.139	0.128	498.600	0.153	0.004
Graders	750	0.372	1.323	2.835	0.005	0.100	0.100	568.299	0.033	0.004
Off-Highway Tractors	120	0.586	3.901	5.317	0.005	0.423	0.389	501.245	0.154	0.004
Off-Highway Tractors	175	0.356	3.259	4.026	0.005	0.205	0.189	499.245	0.153	0.004
Off-Highway Tractors	250	0.328	1.403	4.382	0.005	0.151	0.139	496.498	0.152	0.004
Off-Highway Tractors	750	0.248	1.145	3.324	0.005	0.112	0.103	497.618	0.153	0.004
Off-Highway Tractors	1000	0.118	0.985	2.340	0.005	0.059	0.054	498.280	0.153	0.004
Off-Highway Trucks	175	0.441	3.436	4.236	0.005	0.233	0.215	495.924	0.152	0.004
Off-Highway Trucks	250	0.417	1.753	4.368	0.005	0.189	0.174	494.794	0.152	0.004
Off-Highway Trucks	500	0.325	1.748	3.668	0.005	0.136	0.125	501.437	0.154	0.004
Off-Highway Trucks	750	0.394	2.356	4.257	0.005	0.170	0.157	500.199	0.153	0.004
Off-Highway Trucks	1000	0.362	1.546	5.653	0.005	0.159	0.146	497.115	0.152	0.004
Other Construction Equipment	15	1.244	5.655	5.421	0.005	0.477	0.439	558.001	0.171	0.005
Other Construction Equipment	25	1.244	5.655	5.421	0.005	0.477	0.439	558.001	0.171	0.005

2017

2017		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Other Construction Equipment	50	1.244	5.655	5.421	0.005	0.477	0.439	558.001	0.171	0.005
Other Construction Equipment	120	0.676	3.885	6.070	0.005	0.475	0.437	497.383	0.152	0.004
Other Construction Equipment	175	0.500	3.338	5.494	0.005	0.290	0.267	495.931	0.152	0.004
Other Construction Equipment	500	0.290	2.121	3.777	0.005	0.138	0.127	501.130	0.154	0.004
Other General Industrial Equipment	15	1.349	6.179	5.277	0.005	0.479	0.441	555.408	0.170	0.005
Other General Industrial Equipment	25	1.349	6.179	5.277	0.005	0.479	0.441	555.408	0.170	0.005
Other General Industrial Equipment	50	1.349	6.179	5.277	0.005	0.479	0.441	555.408	0.170	0.005
Other General Industrial Equipment	120	0.660	3.998	5.721	0.005	0.471	0.433	496.111	0.152	0.004
Other General Industrial Equipment	175	0.437	3.399	4.534	0.005	0.250	0.230	498.064	0.153	0.004
Other General Industrial Equipment	250	0.411	1.780	5.022	0.005	0.199	0.183	499.513	0.153	0.004
Other General Industrial Equipment	500	0.334	2.365	3.949	0.005	0.152	0.140	499.203	0.153	0.004
Other General Industrial Equipment	750	0.219	1.480	2.592	0.005	0.086	0.079	499.767	0.153	0.004
Other General Industrial Equipment	1000	0.251	1.057	4.787	0.005	0.115	0.105	498.280	0.153	0.004
Other Material Handling Equipment	50	1.615	6.635	5.574	0.005	0.546	0.502	552.804	0.169	0.005
Other Material Handling Equipment	120	0.488	3.758	4.561	0.005	0.341	0.314	499.899	0.153	0.004
Other Material Handling Equipment	175	0.427	3.351	4.488	0.005	0.238	0.219	498.454	0.153	0.004
Other Material Handling Equipment	250	0.359	1.512	4.705	0.005	0.163	0.150	497.676	0.153	0.004
Other Material Handling Equipment	500	0.325	1.863	3.971	0.005	0.154	0.141	496.425	0.152	0.004
Other Material Handling Equipment	9999	0.169	1.010	3.520	0.005	0.072	0.067	498.280	0.153	0.004
Pavers	25	1.731	6.199	5.437	0.005	0.540	0.497	556.453	0.171	0.005
Pavers	50	1.731	6.199	5.437	0.005	0.540	0.497	556.453	0.171	0.005
Pavers	120	0.625	3.759	5.692	0.005	0.437	0.402	495.925	0.152	0.004
Pavers	175	0.389	3.063	4.353	0.005	0.214	0.197	498.967	0.153	0.004
Pavers	250	0.208	1.037	3.809	0.005	0.100	0.092	499.562	0.153	0.004
Pavers	500	0.168	0.979	2.487	0.005	0.087	0.081	491.784	0.151	0.004
Paving Equipment	25	0.926	4.804	4.728	0.005	0.359	0.331	548.648	0.168	0.005
Paving Equipment	50	0.926	4.804	4.728	0.005	0.359	0.331	548.648	0.168	0.005
Paving Equipment	120	0.563	3.741	5.207	0.005	0.391	0.359	500.165	0.153	0.004
Paving Equipment	175	0.343	3.073	3.896	0.005	0.195	0.179	497.148	0.152	0.004
Paving Equipment	250	0.288	1.333	4.121	0.005	0.142	0.130	498.732	0.153	0.004
Plate Compactors	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005

2017

2017		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Pressure Washers	15	0.699	3.599	4.847	0.008	0.250	0.250	568.299	0.063	0.005
Pressure Washers	25	0.757	2.564	4.729	0.007	0.233	0.233	568.299	0.068	0.005
Pressure Washers	50	0.760	3.632	4.355	0.007	0.240	0.240	568.299	0.068	0.005
Pressure Washers	120	0.444	3.283	3.888	0.006	0.233	0.233	568.300	0.040	0.004
Pressure Washers	175	0.346	2.910	3.349	0.006	0.149	0.149	568.299	0.031	0.004
Pressure Washers	250	0.102	0.986	0.317	0.006	0.009	0.009	568.299	0.009	0.004
Pumps	15	0.786	3.599	4.887	0.008	0.272	0.272	568.299	0.070	0.005
Pumps	25	0.830	2.564	4.729	0.007	0.243	0.243	568.299	0.074	0.005
Pumps	50	1.104	4.514	4.578	0.007	0.301	0.301	568.299	0.099	0.005
Pumps	120	0.546	3.495	4.134	0.006	0.287	0.287	568.299	0.049	0.004
Pumps	175	0.376	2.975	3.400	0.006	0.159	0.159	568.299	0.033	0.004
Pumps	250	0.260	1.080	2.958	0.006	0.084	0.084	568.299	0.023	0.004
Pumps	500	0.239	1.062	2.613	0.005	0.079	0.079	568.299	0.021	0.004
Pumps	750	0.244	1.062	2.695	0.005	0.080	0.080	568.299	0.022	0.004
Pumps	9999	0.313	1.177	4.343	0.005	0.106	0.106	568.299	0.028	0.004
Rollers	15	1.198	5.147	5.098	0.005	0.436	0.401	555.020	0.170	0.005
Rollers	25	1.198	5.147	5.098	0.005	0.436	0.401	555.020	0.170	0.005
Rollers	50	1.198	5.147	5.098	0.005	0.436	0.401	555.020	0.170	0.005
Rollers	120	0.580	3.713	5.411	0.005	0.392	0.361	500.153	0.153	0.004
Rollers	175	0.314	2.981	3.874	0.005	0.180	0.166	497.909	0.153	0.004
Rollers	250	0.274	1.408	3.921	0.005	0.129	0.119	499.702	0.153	0.004
Rollers	500	0.297	2.685	3.840	0.005	0.150	0.138	505.832	0.155	0.004
Rough Terrain Forklifts	50	1.108	4.833	4.903	0.005	0.382	0.352	554.623	0.170	0.005
Rough Terrain Forklifts	120	0.271	3.318	3.418	0.005	0.182	0.167	499.168	0.153	0.004
Rough Terrain Forklifts	175	0.194	2.866	2.902	0.005	0.112	0.103	497.777	0.153	0.004
Rough Terrain Forklifts	250	0.148	1.024	2.474	0.005	0.059	0.054	499.001	0.153	0.004
Rough Terrain Forklifts	500	0.182	0.966	3.568	0.005	0.079	0.073	493.336	0.151	0.004
Rubber Tired Dozers	175	0.903	4.149	9.129	0.005	0.525	0.483	499.410	0.153	0.004
Rubber Tired Dozers	250	0.707	2.655	7.671	0.005	0.376	0.345	501.548	0.154	0.004
Rubber Tired Dozers	500	0.662	5.526	7.333	0.005	0.341	0.313	505.849	0.155	0.004
Rubber Tired Dozers	750	0.526	2.767	7.172	0.005	0.260	0.239	499.367	0.153	0.004
Rubber Tired Dozers	1000	0.602	2.560	6.013	0.005	0.195	0.195	568.299	0.054	0.004
Rubber Tired Loaders	25	1.957	7.660	5.954	0.005	0.633	0.582	553.583	0.170	0.005
Rubber Tired Loaders	50	1.957	7.660	5.954	0.005	0.633	0.582	553.583	0.170	0.005
Rubber Tired Loaders	120	0.757	4.171	6.236	0.005	0.530	0.487	491.853	0.151	0.004
Rubber Tired Loaders	175	0.522	3.518	5.195	0.005	0.290	0.266	497.353	0.152	0.004
Rubber Tired Loaders	250	0.373	1.417	4.755	0.005	0.162	0.149	495.950	0.152	0.004
Rubber Tired Loaders	500	0.369	2.060	4.253	0.005	0.160	0.148	492.276	0.151	0.004
Rubber Tired Loaders	750	0.367	1.700	4.050	0.005	0.160	0.147	484.366	0.148	0.004
Rubber Tired Loaders	1000	0.415	1.456	6.553	0.005	0.192	0.177	496.897	0.152	0.004
Scrapers	120	0.754	4.207	7.179	0.005	0.551	0.507	511.112	0.157	0.004
Scrapers	175	0.629	3.705	6.671	0.005	0.359	0.331	505.331	0.155	0.004
Scrapers	250	0.627	2.647	7.399	0.005	0.333	0.306	494.523	0.152	0.004
Scrapers	500	0.425	3.337	5.340	0.005	0.214	0.197	498.457	0.153	0.004
Scrapers	750	0.325	2.295	4.216	0.005	0.156	0.143	498.693	0.153	0.004
Signal Boards	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Signal Boards	50	1.158	4.785	4.590	0.007	0.306	0.306	568.299	0.104	0.005
Signal Boards	120	0.553	3.566	4.059	0.006	0.290	0.290	568.299	0.049	0.004

2017

2017		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Signal Boards	175	0.388	3.044	3.305	0.006	0.161	0.161	568.299	0.035	0.004
Signal Boards	250	0.330	1.323	3.452	0.007	0.101	0.101	686.695	0.029	0.004
Skid Steer Loaders	25	0.568	3.919	4.113	0.005	0.218	0.200	556.714	0.171	0.005
Skid Steer Loaders	50	0.568	3.919	4.113	0.005	0.218	0.200	556.714	0.171	0.005
Skid Steer Loaders	120	0.255	3.319	3.286	0.005	0.177	0.163	498.326	0.153	0.004
Surfacing Equipment	50	0.928	4.603	5.064	0.006	0.365	0.336	564.477	0.173	0.005
Surfacing Equipment	120	0.508	3.556	4.942	0.005	0.337	0.310	498.360	0.153	0.004
Surfacing Equipment	175	0.455	3.003	5.393	0.005	0.264	0.243	496.274	0.152	0.004
Surfacing Equipment	250	0.274	1.343	4.468	0.005	0.129	0.119	501.847	0.154	0.004
Surfacing Equipment	500	0.204	1.396	3.106	0.005	0.103	0.094	496.885	0.152	0.004
Surfacing Equipment	750	0.160	1.003	2.770	0.005	0.090	0.083	499.712	0.153	0.004
Sweepers/Scrubbers	15	1.712	6.719	5.626	0.005	0.582	0.535	554.513	0.170	0.005
Sweepers/Scrubbers	25	1.712	6.719	5.626	0.005	0.582	0.535	554.513	0.170	0.005
Sweepers/Scrubbers	50	1.712	6.719	5.626	0.005	0.582	0.535	554.513	0.170	0.005
Sweepers/Scrubbers	120	0.721	4.010	6.020	0.005	0.520	0.479	500.456	0.153	0.004
Sweepers/Scrubbers	175	0.711	3.784	7.424	0.005	0.395	0.363	499.407	0.153	0.004
Sweepers/Scrubbers	250	0.513	2.090	6.509	0.005	0.264	0.243	496.244	0.152	0.004
Tractors/Loaders/Backhoes	25	1.194	5.689	5.110	0.005	0.433	0.399	544.929	0.167	0.005
Tractors/Loaders/Backhoes	50	1.194	5.689	5.110	0.005	0.433	0.399	544.929	0.167	0.005
Tractors/Loaders/Backhoes	120	0.501	3.782	4.809	0.005	0.362	0.333	502.795	0.154	0.004
Tractors/Loaders/Backhoes	175	0.354	3.200	3.879	0.005	0.197	0.182	493.912	0.151	0.004
Tractors/Loaders/Backhoes	250	0.291	1.304	4.041	0.005	0.132	0.121	496.845	0.152	0.004
Tractors/Loaders/Backhoes	500	0.272	1.739	3.490	0.005	0.122	0.112	497.113	0.152	0.004
Tractors/Loaders/Backhoes	750	0.296	1.646	3.862	0.005	0.139	0.128	492.953	0.151	0.004
Trenchers	15	1.149	5.197	5.166	0.005	0.449	0.413	557.460	0.171	0.005
Trenchers	25	1.149	5.197	5.166	0.005	0.449	0.413	557.460	0.171	0.005
Trenchers	50	1.149	5.197	5.166	0.005	0.449	0.413	557.460	0.171	0.005
Trenchers	120	0.762	3.968	6.679	0.005	0.523	0.481	501.992	0.154	0.004
Trenchers	175	0.536	3.434	5.927	0.005	0.300	0.276	493.764	0.151	0.004
Trenchers	250	0.486	2.037	6.194	0.005	0.250	0.230	499.228	0.153	0.004
Trenchers	500	0.265	1.966	3.442	0.005	0.129	0.119	497.020	0.152	0.004
Trenchers	750	0.114	0.972	1.430	0.005	0.046	0.042	501.183	0.154	0.004
Welders	15	0.786	3.599	4.887	0.008	0.272	0.272	568.299	0.070	0.005
Welders	25	0.830	2.564	4.729	0.007	0.243	0.243	568.299	0.074	0.005
Welders	50	1.372	5.239	4.768	0.007	0.350	0.350	568.299	0.123	0.005
Welders	120	0.630	3.675	4.328	0.006	0.332	0.332	568.299	0.056	0.004
Welders	175	0.442	3.124	3.562	0.006	0.183	0.183	568.299	0.039	0.004
Welders	250	0.310	1.133	3.105	0.006	0.094	0.094	568.299	0.028	0.004
Welders	500	0.290	1.102	2.713	0.005	0.088	0.088	568.299	0.026	0.004
Water Trucks	175	0.441	3.436	4.236	0.005	0.233	0.215	495.924	0.152	0.004
Water Trucks	250	0.417	1.753	4.368	0.005	0.189	0.174	494.794	0.152	0.004
Water Trucks	500	0.325	1.748	3.668	0.005	0.136	0.125	501.437	0.154	0.004
Water Trucks	750	0.394	2.356	4.257	0.005	0.170	0.157	500.199	0.153	0.004
Water Trucks	1000	0.362	1.546	5.653	0.005	0.159	0.146	497.115	0.152	0.004

2018

2018		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Aerial Lifts	15	0.182	3.116	3.210	0.005	0.054	0.050	545.494	0.170	0.005
Aerial Lifts	25	0.182	3.116	3.210	0.005	0.054	0.050	545.494	0.170	0.005
Aerial Lifts	50	0.182	3.116	3.210	0.005	0.054	0.050	545.494	0.170	0.005
Aerial Lifts	120	0.122	3.167	2.064	0.005	0.057	0.053	490.474	0.153	0.004
Aerial Lifts	500	0.062	0.937	0.634	0.005	0.009	0.008	490.412	0.153	0.004
Aerial Lifts	750	0.225	1.037	2.385	0.005	0.071	0.071	568.299	0.020	0.004
Air Compressors	15	0.766	3.580	4.762	0.008	0.256	0.256	568.299	0.069	0.005
Air Compressors	25	0.807	2.531	4.661	0.007	0.232	0.232	568.300	0.072	0.005
Air Compressors	50	1.300	5.439	4.707	0.007	0.329	0.329	568.299	0.117	0.005
Air Compressors	120	0.603	3.744	4.050	0.006	0.304	0.304	568.300	0.054	0.004
Air Compressors	175	0.435	3.205	3.228	0.006	0.170	0.170	568.299	0.039	0.004
Air Compressors	250	0.321	1.146	2.797	0.006	0.087	0.087	568.300	0.029	0.004
Air Compressors	500	0.307	1.101	2.465	0.005	0.083	0.083	568.299	0.027	0.004
Air Compressors	750	0.309	1.101	2.533	0.005	0.084	0.084	568.299	0.027	0.004
Air Compressors	1000	0.343	1.210	4.325	0.005	0.111	0.111	568.299	0.030	0.004
Bore/Drill Rigs	15	0.767	4.569	4.869	0.006	0.329	0.303	554.204	0.173	0.005
Bore/Drill Rigs	25	0.767	4.569	4.869	0.006	0.329	0.303	554.204	0.173	0.005
Bore/Drill Rigs	50	0.767	4.569	4.869	0.006	0.329	0.303	554.204	0.173	0.005
Bore/Drill Rigs	120	0.269	3.323	3.400	0.005	0.184	0.170	479.672	0.149	0.004
Bore/Drill Rigs	175	0.203	2.961	2.357	0.005	0.103	0.095	495.073	0.154	0.004
Bore/Drill Rigs	250	0.155	1.073	2.153	0.005	0.061	0.056	484.561	0.151	0.004
Bore/Drill Rigs	500	0.135	1.032	1.746	0.005	0.052	0.048	485.689	0.151	0.004
Bore/Drill Rigs	750	0.126	1.006	1.679	0.005	0.055	0.050	489.730	0.153	0.004
Bore/Drill Rigs	1000	0.125	0.978	3.032	0.005	0.060	0.056	490.243	0.153	0.004
Cement and Mortar Mixers	15	0.661	3.469	4.142	0.008	0.163	0.163	568.299	0.059	0.005
Cement and Mortar Mixers	25	0.749	2.440	4.504	0.007	0.205	0.205	568.299	0.067	0.005
Concrete/Industrial Saws	25	0.685	2.339	4.332	0.007	0.161	0.161	568.299	0.061	0.005
Concrete/Industrial Saws	50	1.032	4.766	4.492	0.007	0.277	0.277	568.299	0.093	0.005
Concrete/Industrial Saws	120	0.498	3.571	3.754	0.006	0.256	0.256	568.299	0.044	0.004
Concrete/Industrial Saws	175	0.359	3.072	2.945	0.006	0.145	0.145	568.299	0.032	0.004
Cranes	50	2.072	7.247	6.004	0.005	0.624	0.574	538.122	0.168	0.005
Cranes	120	0.932	4.452	7.931	0.005	0.583	0.536	488.117	0.152	0.004
Cranes	175	0.621	3.666	6.557	0.005	0.351	0.323	493.045	0.154	0.004
Cranes	250	0.483	2.134	5.773	0.005	0.250	0.230	491.407	0.153	0.004
Cranes	500	0.370	3.187	4.634	0.005	0.187	0.172	490.891	0.153	0.004
Cranes	750	0.271	1.613	3.769	0.005	0.137	0.126	489.054	0.152	0.004
Cranes	9999	0.162	0.983	2.335	0.005	0.059	0.054	490.412	0.153	0.004
Crawler Tractors	50	2.446	8.009	6.163	0.005	0.704	0.648	536.141	0.167	0.005
Crawler Tractors	120	0.798	4.123	6.723	0.005	0.566	0.521	494.922	0.154	0.004
Crawler Tractors	175	0.555	3.421	5.859	0.005	0.326	0.299	490.000	0.153	0.004
Crawler Tractors	250	0.398	1.654	5.290	0.005	0.200	0.184	491.606	0.153	0.004
Crawler Tractors	500	0.344	2.382	4.373	0.005	0.169	0.156	493.510	0.154	0.004
Crawler Tractors	750	0.296	1.445	3.834	0.005	0.142	0.130	491.266	0.153	0.004
Crawler Tractors	1000	0.489	2.105	7.564	0.005	0.225	0.207	494.105	0.154	0.004
Crushing/Proc. Equipment	50	1.225	5.461	4.657	0.007	0.310	0.310	568.299	0.110	0.005

2018

2018		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Crushing/Proc. Equipment	120	0.580	3.763	3.881	0.006	0.284	0.284	568.299	0.052	0.004
Crushing/Proc. Equipment	175	0.427	3.234	3.049	0.006	0.161	0.161	568.299	0.038	0.004
Crushing/Proc. Equipment	250	0.322	1.146	2.622	0.006	0.083	0.083	568.299	0.029	0.004
Crushing/Proc. Equipment	500	0.309	1.099	2.312	0.005	0.079	0.079	568.299	0.027	0.004
Crushing/Proc. Equipment	750	0.308	1.097	2.358	0.005	0.079	0.079	568.299	0.027	0.004
Crushing/Proc. Equipment	9999	0.361	1.198	4.168	0.005	0.107	0.107	568.299	0.032	0.004
Dumpers/Tenders	25	0.686	2.339	4.350	0.007	0.169	0.169	568.299	0.061	0.005
Excavators	25	0.687	4.700	4.395	0.005	0.284	0.261	545.347	0.170	0.005
Excavators	50	0.687	4.700	4.395	0.005	0.284	0.261	545.347	0.170	0.005
Excavators	120	0.368	3.562	3.764	0.005	0.251	0.230	486.056	0.151	0.004
Excavators	175	0.273	3.093	2.924	0.005	0.142	0.130	490.673	0.153	0.004
Excavators	250	0.202	1.152	2.594	0.005	0.079	0.073	490.257	0.153	0.004
Excavators	500	0.175	1.140	2.050	0.005	0.066	0.061	489.103	0.152	0.004
Excavators	750	0.189	1.224	2.266	0.005	0.076	0.070	487.653	0.152	0.004
Forklifts	50	1.393	6.103	5.052	0.005	0.447	0.411	545.919	0.170	0.005
Forklifts	120	0.567	3.858	5.015	0.005	0.400	0.368	489.866	0.153	0.004
Forklifts	175	0.427	3.336	4.430	0.005	0.241	0.222	490.466	0.153	0.004
Forklifts	250	0.425	1.835	4.938	0.005	0.207	0.191	491.733	0.153	0.004
Forklifts	500	0.282	1.878	3.019	0.005	0.125	0.115	492.034	0.153	0.004
Generator Sets	15	0.679	3.580	4.728	0.008	0.237	0.237	568.299	0.061	0.005
Generator Sets	25	0.744	2.531	4.661	0.007	0.224	0.224	568.299	0.067	0.005
Generator Sets	50	0.895	4.182	4.366	0.007	0.253	0.253	568.299	0.080	0.005
Generator Sets	120	0.461	3.418	3.752	0.006	0.239	0.239	568.299	0.041	0.004
Generator Sets	175	0.319	2.930	2.989	0.006	0.133	0.133	568.299	0.028	0.004
Generator Sets	250	0.226	1.048	2.582	0.006	0.072	0.072	568.299	0.020	0.004
Generator Sets	500	0.211	1.028	2.310	0.005	0.069	0.069	568.299	0.019	0.004
Generator Sets	750	0.215	1.028	2.370	0.005	0.070	0.070	568.299	0.019	0.004
Generator Sets	9999	0.280	1.128	4.058	0.005	0.095	0.095	568.299	0.025	0.004
Graders	50	2.809	8.626	6.180	0.005	0.790	0.726	511.910	0.159	0.005
Graders	120	1.075	4.697	8.520	0.005	0.697	0.641	487.698	0.152	0.004
Graders	175	0.661	3.710	6.605	0.005	0.371	0.342	497.377	0.155	0.004
Graders	250	0.384	1.416	5.271	0.005	0.171	0.158	495.431	0.154	0.004
Graders	500	0.324	1.564	3.345	0.005	0.130	0.119	490.576	0.153	0.004
Graders	750	0.353	1.286	2.543	0.005	0.090	0.090	568.299	0.031	0.004
Off-Highway Tractors	120	0.522	3.832	4.787	0.005	0.373	0.343	492.871	0.153	0.004
Off-Highway Tractors	175	0.315	3.219	3.498	0.005	0.176	0.162	491.313	0.153	0.004
Off-Highway Tractors	250	0.272	1.295	3.454	0.005	0.119	0.109	488.677	0.152	0.004
Off-Highway Tractors	750	0.196	1.119	2.166	0.005	0.081	0.074	490.182	0.153	0.004
Off-Highway Tractors	1000	0.129	0.998	2.359	0.005	0.060	0.055	490.412	0.153	0.004
Off-Highway Trucks	175	0.383	3.383	3.543	0.005	0.192	0.177	488.044	0.152	0.004
Off-Highway Trucks	250	0.341	1.543	3.451	0.005	0.141	0.130	487.635	0.152	0.004
Off-Highway Trucks	500	0.287	1.560	3.090	0.005	0.113	0.104	493.506	0.154	0.004
Off-Highway Trucks	750	0.348	2.176	3.691	0.005	0.143	0.132	492.114	0.153	0.004
Off-Highway Trucks	1000	0.297	1.357	4.858	0.005	0.127	0.116	487.790	0.152	0.004
Other Construction Equipment	15	1.169	5.541	5.272	0.005	0.449	0.413	548.939	0.171	0.005
Other Construction Equipment	25	1.169	5.541	5.272	0.005	0.449	0.413	548.939	0.171	0.005

2018

2018		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Other Construction Equipment	50	1.169	5.541	5.272	0.005	0.449	0.413	548.939	0.171	0.005
Other Construction Equipment	120	0.598	3.799	5.441	0.005	0.417	0.383	490.018	0.153	0.004
Other Construction Equipment	175	0.436	3.263	4.755	0.005	0.250	0.230	487.986	0.152	0.004
Other Construction Equipment	500	0.251	1.813	3.167	0.005	0.115	0.105	493.360	0.154	0.004
Other General Industrial Equipment	15	1.154	5.827	4.979	0.005	0.414	0.381	546.639	0.170	0.005
Other General Industrial Equipment	25	1.154	5.827	4.979	0.005	0.414	0.381	546.639	0.170	0.005
Other General Industrial Equipment	50	1.154	5.827	4.979	0.005	0.414	0.381	546.639	0.170	0.005
Other General Industrial Equipment	120	0.557	3.876	4.955	0.005	0.392	0.360	488.278	0.152	0.004
Other General Industrial Equipment	175	0.318	3.237	3.237	0.005	0.172	0.158	490.200	0.153	0.004
Other General Industrial Equipment	250	0.303	1.455	3.648	0.005	0.135	0.124	491.626	0.153	0.004
Other General Industrial Equipment	500	0.254	1.583	2.907	0.005	0.104	0.095	491.321	0.153	0.004
Other General Industrial Equipment	750	0.217	1.483	2.419	0.005	0.083	0.076	491.876	0.153	0.004
Other General Industrial Equipment	1000	0.257	1.066	4.810	0.005	0.116	0.107	490.412	0.153	0.004
Other Material Handling Equipment	50	1.289	6.061	5.182	0.005	0.457	0.420	544.075	0.169	0.005
Other Material Handling Equipment	120	0.407	3.675	3.944	0.005	0.271	0.249	492.006	0.153	0.004
Other Material Handling Equipment	175	0.327	3.218	3.332	0.005	0.173	0.159	490.583	0.153	0.004
Other Material Handling Equipment	250	0.316	1.388	4.092	0.005	0.135	0.124	489.817	0.153	0.004
Other Material Handling Equipment	500	0.296	1.633	3.524	0.005	0.134	0.123	488.587	0.152	0.004
Other Material Handling Equipment	9999	0.180	1.023	3.551	0.005	0.074	0.068	490.412	0.153	0.004
Pavers	25	1.539	5.849	5.121	0.005	0.478	0.440	547.079	0.170	0.005
Pavers	50	1.539	5.849	5.121	0.005	0.478	0.440	547.079	0.170	0.005
Pavers	120	0.536	3.660	5.019	0.005	0.375	0.345	488.181	0.152	0.004
Pavers	175	0.339	3.039	3.747	0.005	0.183	0.168	491.322	0.153	0.004
Pavers	250	0.198	1.034	3.474	0.005	0.092	0.085	491.543	0.153	0.004
Pavers	500	0.164	0.981	2.320	0.005	0.083	0.076	484.277	0.151	0.004
Paving Equipment	25	0.737	4.416	4.312	0.005	0.286	0.263	540.612	0.168	0.005
Paving Equipment	50	0.737	4.416	4.312	0.005	0.286	0.263	540.612	0.168	0.005
Paving Equipment	120	0.449	3.607	4.270	0.005	0.302	0.278	492.118	0.153	0.004
Paving Equipment	175	0.284	3.026	3.172	0.005	0.155	0.143	489.202	0.152	0.004
Paving Equipment	250	0.258	1.281	3.587	0.005	0.123	0.113	490.683	0.153	0.004
Plate Compactors	15	0.661	3.470	4.142	0.008	0.161	0.161	568.300	0.059	0.005

2018

2018		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Pressure Washers	15	0.679	3.580	4.728	0.008	0.237	0.237	568.299	0.061	0.005
Pressure Washers	25	0.744	2.531	4.661	0.007	0.224	0.224	568.299	0.067	0.005
Pressure Washers	50	0.661	3.542	4.202	0.007	0.212	0.212	568.299	0.059	0.005
Pressure Washers	120	0.388	3.260	3.584	0.006	0.203	0.203	568.299	0.035	0.004
Pressure Washers	175	0.309	2.908	2.989	0.006	0.132	0.132	568.299	0.027	0.004
Pressure Washers	250	0.099	0.986	0.277	0.006	0.009	0.009	568.299	0.008	0.004
Pumps	15	0.766	3.580	4.762	0.008	0.256	0.256	568.299	0.069	0.005
Pumps	25	0.807	2.531	4.661	0.007	0.232	0.232	568.299	0.072	0.005
Pumps	50	0.973	4.397	4.422	0.007	0.267	0.267	568.299	0.087	0.005
Pumps	120	0.485	3.471	3.808	0.006	0.252	0.252	568.299	0.043	0.004
Pumps	175	0.338	2.974	3.035	0.006	0.140	0.140	568.299	0.030	0.004
Pumps	250	0.242	1.065	2.624	0.006	0.075	0.075	568.299	0.021	0.004
Pumps	500	0.226	1.041	2.340	0.005	0.071	0.071	568.299	0.020	0.004
Pumps	750	0.230	1.041	2.401	0.005	0.072	0.072	568.299	0.020	0.004
Pumps	9999	0.293	1.144	4.105	0.005	0.098	0.098	568.299	0.026	0.004
Rollers	15	1.064	4.923	4.842	0.005	0.387	0.356	546.291	0.170	0.005
Rollers	25	1.064	4.923	4.842	0.005	0.387	0.356	546.291	0.170	0.005
Rollers	50	1.064	4.923	4.842	0.005	0.387	0.356	546.291	0.170	0.005
Rollers	120	0.481	3.610	4.650	0.005	0.320	0.294	492.212	0.153	0.004
Rollers	175	0.265	2.949	3.181	0.005	0.147	0.136	490.181	0.153	0.004
Rollers	250	0.211	1.243	2.995	0.005	0.094	0.086	491.664	0.153	0.004
Rollers	500	0.245	2.231	3.098	0.005	0.119	0.110	497.996	0.155	0.004
Rough Terrain Forklifts	50	1.070	4.768	4.735	0.005	0.359	0.330	545.869	0.170	0.005
Rough Terrain Forklifts	120	0.222	3.270	2.845	0.005	0.136	0.125	491.211	0.153	0.004
Rough Terrain Forklifts	175	0.164	2.842	2.342	0.005	0.088	0.081	489.987	0.153	0.004
Rough Terrain Forklifts	250	0.152	1.029	2.487	0.005	0.060	0.055	491.100	0.153	0.004
Rough Terrain Forklifts	500	0.145	0.958	2.701	0.005	0.060	0.055	485.954	0.151	0.004
Rubber Tired Dozers	175	0.802	3.990	8.021	0.005	0.461	0.424	491.492	0.153	0.004
Rubber Tired Dozers	250	0.669	2.512	7.208	0.005	0.350	0.322	493.634	0.154	0.004
Rubber Tired Dozers	500	0.598	4.982	6.502	0.005	0.300	0.276	498.186	0.155	0.004
Rubber Tired Dozers	750	0.506	2.759	6.727	0.005	0.248	0.228	491.473	0.153	0.004
Rubber Tired Dozers	1000	0.574	2.413	5.764	0.005	0.183	0.183	568.299	0.051	0.004
Rubber Tired Loaders	25	1.765	7.299	5.679	0.005	0.576	0.530	545.053	0.170	0.005
Rubber Tired Loaders	50	1.765	7.299	5.679	0.005	0.576	0.530	545.053	0.170	0.005
Rubber Tired Loaders	120	0.655	4.047	5.470	0.005	0.452	0.416	484.093	0.151	0.004
Rubber Tired Loaders	175	0.448	3.423	4.368	0.005	0.242	0.223	489.511	0.152	0.004
Rubber Tired Loaders	250	0.334	1.346	4.131	0.005	0.140	0.129	487.902	0.152	0.004
Rubber Tired Loaders	500	0.334	1.868	3.726	0.005	0.140	0.128	484.571	0.151	0.004
Rubber Tired Loaders	750	0.331	1.555	3.544	0.005	0.140	0.129	476.566	0.148	0.004
Rubber Tired Loaders	1000	0.336	1.213	5.673	0.005	0.154	0.142	488.404	0.152	0.004
Scrapers	120	0.740	4.204	7.036	0.005	0.543	0.499	502.829	0.157	0.004
Scrapers	175	0.539	3.568	5.641	0.005	0.303	0.279	497.340	0.155	0.004
Scrapers	250	0.557	2.407	6.563	0.005	0.290	0.267	486.991	0.152	0.004
Scrapers	500	0.369	2.828	4.568	0.005	0.180	0.166	490.773	0.153	0.004
Scrapers	750	0.294	1.965	3.746	0.005	0.135	0.124	490.578	0.153	0.004
Signal Boards	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Signal Boards	50	1.018	4.657	4.427	0.007	0.270	0.270	568.299	0.091	0.005
Signal Boards	120	0.492	3.541	3.723	0.006	0.252	0.252	568.299	0.044	0.004

2018

2018		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Signal Boards	175	0.351	3.043	2.930	0.006	0.141	0.141	568.299	0.031	0.004
Signal Boards	250	0.309	1.306	3.040	0.007	0.090	0.090	686.695	0.027	0.004
Skid Steer Loaders	25	0.487	3.787	3.890	0.005	0.178	0.164	547.558	0.171	0.005
Skid Steer Loaders	50	0.487	3.787	3.890	0.005	0.178	0.164	547.558	0.171	0.005
Skid Steer Loaders	120	0.216	3.282	2.860	0.005	0.140	0.129	490.094	0.153	0.004
Surfacing Equipment	50	0.779	4.353	4.820	0.006	0.320	0.294	555.736	0.173	0.005
Surfacing Equipment	120	0.414	3.489	4.284	0.005	0.269	0.247	491.317	0.153	0.004
Surfacing Equipment	175	0.375	2.976	4.475	0.005	0.215	0.198	488.441	0.152	0.004
Surfacing Equipment	250	0.241	1.234	3.989	0.005	0.113	0.104	494.139	0.154	0.004
Surfacing Equipment	500	0.157	1.226	2.204	0.005	0.076	0.070	487.872	0.152	0.004
Surfacing Equipment	750	0.143	0.993	2.269	0.005	0.078	0.072	488.860	0.152	0.004
Sweepers/Scrubbers	15	1.545	6.444	5.399	0.005	0.531	0.488	545.758	0.170	0.005
Sweepers/Scrubbers	25	1.545	6.444	5.399	0.005	0.531	0.488	545.758	0.170	0.005
Sweepers/Scrubbers	50	1.545	6.444	5.399	0.005	0.531	0.488	545.758	0.170	0.005
Sweepers/Scrubbers	120	0.600	3.882	5.136	0.005	0.428	0.394	492.554	0.153	0.004
Sweepers/Scrubbers	175	0.589	3.588	6.071	0.005	0.320	0.294	491.521	0.153	0.004
Sweepers/Scrubbers	250	0.350	1.605	4.302	0.005	0.169	0.156	488.409	0.152	0.004
Tractors/Loaders/Backhoes	25	0.992	5.310	4.764	0.005	0.363	0.334	536.112	0.167	0.005
Tractors/Loaders/Backhoes	50	0.992	5.310	4.764	0.005	0.363	0.334	536.112	0.167	0.005
Tractors/Loaders/Backhoes	120	0.420	3.692	4.154	0.005	0.294	0.271	494.124	0.154	0.004
Tractors/Loaders/Backhoes	175	0.297	3.137	3.168	0.005	0.160	0.147	485.775	0.151	0.004
Tractors/Loaders/Backhoes	250	0.259	1.242	3.460	0.005	0.112	0.103	489.456	0.152	0.004
Tractors/Loaders/Backhoes	500	0.222	1.445	2.669	0.005	0.092	0.085	486.294	0.151	0.004
Tractors/Loaders/Backhoes	750	0.271	1.601	3.402	0.005	0.124	0.114	485.010	0.151	0.004
Trenchers	15	1.039	5.018	4.960	0.005	0.409	0.377	548.361	0.171	0.005
Trenchers	25	1.039	5.018	4.960	0.005	0.409	0.377	548.361	0.171	0.005
Trenchers	50	1.039	5.018	4.960	0.005	0.409	0.377	548.361	0.171	0.005
Trenchers	120	0.658	3.855	5.915	0.005	0.450	0.414	493.715	0.154	0.004
Trenchers	175	0.470	3.331	5.127	0.005	0.261	0.240	485.925	0.151	0.004
Trenchers	250	0.419	1.849	5.296	0.005	0.212	0.195	491.565	0.153	0.004
Trenchers	500	0.256	1.974	3.211	0.005	0.121	0.112	489.628	0.152	0.004
Trenchers	750	0.094	0.966	1.025	0.005	0.029	0.026	494.643	0.154	0.004
Welders	15	0.766	3.580	4.762	0.008	0.256	0.256	568.300	0.069	0.005
Welders	25	0.807	2.531	4.661	0.007	0.232	0.232	568.299	0.072	0.005
Welders	50	1.210	5.092	4.607	0.007	0.311	0.311	568.299	0.109	0.005
Welders	120	0.564	3.648	3.980	0.006	0.290	0.290	568.299	0.050	0.004
Welders	175	0.402	3.123	3.176	0.006	0.162	0.162	568.299	0.036	0.004
Welders	250	0.292	1.118	2.751	0.006	0.084	0.084	568.299	0.026	0.004
Welders	500	0.277	1.080	2.430	0.005	0.080	0.080	568.299	0.025	0.004
Water Trucks	175	0.383	3.383	3.543	0.005	0.192	0.177	488.044	0.152	0.004
Water Trucks	250	0.341	1.543	3.451	0.005	0.141	0.130	487.635	0.152	0.004
Water Trucks	500	0.287	1.560	3.090	0.005	0.113	0.104	493.506	0.154	0.004
Water Trucks	750	0.348	2.176	3.691	0.005	0.143	0.132	492.114	0.153	0.004
Water Trucks	1000	0.297	1.357	4.858	0.005	0.127	0.116	487.790	0.152	0.004

2019

2019		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Aerial Lifts	15	0.172	3.115	3.079	0.005	0.042	0.038	536.743	0.170	0.005
Aerial Lifts	25	0.172	3.115	3.079	0.005	0.042	0.038	536.743	0.170	0.005
Aerial Lifts	50	0.172	3.115	3.079	0.005	0.042	0.038	536.743	0.170	0.005
Aerial Lifts	120	0.118	3.173	1.977	0.005	0.049	0.045	482.606	0.153	0.004
Aerial Lifts	500	0.066	0.941	0.636	0.005	0.009	0.008	482.545	0.153	0.004
Aerial Lifts	750	0.212	1.023	2.117	0.005	0.064	0.064	568.299	0.019	0.004
Air Compressors	15	0.748	3.562	4.647	0.008	0.241	0.241	568.299	0.067	0.005
Air Compressors	25	0.787	2.501	4.596	0.007	0.222	0.222	568.299	0.071	0.005
Air Compressors	50	1.129	5.283	4.546	0.007	0.287	0.287	568.299	0.101	0.005
Air Compressors	120	0.538	3.718	3.706	0.006	0.260	0.260	568.299	0.048	0.004
Air Compressors	175	0.401	3.204	2.874	0.006	0.150	0.150	568.299	0.036	0.004
Air Compressors	250	0.304	1.132	2.469	0.006	0.078	0.078	568.299	0.027	0.004
Air Compressors	500	0.293	1.086	2.193	0.005	0.075	0.075	568.299	0.026	0.004
Air Compressors	750	0.294	1.086	2.247	0.005	0.076	0.076	568.299	0.026	0.004
Air Compressors	1000	0.324	1.182	4.073	0.005	0.102	0.102	568.299	0.029	0.004
Bore/Drill Rigs	15	0.722	4.497	4.718	0.006	0.303	0.278	545.293	0.173	0.005
Bore/Drill Rigs	25	0.722	4.497	4.718	0.006	0.303	0.278	545.293	0.173	0.005
Bore/Drill Rigs	50	0.722	4.497	4.718	0.006	0.303	0.278	545.293	0.173	0.005
Bore/Drill Rigs	120	0.267	3.332	3.321	0.005	0.180	0.166	472.453	0.150	0.004
Bore/Drill Rigs	175	0.181	2.956	2.018	0.005	0.088	0.081	487.355	0.154	0.004
Bore/Drill Rigs	250	0.143	1.061	1.894	0.005	0.054	0.049	475.790	0.151	0.004
Bore/Drill Rigs	500	0.129	1.034	1.551	0.005	0.048	0.044	477.046	0.151	0.004
Bore/Drill Rigs	750	0.117	0.971	1.449	0.005	0.048	0.044	481.836	0.152	0.004
Bore/Drill Rigs	1000	0.129	0.983	3.041	0.005	0.061	0.056	482.359	0.153	0.004
Cement and Mortar Mixers	15	0.661	3.469	4.142	0.008	0.162	0.162	568.299	0.059	0.005
Cement and Mortar Mixers	25	0.735	2.417	4.469	0.007	0.196	0.196	568.299	0.066	0.005
Concrete/Industrial Saws	25	0.685	2.339	4.332	0.007	0.161	0.161	568.299	0.061	0.005
Concrete/Industrial Saws	50	0.899	4.645	4.338	0.007	0.242	0.242	568.299	0.081	0.005
Concrete/Industrial Saws	120	0.443	3.550	3.441	0.006	0.220	0.220	568.300	0.040	0.004
Concrete/Industrial Saws	175	0.330	3.072	2.618	0.006	0.128	0.128	568.299	0.029	0.004
Cranes	50	2.045	7.245	5.952	0.005	0.615	0.566	529.463	0.168	0.005
Cranes	120	0.803	4.265	6.958	0.005	0.501	0.460	480.325	0.152	0.004
Cranes	175	0.568	3.598	5.949	0.005	0.318	0.292	485.182	0.154	0.004
Cranes	250	0.427	1.941	5.084	0.005	0.216	0.198	483.462	0.153	0.004
Cranes	500	0.349	2.969	4.297	0.005	0.173	0.159	483.142	0.153	0.004
Cranes	750	0.252	1.446	3.428	0.005	0.124	0.114	481.119	0.152	0.004
Cranes	9999	0.172	0.991	2.349	0.005	0.060	0.055	482.545	0.153	0.004
Crawler Tractors	50	2.225	7.589	5.855	0.005	0.640	0.589	525.977	0.166	0.005
Crawler Tractors	120	0.757	4.088	6.393	0.005	0.535	0.492	486.991	0.154	0.004
Crawler Tractors	175	0.517	3.379	5.382	0.005	0.300	0.276	481.622	0.152	0.004
Crawler Tractors	250	0.380	1.604	4.972	0.005	0.188	0.173	483.449	0.153	0.004
Crawler Tractors	500	0.319	2.219	3.934	0.005	0.153	0.141	485.865	0.154	0.004
Crawler Tractors	750	0.266	1.356	3.343	0.005	0.123	0.113	483.388	0.153	0.004
Crawler Tractors	1000	0.460	2.020	7.212	0.005	0.211	0.194	486.255	0.154	0.004
Crushing/Proc. Equipment	50	1.064	5.316	4.495	0.007	0.269	0.269	568.299	0.096	0.005

2019

2019		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Crushing/Proc. Equipment	120	0.519	3.739	3.544	0.006	0.241	0.241	568.299	0.046	0.004
Crushing/Proc. Equipment	175	0.394	3.233	2.700	0.006	0.141	0.141	568.299	0.035	0.004
Crushing/Proc. Equipment	250	0.304	1.134	2.300	0.006	0.074	0.074	568.299	0.027	0.004
Crushing/Proc. Equipment	500	0.295	1.087	2.046	0.005	0.071	0.071	568.299	0.026	0.004
Crushing/Proc. Equipment	750	0.294	1.085	2.085	0.005	0.071	0.071	568.299	0.026	0.004
Crushing/Proc. Equipment	9999	0.345	1.173	3.927	0.005	0.098	0.098	568.299	0.031	0.004
Dumpers/Tenders	25	0.686	2.339	4.341	0.007	0.167	0.167	568.299	0.061	0.005
Excavators	25	0.637	4.597	4.199	0.005	0.250	0.230	536.913	0.170	0.005
Excavators	50	0.637	4.597	4.199	0.005	0.250	0.230	536.913	0.170	0.005
Excavators	120	0.325	3.524	3.369	0.005	0.211	0.194	478.245	0.151	0.004
Excavators	175	0.246	3.082	2.533	0.005	0.122	0.112	482.684	0.153	0.004
Excavators	250	0.186	1.127	2.242	0.005	0.068	0.063	482.250	0.153	0.004
Excavators	500	0.162	1.114	1.780	0.005	0.058	0.053	481.236	0.152	0.004
Excavators	750	0.176	1.173	1.987	0.005	0.067	0.062	479.288	0.152	0.004
Forklifts	50	1.244	5.880	4.862	0.005	0.401	0.369	537.161	0.170	0.005
Forklifts	120	0.510	3.804	4.550	0.005	0.353	0.324	482.007	0.153	0.004
Forklifts	175	0.382	3.288	3.865	0.005	0.210	0.193	482.598	0.153	0.004
Forklifts	250	0.374	1.677	4.250	0.005	0.175	0.161	483.844	0.153	0.004
Forklifts	500	0.268	1.814	2.751	0.005	0.112	0.103	484.140	0.153	0.004
Generator Sets	15	0.662	3.562	4.617	0.008	0.224	0.224	568.299	0.059	0.005
Generator Sets	25	0.731	2.501	4.596	0.007	0.214	0.214	568.299	0.066	0.005
Generator Sets	50	0.779	4.076	4.215	0.007	0.222	0.222	568.299	0.070	0.005
Generator Sets	120	0.405	3.396	3.446	0.006	0.206	0.206	568.299	0.036	0.004
Generator Sets	175	0.290	2.929	2.669	0.006	0.118	0.118	568.299	0.026	0.004
Generator Sets	250	0.211	1.036	2.285	0.006	0.064	0.064	568.299	0.019	0.004
Generator Sets	500	0.199	1.015	2.056	0.005	0.062	0.062	568.299	0.018	0.004
Generator Sets	750	0.202	1.015	2.104	0.005	0.062	0.062	568.299	0.018	0.004
Generator Sets	9999	0.261	1.103	3.829	0.005	0.087	0.087	568.299	0.023	0.004
Graders	50	2.616	8.279	5.945	0.005	0.737	0.678	503.751	0.159	0.005
Graders	120	1.032	4.642	8.159	0.005	0.665	0.612	479.901	0.152	0.004
Graders	175	0.609	3.656	6.014	0.005	0.337	0.310	489.042	0.155	0.004
Graders	250	0.360	1.359	4.866	0.005	0.156	0.144	486.329	0.154	0.004
Graders	500	0.323	1.528	3.218	0.005	0.124	0.115	482.588	0.153	0.004
Graders	750	0.335	1.255	2.276	0.005	0.080	0.080	568.299	0.030	0.004
Off-Highway Tractors	120	0.473	3.795	4.421	0.005	0.331	0.305	484.269	0.153	0.004
Off-Highway Tractors	175	0.294	3.219	3.208	0.005	0.159	0.146	483.431	0.153	0.004
Off-Highway Tractors	250	0.239	1.218	2.914	0.005	0.098	0.090	481.275	0.152	0.004
Off-Highway Tractors	750	0.205	1.129	2.177	0.005	0.082	0.075	482.309	0.153	0.004
Off-Highway Tractors	1000	0.140	1.010	2.378	0.005	0.062	0.057	482.545	0.153	0.004
Off-Highway Trucks	175	0.323	3.326	2.825	0.005	0.149	0.138	480.362	0.152	0.004
Off-Highway Trucks	250	0.307	1.461	2.985	0.005	0.119	0.110	480.170	0.152	0.004
Off-Highway Trucks	500	0.264	1.483	2.669	0.005	0.097	0.089	485.383	0.154	0.004
Off-Highway Trucks	750	0.327	2.041	3.320	0.005	0.129	0.118	483.218	0.153	0.004
Off-Highway Trucks	1000	0.295	1.356	4.765	0.005	0.124	0.114	480.348	0.152	0.004
Other Construction Equipment	15	1.152	5.541	5.203	0.005	0.437	0.402	539.735	0.171	0.005
Other Construction Equipment	25	1.152	5.541	5.203	0.005	0.437	0.402	539.735	0.171	0.005

2019

2019		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Other Construction Equipment	50	1.152	5.541	5.203	0.005	0.437	0.402	539.735	0.171	0.005
Other Construction Equipment	120	0.550	3.754	5.048	0.005	0.379	0.349	482.218	0.153	0.004
Other Construction Equipment	175	0.412	3.256	4.433	0.005	0.234	0.215	480.452	0.152	0.004
Other Construction Equipment	500	0.234	1.667	2.855	0.005	0.103	0.094	485.413	0.154	0.004
Other General Industrial Equipment	15	1.042	5.662	4.807	0.005	0.374	0.344	537.869	0.170	0.005
Other General Industrial Equipment	25	1.042	5.662	4.807	0.005	0.374	0.344	537.869	0.170	0.005
Other General Industrial Equipment	50	1.042	5.662	4.807	0.005	0.374	0.344	537.869	0.170	0.005
Other General Industrial Equipment	120	0.500	3.821	4.497	0.005	0.343	0.316	480.444	0.152	0.004
Other General Industrial Equipment	175	0.302	3.241	2.999	0.005	0.157	0.144	482.336	0.153	0.004
Other General Industrial Equipment	250	0.259	1.299	3.020	0.005	0.106	0.097	483.739	0.153	0.004
Other General Industrial Equipment	500	0.239	1.561	2.575	0.005	0.092	0.085	483.439	0.153	0.004
Other General Industrial Equipment	750	0.199	1.474	2.115	0.005	0.076	0.070	483.985	0.153	0.004
Other General Industrial Equipment	1000	0.264	1.076	4.834	0.005	0.117	0.108	482.545	0.153	0.004
Other Material Handling Equipment	50	1.275	6.139	5.179	0.005	0.452	0.416	535.347	0.169	0.005
Other Material Handling Equipment	120	0.360	3.636	3.566	0.005	0.231	0.212	484.113	0.153	0.004
Other Material Handling Equipment	175	0.280	3.185	2.774	0.005	0.139	0.128	482.713	0.153	0.004
Other Material Handling Equipment	250	0.300	1.341	3.817	0.005	0.123	0.113	481.959	0.153	0.004
Other Material Handling Equipment	500	0.291	1.620	3.371	0.005	0.128	0.118	480.748	0.152	0.004
Other Material Handling Equipment	9999	0.190	1.036	3.583	0.005	0.076	0.070	482.545	0.153	0.004
Pavers	25	1.418	5.657	4.916	0.005	0.436	0.401	538.325	0.170	0.005
Pavers	50	1.418	5.657	4.916	0.005	0.436	0.401	538.325	0.170	0.005
Pavers	120	0.496	3.622	4.670	0.005	0.346	0.318	480.251	0.152	0.004
Pavers	175	0.299	3.013	3.245	0.005	0.159	0.146	483.394	0.153	0.004
Pavers	250	0.187	1.032	3.111	0.005	0.084	0.077	483.574	0.153	0.004
Pavers	500	0.167	0.986	2.270	0.005	0.081	0.075	476.971	0.151	0.004
Paving Equipment	25	0.705	4.408	4.238	0.005	0.270	0.248	531.861	0.168	0.005
Paving Equipment	50	0.705	4.408	4.238	0.005	0.270	0.248	531.861	0.168	0.005
Paving Equipment	120	0.425	3.598	4.042	0.005	0.281	0.258	484.387	0.153	0.004
Paving Equipment	175	0.254	3.011	2.692	0.005	0.134	0.123	481.225	0.152	0.004
Paving Equipment	250	0.241	1.244	3.251	0.005	0.112	0.103	482.644	0.153	0.004
Plate Compactors	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005

2019

2019		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Pressure Washers	15	0.662	3.562	4.617	0.008	0.224	0.224	568.299	0.059	0.005
Pressure Washers	25	0.731	2.501	4.596	0.007	0.214	0.214	568.299	0.066	0.005
Pressure Washers	50	0.569	3.457	4.053	0.007	0.184	0.184	568.299	0.051	0.005
Pressure Washers	120	0.337	3.240	3.295	0.006	0.174	0.174	568.299	0.030	0.004
Pressure Washers	175	0.280	2.907	2.670	0.006	0.117	0.117	568.299	0.025	0.004
Pressure Washers	250	0.098	0.986	0.265	0.006	0.009	0.009	568.299	0.008	0.004
Pumps	15	0.748	3.562	4.647	0.008	0.241	0.241	568.300	0.067	0.005
Pumps	25	0.787	2.501	4.596	0.007	0.222	0.222	568.300	0.071	0.005
Pumps	50	0.849	4.284	4.269	0.007	0.235	0.235	568.299	0.076	0.005
Pumps	120	0.429	3.449	3.497	0.006	0.217	0.217	568.299	0.038	0.004
Pumps	175	0.309	2.974	2.711	0.006	0.124	0.124	568.299	0.027	0.004
Pumps	250	0.226	1.052	2.323	0.006	0.067	0.067	568.299	0.020	0.004
Pumps	500	0.214	1.027	2.084	0.005	0.064	0.064	568.300	0.019	0.004
Pumps	750	0.217	1.027	2.133	0.005	0.065	0.065	568.299	0.019	0.004
Pumps	9999	0.273	1.118	3.873	0.005	0.089	0.089	568.299	0.024	0.004
Rollers	15	0.972	4.778	4.645	0.005	0.349	0.321	537.546	0.170	0.005
Rollers	25	0.972	4.778	4.645	0.005	0.349	0.321	537.546	0.170	0.005
Rollers	50	0.972	4.778	4.645	0.005	0.349	0.321	537.546	0.170	0.005
Rollers	120	0.423	3.557	4.179	0.005	0.275	0.253	484.336	0.153	0.004
Rollers	175	0.231	2.933	2.699	0.005	0.124	0.114	482.453	0.153	0.004
Rollers	250	0.211	1.249	2.883	0.005	0.092	0.084	483.777	0.153	0.004
Rollers	500	0.234	2.101	2.908	0.005	0.111	0.102	489.977	0.155	0.004
Rough Terrain Forklifts	50	1.009	4.674	4.557	0.005	0.328	0.302	537.329	0.170	0.005
Rough Terrain Forklifts	120	0.202	3.258	2.622	0.005	0.117	0.108	483.311	0.153	0.004
Rough Terrain Forklifts	175	0.149	2.841	2.058	0.005	0.075	0.069	482.119	0.153	0.004
Rough Terrain Forklifts	250	0.109	0.974	1.639	0.005	0.036	0.034	483.088	0.153	0.004
Rough Terrain Forklifts	500	0.116	0.950	1.961	0.005	0.043	0.040	477.254	0.151	0.004
Rubber Tired Dozers	175	0.759	3.949	7.520	0.005	0.433	0.398	483.559	0.153	0.004
Rubber Tired Dozers	250	0.651	2.459	6.929	0.005	0.338	0.311	485.172	0.154	0.004
Rubber Tired Dozers	500	0.572	4.743	6.143	0.005	0.283	0.260	490.383	0.155	0.004
Rubber Tired Dozers	750	0.455	2.598	6.122	0.005	0.218	0.201	483.579	0.153	0.004
Rubber Tired Dozers	1000	0.547	2.281	5.528	0.005	0.171	0.171	568.299	0.049	0.004
Rubber Tired Loaders	25	1.602	6.978	5.432	0.005	0.518	0.476	536.225	0.170	0.005
Rubber Tired Loaders	50	1.602	6.978	5.432	0.005	0.518	0.476	536.225	0.170	0.005
Rubber Tired Loaders	120	0.595	3.979	5.006	0.005	0.402	0.370	475.864	0.151	0.004
Rubber Tired Loaders	175	0.405	3.381	3.859	0.005	0.213	0.196	481.736	0.152	0.004
Rubber Tired Loaders	250	0.309	1.302	3.745	0.005	0.126	0.116	480.100	0.152	0.004
Rubber Tired Loaders	500	0.306	1.725	3.288	0.005	0.123	0.113	477.042	0.151	0.004
Rubber Tired Loaders	750	0.293	1.452	3.019	0.005	0.118	0.109	471.187	0.149	0.004
Rubber Tired Loaders	1000	0.323	1.208	5.459	0.005	0.146	0.135	480.523	0.152	0.004
Scrapers	120	0.718	4.197	6.841	0.005	0.526	0.483	494.100	0.156	0.004
Scrapers	175	0.510	3.533	5.264	0.005	0.283	0.261	489.255	0.155	0.004
Scrapers	250	0.501	2.233	5.831	0.005	0.257	0.236	479.032	0.152	0.004
Scrapers	500	0.343	2.595	4.156	0.005	0.163	0.150	482.732	0.153	0.004
Scrapers	750	0.277	1.829	3.431	0.005	0.123	0.113	482.596	0.153	0.004
Signal Boards	15	0.661	3.470	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Signal Boards	50	0.887	4.538	4.272	0.007	0.236	0.236	568.300	0.080	0.005
Signal Boards	120	0.437	3.519	3.410	0.006	0.216	0.216	568.299	0.039	0.004

2019

2019		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Signal Boards	175	0.321	3.043	2.601	0.006	0.125	0.125	568.299	0.029	0.004
Signal Boards	250	0.291	1.292	2.676	0.007	0.080	0.080	686.695	0.026	0.004
Skid Steer Loaders	25	0.446	3.740	3.750	0.005	0.154	0.141	539.267	0.171	0.005
Skid Steer Loaders	50	0.446	3.740	3.750	0.005	0.154	0.141	539.267	0.171	0.005
Skid Steer Loaders	120	0.199	3.277	2.656	0.005	0.122	0.112	482.384	0.153	0.004
Surfacing Equipment	50	0.643	4.100	4.420	0.006	0.250	0.230	547.046	0.173	0.005
Surfacing Equipment	120	0.355	3.449	3.823	0.005	0.226	0.208	484.076	0.153	0.004
Surfacing Equipment	175	0.357	2.972	4.239	0.005	0.204	0.187	479.672	0.152	0.004
Surfacing Equipment	250	0.217	1.216	3.400	0.005	0.101	0.093	486.842	0.154	0.004
Surfacing Equipment	500	0.146	1.214	1.899	0.005	0.068	0.063	481.897	0.153	0.004
Surfacing Equipment	750	0.142	0.994	2.179	0.005	0.076	0.070	480.166	0.152	0.004
Sweepers/Scrubbers	15	1.431	6.268	5.225	0.005	0.491	0.452	537.002	0.170	0.005
Sweepers/Scrubbers	25	1.431	6.268	5.225	0.005	0.491	0.452	537.002	0.170	0.005
Sweepers/Scrubbers	50	1.431	6.268	5.225	0.005	0.491	0.452	537.002	0.170	0.005
Sweepers/Scrubbers	120	0.550	3.846	4.773	0.005	0.387	0.356	484.652	0.153	0.004
Sweepers/Scrubbers	175	0.523	3.449	5.301	0.005	0.277	0.255	483.636	0.153	0.004
Sweepers/Scrubbers	250	0.235	1.230	2.866	0.005	0.099	0.091	480.574	0.152	0.004
Tractors/Loaders/Backhoes	25	0.920	5.203	4.609	0.005	0.330	0.304	527.684	0.167	0.005
Tractors/Loaders/Backhoes	50	0.920	5.203	4.609	0.005	0.330	0.304	527.684	0.167	0.005
Tractors/Loaders/Backhoes	120	0.368	3.638	3.693	0.005	0.247	0.227	485.855	0.154	0.004
Tractors/Loaders/Backhoes	175	0.270	3.122	2.784	0.005	0.140	0.129	477.915	0.151	0.004
Tractors/Loaders/Backhoes	250	0.245	1.220	3.147	0.005	0.102	0.094	481.421	0.152	0.004
Tractors/Loaders/Backhoes	500	0.206	1.389	2.345	0.005	0.082	0.075	479.083	0.152	0.004
Tractors/Loaders/Backhoes	750	0.262	1.603	3.120	0.005	0.117	0.107	478.922	0.152	0.004
Trenchers	15	0.955	4.892	4.785	0.005	0.377	0.347	539.104	0.171	0.005
Trenchers	25	0.955	4.892	4.785	0.005	0.377	0.347	539.104	0.171	0.005
Trenchers	50	0.955	4.892	4.785	0.005	0.377	0.347	539.104	0.171	0.005
Trenchers	120	0.631	3.837	5.695	0.005	0.431	0.396	485.364	0.154	0.004
Trenchers	175	0.460	3.342	4.960	0.005	0.255	0.234	478.129	0.151	0.004
Trenchers	250	0.405	1.810	5.047	0.005	0.203	0.187	484.117	0.153	0.004
Trenchers	500	0.254	1.987	3.128	0.005	0.118	0.109	482.165	0.153	0.004
Trenchers	750	0.078	0.956	0.707	0.005	0.015	0.014	484.542	0.153	0.004
Welders	15	0.748	3.562	4.647	0.008	0.241	0.241	568.299	0.067	0.005
Welders	25	0.787	2.501	4.596	0.007	0.222	0.222	568.299	0.071	0.005
Welders	50	1.055	4.950	4.449	0.007	0.273	0.273	568.299	0.095	0.005
Welders	120	0.503	3.623	3.648	0.006	0.250	0.250	568.299	0.045	0.004
Welders	175	0.370	3.122	2.832	0.006	0.143	0.143	568.300	0.033	0.004
Welders	250	0.276	1.104	2.432	0.006	0.075	0.075	568.299	0.024	0.004
Welders	500	0.264	1.065	2.163	0.005	0.072	0.072	568.300	0.023	0.004
Water Trucks	175	0.323	3.326	2.825	0.005	0.149	0.138	480.362	0.152	0.004
Water Trucks	250	0.307	1.461	2.985	0.005	0.119	0.110	480.170	0.152	0.004
Water Trucks	500	0.264	1.483	2.669	0.005	0.097	0.089	485.383	0.154	0.004
Water Trucks	750	0.327	2.041	3.320	0.005	0.129	0.118	483.218	0.153	0.004
Water Trucks	1000	0.295	1.356	4.765	0.005	0.124	0.114	480.348	0.152	0.004

2020

2020		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Aerial Lifts	15	0.168	3.099	2.955	0.005	0.031	0.028	525.074	0.170	0.005
Aerial Lifts	25	0.168	3.099	2.955	0.005	0.031	0.028	525.074	0.170	0.005
Aerial Lifts	50	0.168	3.099	2.955	0.005	0.031	0.028	525.074	0.170	0.005
Aerial Lifts	120	0.115	3.177	1.869	0.005	0.042	0.038	472.114	0.153	0.004
Aerial Lifts	500	0.069	0.946	0.638	0.005	0.009	0.008	472.055	0.153	0.004
Aerial Lifts	750	0.200	1.013	1.868	0.005	0.057	0.057	568.299	0.018	0.004
Air Compressors	15	0.731	3.546	4.542	0.008	0.227	0.227	568.299	0.066	0.005
Air Compressors	25	0.769	2.473	4.538	0.007	0.212	0.212	568.300	0.069	0.005
Air Compressors	50	1.001	5.164	4.397	0.007	0.250	0.250	568.299	0.090	0.005
Air Compressors	120	0.489	3.698	3.400	0.006	0.224	0.224	568.299	0.044	0.004
Air Compressors	175	0.374	3.203	2.558	0.006	0.133	0.133	568.299	0.033	0.004
Air Compressors	250	0.288	1.121	2.172	0.006	0.069	0.069	568.299	0.026	0.004
Air Compressors	500	0.279	1.076	1.935	0.005	0.067	0.067	568.299	0.025	0.004
Air Compressors	750	0.280	1.076	1.982	0.005	0.067	0.067	568.299	0.025	0.004
Air Compressors	1000	0.306	1.158	3.828	0.005	0.093	0.093	568.300	0.027	0.004
Bore/Drill Rigs	15	0.716	4.510	4.645	0.006	0.294	0.271	535.295	0.173	0.005
Bore/Drill Rigs	25	0.716	4.510	4.645	0.006	0.294	0.271	535.295	0.173	0.005
Bore/Drill Rigs	50	0.716	4.510	4.645	0.006	0.294	0.271	535.295	0.173	0.005
Bore/Drill Rigs	120	0.246	3.323	3.066	0.005	0.159	0.146	463.583	0.150	0.004
Bore/Drill Rigs	175	0.174	2.969	1.871	0.005	0.082	0.076	477.722	0.155	0.004
Bore/Drill Rigs	250	0.142	1.068	1.807	0.005	0.052	0.048	466.834	0.151	0.004
Bore/Drill Rigs	500	0.125	1.013	1.409	0.005	0.045	0.041	466.822	0.151	0.004
Bore/Drill Rigs	750	0.109	0.974	1.231	0.005	0.041	0.038	473.668	0.153	0.004
Bore/Drill Rigs	1000	0.133	0.988	3.050	0.005	0.061	0.056	471.849	0.153	0.004
Cement and Mortar Mixers	15	0.661	3.470	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Cement and Mortar Mixers	25	0.723	2.397	4.442	0.007	0.187	0.187	568.299	0.065	0.005
Concrete/Industrial Saws	25	0.685	2.339	4.332	0.007	0.161	0.161	568.299	0.061	0.005
Concrete/Industrial Saws	50	0.798	4.552	4.196	0.007	0.212	0.212	568.299	0.072	0.005
Concrete/Industrial Saws	120	0.401	3.535	3.163	0.006	0.190	0.190	568.299	0.036	0.004
Concrete/Industrial Saws	175	0.306	3.072	2.324	0.006	0.114	0.114	568.299	0.027	0.004
Cranes	50	2.084	7.376	5.985	0.005	0.624	0.574	517.926	0.168	0.005
Cranes	120	0.732	4.171	6.381	0.005	0.453	0.417	469.882	0.152	0.004
Cranes	175	0.537	3.562	5.570	0.005	0.298	0.274	474.594	0.154	0.004
Cranes	250	0.384	1.790	4.563	0.005	0.188	0.173	472.949	0.153	0.004
Cranes	500	0.321	2.660	3.862	0.005	0.155	0.142	472.558	0.153	0.004
Cranes	750	0.242	1.444	3.105	0.005	0.116	0.107	470.425	0.152	0.004
Cranes	9999	0.182	0.999	2.361	0.005	0.060	0.056	472.055	0.153	0.004
Crawler Tractors	50	2.053	7.300	5.643	0.005	0.591	0.544	515.679	0.167	0.005
Crawler Tractors	120	0.715	4.044	6.009	0.005	0.501	0.460	476.328	0.154	0.004
Crawler Tractors	175	0.476	3.340	4.872	0.005	0.272	0.250	471.015	0.152	0.004
Crawler Tractors	250	0.360	1.555	4.632	0.005	0.175	0.161	472.941	0.153	0.004
Crawler Tractors	500	0.301	2.088	3.622	0.005	0.141	0.130	475.234	0.154	0.004
Crawler Tractors	750	0.256	1.310	3.137	0.005	0.115	0.106	473.312	0.153	0.004
Crawler Tractors	1000	0.463	2.028	7.237	0.005	0.212	0.195	475.653	0.154	0.004
Crushing/Proc. Equipment	50	0.947	5.211	4.347	0.007	0.233	0.233	568.299	0.085	0.005

2020

2020		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Crushing/Proc. Equipment	120	0.473	3.722	3.249	0.006	0.206	0.206	568.299	0.042	0.004
Crushing/Proc. Equipment	175	0.367	3.234	2.392	0.006	0.124	0.124	568.299	0.033	0.004
Crushing/Proc. Equipment	250	0.289	1.125	2.014	0.006	0.065	0.065	568.299	0.026	0.004
Crushing/Proc. Equipment	500	0.281	1.078	1.799	0.005	0.063	0.063	568.299	0.025	0.004
Crushing/Proc. Equipment	750	0.281	1.077	1.835	0.005	0.063	0.063	568.299	0.025	0.004
Crushing/Proc. Equipment	9999	0.329	1.153	3.699	0.005	0.089	0.089	568.299	0.029	0.004
Dumpers/Tenders	25	0.685	2.339	4.336	0.007	0.165	0.165	568.299	0.061	0.005
Excavators	25	0.593	4.500	4.031	0.005	0.222	0.204	525.368	0.170	0.005
Excavators	50	0.593	4.500	4.031	0.005	0.222	0.204	525.368	0.170	0.005
Excavators	120	0.299	3.505	3.090	0.005	0.185	0.170	468.055	0.151	0.004
Excavators	175	0.231	3.086	2.278	0.005	0.110	0.102	472.289	0.153	0.004
Excavators	250	0.177	1.118	2.027	0.005	0.061	0.057	471.883	0.153	0.004
Excavators	500	0.153	1.102	1.572	0.005	0.052	0.048	470.296	0.152	0.004
Excavators	750	0.170	1.145	1.797	0.005	0.061	0.056	468.871	0.152	0.004
Forklifts	50	1.124	5.706	4.686	0.005	0.360	0.331	525.483	0.170	0.005
Forklifts	120	0.459	3.760	4.133	0.005	0.308	0.283	471.529	0.153	0.004
Forklifts	175	0.338	3.249	3.320	0.005	0.180	0.165	472.106	0.153	0.004
Forklifts	250	0.293	1.442	3.241	0.005	0.126	0.116	473.326	0.153	0.004
Forklifts	500	0.251	1.478	2.440	0.005	0.097	0.089	473.615	0.153	0.004
Generator Sets	15	0.646	3.546	4.516	0.008	0.212	0.212	568.299	0.058	0.005
Generator Sets	25	0.721	2.473	4.538	0.007	0.205	0.205	568.299	0.065	0.005
Generator Sets	50	0.691	3.995	4.075	0.007	0.194	0.194	568.299	0.062	0.005
Generator Sets	120	0.364	3.380	3.173	0.006	0.179	0.179	568.299	0.032	0.004
Generator Sets	175	0.267	2.930	2.380	0.006	0.105	0.105	568.299	0.024	0.004
Generator Sets	250	0.198	1.026	2.016	0.006	0.057	0.057	568.299	0.017	0.004
Generator Sets	500	0.188	1.005	1.816	0.005	0.055	0.055	568.299	0.017	0.004
Generator Sets	750	0.191	1.005	1.858	0.005	0.056	0.056	568.299	0.017	0.004
Generator Sets	9999	0.242	1.082	3.608	0.005	0.079	0.079	568.300	0.021	0.004
Graders	50	2.516	8.134	5.825	0.005	0.709	0.652	492.862	0.159	0.005
Graders	120	0.976	4.561	7.725	0.005	0.622	0.572	469.337	0.152	0.004
Graders	175	0.567	3.621	5.530	0.005	0.309	0.284	478.040	0.155	0.004
Graders	250	0.352	1.342	4.678	0.005	0.150	0.138	475.304	0.154	0.004
Graders	500	0.322	1.526	3.107	0.005	0.121	0.111	471.980	0.153	0.004
Graders	750	0.319	1.229	2.031	0.005	0.072	0.072	568.299	0.028	0.004
Off-Highway Tractors	120	0.448	3.788	4.183	0.005	0.307	0.283	474.148	0.153	0.004
Off-Highway Tractors	175	0.271	3.215	2.890	0.005	0.140	0.129	472.917	0.153	0.004
Off-Highway Tractors	250	0.221	1.181	2.575	0.005	0.086	0.079	470.943	0.152	0.004
Off-Highway Tractors	750	0.201	1.131	2.047	0.005	0.076	0.070	471.815	0.153	0.004
Off-Highway Tractors	1000	0.150	1.022	2.396	0.005	0.063	0.058	472.055	0.153	0.004
Off-Highway Trucks	175	0.310	3.339	2.628	0.005	0.137	0.126	470.097	0.152	0.004
Off-Highway Trucks	250	0.275	1.391	2.507	0.005	0.098	0.090	470.168	0.152	0.004
Off-Highway Trucks	500	0.246	1.414	2.347	0.005	0.086	0.079	474.579	0.154	0.004
Off-Highway Trucks	750	0.312	2.027	3.058	0.005	0.120	0.110	472.750	0.153	0.004
Off-Highway Trucks	1000	0.303	1.372	4.794	0.005	0.125	0.115	469.889	0.152	0.004
Other Construction Equipment	15	1.072	5.404	5.036	0.005	0.405	0.373	527.966	0.171	0.005
Other Construction Equipment	25	1.072	5.404	5.036	0.005	0.405	0.373	527.966	0.171	0.005

2020

2020		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Other Construction Equipment	50	1.072	5.404	5.036	0.005	0.405	0.373	527.966	0.171	0.005
Other Construction Equipment	120	0.519	3.732	4.771	0.005	0.354	0.325	472.216	0.153	0.004
Other Construction Equipment	175	0.388	3.235	4.112	0.005	0.217	0.200	469.984	0.152	0.004
Other Construction Equipment	500	0.224	1.634	2.637	0.005	0.096	0.088	475.233	0.154	0.004
Other General Industrial Equipment	15	0.946	5.504	4.622	0.005	0.334	0.307	526.176	0.170	0.005
Other General Industrial Equipment	25	0.946	5.504	4.622	0.005	0.334	0.307	526.176	0.170	0.005
Other General Industrial Equipment	50	0.946	5.504	4.622	0.005	0.334	0.307	526.176	0.170	0.005
Other General Industrial Equipment	120	0.446	3.771	4.061	0.005	0.296	0.272	470.000	0.152	0.004
Other General Industrial Equipment	175	0.268	3.229	2.575	0.005	0.135	0.124	471.850	0.153	0.004
Other General Industrial Equipment	250	0.237	1.239	2.668	0.005	0.090	0.083	473.223	0.153	0.004
Other General Industrial Equipment	500	0.208	1.344	2.062	0.005	0.072	0.067	472.929	0.153	0.004
Other General Industrial Equipment	750	0.175	1.462	1.676	0.005	0.062	0.057	473.464	0.153	0.004
Other General Industrial Equipment	1000	0.271	1.085	4.857	0.005	0.119	0.109	472.055	0.153	0.004
Other Material Handling Equipment	50	1.245	6.167	5.139	0.005	0.439	0.404	523.709	0.169	0.005
Other Material Handling Equipment	120	0.307	3.589	3.104	0.005	0.182	0.168	473.588	0.153	0.004
Other Material Handling Equipment	175	0.252	3.171	2.367	0.005	0.118	0.109	472.219	0.153	0.004
Other Material Handling Equipment	250	0.291	1.319	3.599	0.005	0.115	0.106	471.482	0.153	0.004
Other Material Handling Equipment	500	0.283	1.523	3.210	0.005	0.120	0.110	470.297	0.152	0.004
Other Material Handling Equipment	9999	0.200	1.049	3.614	0.005	0.078	0.072	472.055	0.153	0.004
Pavers	25	1.318	5.523	4.764	0.005	0.402	0.370	526.210	0.170	0.005
Pavers	50	1.318	5.523	4.764	0.005	0.402	0.370	526.210	0.170	0.005
Pavers	120	0.470	3.604	4.427	0.005	0.325	0.299	469.882	0.152	0.004
Pavers	175	0.273	3.010	2.918	0.005	0.142	0.131	472.775	0.153	0.004
Pavers	250	0.176	1.028	2.777	0.005	0.076	0.070	472.834	0.153	0.004
Pavers	500	0.165	0.987	2.134	0.005	0.077	0.071	466.206	0.151	0.004
Paving Equipment	25	0.621	4.223	3.952	0.005	0.217	0.200	520.124	0.168	0.005
Paving Equipment	50	0.621	4.223	3.952	0.005	0.217	0.200	520.124	0.168	0.005
Paving Equipment	120	0.397	3.582	3.781	0.005	0.256	0.235	473.325	0.153	0.004
Paving Equipment	175	0.248	3.024	2.555	0.005	0.128	0.118	470.736	0.152	0.004
Paving Equipment	250	0.244	1.252	3.220	0.005	0.111	0.102	472.151	0.153	0.004
Plate Compactors	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005

2020

2020		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Pressure Washers	15	0.646	3.546	4.516	0.008	0.212	0.212	568.299	0.058	0.005
Pressure Washers	25	0.721	2.473	4.538	0.007	0.205	0.205	568.299	0.065	0.005
Pressure Washers	50	0.499	3.393	3.917	0.007	0.161	0.161	568.299	0.045	0.005
Pressure Washers	120	0.298	3.225	3.036	0.006	0.151	0.151	568.299	0.026	0.004
Pressure Washers	175	0.258	2.907	2.383	0.006	0.104	0.104	568.299	0.023	0.004
Pressure Washers	250	0.098	0.986	0.265	0.006	0.009	0.009	568.299	0.008	0.004
Pumps	15	0.731	3.546	4.542	0.008	0.227	0.227	568.299	0.066	0.005
Pumps	25	0.769	2.473	4.538	0.007	0.212	0.212	568.299	0.069	0.005
Pumps	50	0.755	4.197	4.128	0.007	0.206	0.206	568.299	0.068	0.005
Pumps	120	0.386	3.432	3.219	0.006	0.189	0.189	568.299	0.034	0.004
Pumps	175	0.285	2.974	2.418	0.006	0.111	0.111	568.299	0.025	0.004
Pumps	250	0.212	1.042	2.050	0.006	0.060	0.060	568.299	0.019	0.004
Pumps	500	0.203	1.017	1.841	0.005	0.057	0.057	568.300	0.018	0.004
Pumps	750	0.205	1.017	1.884	0.005	0.058	0.058	568.299	0.018	0.004
Pumps	9999	0.255	1.096	3.649	0.005	0.081	0.081	568.300	0.023	0.004
Rollers	15	0.926	4.725	4.534	0.005	0.329	0.303	525.880	0.170	0.005
Rollers	25	0.926	4.725	4.534	0.005	0.329	0.303	525.880	0.170	0.005
Rollers	50	0.926	4.725	4.534	0.005	0.329	0.303	525.880	0.170	0.005
Rollers	120	0.388	3.531	3.882	0.005	0.248	0.228	473.859	0.153	0.004
Rollers	175	0.215	2.933	2.452	0.005	0.113	0.104	471.918	0.153	0.004
Rollers	250	0.209	1.253	2.751	0.005	0.089	0.082	473.367	0.153	0.004
Rollers	500	0.235	2.113	2.828	0.005	0.109	0.101	479.325	0.155	0.004
Rough Terrain Forklifts	50	0.999	4.686	4.495	0.005	0.316	0.291	525.622	0.170	0.005
Rough Terrain Forklifts	120	0.189	3.256	2.452	0.005	0.103	0.094	472.984	0.153	0.004
Rough Terrain Forklifts	175	0.143	2.845	1.869	0.005	0.068	0.063	471.715	0.153	0.004
Rough Terrain Forklifts	250	0.112	0.978	1.609	0.005	0.037	0.034	472.567	0.153	0.004
Rough Terrain Forklifts	500	0.089	0.942	1.302	0.005	0.028	0.026	465.771	0.151	0.004
Rubber Tired Dozers	175	0.726	3.893	7.185	0.005	0.411	0.378	473.012	0.153	0.004
Rubber Tired Dozers	250	0.620	2.371	6.503	0.005	0.319	0.293	474.793	0.154	0.004
Rubber Tired Dozers	500	0.535	4.411	5.641	0.005	0.259	0.238	479.757	0.155	0.004
Rubber Tired Dozers	750	0.457	2.601	6.123	0.005	0.218	0.201	473.056	0.153	0.004
Rubber Tired Dozers	1000	0.522	2.164	5.306	0.005	0.160	0.160	568.299	0.047	0.004
Rubber Tired Loaders	25	1.481	6.768	5.254	0.005	0.474	0.436	524.697	0.170	0.005
Rubber Tired Loaders	50	1.481	6.768	5.254	0.005	0.474	0.436	524.697	0.170	0.005
Rubber Tired Loaders	120	0.556	3.948	4.686	0.005	0.367	0.338	465.674	0.151	0.004
Rubber Tired Loaders	175	0.379	3.368	3.517	0.005	0.194	0.178	471.214	0.152	0.004
Rubber Tired Loaders	250	0.290	1.269	3.421	0.005	0.114	0.105	469.513	0.152	0.004
Rubber Tired Loaders	500	0.289	1.630	3.017	0.005	0.112	0.103	466.783	0.151	0.004
Rubber Tired Loaders	750	0.277	1.400	2.767	0.005	0.108	0.099	462.193	0.150	0.004
Rubber Tired Loaders	1000	0.312	1.204	5.253	0.005	0.139	0.127	469.935	0.152	0.004
Scrapers	120	0.701	4.198	6.677	0.005	0.510	0.469	483.745	0.157	0.004
Scrapers	175	0.478	3.501	4.869	0.005	0.262	0.241	478.608	0.155	0.004
Scrapers	250	0.446	2.065	5.089	0.005	0.223	0.205	468.988	0.152	0.004
Scrapers	500	0.320	2.401	3.783	0.005	0.148	0.136	472.175	0.153	0.004
Scrapers	750	0.262	1.725	3.126	0.005	0.113	0.104	471.778	0.153	0.004
Signal Boards	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Signal Boards	50	0.788	4.448	4.132	0.007	0.206	0.206	568.299	0.071	0.005
Signal Boards	120	0.395	3.504	3.134	0.006	0.187	0.187	568.299	0.035	0.004

2020

2020		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Signal Boards	175	0.298	3.043	2.309	0.006	0.110	0.110	568.299	0.026	0.004
Signal Boards	250	0.274	1.281	2.350	0.007	0.071	0.071	686.695	0.024	0.004
Skid Steer Loaders	25	0.439	3.764	3.691	0.005	0.145	0.133	527.758	0.171	0.005
Skid Steer Loaders	50	0.439	3.764	3.691	0.005	0.145	0.133	527.758	0.171	0.005
Skid Steer Loaders	120	0.188	3.277	2.505	0.005	0.108	0.100	471.908	0.153	0.004
Surfacing Equipment	50	0.536	3.934	4.239	0.006	0.216	0.199	535.528	0.173	0.005
Surfacing Equipment	120	0.330	3.439	3.612	0.005	0.206	0.190	473.819	0.153	0.004
Surfacing Equipment	175	0.308	2.931	3.672	0.005	0.175	0.161	469.208	0.152	0.004
Surfacing Equipment	250	0.212	1.218	3.222	0.005	0.097	0.089	476.426	0.154	0.004
Surfacing Equipment	500	0.146	1.219	1.838	0.005	0.067	0.062	471.633	0.153	0.004
Surfacing Equipment	750	0.142	0.996	2.094	0.005	0.074	0.068	469.625	0.152	0.004
Sweepers/Scrubbers	15	1.344	6.155	5.095	0.005	0.463	0.426	525.328	0.170	0.005
Sweepers/Scrubbers	25	1.344	6.155	5.095	0.005	0.463	0.426	525.328	0.170	0.005
Sweepers/Scrubbers	50	1.344	6.155	5.095	0.005	0.463	0.426	525.328	0.170	0.005
Sweepers/Scrubbers	120	0.520	3.828	4.482	0.005	0.360	0.331	474.116	0.153	0.004
Sweepers/Scrubbers	175	0.462	3.359	4.608	0.005	0.237	0.218	473.122	0.153	0.004
Sweepers/Scrubbers	250	0.207	1.137	2.486	0.005	0.079	0.073	470.126	0.152	0.004
Tractors/Loaders/Backhoes	25	0.830	5.035	4.398	0.005	0.288	0.265	515.874	0.167	0.005
Tractors/Loaders/Backhoes	50	0.830	5.035	4.398	0.005	0.288	0.265	515.874	0.167	0.005
Tractors/Loaders/Backhoes	120	0.331	3.601	3.326	0.005	0.210	0.194	475.154	0.154	0.004
Tractors/Loaders/Backhoes	175	0.246	3.105	2.415	0.005	0.122	0.112	467.513	0.151	0.004
Tractors/Loaders/Backhoes	250	0.225	1.196	2.738	0.005	0.090	0.083	470.500	0.152	0.004
Tractors/Loaders/Backhoes	500	0.194	1.358	2.080	0.005	0.073	0.067	468.245	0.151	0.004
Tractors/Loaders/Backhoes	750	0.268	1.610	3.119	0.005	0.117	0.108	468.660	0.152	0.004
Trenchers	15	0.905	4.833	4.677	0.005	0.356	0.328	527.096	0.171	0.005
Trenchers	25	0.905	4.833	4.677	0.005	0.356	0.328	527.096	0.171	0.005
Trenchers	50	0.905	4.833	4.677	0.005	0.356	0.328	527.096	0.171	0.005
Trenchers	120	0.610	3.833	5.520	0.005	0.413	0.380	475.127	0.154	0.004
Trenchers	175	0.421	3.330	4.460	0.005	0.228	0.210	467.735	0.151	0.004
Trenchers	250	0.392	1.774	4.809	0.005	0.195	0.179	473.595	0.153	0.004
Trenchers	500	0.233	1.859	2.775	0.005	0.105	0.097	470.637	0.152	0.004
Trenchers	750	0.070	0.950	0.560	0.005	0.009	0.008	472.656	0.153	0.004
Welders	15	0.731	3.546	4.542	0.008	0.227	0.227	568.299	0.066	0.005
Welders	25	0.769	2.473	4.538	0.007	0.212	0.212	568.299	0.069	0.005
Welders	50	0.937	4.840	4.304	0.007	0.238	0.238	568.299	0.084	0.005
Welders	120	0.455	3.605	3.351	0.006	0.216	0.216	568.299	0.041	0.004
Welders	175	0.344	3.122	2.523	0.006	0.127	0.127	568.299	0.031	0.004
Welders	250	0.261	1.093	2.143	0.006	0.066	0.066	568.299	0.023	0.004
Welders	500	0.252	1.055	1.910	0.005	0.064	0.064	568.299	0.022	0.004
Water Trucks	175	0.310	3.339	2.628	0.005	0.137	0.126	470.097	0.152	0.004
Water Trucks	250	0.275	1.391	2.507	0.005	0.098	0.090	470.168	0.152	0.004
Water Trucks	500	0.246	1.414	2.347	0.005	0.086	0.079	474.579	0.154	0.004
Water Trucks	750	0.312	2.027	3.058	0.005	0.120	0.110	472.750	0.153	0.004
Water Trucks	1000	0.303	1.372	4.794	0.005	0.125	0.115	469.889	0.152	0.004

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2021		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Aerial Lifts	15	0.165	3.114	2.922	0.005	0.027	0.024	525.074	0.170	0.005
Aerial Lifts	25	0.165	3.114	2.922	0.005	0.027	0.024	525.074	0.170	0.005
Aerial Lifts	50	0.165	3.114	2.922	0.005	0.027	0.024	525.074	0.170	0.005
Aerial Lifts	120	0.109	3.176	1.744	0.005	0.033	0.031	472.114	0.153	0.004
Aerial Lifts	500	0.072	0.951	0.640	0.005	0.009	0.008	472.055	0.153	0.004
Aerial Lifts	750	0.187	1.004	1.610	0.005	0.050	0.050	568.299	0.016	0.004
Air Compressors	15	0.717	3.531	4.462	0.008	0.214	0.214	568.299	0.064	0.005
Air Compressors	25	0.752	2.446	4.497	0.007	0.201	0.201	568.299	0.067	0.005
Air Compressors	50	0.887	5.021	4.221	0.007	0.212	0.212	568.299	0.080	0.005
Air Compressors	120	0.442	3.670	3.083	0.006	0.190	0.190	568.299	0.039	0.004
Air Compressors	175	0.343	3.192	2.218	0.006	0.115	0.115	568.299	0.030	0.004
Air Compressors	250	0.268	1.108	1.859	0.006	0.060	0.060	568.299	0.024	0.004
Air Compressors	500	0.261	1.064	1.663	0.005	0.058	0.058	568.299	0.023	0.004
Air Compressors	750	0.262	1.064	1.699	0.005	0.058	0.058	568.299	0.023	0.004
Air Compressors	1000	0.284	1.134	3.565	0.005	0.082	0.082	568.300	0.025	0.004
Bore/Drill Rigs	15	0.711	4.548	4.634	0.006	0.291	0.268	535.378	0.173	0.005
Bore/Drill Rigs	25	0.711	4.548	4.634	0.006	0.291	0.268	535.378	0.173	0.005
Bore/Drill Rigs	50	0.711	4.548	4.634	0.006	0.291	0.268	535.378	0.173	0.005
Bore/Drill Rigs	120	0.217	3.306	2.737	0.005	0.131	0.121	464.973	0.150	0.004
Bore/Drill Rigs	175	0.154	2.961	1.598	0.005	0.070	0.064	477.048	0.154	0.004
Bore/Drill Rigs	250	0.133	1.064	1.551	0.005	0.047	0.043	467.992	0.151	0.004
Bore/Drill Rigs	500	0.117	1.015	1.221	0.005	0.041	0.038	469.816	0.152	0.004
Bore/Drill Rigs	750	0.098	0.972	0.955	0.005	0.033	0.031	474.079	0.153	0.004
Bore/Drill Rigs	1000	0.136	0.993	3.058	0.005	0.061	0.057	471.816	0.153	0.004
Cement and Mortar Mixers	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Cement and Mortar Mixers	25	0.712	2.381	4.419	0.007	0.180	0.180	568.299	0.064	0.005
Concrete/Industrial Saws	25	0.685	2.340	4.332	0.007	0.161	0.161	568.299	0.061	0.005
Concrete/Industrial Saws	50	0.722	4.481	4.063	0.007	0.184	0.184	568.300	0.065	0.005
Concrete/Industrial Saws	120	0.369	3.523	2.913	0.006	0.166	0.166	568.299	0.033	0.004
Concrete/Industrial Saws	175	0.286	3.072	2.055	0.006	0.101	0.101	568.299	0.025	0.004
Cranes	50	2.115	7.489	6.014	0.005	0.631	0.581	517.900	0.168	0.005
Cranes	120	0.651	4.065	5.731	0.005	0.398	0.366	469.887	0.152	0.004
Cranes	175	0.498	3.516	5.113	0.005	0.273	0.251	474.546	0.154	0.004
Cranes	250	0.350	1.678	4.104	0.005	0.167	0.153	472.906	0.153	0.004
Cranes	500	0.295	2.448	3.443	0.005	0.139	0.127	472.455	0.153	0.004
Cranes	750	0.228	1.440	2.727	0.005	0.107	0.098	470.550	0.152	0.004
Cranes	9999	0.192	1.008	2.374	0.005	0.061	0.057	472.055	0.153	0.004
Crawler Tractors	50	2.064	7.349	5.615	0.005	0.591	0.543	516.108	0.167	0.005
Crawler Tractors	120	0.673	4.005	5.657	0.005	0.466	0.429	476.437	0.154	0.004
Crawler Tractors	175	0.436	3.310	4.395	0.005	0.245	0.225	471.421	0.153	0.004
Crawler Tractors	250	0.343	1.515	4.334	0.005	0.163	0.150	472.925	0.153	0.004
Crawler Tractors	500	0.283	2.024	3.276	0.005	0.129	0.119	474.484	0.154	0.004
Crawler Tractors	750	0.239	1.270	2.825	0.005	0.104	0.096	473.094	0.153	0.004
Crawler Tractors	1000	0.399	1.896	6.399	0.005	0.182	0.167	471.822	0.153	0.004
Crushing/Proc. Equipment	50	0.862	5.136	4.211	0.007	0.201	0.201	568.299	0.077	0.005

2021

2021		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Crushing/Proc. Equipment	120	0.438	3.711	2.989	0.006	0.178	0.178	568.299	0.039	0.004
Crushing/Proc. Equipment	175	0.344	3.235	2.114	0.006	0.109	0.109	568.299	0.031	0.004
Crushing/Proc. Equipment	250	0.274	1.119	1.756	0.006	0.057	0.057	568.299	0.024	0.004
Crushing/Proc. Equipment	500	0.268	1.072	1.574	0.005	0.055	0.055	568.300	0.024	0.004
Crushing/Proc. Equipment	750	0.268	1.072	1.606	0.005	0.055	0.055	568.299	0.024	0.004
Crushing/Proc. Equipment	9999	0.314	1.136	3.487	0.005	0.080	0.080	568.299	0.028	0.004
Dumpers/Tenders	25	0.685	2.339	4.333	0.007	0.163	0.163	568.299	0.061	0.005
Excavators	25	0.562	4.461	3.919	0.005	0.202	0.186	525.377	0.170	0.005
Excavators	50	0.562	4.461	3.919	0.005	0.202	0.186	525.377	0.170	0.005
Excavators	120	0.275	3.492	2.849	0.005	0.161	0.148	467.791	0.151	0.004
Excavators	175	0.216	3.090	2.034	0.005	0.099	0.091	472.359	0.153	0.004
Excavators	250	0.163	1.103	1.706	0.005	0.052	0.048	471.793	0.153	0.004
Excavators	500	0.143	1.088	1.332	0.005	0.045	0.041	469.616	0.152	0.004
Excavators	750	0.165	1.150	1.619	0.005	0.056	0.052	469.547	0.152	0.004
Forklifts	50	1.002	5.535	4.520	0.005	0.318	0.292	525.483	0.170	0.005
Forklifts	120	0.412	3.720	3.756	0.005	0.267	0.245	471.529	0.153	0.004
Forklifts	175	0.308	3.231	2.921	0.005	0.158	0.145	472.106	0.153	0.004
Forklifts	250	0.249	1.337	2.582	0.005	0.099	0.091	473.326	0.153	0.004
Forklifts	500	0.254	1.485	2.303	0.005	0.094	0.086	473.615	0.153	0.004
Generator Sets	15	0.634	3.531	4.441	0.008	0.201	0.201	568.299	0.057	0.005
Generator Sets	25	0.712	2.446	4.497	0.007	0.196	0.196	568.299	0.064	0.005
Generator Sets	50	0.613	3.905	3.916	0.007	0.165	0.165	568.299	0.055	0.005
Generator Sets	120	0.326	3.361	2.888	0.006	0.153	0.153	568.299	0.029	0.004
Generator Sets	175	0.243	2.925	2.068	0.006	0.091	0.091	568.299	0.021	0.004
Generator Sets	250	0.183	1.016	1.730	0.006	0.049	0.049	568.299	0.016	0.004
Generator Sets	500	0.175	0.996	1.562	0.005	0.048	0.048	568.299	0.015	0.004
Generator Sets	750	0.177	0.996	1.596	0.005	0.048	0.048	568.299	0.016	0.004
Generator Sets	9999	0.220	1.060	3.372	0.005	0.070	0.070	568.300	0.019	0.004
Graders	50	2.235	7.626	5.485	0.005	0.631	0.581	492.935	0.159	0.005
Graders	120	0.901	4.452	7.125	0.005	0.570	0.524	469.070	0.152	0.004
Graders	175	0.505	3.559	4.839	0.005	0.270	0.248	478.529	0.155	0.004
Graders	250	0.335	1.307	4.381	0.005	0.139	0.128	474.539	0.154	0.004
Graders	500	0.322	1.460	3.013	0.005	0.117	0.108	471.898	0.153	0.004
Graders	750	0.303	1.207	1.808	0.005	0.064	0.064	568.299	0.027	0.004
Off-Highway Tractors	120	0.395	3.743	3.773	0.005	0.261	0.240	474.516	0.154	0.004
Off-Highway Tractors	175	0.259	3.220	2.660	0.005	0.129	0.118	472.924	0.153	0.004
Off-Highway Tractors	250	0.200	1.162	2.113	0.005	0.072	0.067	471.003	0.152	0.004
Off-Highway Tractors	750	0.181	1.122	1.715	0.005	0.063	0.058	471.806	0.153	0.004
Off-Highway Tractors	1000	0.160	1.033	2.414	0.005	0.064	0.059	472.055	0.153	0.004
Off-Highway Trucks	175	0.278	3.324	2.246	0.005	0.113	0.104	470.290	0.152	0.004
Off-Highway Trucks	250	0.249	1.348	2.109	0.005	0.082	0.076	470.193	0.152	0.004
Off-Highway Trucks	500	0.225	1.338	1.954	0.005	0.072	0.066	474.542	0.154	0.004
Off-Highway Trucks	750	0.293	1.935	2.668	0.005	0.106	0.098	472.991	0.153	0.004
Off-Highway Trucks	1000	0.256	1.252	4.158	0.005	0.099	0.091	471.055	0.152	0.004
Other Construction Equipment	15	1.010	5.307	4.902	0.005	0.382	0.351	527.783	0.171	0.005
Other Construction Equipment	25	1.010	5.307	4.902	0.005	0.382	0.351	527.783	0.171	0.005

2021

2021		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Other Construction Equipment	50	1.010	5.307	4.902	0.005	0.382	0.351	527.783	0.171	0.005
Other Construction Equipment	120	0.482	3.703	4.456	0.005	0.323	0.298	472.275	0.153	0.004
Other Construction Equipment	175	0.330	3.183	3.438	0.005	0.180	0.165	469.764	0.152	0.004
Other Construction Equipment	500	0.215	1.599	2.428	0.005	0.090	0.083	475.212	0.154	0.004
Other General Industrial Equipment	15	0.831	5.314	4.425	0.005	0.289	0.266	526.176	0.170	0.005
Other General Industrial Equipment	25	0.831	5.314	4.425	0.005	0.289	0.266	526.176	0.170	0.005
Other General Industrial Equipment	50	0.831	5.314	4.425	0.005	0.289	0.266	526.176	0.170	0.005
Other General Industrial Equipment	120	0.404	3.740	3.718	0.005	0.256	0.235	470.000	0.152	0.004
Other General Industrial Equipment	175	0.254	3.234	2.347	0.005	0.121	0.111	471.850	0.153	0.004
Other General Industrial Equipment	250	0.204	1.171	2.094	0.005	0.070	0.064	473.223	0.153	0.004
Other General Industrial Equipment	500	0.195	1.330	1.796	0.005	0.064	0.059	472.929	0.153	0.004
Other General Industrial Equipment	750	0.166	1.463	1.387	0.005	0.054	0.050	473.464	0.153	0.004
Other General Industrial Equipment	1000	0.276	1.093	4.876	0.005	0.120	0.110	472.055	0.153	0.004
Other Material Handling Equipment	50	1.108	5.960	4.966	0.005	0.396	0.364	523.709	0.169	0.005
Other Material Handling Equipment	120	0.294	3.602	2.956	0.005	0.166	0.152	473.588	0.153	0.004
Other Material Handling Equipment	175	0.249	3.196	2.246	0.005	0.114	0.105	472.219	0.153	0.004
Other Material Handling Equipment	250	0.269	1.309	3.082	0.005	0.102	0.094	471.482	0.153	0.004
Other Material Handling Equipment	500	0.254	1.442	2.602	0.005	0.101	0.093	470.297	0.152	0.004
Other Material Handling Equipment	9999	0.073	0.972	2.318	0.005	0.020	0.018	472.055	0.153	0.004
Pavers	25	1.208	5.302	4.602	0.005	0.370	0.340	526.515	0.170	0.005
Pavers	50	1.208	5.302	4.602	0.005	0.370	0.340	526.515	0.170	0.005
Pavers	120	0.420	3.563	4.026	0.005	0.285	0.263	469.774	0.152	0.004
Pavers	175	0.256	3.016	2.695	0.005	0.130	0.120	472.555	0.153	0.004
Pavers	250	0.166	1.024	2.484	0.005	0.070	0.064	472.477	0.153	0.004
Pavers	500	0.164	0.988	2.053	0.005	0.074	0.068	465.591	0.151	0.004
Paving Equipment	25	0.587	4.211	3.882	0.005	0.200	0.184	520.397	0.168	0.005
Paving Equipment	50	0.587	4.211	3.882	0.005	0.200	0.184	520.397	0.168	0.005
Paving Equipment	120	0.355	3.554	3.451	0.005	0.219	0.202	473.221	0.153	0.004
Paving Equipment	175	0.229	3.032	2.315	0.005	0.114	0.105	470.650	0.152	0.004
Paving Equipment	250	0.211	1.209	2.582	0.005	0.092	0.085	472.151	0.153	0.004
Plate Compactors	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005

2021

2021		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Pressure Washers	15	0.634	3.531	4.441	0.008	0.201	0.201	568.299	0.057	0.005
Pressure Washers	25	0.712	2.446	4.497	0.007	0.196	0.196	568.299	0.064	0.005
Pressure Washers	50	0.439	3.329	3.765	0.007	0.136	0.136	568.299	0.039	0.005
Pressure Washers	120	0.264	3.210	2.766	0.006	0.129	0.129	568.299	0.023	0.004
Pressure Washers	175	0.238	2.907	2.118	0.006	0.093	0.093	568.299	0.021	0.004
Pressure Washers	250	0.098	0.986	0.265	0.006	0.009	0.009	568.299	0.008	0.004
Pumps	15	0.717	3.531	4.462	0.008	0.214	0.214	568.299	0.064	0.005
Pumps	25	0.752	2.446	4.497	0.007	0.201	0.201	568.299	0.067	0.005
Pumps	50	0.671	4.099	3.966	0.007	0.175	0.175	568.299	0.060	0.005
Pumps	120	0.347	3.412	2.928	0.006	0.162	0.162	568.300	0.031	0.004
Pumps	175	0.260	2.968	2.101	0.006	0.096	0.096	568.299	0.023	0.004
Pumps	250	0.197	1.031	1.759	0.006	0.052	0.052	568.299	0.017	0.004
Pumps	500	0.189	1.007	1.584	0.005	0.050	0.050	568.299	0.017	0.004
Pumps	750	0.191	1.007	1.618	0.005	0.050	0.050	568.299	0.017	0.004
Pumps	9999	0.233	1.074	3.409	0.005	0.072	0.072	568.300	0.021	0.004
Rollers	15	0.848	4.597	4.351	0.005	0.294	0.270	525.791	0.170	0.005
Rollers	25	0.848	4.597	4.351	0.005	0.294	0.270	525.791	0.170	0.005
Rollers	50	0.848	4.597	4.351	0.005	0.294	0.270	525.791	0.170	0.005
Rollers	120	0.353	3.507	3.589	0.005	0.219	0.202	473.901	0.153	0.004
Rollers	175	0.193	2.926	2.117	0.005	0.097	0.090	471.980	0.153	0.004
Rollers	250	0.197	1.228	2.493	0.005	0.081	0.075	473.470	0.153	0.004
Rollers	500	0.221	1.950	2.589	0.005	0.100	0.092	479.329	0.155	0.004
Rough Terrain Forklifts	50	0.969	4.657	4.411	0.005	0.304	0.280	525.384	0.170	0.005
Rough Terrain Forklifts	120	0.175	3.252	2.285	0.005	0.089	0.082	473.110	0.153	0.004
Rough Terrain Forklifts	175	0.130	2.845	1.617	0.005	0.060	0.055	471.758	0.153	0.004
Rough Terrain Forklifts	250	0.115	0.984	1.612	0.005	0.037	0.034	472.547	0.153	0.004
Rough Terrain Forklifts	500	0.092	0.946	1.302	0.005	0.028	0.026	465.744	0.151	0.004
Rubber Tired Dozers	175	0.691	3.848	6.790	0.005	0.386	0.356	472.975	0.153	0.004
Rubber Tired Dozers	250	0.601	2.317	6.296	0.005	0.306	0.281	474.798	0.154	0.004
Rubber Tired Dozers	500	0.492	4.041	5.081	0.005	0.232	0.214	478.987	0.155	0.004
Rubber Tired Dozers	750	0.458	2.604	6.123	0.005	0.218	0.201	473.046	0.153	0.004
Rubber Tired Dozers	1000	0.497	2.057	5.095	0.005	0.150	0.150	568.299	0.044	0.004
Rubber Tired Loaders	25	1.326	6.449	4.974	0.005	0.409	0.377	524.551	0.170	0.005
Rubber Tired Loaders	50	1.326	6.449	4.974	0.005	0.409	0.377	524.551	0.170	0.005
Rubber Tired Loaders	120	0.498	3.892	4.215	0.005	0.316	0.291	466.421	0.151	0.004
Rubber Tired Loaders	175	0.346	3.354	3.119	0.005	0.171	0.157	471.080	0.152	0.004
Rubber Tired Loaders	250	0.266	1.240	2.998	0.005	0.100	0.092	469.564	0.152	0.004
Rubber Tired Loaders	500	0.264	1.529	2.610	0.005	0.097	0.090	467.928	0.151	0.004
Rubber Tired Loaders	750	0.271	1.397	2.641	0.005	0.102	0.094	462.055	0.149	0.004
Rubber Tired Loaders	1000	0.294	1.206	4.975	0.005	0.128	0.118	471.258	0.152	0.004
Scrapers	120	0.704	4.218	6.659	0.005	0.512	0.471	483.713	0.156	0.004
Scrapers	175	0.432	3.456	4.341	0.005	0.232	0.213	478.654	0.155	0.004
Scrapers	250	0.391	1.884	4.367	0.005	0.189	0.174	469.126	0.152	0.004
Scrapers	500	0.299	2.255	3.445	0.005	0.134	0.123	472.464	0.153	0.004
Scrapers	750	0.250	1.658	2.887	0.005	0.105	0.097	471.786	0.153	0.004
Signal Boards	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Signal Boards	50	0.714	4.380	4.002	0.007	0.179	0.179	568.299	0.064	0.005
Signal Boards	120	0.363	3.493	2.889	0.006	0.162	0.162	568.299	0.032	0.004

2021

2021		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Signal Boards	175	0.278	3.043	2.043	0.006	0.098	0.098	568.299	0.025	0.004
Signal Boards	250	0.260	1.273	2.053	0.007	0.063	0.063	686.695	0.023	0.004
Skid Steer Loaders	25	0.409	3.732	3.573	0.005	0.126	0.116	527.450	0.171	0.005
Skid Steer Loaders	50	0.409	3.732	3.573	0.005	0.126	0.116	527.450	0.171	0.005
Skid Steer Loaders	120	0.178	3.277	2.366	0.005	0.096	0.089	471.977	0.153	0.004
Surfacing Equipment	50	0.507	3.932	4.189	0.006	0.204	0.188	535.784	0.173	0.005
Surfacing Equipment	120	0.312	3.436	3.461	0.005	0.191	0.175	474.091	0.153	0.004
Surfacing Equipment	175	0.258	2.919	3.099	0.005	0.145	0.134	469.169	0.152	0.004
Surfacing Equipment	250	0.207	1.219	2.994	0.005	0.092	0.085	476.802	0.154	0.004
Surfacing Equipment	500	0.141	1.202	1.753	0.005	0.064	0.058	471.748	0.153	0.004
Surfacing Equipment	750	0.125	0.992	1.597	0.005	0.062	0.057	470.409	0.152	0.004
Sweepers/Scrubbers	15	1.219	5.900	4.849	0.005	0.412	0.379	525.328	0.170	0.005
Sweepers/Scrubbers	25	1.219	5.900	4.849	0.005	0.412	0.379	525.328	0.170	0.005
Sweepers/Scrubbers	50	1.219	5.900	4.849	0.005	0.412	0.379	525.328	0.170	0.005
Sweepers/Scrubbers	120	0.440	3.757	3.962	0.005	0.291	0.268	474.116	0.153	0.004
Sweepers/Scrubbers	175	0.385	3.247	3.707	0.005	0.187	0.172	473.122	0.153	0.004
Sweepers/Scrubbers	250	0.164	1.108	1.758	0.005	0.055	0.051	470.126	0.152	0.004
Tractors/Loaders/Backhoes	25	0.756	4.902	4.226	0.005	0.255	0.234	515.121	0.167	0.005
Tractors/Loaders/Backhoes	50	0.756	4.902	4.226	0.005	0.255	0.234	515.121	0.167	0.005
Tractors/Loaders/Backhoes	120	0.296	3.571	2.995	0.005	0.177	0.163	475.362	0.154	0.004
Tractors/Loaders/Backhoes	175	0.221	3.091	2.062	0.005	0.104	0.096	467.529	0.151	0.004
Tractors/Loaders/Backhoes	250	0.209	1.186	2.369	0.005	0.080	0.074	470.572	0.152	0.004
Tractors/Loaders/Backhoes	500	0.179	1.341	1.776	0.005	0.064	0.059	469.303	0.152	0.004
Tractors/Loaders/Backhoes	750	0.247	1.433	2.754	0.005	0.104	0.096	466.456	0.151	0.004
Trenchers	15	0.809	4.666	4.459	0.005	0.313	0.288	527.017	0.170	0.005
Trenchers	25	0.809	4.666	4.459	0.005	0.313	0.288	527.017	0.170	0.005
Trenchers	50	0.809	4.666	4.459	0.005	0.313	0.288	527.017	0.170	0.005
Trenchers	120	0.556	3.789	5.106	0.005	0.371	0.341	475.287	0.154	0.004
Trenchers	175	0.407	3.304	4.272	0.005	0.219	0.201	467.734	0.151	0.004
Trenchers	250	0.356	1.668	4.360	0.005	0.172	0.158	473.854	0.153	0.004
Trenchers	500	0.221	1.865	2.491	0.005	0.100	0.092	470.701	0.152	0.004
Trenchers	750	0.066	0.947	0.475	0.005	0.009	0.008	472.529	0.153	0.004
Welders	15	0.717	3.531	4.462	0.008	0.214	0.214	568.299	0.064	0.005
Welders	25	0.752	2.446	4.497	0.007	0.201	0.201	568.299	0.067	0.005
Welders	50	0.829	4.708	4.133	0.007	0.203	0.203	568.299	0.074	0.005
Welders	120	0.411	3.579	3.042	0.006	0.184	0.184	568.299	0.037	0.004
Welders	175	0.315	3.112	2.189	0.006	0.110	0.110	568.299	0.028	0.004
Welders	250	0.243	1.081	1.836	0.006	0.057	0.057	568.299	0.021	0.004
Welders	500	0.236	1.044	1.642	0.005	0.055	0.055	568.299	0.021	0.004
Water Trucks	175	0.278	3.324	2.246	0.005	0.113	0.104	470.290	0.152	0.004
Water Trucks	250	0.249	1.348	2.109	0.005	0.082	0.076	470.193	0.152	0.004
Water Trucks	500	0.225	1.338	1.954	0.005	0.072	0.066	474.542	0.154	0.004
Water Trucks	750	0.293	1.935	2.668	0.005	0.106	0.098	472.991	0.153	0.004
Water Trucks	1000	0.256	1.252	4.158	0.005	0.099	0.091	471.055	0.152	0.004

2022

AvgHP

2022		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Aerial Lifts	15	0.162	3.112	2.907	0.005	0.024	0.022	525.074	0.170	0.005
Aerial Lifts	25	0.162	3.112	2.907	0.005	0.024	0.022	525.074	0.170	0.005
Aerial Lifts	50	0.162	3.112	2.907	0.005	0.024	0.022	525.074	0.170	0.005
Aerial Lifts	120	0.105	3.176	1.627	0.005	0.030	0.028	472.114	0.153	0.004
Aerial Lifts	500	0.075	0.956	0.642	0.005	0.009	0.008	472.055	0.153	0.004
Aerial Lifts	750	0.177	0.998	1.424	0.005	0.044	0.044	568.299	0.016	0.004
Air Compressors	15	0.707	3.519	4.408	0.008	0.203	0.203	568.299	0.063	0.005
Air Compressors	25	0.739	2.426	4.470	0.007	0.193	0.193	568.299	0.066	0.005
Air Compressors	50	0.814	4.959	4.093	0.007	0.183	0.183	568.299	0.073	0.005
Air Compressors	120	0.413	3.662	2.844	0.006	0.165	0.165	568.299	0.037	0.004
Air Compressors	175	0.322	3.194	1.959	0.006	0.101	0.101	568.299	0.029	0.004
Air Compressors	250	0.255	1.102	1.617	0.006	0.052	0.052	568.300	0.023	0.004
Air Compressors	500	0.249	1.059	1.472	0.005	0.051	0.051	568.299	0.022	0.004
Air Compressors	750	0.250	1.059	1.502	0.005	0.051	0.051	568.299	0.022	0.004
Air Compressors	1000	0.269	1.117	3.378	0.005	0.075	0.075	568.300	0.024	0.004
Bore/Drill Rigs	15	0.631	4.334	4.285	0.006	0.241	0.221	529.870	0.171	0.005
Bore/Drill Rigs	25	0.631	4.334	4.285	0.006	0.241	0.221	529.870	0.171	0.005
Bore/Drill Rigs	50	0.631	4.334	4.285	0.006	0.241	0.221	529.870	0.171	0.005
Bore/Drill Rigs	120	0.191	3.260	2.425	0.005	0.107	0.099	462.267	0.150	0.004
Bore/Drill Rigs	175	0.137	2.954	1.288	0.005	0.057	0.052	477.372	0.154	0.004
Bore/Drill Rigs	250	0.115	1.047	1.163	0.005	0.037	0.034	468.760	0.152	0.004
Bore/Drill Rigs	500	0.108	1.002	1.035	0.005	0.035	0.032	467.192	0.151	0.004
Bore/Drill Rigs	750	0.091	0.975	0.773	0.005	0.028	0.026	477.141	0.154	0.004
Bore/Drill Rigs	1000	0.057	0.945	2.278	0.005	0.018	0.017	472.921	0.153	0.004
Cement and Mortar Mixers	15	0.661	3.470	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Cement and Mortar Mixers	25	0.704	2.367	4.399	0.007	0.175	0.175	568.299	0.063	0.005
Concrete/Industrial Saws	25	0.685	2.339	4.332	0.007	0.161	0.161	568.299	0.061	0.005
Concrete/Industrial Saws	50	0.660	4.422	3.936	0.007	0.158	0.158	568.300	0.059	0.005
Concrete/Industrial Saws	120	0.343	3.514	2.686	0.006	0.144	0.144	568.299	0.031	0.004
Concrete/Industrial Saws	175	0.267	3.072	1.806	0.006	0.089	0.089	568.300	0.024	0.004
Cranes	50	2.028	7.368	5.899	0.005	0.603	0.555	517.872	0.168	0.005
Cranes	120	0.578	3.972	5.149	0.005	0.346	0.318	469.993	0.152	0.004
Cranes	175	0.457	3.475	4.617	0.005	0.246	0.227	474.589	0.154	0.004
Cranes	250	0.316	1.602	3.541	0.005	0.147	0.135	472.983	0.153	0.004
Cranes	500	0.261	2.212	2.894	0.005	0.117	0.108	472.181	0.153	0.004
Cranes	750	0.200	1.283	2.251	0.005	0.089	0.082	470.476	0.152	0.004
Cranes	9999	0.201	1.015	2.386	0.005	0.062	0.057	472.055	0.153	0.004
Crawler Tractors	50	1.899	7.041	5.380	0.005	0.539	0.496	516.148	0.167	0.005
Crawler Tractors	120	0.600	3.925	5.101	0.005	0.408	0.375	476.022	0.154	0.004
Crawler Tractors	175	0.389	3.264	3.827	0.005	0.214	0.197	471.567	0.153	0.004
Crawler Tractors	250	0.306	1.440	3.737	0.005	0.141	0.130	472.098	0.153	0.004
Crawler Tractors	500	0.254	1.916	2.744	0.005	0.111	0.102	474.412	0.153	0.004
Crawler Tractors	750	0.198	1.186	2.126	0.005	0.079	0.073	472.876	0.153	0.004
Crawler Tractors	1000	0.357	1.732	5.923	0.005	0.162	0.149	470.701	0.152	0.004
Crushing/Proc. Equipment	50	0.795	5.081	4.083	0.007	0.172	0.172	568.299	0.071	0.005

2022

AvgHP

2022		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Crushing/Proc. Equipment	120	0.410	3.704	2.758	0.006	0.154	0.154	568.299	0.037	0.004
Crushing/Proc. Equipment	175	0.323	3.237	1.861	0.006	0.095	0.095	568.299	0.029	0.004
Crushing/Proc. Equipment	250	0.260	1.114	1.521	0.006	0.050	0.050	568.299	0.023	0.004
Crushing/Proc. Equipment	500	0.255	1.067	1.389	0.005	0.048	0.048	568.299	0.023	0.004
Crushing/Proc. Equipment	750	0.256	1.067	1.416	0.005	0.048	0.048	568.299	0.023	0.004
Crushing/Proc. Equipment	9999	0.300	1.121	3.310	0.005	0.073	0.073	568.299	0.027	0.004
Dumpers/Tenders	25	0.685	2.339	4.332	0.007	0.162	0.162	568.299	0.061	0.005
Excavators	25	0.478	4.273	3.700	0.005	0.160	0.147	525.447	0.170	0.005
Excavators	50	0.478	4.273	3.700	0.005	0.160	0.147	525.447	0.170	0.005
Excavators	120	0.252	3.473	2.606	0.005	0.138	0.127	467.626	0.151	0.004
Excavators	175	0.191	3.074	1.678	0.005	0.081	0.075	472.192	0.153	0.004
Excavators	250	0.148	1.092	1.386	0.005	0.044	0.040	472.041	0.153	0.004
Excavators	500	0.128	1.061	1.040	0.005	0.035	0.032	469.711	0.152	0.004
Excavators	750	0.150	1.144	1.287	0.005	0.047	0.043	469.289	0.152	0.004
Forklifts	50	0.859	5.304	4.312	0.005	0.270	0.248	525.483	0.170	0.005
Forklifts	120	0.362	3.675	3.360	0.005	0.223	0.205	471.529	0.153	0.004
Forklifts	175	0.273	3.197	2.480	0.005	0.132	0.122	472.106	0.153	0.004
Forklifts	250	0.236	1.317	2.319	0.005	0.090	0.083	473.326	0.153	0.004
Forklifts	500	0.232	1.219	1.991	0.005	0.077	0.071	473.615	0.153	0.004
Generator Sets	15	0.626	3.519	4.390	0.008	0.193	0.193	568.299	0.056	0.005
Generator Sets	25	0.706	2.426	4.470	0.007	0.188	0.188	568.299	0.063	0.005
Generator Sets	50	0.560	3.858	3.796	0.007	0.143	0.143	568.299	0.050	0.005
Generator Sets	120	0.301	3.353	2.671	0.006	0.134	0.134	568.299	0.027	0.004
Generator Sets	175	0.226	2.926	1.830	0.006	0.081	0.081	568.299	0.020	0.004
Generator Sets	250	0.173	1.010	1.508	0.006	0.043	0.043	568.299	0.015	0.004
Generator Sets	500	0.166	0.990	1.384	0.005	0.042	0.042	568.299	0.015	0.004
Generator Sets	750	0.168	0.990	1.412	0.005	0.043	0.043	568.299	0.015	0.004
Generator Sets	9999	0.206	1.045	3.202	0.005	0.063	0.063	568.299	0.018	0.004
Graders	50	2.106	7.428	5.332	0.005	0.595	0.547	493.025	0.160	0.005
Graders	120	0.796	4.330	6.360	0.005	0.493	0.453	469.630	0.152	0.004
Graders	175	0.440	3.493	4.125	0.005	0.229	0.211	478.566	0.155	0.004
Graders	250	0.307	1.273	3.888	0.005	0.124	0.114	474.239	0.153	0.004
Graders	500	0.311	1.390	2.802	0.005	0.108	0.100	471.928	0.153	0.004
Graders	750	0.289	1.187	1.606	0.005	0.057	0.057	568.299	0.026	0.004
Off-Highway Tractors	120	0.348	3.710	3.400	0.005	0.219	0.202	475.234	0.154	0.004
Off-Highway Tractors	175	0.231	3.186	2.239	0.005	0.107	0.099	472.811	0.153	0.004
Off-Highway Tractors	250	0.180	1.143	1.732	0.005	0.060	0.055	471.131	0.152	0.004
Off-Highway Tractors	750	0.171	1.121	1.433	0.005	0.055	0.050	471.939	0.153	0.004
Off-Highway Tractors	1000	0.170	1.044	2.432	0.005	0.066	0.060	472.055	0.153	0.004
Off-Highway Trucks	175	0.241	3.284	1.811	0.005	0.088	0.081	470.181	0.152	0.004
Off-Highway Trucks	250	0.215	1.279	1.618	0.005	0.064	0.059	469.615	0.152	0.004
Off-Highway Trucks	500	0.196	1.247	1.490	0.005	0.054	0.050	474.714	0.154	0.004
Off-Highway Trucks	750	0.263	1.746	2.268	0.005	0.088	0.081	473.977	0.153	0.004
Off-Highway Trucks	1000	0.234	1.214	3.842	0.005	0.086	0.079	472.344	0.153	0.004
Other Construction Equipment	15	0.920	5.167	4.741	0.005	0.348	0.320	529.183	0.171	0.005
Other Construction Equipment	25	0.920	5.167	4.741	0.005	0.348	0.320	529.183	0.171	0.005

2022

AvgHP

2022		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Other Construction Equipment	50	0.920	5.167	4.741	0.005	0.348	0.320	529.183	0.171	0.005
Other Construction Equipment	120	0.440	3.666	4.098	0.005	0.288	0.265	472.318	0.153	0.004
Other Construction Equipment	175	0.295	3.155	2.994	0.005	0.156	0.144	469.613	0.152	0.004
Other Construction Equipment	500	0.188	1.438	1.975	0.005	0.074	0.068	475.998	0.154	0.004
Other General Industrial Equipment	15	0.702	5.076	4.197	0.005	0.238	0.219	526.176	0.170	0.005
Other General Industrial Equipment	25	0.702	5.076	4.197	0.005	0.238	0.219	526.176	0.170	0.005
Other General Industrial Equipment	50	0.702	5.076	4.197	0.005	0.238	0.219	526.176	0.170	0.005
Other General Industrial Equipment	120	0.339	3.668	3.200	0.005	0.199	0.183	470.000	0.152	0.004
Other General Industrial Equipment	175	0.244	3.233	2.150	0.005	0.111	0.102	471.850	0.153	0.004
Other General Industrial Equipment	250	0.187	1.138	1.759	0.005	0.057	0.052	473.223	0.153	0.004
Other General Industrial Equipment	500	0.175	1.171	1.433	0.005	0.050	0.046	472.929	0.153	0.004
Other General Industrial Equipment	750	0.149	1.457	1.062	0.005	0.046	0.042	473.464	0.153	0.004
Other General Industrial Equipment	1000	0.187	1.039	3.942	0.005	0.079	0.073	472.055	0.153	0.004
Other Material Handling Equipment	50	1.103	5.984	4.920	0.005	0.385	0.354	523.709	0.169	0.005
Other Material Handling Equipment	120	0.247	3.557	2.567	0.005	0.121	0.111	473.588	0.153	0.004
Other Material Handling Equipment	175	0.226	3.176	1.894	0.005	0.103	0.095	472.219	0.153	0.004
Other Material Handling Equipment	250	0.229	1.239	2.425	0.005	0.083	0.076	471.482	0.153	0.004
Other Material Handling Equipment	500	0.226	1.346	2.063	0.005	0.083	0.077	470.297	0.152	0.004
Other Material Handling Equipment	9999	0.076	0.978	2.328	0.005	0.020	0.018	472.055	0.153	0.004
Pavers	25	1.092	5.114	4.421	0.005	0.330	0.303	526.896	0.170	0.005
Pavers	50	1.092	5.114	4.421	0.005	0.330	0.303	526.896	0.170	0.005
Pavers	120	0.373	3.525	3.659	0.005	0.248	0.228	470.185	0.152	0.004
Pavers	175	0.215	2.995	2.180	0.005	0.104	0.095	472.760	0.153	0.004
Pavers	250	0.140	1.012	1.900	0.005	0.055	0.050	472.372	0.153	0.004
Pavers	500	0.150	0.982	1.810	0.005	0.063	0.058	466.004	0.151	0.004
Paving Equipment	25	0.572	4.244	3.836	0.005	0.188	0.173	520.659	0.168	0.005
Paving Equipment	50	0.572	4.244	3.836	0.005	0.188	0.173	520.659	0.168	0.005
Paving Equipment	120	0.296	3.501	3.000	0.005	0.171	0.157	473.448	0.153	0.004
Paving Equipment	175	0.213	3.038	2.073	0.005	0.101	0.093	470.665	0.152	0.004
Paving Equipment	250	0.196	1.204	2.228	0.005	0.083	0.076	472.169	0.153	0.004
Plate Compactors	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005

2022

AvgHP

2022		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Pressure Washers	15	0.626	3.519	4.390	0.008	0.193	0.193	568.299	0.056	0.005
Pressure Washers	25	0.706	2.426	4.470	0.007	0.188	0.188	568.299	0.063	0.005
Pressure Washers	50	0.398	3.291	3.649	0.007	0.117	0.117	568.300	0.035	0.005
Pressure Washers	120	0.241	3.202	2.560	0.006	0.112	0.112	568.299	0.021	0.004
Pressure Washers	175	0.221	2.907	1.871	0.006	0.082	0.082	568.299	0.019	0.004
Pressure Washers	250	0.098	0.986	0.265	0.006	0.009	0.009	568.299	0.008	0.004
Pumps	15	0.707	3.519	4.408	0.008	0.203	0.203	568.299	0.063	0.005
Pumps	25	0.739	2.426	4.470	0.007	0.193	0.193	568.299	0.066	0.005
Pumps	50	0.614	4.048	3.846	0.007	0.152	0.152	568.299	0.055	0.005
Pumps	120	0.321	3.404	2.708	0.006	0.142	0.142	568.299	0.029	0.004
Pumps	175	0.242	2.969	1.860	0.006	0.085	0.085	568.299	0.021	0.004
Pumps	250	0.186	1.025	1.534	0.006	0.045	0.045	568.299	0.016	0.004
Pumps	500	0.180	1.001	1.404	0.005	0.044	0.044	568.300	0.016	0.004
Pumps	750	0.181	1.001	1.432	0.005	0.044	0.044	568.300	0.016	0.004
Pumps	9999	0.219	1.058	3.236	0.005	0.065	0.065	568.299	0.019	0.004
Rollers	15	0.738	4.402	4.128	0.005	0.250	0.230	525.691	0.170	0.005
Rollers	25	0.738	4.402	4.128	0.005	0.250	0.230	525.691	0.170	0.005
Rollers	50	0.738	4.402	4.128	0.005	0.250	0.230	525.691	0.170	0.005
Rollers	120	0.310	3.470	3.219	0.005	0.186	0.171	473.929	0.153	0.004
Rollers	175	0.164	2.913	1.714	0.005	0.079	0.072	471.948	0.153	0.004
Rollers	250	0.187	1.228	2.212	0.005	0.077	0.071	473.514	0.153	0.004
Rollers	500	0.218	1.955	2.463	0.005	0.097	0.089	478.982	0.155	0.004
Rough Terrain Forklifts	50	0.789	4.304	4.041	0.005	0.238	0.219	525.015	0.170	0.005
Rough Terrain Forklifts	120	0.159	3.244	2.098	0.005	0.073	0.067	473.089	0.153	0.004
Rough Terrain Forklifts	175	0.120	2.844	1.405	0.005	0.051	0.047	471.677	0.153	0.004
Rough Terrain Forklifts	250	0.119	0.989	1.617	0.005	0.037	0.034	472.541	0.153	0.004
Rough Terrain Forklifts	500	0.068	0.937	0.558	0.005	0.009	0.008	466.560	0.151	0.004
Rubber Tired Dozers	175	0.600	3.752	5.808	0.005	0.326	0.300	473.912	0.153	0.004
Rubber Tired Dozers	250	0.480	2.056	5.046	0.005	0.240	0.220	474.617	0.154	0.004
Rubber Tired Dozers	500	0.475	3.895	4.808	0.005	0.220	0.202	479.311	0.155	0.004
Rubber Tired Dozers	750	0.460	2.607	6.122	0.005	0.218	0.201	473.035	0.153	0.004
Rubber Tired Dozers	1000	0.475	1.961	4.896	0.005	0.140	0.140	568.299	0.042	0.004
Rubber Tired Loaders	25	1.179	6.204	4.748	0.005	0.354	0.326	524.791	0.170	0.005
Rubber Tired Loaders	50	1.179	6.204	4.748	0.005	0.354	0.326	524.791	0.170	0.005
Rubber Tired Loaders	120	0.440	3.839	3.768	0.005	0.267	0.245	466.494	0.151	0.004
Rubber Tired Loaders	175	0.295	3.302	2.518	0.005	0.136	0.125	470.927	0.152	0.004
Rubber Tired Loaders	250	0.226	1.188	2.347	0.005	0.079	0.072	469.904	0.152	0.004
Rubber Tired Loaders	500	0.237	1.441	2.175	0.005	0.081	0.075	468.129	0.151	0.004
Rubber Tired Loaders	750	0.233	1.315	2.097	0.005	0.080	0.074	463.819	0.150	0.004
Rubber Tired Loaders	1000	0.193	1.162	3.617	0.005	0.075	0.069	472.858	0.153	0.004
Scrapers	120	0.681	4.205	6.455	0.005	0.494	0.454	483.448	0.156	0.004
Scrapers	175	0.390	3.417	3.833	0.005	0.204	0.187	478.741	0.155	0.004
Scrapers	250	0.341	1.743	3.669	0.005	0.160	0.147	469.269	0.152	0.004
Scrapers	500	0.264	2.052	2.879	0.005	0.112	0.103	473.230	0.153	0.004
Scrapers	750	0.224	1.508	2.475	0.005	0.090	0.083	471.279	0.152	0.004
Signal Boards	15	0.661	3.469	4.142	0.008	0.161	0.161	568.300	0.059	0.005
Signal Boards	50	0.655	4.325	3.880	0.007	0.154	0.154	568.299	0.059	0.005
Signal Boards	120	0.337	3.484	2.668	0.006	0.141	0.141	568.299	0.030	0.004

2022

AvgHP

2022		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Signal Boards	175	0.260	3.044	1.801	0.006	0.086	0.086	568.299	0.023	0.004
Signal Boards	250	0.247	1.266	1.782	0.007	0.055	0.055	686.695	0.022	0.004
Skid Steer Loaders	25	0.365	3.656	3.433	0.005	0.103	0.095	527.273	0.171	0.005
Skid Steer Loaders	50	0.365	3.656	3.433	0.005	0.103	0.095	527.273	0.171	0.005
Skid Steer Loaders	120	0.164	3.270	2.189	0.005	0.081	0.075	472.432	0.153	0.004
Surfacing Equipment	50	0.428	3.772	3.911	0.006	0.154	0.142	535.836	0.173	0.005
Surfacing Equipment	120	0.293	3.409	3.250	0.005	0.175	0.161	473.636	0.153	0.004
Surfacing Equipment	175	0.239	2.910	2.701	0.005	0.130	0.120	469.126	0.152	0.004
Surfacing Equipment	250	0.196	1.217	2.667	0.005	0.085	0.078	476.951	0.154	0.004
Surfacing Equipment	500	0.132	1.160	1.557	0.005	0.057	0.053	470.525	0.152	0.004
Surfacing Equipment	750	0.115	0.988	1.355	0.005	0.052	0.048	470.400	0.152	0.004
Sweepers/Scrubbers	15	1.008	5.451	4.490	0.005	0.335	0.308	525.328	0.170	0.005
Sweepers/Scrubbers	25	1.008	5.451	4.490	0.005	0.335	0.308	525.328	0.170	0.005
Sweepers/Scrubbers	50	1.008	5.451	4.490	0.005	0.335	0.308	525.328	0.170	0.005
Sweepers/Scrubbers	120	0.372	3.692	3.472	0.005	0.232	0.214	474.116	0.153	0.004
Sweepers/Scrubbers	175	0.321	3.222	3.002	0.005	0.145	0.133	473.122	0.153	0.004
Sweepers/Scrubbers	250	0.152	1.101	1.605	0.005	0.050	0.046	470.126	0.152	0.004
Tractors/Loaders/Backhoes	25	0.688	4.760	4.030	0.005	0.218	0.200	514.461	0.166	0.005
Tractors/Loaders/Backhoes	50	0.688	4.760	4.030	0.005	0.218	0.200	514.461	0.166	0.005
Tractors/Loaders/Backhoes	120	0.260	3.536	2.647	0.005	0.142	0.131	475.898	0.154	0.004
Tractors/Loaders/Backhoes	175	0.200	3.079	1.753	0.005	0.089	0.082	467.800	0.151	0.004
Tractors/Loaders/Backhoes	250	0.187	1.162	1.943	0.005	0.067	0.062	470.124	0.152	0.004
Tractors/Loaders/Backhoes	500	0.160	1.280	1.437	0.005	0.053	0.049	469.256	0.152	0.004
Tractors/Loaders/Backhoes	750	0.232	1.353	2.453	0.005	0.094	0.087	466.633	0.151	0.004
Trenchers	15	0.722	4.518	4.269	0.005	0.275	0.253	527.026	0.171	0.005
Trenchers	25	0.722	4.518	4.269	0.005	0.275	0.253	527.026	0.171	0.005
Trenchers	50	0.722	4.518	4.269	0.005	0.275	0.253	527.026	0.171	0.005
Trenchers	120	0.529	3.778	4.913	0.005	0.348	0.320	475.326	0.154	0.004
Trenchers	175	0.396	3.313	4.103	0.005	0.212	0.195	467.734	0.151	0.004
Trenchers	250	0.335	1.663	3.853	0.005	0.161	0.148	473.851	0.153	0.004
Trenchers	500	0.212	1.872	2.212	0.005	0.094	0.086	470.585	0.152	0.004
Trenchers	750	0.057	0.945	0.301	0.005	0.009	0.008	474.289	0.153	0.004
Welders	15	0.707	3.519	4.408	0.008	0.203	0.203	568.300	0.063	0.005
Welders	25	0.739	2.426	4.470	0.007	0.193	0.193	568.299	0.066	0.005
Welders	50	0.758	4.645	4.007	0.007	0.175	0.175	568.299	0.068	0.005
Welders	120	0.382	3.570	2.808	0.006	0.160	0.160	568.299	0.034	0.004
Welders	175	0.295	3.113	1.935	0.006	0.097	0.097	568.300	0.026	0.004
Welders	250	0.231	1.074	1.598	0.006	0.050	0.050	568.299	0.020	0.004
Welders	500	0.225	1.038	1.454	0.005	0.049	0.049	568.300	0.020	0.004
Water Trucks	175	0.241	3.284	1.811	0.005	0.088	0.081	470.181	0.152	0.004
Water Trucks	250	0.215	1.279	1.618	0.005	0.064	0.059	469.615	0.152	0.004
Water Trucks	500	0.196	1.247	1.490	0.005	0.054	0.050	474.714	0.154	0.004
Water Trucks	750	0.263	1.746	2.268	0.005	0.088	0.081	473.977	0.153	0.004
Water Trucks	1000	0.234	1.214	3.842	0.005	0.086	0.079	472.344	0.153	0.004

2023

2023		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Aerial Lifts	15	0.163	3.122	2.897	0.005	0.023	0.021	525.074	0.170	0.005
Aerial Lifts	25	0.163	3.122	2.897	0.005	0.023	0.021	525.074	0.170	0.005
Aerial Lifts	50	0.163	3.122	2.897	0.005	0.023	0.021	525.074	0.170	0.005
Aerial Lifts	120	0.101	3.170	1.548	0.005	0.027	0.025	472.114	0.153	0.004
Aerial Lifts	500	0.079	0.961	0.645	0.005	0.009	0.009	472.055	0.153	0.004
Aerial Lifts	750	0.169	0.995	1.265	0.005	0.038	0.038	568.299	0.015	0.004
Air Compressors	15	0.698	3.508	4.359	0.008	0.194	0.194	568.299	0.063	0.005
Air Compressors	25	0.728	2.407	4.447	0.007	0.186	0.186	568.299	0.065	0.005
Air Compressors	50	0.753	4.913	3.975	0.007	0.156	0.156	568.299	0.067	0.005
Air Compressors	120	0.387	3.657	2.631	0.006	0.143	0.143	568.299	0.034	0.004
Air Compressors	175	0.303	3.197	1.748	0.006	0.089	0.089	568.299	0.027	0.004
Air Compressors	250	0.243	1.099	1.420	0.006	0.045	0.045	568.299	0.021	0.004
Air Compressors	500	0.238	1.055	1.305	0.005	0.044	0.044	568.299	0.021	0.004
Air Compressors	750	0.239	1.055	1.331	0.005	0.044	0.044	568.299	0.021	0.004
Air Compressors	1000	0.256	1.102	3.221	0.005	0.068	0.068	568.299	0.023	0.004
Bore/Drill Rigs	15	0.606	4.311	4.208	0.006	0.226	0.208	531.986	0.172	0.005
Bore/Drill Rigs	25	0.606	4.311	4.208	0.006	0.226	0.208	531.986	0.172	0.005
Bore/Drill Rigs	50	0.606	4.311	4.208	0.006	0.226	0.208	531.986	0.172	0.005
Bore/Drill Rigs	120	0.187	3.258	2.357	0.005	0.102	0.093	461.214	0.149	0.004
Bore/Drill Rigs	175	0.125	2.969	1.078	0.005	0.048	0.044	479.647	0.155	0.004
Bore/Drill Rigs	250	0.110	1.043	1.047	0.005	0.034	0.031	469.706	0.152	0.004
Bore/Drill Rigs	500	0.101	0.989	0.898	0.005	0.030	0.028	464.041	0.150	0.004
Bore/Drill Rigs	750	0.091	0.982	0.717	0.005	0.026	0.024	479.220	0.155	0.004
Bore/Drill Rigs	1000	0.053	0.936	2.262	0.005	0.018	0.016	472.020	0.153	0.004
Cement and Mortar Mixers	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Cement and Mortar Mixers	25	0.697	2.356	4.382	0.007	0.172	0.172	568.299	0.062	0.005
Concrete/Industrial Saws	25	0.685	2.340	4.332	0.007	0.161	0.161	568.299	0.061	0.005
Concrete/Industrial Saws	50	0.606	4.372	3.815	0.007	0.134	0.134	568.299	0.054	0.005
Concrete/Industrial Saws	120	0.320	3.507	2.478	0.006	0.123	0.123	568.300	0.028	0.004
Concrete/Industrial Saws	175	0.250	3.072	1.599	0.006	0.077	0.077	568.299	0.022	0.004
Cranes	50	2.047	7.453	5.923	0.005	0.608	0.559	517.872	0.168	0.005
Cranes	120	0.552	3.944	4.875	0.005	0.323	0.297	469.889	0.152	0.004
Cranes	175	0.423	3.443	4.222	0.005	0.224	0.206	474.595	0.154	0.004
Cranes	250	0.297	1.553	3.229	0.005	0.135	0.124	472.974	0.153	0.004
Cranes	500	0.236	2.010	2.511	0.005	0.102	0.093	472.294	0.153	0.004
Cranes	750	0.195	1.282	2.073	0.005	0.084	0.077	470.251	0.152	0.004
Cranes	9999	0.211	1.023	2.399	0.005	0.063	0.058	472.055	0.153	0.004
Crawler Tractors	50	1.873	7.027	5.325	0.005	0.526	0.484	516.159	0.167	0.005
Crawler Tractors	120	0.558	3.889	4.762	0.005	0.373	0.343	476.158	0.154	0.004
Crawler Tractors	175	0.347	3.235	3.330	0.005	0.185	0.170	471.781	0.153	0.004
Crawler Tractors	250	0.276	1.395	3.187	0.005	0.124	0.114	471.624	0.153	0.004
Crawler Tractors	500	0.241	1.852	2.476	0.005	0.102	0.094	474.613	0.154	0.004
Crawler Tractors	750	0.184	1.159	1.867	0.005	0.069	0.064	472.530	0.153	0.004
Crawler Tractors	1000	0.268	1.610	4.770	0.005	0.118	0.109	473.666	0.153	0.004
Crushing/Proc. Equipment	50	0.739	5.039	3.962	0.007	0.146	0.146	568.299	0.066	0.005

2023

2023		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Crushing/Proc. Equipment	120	0.385	3.700	2.552	0.006	0.132	0.132	568.299	0.034	0.004
Crushing/Proc. Equipment	175	0.304	3.240	1.654	0.006	0.083	0.083	568.299	0.027	0.004
Crushing/Proc. Equipment	250	0.248	1.111	1.330	0.006	0.043	0.043	568.299	0.022	0.004
Crushing/Proc. Equipment	500	0.244	1.064	1.227	0.005	0.042	0.042	568.299	0.022	0.004
Crushing/Proc. Equipment	750	0.244	1.065	1.251	0.005	0.042	0.042	568.300	0.022	0.004
Crushing/Proc. Equipment	9999	0.287	1.107	3.160	0.005	0.066	0.066	568.299	0.025	0.004
Dumpers/Tenders	25	0.685	2.339	4.332	0.007	0.162	0.162	568.299	0.061	0.005
Excavators	25	0.450	4.234	3.594	0.005	0.139	0.128	525.429	0.170	0.005
Excavators	50	0.450	4.234	3.594	0.005	0.139	0.128	525.429	0.170	0.005
Excavators	120	0.230	3.454	2.381	0.005	0.116	0.107	467.157	0.151	0.004
Excavators	175	0.178	3.076	1.462	0.005	0.072	0.066	472.277	0.153	0.004
Excavators	250	0.142	1.090	1.209	0.005	0.039	0.036	472.213	0.153	0.004
Excavators	500	0.122	1.051	0.893	0.005	0.030	0.028	469.889	0.152	0.004
Excavators	750	0.144	1.132	1.159	0.005	0.043	0.040	468.683	0.152	0.004
Forklifts	50	0.766	5.166	4.152	0.005	0.232	0.213	525.483	0.170	0.005
Forklifts	120	0.327	3.647	3.057	0.005	0.189	0.174	471.529	0.153	0.004
Forklifts	175	0.244	3.180	2.112	0.005	0.111	0.102	472.106	0.153	0.004
Forklifts	250	0.204	1.235	1.807	0.005	0.069	0.063	473.326	0.153	0.004
Forklifts	500	0.220	1.216	1.788	0.005	0.069	0.063	473.615	0.153	0.004
Generator Sets	15	0.618	3.508	4.345	0.008	0.186	0.186	568.299	0.055	0.005
Generator Sets	25	0.701	2.407	4.447	0.007	0.182	0.182	568.299	0.063	0.005
Generator Sets	50	0.514	3.819	3.685	0.007	0.124	0.124	568.299	0.046	0.005
Generator Sets	120	0.279	3.347	2.477	0.006	0.117	0.117	568.299	0.025	0.004
Generator Sets	175	0.211	2.927	1.635	0.006	0.071	0.071	568.299	0.019	0.004
Generator Sets	250	0.164	1.006	1.328	0.006	0.038	0.038	568.299	0.014	0.004
Generator Sets	500	0.158	0.986	1.228	0.005	0.037	0.037	568.299	0.014	0.004
Generator Sets	750	0.160	0.986	1.253	0.005	0.037	0.037	568.299	0.014	0.004
Generator Sets	9999	0.194	1.031	3.058	0.005	0.058	0.058	568.299	0.017	0.004
Graders	50	1.947	7.191	5.148	0.005	0.549	0.505	494.020	0.160	0.005
Graders	120	0.719	4.228	5.740	0.005	0.436	0.401	469.286	0.152	0.004
Graders	175	0.390	3.450	3.548	0.005	0.195	0.180	478.463	0.155	0.004
Graders	250	0.284	1.252	3.441	0.005	0.112	0.103	473.926	0.153	0.004
Graders	500	0.309	1.385	2.705	0.005	0.105	0.097	471.031	0.152	0.004
Graders	750	0.276	1.170	1.425	0.005	0.051	0.051	568.300	0.024	0.004
Off-Highway Tractors	120	0.316	3.687	3.095	0.005	0.187	0.172	476.087	0.154	0.004
Off-Highway Tractors	175	0.201	3.143	1.785	0.005	0.085	0.079	472.996	0.153	0.004
Off-Highway Tractors	250	0.171	1.138	1.491	0.005	0.053	0.049	470.845	0.152	0.004
Off-Highway Tractors	750	0.168	1.124	1.289	0.005	0.051	0.047	471.932	0.153	0.004
Off-Highway Tractors	1000	0.180	1.055	2.449	0.005	0.067	0.062	472.055	0.153	0.004
Off-Highway Trucks	175	0.236	3.304	1.683	0.005	0.081	0.074	470.292	0.152	0.004
Off-Highway Trucks	250	0.207	1.273	1.456	0.005	0.059	0.054	469.446	0.152	0.004
Off-Highway Trucks	500	0.187	1.221	1.324	0.005	0.048	0.044	475.049	0.154	0.004
Off-Highway Trucks	750	0.263	1.719	2.182	0.005	0.084	0.078	473.767	0.153	0.004
Off-Highway Trucks	1000	0.214	1.194	3.544	0.005	0.074	0.068	472.857	0.153	0.004
Other Construction Equipment	15	0.866	5.074	4.594	0.006	0.322	0.296	529.339	0.171	0.005
Other Construction Equipment	25	0.866	5.074	4.594	0.006	0.322	0.296	529.339	0.171	0.005

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2023		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Other Construction Equipment	50	0.866	5.074	4.594	0.006	0.322	0.296	529.339	0.171	0.005
Other Construction Equipment	120	0.406	3.632	3.790	0.005	0.259	0.238	471.990	0.153	0.004
Other Construction Equipment	175	0.274	3.142	2.698	0.005	0.141	0.129	469.558	0.152	0.004
Other Construction Equipment	500	0.180	1.396	1.812	0.005	0.069	0.063	476.185	0.154	0.004
Other General Industrial Equipment	15	0.603	4.883	3.993	0.005	0.194	0.179	526.176	0.170	0.005
Other General Industrial Equipment	25	0.603	4.883	3.993	0.005	0.194	0.179	526.176	0.170	0.005
Other General Industrial Equipment	50	0.603	4.883	3.993	0.005	0.194	0.179	526.176	0.170	0.005
Other General Industrial Equipment	120	0.308	3.647	2.924	0.005	0.169	0.155	470.000	0.152	0.004
Other General Industrial Equipment	175	0.201	3.175	1.609	0.005	0.080	0.074	471.850	0.153	0.004
Other General Industrial Equipment	250	0.181	1.140	1.530	0.005	0.051	0.047	473.223	0.153	0.004
Other General Industrial Equipment	500	0.164	1.121	1.256	0.005	0.043	0.040	472.929	0.153	0.004
Other General Industrial Equipment	750	0.111	1.105	0.626	0.005	0.023	0.021	473.464	0.153	0.004
Other General Industrial Equipment	1000	0.193	1.049	3.956	0.005	0.080	0.073	472.055	0.153	0.004
Other Material Handling Equipment	50	1.011	5.757	4.684	0.005	0.340	0.313	523.709	0.169	0.005
Other Material Handling Equipment	120	0.225	3.515	2.298	0.005	0.104	0.095	473.588	0.153	0.004
Other Material Handling Equipment	175	0.217	3.171	1.769	0.005	0.096	0.088	472.219	0.153	0.004
Other Material Handling Equipment	250	0.207	1.209	2.004	0.005	0.069	0.064	471.482	0.153	0.004
Other Material Handling Equipment	500	0.218	1.344	1.870	0.005	0.078	0.072	470.297	0.152	0.004
Other Material Handling Equipment	9999	0.054	0.939	2.268	0.005	0.018	0.017	472.055	0.153	0.004
Pavers	25	1.007	5.007	4.285	0.005	0.299	0.275	526.860	0.170	0.005
Pavers	50	1.007	5.007	4.285	0.005	0.299	0.275	526.860	0.170	0.005
Pavers	120	0.349	3.507	3.427	0.005	0.226	0.208	470.084	0.152	0.004
Pavers	175	0.199	2.994	1.955	0.005	0.092	0.085	472.718	0.153	0.004
Pavers	250	0.130	1.010	1.611	0.005	0.047	0.043	472.605	0.153	0.004
Pavers	500	0.152	0.987	1.771	0.005	0.062	0.057	466.004	0.151	0.004
Paving Equipment	25	0.541	4.241	3.774	0.005	0.173	0.159	521.114	0.169	0.005
Paving Equipment	50	0.541	4.241	3.774	0.005	0.173	0.159	521.114	0.169	0.005
Paving Equipment	120	0.278	3.503	2.837	0.005	0.153	0.140	473.427	0.153	0.004
Paving Equipment	175	0.204	3.051	1.913	0.005	0.093	0.086	470.663	0.152	0.004
Paving Equipment	250	0.175	1.165	1.885	0.005	0.070	0.065	472.169	0.153	0.004
Plate Compactors	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005

2023

2023		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Pressure Washers	15	0.618	3.508	4.345	0.008	0.186	0.186	568.299	0.055	0.005
Pressure Washers	25	0.701	2.407	4.447	0.007	0.182	0.182	568.299	0.063	0.005
Pressure Washers	50	0.363	3.260	3.541	0.007	0.101	0.101	568.299	0.032	0.005
Pressure Washers	120	0.222	3.196	2.377	0.006	0.097	0.097	568.299	0.020	0.004
Pressure Washers	175	0.205	2.907	1.665	0.006	0.072	0.072	568.299	0.018	0.004
Pressure Washers	250	0.098	0.986	0.265	0.006	0.009	0.009	568.299	0.008	0.004
Pumps	15	0.698	3.508	4.359	0.008	0.194	0.194	568.299	0.063	0.005
Pumps	25	0.728	2.407	4.447	0.007	0.186	0.186	568.299	0.065	0.005
Pumps	50	0.565	4.007	3.734	0.007	0.131	0.131	568.299	0.051	0.005
Pumps	120	0.299	3.398	2.511	0.006	0.123	0.123	568.299	0.026	0.004
Pumps	175	0.227	2.971	1.662	0.006	0.075	0.075	568.299	0.020	0.004
Pumps	250	0.177	1.021	1.351	0.006	0.040	0.040	568.299	0.015	0.004
Pumps	500	0.171	0.998	1.246	0.005	0.038	0.038	568.300	0.015	0.004
Pumps	750	0.173	0.998	1.271	0.005	0.039	0.039	568.299	0.015	0.004
Pumps	9999	0.207	1.043	3.090	0.005	0.059	0.059	568.299	0.018	0.004
Rollers	15	0.661	4.252	3.921	0.005	0.212	0.195	525.862	0.170	0.005
Rollers	25	0.661	4.252	3.921	0.005	0.212	0.195	525.862	0.170	0.005
Rollers	50	0.661	4.252	3.921	0.005	0.212	0.195	525.862	0.170	0.005
Rollers	120	0.287	3.455	3.003	0.005	0.165	0.152	473.936	0.153	0.004
Rollers	175	0.150	2.909	1.483	0.005	0.068	0.062	471.935	0.153	0.004
Rollers	250	0.188	1.234	2.173	0.005	0.076	0.070	473.516	0.153	0.004
Rollers	500	0.211	1.956	2.290	0.005	0.093	0.085	478.303	0.155	0.004
Rough Terrain Forklifts	50	0.690	4.125	3.853	0.005	0.204	0.187	524.802	0.170	0.005
Rough Terrain Forklifts	120	0.150	3.242	1.984	0.005	0.064	0.059	473.158	0.153	0.004
Rough Terrain Forklifts	175	0.111	2.843	1.218	0.005	0.044	0.040	471.622	0.153	0.004
Rough Terrain Forklifts	250	0.116	0.990	1.474	0.005	0.034	0.032	472.778	0.153	0.004
Rough Terrain Forklifts	500	0.069	0.938	0.558	0.005	0.009	0.008	466.554	0.151	0.004
Rubber Tired Dozers	175	0.588	3.766	5.656	0.005	0.316	0.291	473.901	0.153	0.004
Rubber Tired Dozers	250	0.393	1.783	4.090	0.005	0.184	0.169	474.597	0.154	0.004
Rubber Tired Dozers	500	0.447	3.686	4.408	0.005	0.202	0.185	479.468	0.155	0.004
Rubber Tired Dozers	750	0.423	2.591	5.334	0.005	0.196	0.180	473.023	0.153	0.004
Rubber Tired Dozers	1000	0.453	1.874	4.709	0.005	0.131	0.131	568.299	0.040	0.004
Rubber Tired Loaders	25	1.049	5.972	4.521	0.005	0.304	0.279	524.304	0.170	0.005
Rubber Tired Loaders	50	1.049	5.972	4.521	0.005	0.304	0.279	524.304	0.170	0.005
Rubber Tired Loaders	120	0.412	3.827	3.512	0.005	0.239	0.219	466.558	0.151	0.004
Rubber Tired Loaders	175	0.269	3.292	2.196	0.005	0.118	0.108	470.660	0.152	0.004
Rubber Tired Loaders	250	0.210	1.171	2.060	0.005	0.069	0.064	469.824	0.152	0.004
Rubber Tired Loaders	500	0.217	1.384	1.866	0.005	0.069	0.064	468.466	0.152	0.004
Rubber Tired Loaders	750	0.227	1.323	1.927	0.005	0.075	0.069	464.555	0.150	0.004
Rubber Tired Loaders	1000	0.193	1.174	3.528	0.005	0.071	0.065	472.303	0.153	0.004
Scrapers	120	0.630	4.144	6.026	0.005	0.458	0.421	483.030	0.156	0.004
Scrapers	175	0.361	3.395	3.479	0.005	0.184	0.169	478.681	0.155	0.004
Scrapers	250	0.317	1.678	3.284	0.005	0.144	0.133	469.560	0.152	0.004
Scrapers	500	0.253	1.975	2.666	0.005	0.105	0.096	473.177	0.153	0.004
Scrapers	750	0.222	1.513	2.386	0.005	0.087	0.080	471.295	0.152	0.004
Signal Boards	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Signal Boards	50	0.603	4.282	3.767	0.007	0.132	0.132	568.299	0.054	0.005
Signal Boards	120	0.315	3.478	2.472	0.006	0.122	0.122	568.299	0.028	0.004

2023

2023		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Signal Boards	175	0.244	3.045	1.602	0.006	0.075	0.075	568.299	0.022	0.004
Signal Boards	250	0.235	1.263	1.562	0.007	0.048	0.048	686.695	0.021	0.004
Skid Steer Loaders	25	0.353	3.654	3.371	0.005	0.093	0.086	527.423	0.171	0.005
Skid Steer Loaders	50	0.353	3.654	3.371	0.005	0.093	0.086	527.423	0.171	0.005
Skid Steer Loaders	120	0.153	3.266	2.039	0.005	0.069	0.063	472.656	0.153	0.004
Surfacing Equipment	50	0.437	3.832	3.924	0.006	0.156	0.143	535.930	0.173	0.005
Surfacing Equipment	120	0.270	3.396	3.058	0.005	0.157	0.144	474.470	0.154	0.004
Surfacing Equipment	175	0.224	2.914	2.455	0.005	0.119	0.110	470.014	0.152	0.004
Surfacing Equipment	250	0.192	1.219	2.502	0.005	0.082	0.075	476.961	0.154	0.004
Surfacing Equipment	500	0.132	1.163	1.476	0.005	0.056	0.051	470.375	0.152	0.004
Surfacing Equipment	750	0.100	0.985	1.081	0.005	0.040	0.037	472.447	0.153	0.004
Sweepers/Scrubbers	15	0.759	4.971	4.127	0.005	0.249	0.229	525.328	0.170	0.005
Sweepers/Scrubbers	25	0.759	4.971	4.127	0.005	0.249	0.229	525.328	0.170	0.005
Sweepers/Scrubbers	50	0.759	4.971	4.127	0.005	0.249	0.229	525.328	0.170	0.005
Sweepers/Scrubbers	120	0.351	3.695	3.285	0.005	0.210	0.193	474.116	0.153	0.004
Sweepers/Scrubbers	175	0.292	3.223	2.609	0.005	0.126	0.116	473.122	0.153	0.004
Sweepers/Scrubbers	250	0.159	1.114	1.610	0.005	0.050	0.046	470.126	0.152	0.004
Tractors/Loaders/Backhoes	25	0.621	4.629	3.857	0.005	0.185	0.170	513.796	0.166	0.005
Tractors/Loaders/Backhoes	50	0.621	4.629	3.857	0.005	0.185	0.170	513.796	0.166	0.005
Tractors/Loaders/Backhoes	120	0.239	3.525	2.426	0.005	0.120	0.110	476.431	0.154	0.004
Tractors/Loaders/Backhoes	175	0.184	3.078	1.521	0.005	0.077	0.070	468.821	0.152	0.004
Tractors/Loaders/Backhoes	250	0.169	1.148	1.588	0.005	0.058	0.053	469.752	0.152	0.004
Tractors/Loaders/Backhoes	500	0.152	1.279	1.247	0.005	0.047	0.043	469.465	0.152	0.004
Tractors/Loaders/Backhoes	750	0.234	1.361	2.419	0.005	0.095	0.087	466.676	0.151	0.004
Trenchers	15	0.642	4.302	3.959	0.005	0.220	0.202	527.095	0.171	0.005
Trenchers	25	0.642	4.302	3.959	0.005	0.220	0.202	527.095	0.171	0.005
Trenchers	50	0.642	4.302	3.959	0.005	0.220	0.202	527.095	0.171	0.005
Trenchers	120	0.504	3.768	4.700	0.005	0.326	0.300	475.690	0.154	0.004
Trenchers	175	0.359	3.291	3.657	0.005	0.186	0.171	467.733	0.151	0.004
Trenchers	250	0.328	1.639	3.737	0.005	0.155	0.143	473.849	0.153	0.004
Trenchers	500	0.199	1.723	2.005	0.005	0.085	0.078	471.613	0.153	0.004
Trenchers	750	0.060	0.951	0.303	0.005	0.009	0.008	474.471	0.154	0.004
Welders	15	0.698	3.508	4.359	0.008	0.194	0.194	568.300	0.063	0.005
Welders	25	0.728	2.407	4.447	0.007	0.186	0.186	568.299	0.065	0.005
Welders	50	0.697	4.596	3.891	0.007	0.151	0.151	568.299	0.062	0.005
Welders	120	0.357	3.564	2.599	0.006	0.139	0.139	568.299	0.032	0.004
Welders	175	0.277	3.115	1.726	0.006	0.085	0.085	568.299	0.025	0.004
Welders	250	0. 2	1.071	1.404	0.006	0.044	0.044	568.299	0.019	0.004
Welders	500	0.215	1.034	1.289	0.005	0.042	0.042	568.299	0.019	0.004
Water Trucks	175	0.236	3.304	1.683	0.005	0.081	0.074	470.292	0.152	0.004
Water Trucks	250	0.207	1.273	1.456	0.005	0.059	0.054	469.446	0.152	0.004
Water Trucks	500	0.187	1.221	1.324	0.005	0.048	0.044	475.049	0.154	0.004
Water Trucks	750	0.263	1.719	2.182	0.005	0.084	0.078	473.767	0.153	0.004
Water Trucks	1000	0.214	1.194	3.544	0.005	0.074	0.068	472.857	0.153	0.004

2024

2024		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Aerial Lifts	15	0.159	3.113	2.888	0.005	0.022	0.020	525.074	0.170	0.005
Aerial Lifts	25	0.159	3.113	2.888	0.005	0.022	0.020	525.074	0.170	0.005
Aerial Lifts	50	0.159	3.113	2.888	0.005	0.022	0.020	525.074	0.170	0.005
Aerial Lifts	120	0.101	3.173	1.528	0.005	0.027	0.024	472.114	0.153	0.004
Aerial Lifts	500	0.082	0.966	0.647	0.005	0.009	0.009	472.055	0.153	0.004
Aerial Lifts	750	0.161	0.991	1.115	0.005	0.033	0.033	568.299	0.014	0.004
Air Compressors	15	0.690	3.499	4.316	0.008	0.188	0.188	568.300	0.062	0.005
Air Compressors	25	0.718	2.390	4.426	0.007	0.181	0.181	568.300	0.064	0.005
Air Compressors	50	0.702	4.880	3.864	0.007	0.135	0.135	568.299	0.063	0.005
Air Compressors	120	0.365	3.655	2.461	0.006	0.123	0.123	568.299	0.032	0.004
Air Compressors	175	0.286	3.202	1.561	0.006	0.077	0.077	568.299	0.025	0.004
Air Compressors	250	0.232	1.096	1.247	0.006	0.039	0.039	568.299	0.020	0.004
Air Compressors	500	0.228	1.053	1.148	0.005	0.038	0.038	568.299	0.020	0.004
Air Compressors	750	0.228	1.053	1.171	0.005	0.038	0.038	568.299	0.020	0.004
Air Compressors	1000	0.243	1.090	3.082	0.005	0.061	0.061	568.299	0.021	0.004
Bore/Drill Rigs	15	0.609	4.331	4.159	0.006	0.219	0.202	529.866	0.171	0.005
Bore/Drill Rigs	25	0.609	4.331	4.159	0.006	0.219	0.202	529.866	0.171	0.005
Bore/Drill Rigs	50	0.609	4.331	4.159	0.006	0.219	0.202	529.866	0.171	0.005
Bore/Drill Rigs	120	0.177	3.251	2.216	0.005	0.090	0.083	461.208	0.149	0.004
Bore/Drill Rigs	175	0.125	2.978	1.029	0.005	0.046	0.043	478.944	0.155	0.004
Bore/Drill Rigs	250	0.108	1.046	0.975	0.005	0.032	0.030	470.712	0.152	0.004
Bore/Drill Rigs	500	0.103	0.994	0.861	0.005	0.029	0.027	464.480	0.150	0.004
Bore/Drill Rigs	750	0.089	0.985	0.671	0.005	0.026	0.024	480.225	0.155	0.004
Bore/Drill Rigs	1000	0.057	0.943	2.273	0.005	0.018	0.017	471.926	0.153	0.004
Cement and Mortar Mixers	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Cement and Mortar Mixers	25	0.693	2.349	4.369	0.007	0.170	0.170	568.299	0.062	0.005
Concrete/Industrial Saws	25	0.685	2.339	4.332	0.007	0.161	0.161	568.299	0.061	0.005
Concrete/Industrial Saws	50	0.561	4.330	3.701	0.007	0.115	0.115	568.300	0.050	0.005
Concrete/Industrial Saws	120	0.300	3.500	2.315	0.006	0.106	0.106	568.299	0.027	0.004
Concrete/Industrial Saws	175	0.235	3.072	1.418	0.006	0.067	0.067	568.299	0.021	0.004
Cranes	50	1.937	7.269	5.788	0.005	0.577	0.531	517.872	0.168	0.005
Cranes	120	0.524	3.906	4.619	0.005	0.301	0.277	469.903	0.152	0.004
Cranes	175	0.381	3.389	3.703	0.005	0.196	0.181	474.636	0.154	0.004
Cranes	250	0.281	1.502	2.966	0.005	0.123	0.114	472.964	0.153	0.004
Cranes	500	0.231	1.933	2.383	0.005	0.096	0.089	472.066	0.153	0.004
Cranes	750	0.191	1.283	1.900	0.005	0.080	0.073	470.331	0.152	0.004
Cranes	9999	0.220	1.031	2.411	0.005	0.064	0.059	472.055	0.153	0.004
Crawler Tractors	50	1.756	6.685	4.975	0.005	0.466	0.429	515.466	0.167	0.005
Crawler Tractors	120	0.513	3.852	4.409	0.005	0.335	0.309	476.234	0.154	0.004
Crawler Tractors	175	0.326	3.227	3.041	0.005	0.170	0.157	471.829	0.153	0.004
Crawler Tractors	250	0.264	1.370	2.953	0.005	0.115	0.106	471.860	0.153	0.004
Crawler Tractors	500	0.228	1.780	2.244	0.005	0.093	0.085	474.025	0.153	0.004
Crawler Tractors	750	0.181	1.159	1.767	0.005	0.066	0.061	472.283	0.153	0.004
Crawler Tractors	1000	0.263	1.588	4.689	0.005	0.115	0.106	474.645	0.154	0.004
Crushing/Proc. Equipment	50	0.694	5.008	3.850	0.007	0.125	0.125	568.299	0.062	0.005

2024

2024		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Crushing/Proc. Equipment	120	0.364	3.697	2.389	0.006	0.112	0.112	568.299	0.032	0.004
Crushing/Proc. Equipment	175	0.287	3.243	1.472	0.006	0.071	0.071	568.299	0.025	0.004
Crushing/Proc. Equipment	250	0.236	1.109	1.165	0.006	0.036	0.036	568.299	0.021	0.004
Crushing/Proc. Equipment	500	0.232	1.062	1.077	0.005	0.035	0.035	568.299	0.021	0.004
Crushing/Proc. Equipment	750	0.233	1.063	1.098	0.005	0.036	0.036	568.299	0.021	0.004
Crushing/Proc. Equipment	9999	0.274	1.096	3.029	0.005	0.059	0.059	568.299	0.024	0.004
Dumpers/Tenders	25	0.685	2.340	4.332	0.007	0.161	0.161	568.299	0.061	0.005
Excavators	25	0.417	4.205	3.508	0.005	0.120	0.110	525.979	0.170	0.005
Excavators	50	0.417	4.205	3.508	0.005	0.120	0.110	525.979	0.170	0.005
Excavators	120	0.217	3.453	2.248	0.005	0.102	0.094	467.384	0.151	0.004
Excavators	175	0.170	3.083	1.325	0.005	0.065	0.060	472.428	0.153	0.004
Excavators	250	0.139	1.090	1.108	0.005	0.036	0.033	472.442	0.153	0.004
Excavators	500	0.121	1.054	0.831	0.005	0.029	0.026	469.711	0.152	0.004
Excavators	750	0.142	1.134	1.105	0.005	0.041	0.037	468.652	0.152	0.004
Forklifts	50	0.692	5.089	4.039	0.005	0.203	0.187	525.483	0.170	0.005
Forklifts	120	0.300	3.629	2.814	0.005	0.163	0.150	471.529	0.153	0.004
Forklifts	175	0.224	3.174	1.861	0.005	0.096	0.088	472.106	0.153	0.004
Forklifts	250	0.196	1.218	1.625	0.005	0.061	0.057	473.326	0.153	0.004
Forklifts	500	0.218	1.219	1.723	0.005	0.065	0.060	473.615	0.153	0.004
Generator Sets	15	0.612	3.499	4.305	0.008	0.181	0.181	568.299	0.055	0.005
Generator Sets	25	0.697	2.390	4.426	0.007	0.178	0.178	568.299	0.062	0.005
Generator Sets	50	0.475	3.787	3.582	0.007	0.107	0.107	568.299	0.042	0.005
Generator Sets	120	0.260	3.342	2.321	0.006	0.101	0.101	568.299	0.023	0.004
Generator Sets	175	0.197	2.929	1.462	0.006	0.062	0.062	568.299	0.017	0.004
Generator Sets	250	0.155	1.003	1.169	0.006	0.033	0.033	568.299	0.014	0.004
Generator Sets	500	0.151	0.983	1.082	0.005	0.032	0.032	568.300	0.013	0.004
Generator Sets	750	0.152	0.983	1.104	0.005	0.032	0.032	568.299	0.013	0.004
Generator Sets	9999	0.183	1.018	2.929	0.005	0.052	0.052	568.300	0.016	0.004
Graders	50	1.850	7.051	5.028	0.005	0.520	0.479	493.791	0.160	0.005
Graders	120	0.683	4.200	5.434	0.005	0.408	0.375	469.821	0.152	0.004
Graders	175	0.364	3.432	3.202	0.005	0.177	0.163	478.497	0.155	0.004
Graders	250	0.262	1.225	3.073	0.005	0.100	0.092	473.669	0.153	0.004
Graders	500	0.293	1.356	2.432	0.005	0.095	0.088	470.266	0.152	0.004
Graders	750	0.264	1.155	1.265	0.005	0.046	0.046	568.300	0.023	0.004
Off-Highway Tractors	120	0.302	3.691	2.949	0.005	0.171	0.157	476.371	0.154	0.004
Off-Highway Tractors	175	0.183	3.133	1.496	0.005	0.072	0.066	473.097	0.153	0.004
Off-Highway Tractors	250	0.169	1.135	1.377	0.005	0.049	0.045	470.689	0.152	0.004
Off-Highway Tractors	750	0.169	1.130	1.235	0.005	0.048	0.044	471.925	0.153	0.004
Off-Highway Tractors	1000	0.189	1.066	2.466	0.005	0.068	0.063	472.055	0.153	0.004
Off-Highway Trucks	175	0.224	3.325	1.494	0.005	0.070	0.064	470.264	0.152	0.004
Off-Highway Trucks	250	0.202	1.259	1.355	0.005	0.054	0.050	469.113	0.152	0.004
Off-Highway Trucks	500	0.185	1.206	1.235	0.005	0.045	0.041	475.220	0.154	0.004
Off-Highway Trucks	750	0.259	1.650	2.085	0.005	0.079	0.073	473.839	0.153	0.004
Off-Highway Trucks	1000	0.209	1.200	3.439	0.005	0.069	0.064	473.097	0.153	0.004
Other Construction Equipment	15	0.828	5.032	4.510	0.006	0.305	0.281	529.209	0.171	0.005
Other Construction Equipment	25	0.828	5.032	4.510	0.006	0.305	0.281	529.209	0.171	0.005

2024

2024		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Other Construction Equipment	50	0.828	5.032	4.510	0.006	0.305	0.281	529.209	0.171	0.005
Other Construction Equipment	120	0.382	3.620	3.582	0.005	0.237	0.218	472.125	0.153	0.004
Other Construction Equipment	175	0.261	3.150	2.520	0.005	0.130	0.120	469.545	0.152	0.004
Other Construction Equipment	500	0.175	1.382	1.677	0.005	0.064	0.059	476.484	0.154	0.004
Other General Industrial Equipment	15	0.546	4.780	3.859	0.005	0.165	0.152	526.176	0.170	0.005
Other General Industrial Equipment	25	0.546	4.780	3.859	0.005	0.165	0.152	526.176	0.170	0.005
Other General Industrial Equipment	50	0.546	4.780	3.859	0.005	0.165	0.152	526.176	0.170	0.005
Other General Industrial Equipment	120	0.287	3.639	2.708	0.005	0.146	0.134	470.000	0.152	0.004
Other General Industrial Equipment	175	0.191	3.185	1.448	0.005	0.073	0.067	471.850	0.153	0.004
Other General Industrial Equipment	250	0.173	1.141	1.319	0.005	0.046	0.042	473.223	0.153	0.004
Other General Industrial Equipment	500	0.158	1.110	1.153	0.005	0.040	0.036	472.929	0.153	0.004
Other General Industrial Equipment	750	0.115	1.112	0.628	0.005	0.023	0.021	473.464	0.153	0.004
Other General Industrial Equipment	1000	0.198	1.058	3.971	0.005	0.080	0.074	472.055	0.153	0.004
Other Material Handling Equipment	50	0.943	5.669	4.579	0.005	0.314	0.289	523.709	0.169	0.005
Other Material Handling Equipment	120	0.220	3.510	2.222	0.005	0.096	0.089	473.588	0.153	0.004
Other Material Handling Equipment	175	0.208	3.181	1.639	0.005	0.088	0.081	472.219	0.153	0.004
Other Material Handling Equipment	250	0.210	1.218	1.986	0.005	0.068	0.063	471.482	0.153	0.004
Other Material Handling Equipment	500	0.212	1.262	1.756	0.005	0.072	0.066	470.297	0.152	0.004
Other Material Handling Equipment	9999	0.058	0.946	2.278	0.005	0.018	0.017	472.055	0.153	0.004
Pavers	25	0.950	4.956	4.203	0.005	0.279	0.257	526.857	0.170	0.005
Pavers	50	0.950	4.956	4.203	0.005	0.279	0.257	526.857	0.170	0.005
Pavers	120	0.337	3.508	3.277	0.005	0.213	0.196	470.226	0.152	0.004
Pavers	175	0.191	3.004	1.809	0.005	0.085	0.078	472.661	0.153	0.004
Pavers	250	0.119	1.009	1.343	0.005	0.041	0.038	473.236	0.153	0.004
Pavers	500	0.143	0.986	1.548	0.005	0.054	0.049	467.171	0.151	0.004
Paving Equipment	25	0.523	4.275	3.743	0.005	0.164	0.151	521.058	0.169	0.005
Paving Equipment	50	0.523	4.275	3.743	0.005	0.164	0.151	521.058	0.169	0.005
Paving Equipment	120	0.262	3.503	2.673	0.005	0.135	0.125	473.175	0.153	0.004
Paving Equipment	175	0.197	3.066	1.785	0.005	0.086	0.079	470.661	0.152	0.004
Paving Equipment	250	0.138	1.114	1.296	0.005	0.048	0.044	472.212	0.153	0.004
Plate Compactors	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005

2024

2024		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Pressure Washers	15	0.612	3.499	4.305	0.008	0.181	0.181	568.299	0.055	0.005
Pressure Washers	25	0.697	2.390	4.426	0.007	0.178	0.178	568.299	0.062	0.005
Pressure Washers	50	0.333	3.233	3.441	0.007	0.087	0.087	568.299	0.030	0.005
Pressure Washers	120	0.204	3.191	2.229	0.006	0.084	0.084	568.299	0.018	0.004
Pressure Washers	175	0.191	2.907	1.482	0.006	0.062	0.062	568.299	0.017	0.004
Pressure Washers	250	0.098	0.986	0.265	0.006	0.009	0.009	568.299	0.008	0.004
Pumps	15	0.690	3.499	4.316	0.008	0.188	0.188	568.299	0.062	0.005
Pumps	25	0.718	2.390	4.426	0.007	0.181	0.181	568.299	0.064	0.005
Pumps	50	0.523	3.974	3.630	0.007	0.114	0.114	568.299	0.047	0.005
Pumps	120	0.279	3.393	2.352	0.006	0.107	0.107	568.299	0.025	0.004
Pumps	175	0.213	2.973	1.486	0.006	0.065	0.065	568.299	0.019	0.004
Pumps	250	0.168	1.018	1.189	0.006	0.034	0.034	568.300	0.015	0.004
Pumps	500	0.164	0.994	1.098	0.005	0.033	0.033	568.299	0.014	0.004
Pumps	750	0.164	0.994	1.120	0.005	0.034	0.034	568.299	0.014	0.004
Pumps	9999	0.196	1.031	2.960	0.005	0.054	0.054	568.299	0.017	0.004
Rollers	15	0.621	4.207	3.824	0.005	0.193	0.177	525.957	0.170	0.005
Rollers	25	0.621	4.207	3.824	0.005	0.193	0.177	525.957	0.170	0.005
Rollers	50	0.621	4.207	3.824	0.005	0.193	0.177	525.957	0.170	0.005
Rollers	120	0.272	3.451	2.843	0.005	0.151	0.138	474.007	0.153	0.004
Rollers	175	0.141	2.914	1.324	0.005	0.061	0.056	472.012	0.153	0.004
Rollers	250	0.179	1.214	1.977	0.005	0.070	0.064	473.512	0.153	0.004
Rollers	500	0.210	1.961	2.216	0.005	0.090	0.083	477.900	0.155	0.004
Rough Terrain Forklifts	50	0.570	3.918	3.653	0.005	0.166	0.152	524.924	0.170	0.005
Rough Terrain Forklifts	120	0.145	3.245	1.914	0.005	0.058	0.054	473.063	0.153	0.004
Rough Terrain Forklifts	175	0.103	2.834	1.044	0.005	0.039	0.036	471.535	0.153	0.004
Rough Terrain Forklifts	250	0.119	0.995	1.480	0.005	0.035	0.032	472.853	0.153	0.004
Rough Terrain Forklifts	500	0.066	0.937	0.476	0.005	0.009	0.008	466.548	0.151	0.004
Rubber Tired Dozers	175	0.532	3.696	5.014	0.005	0.279	0.257	473.515	0.153	0.004
Rubber Tired Dozers	250	0.399	1.797	4.090	0.005	0.184	0.170	474.585	0.154	0.004
Rubber Tired Dozers	500	0.417	3.457	4.030	0.005	0.182	0.168	479.394	0.155	0.004
Rubber Tired Dozers	750	0.425	2.596	5.334	0.005	0.196	0.180	473.011	0.153	0.004
Rubber Tired Dozers	1000	0.433	1.796	4.532	0.005	0.123	0.123	568.299	0.039	0.004
Rubber Tired Loaders	25	1.009	5.987	4.468	0.005	0.286	0.263	524.230	0.170	0.005
Rubber Tired Loaders	50	1.009	5.987	4.468	0.005	0.286	0.263	524.230	0.170	0.005
Rubber Tired Loaders	120	0.397	3.832	3.339	0.005	0.221	0.203	466.808	0.151	0.004
Rubber Tired Loaders	175	0.246	3.288	1.884	0.005	0.101	0.092	470.357	0.152	0.004
Rubber Tired Loaders	250	0.197	1.161	1.806	0.005	0.060	0.056	469.788	0.152	0.004
Rubber Tired Loaders	500	0.209	1.352	1.702	0.005	0.063	0.058	468.513	0.152	0.004
Rubber Tired Loaders	750	0.226	1.333	1.881	0.005	0.072	0.066	464.866	0.150	0.004
Rubber Tired Loaders	1000	0.201	1.191	3.544	0.005	0.071	0.066	472.345	0.153	0.004
Scrapers	120	0.575	4.095	5.632	0.005	0.414	0.381	482.701	0.156	0.004
Scrapers	175	0.336	3.372	3.156	0.005	0.167	0.153	478.809	0.155	0.004
Scrapers	250	0.301	1.627	3.014	0.005	0.133	0.123	469.352	0.152	0.004
Scrapers	500	0.245	1.921	2.477	0.005	0.098	0.090	472.846	0.153	0.004
Scrapers	750	0.213	1.461	2.187	0.005	0.081	0.074	471.429	0.153	0.004
Signal Boards	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Signal Boards	50	0.559	4.247	3.662	0.007	0.114	0.114	568.299	0.050	0.005
Signal Boards	120	0.296	3.474	2.315	0.006	0.105	0.105	568.299	0.026	0.004

2024

2024		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Signal Boards	175	0.229	3.047	1.427	0.006	0.065	0.065	568.299	0.020	0.004
Signal Boards	250	0.224	1.259	1.370	0.007	0.041	0.041	686.695	0.020	0.004
Skid Steer Loaders	25	0.350	3.671	3.346	0.005	0.089	0.082	527.801	0.171	0.005
Skid Steer Loaders	50	0.350	3.671	3.346	0.005	0.089	0.082	527.801	0.171	0.005
Skid Steer Loaders	120	0.147	3.264	1.948	0.005	0.063	0.058	472.847	0.153	0.004
Surfacing Equipment	50	0.333	3.662	3.721	0.006	0.116	0.107	536.030	0.173	0.005
Surfacing Equipment	120	0.251	3.389	2.883	0.005	0.142	0.131	475.381	0.154	0.004
Surfacing Equipment	175	0.228	2.930	2.464	0.005	0.120	0.111	470.077	0.152	0.004
Surfacing Equipment	250	0.176	1.183	2.236	0.005	0.071	0.065	477.096	0.154	0.004
Surfacing Equipment	500	0.134	1.168	1.478	0.005	0.056	0.051	470.252	0.152	0.004
Surfacing Equipment	750	0.094	0.985	0.947	0.005	0.035	0.032	472.983	0.153	0.004
Sweepers/Scrubbers	15	0.746	5.003	4.079	0.005	0.239	0.219	525.328	0.170	0.005
Sweepers/Scrubbers	25	0.746	5.003	4.079	0.005	0.239	0.219	525.328	0.170	0.005
Sweepers/Scrubbers	50	0.746	5.003	4.079	0.005	0.239	0.219	525.328	0.170	0.005
Sweepers/Scrubbers	120	0.332	3.693	3.098	0.005	0.189	0.173	474.116	0.153	0.004
Sweepers/Scrubbers	175	0.266	3.234	2.253	0.005	0.107	0.099	473.122	0.153	0.004
Sweepers/Scrubbers	250	0.164	1.127	1.614	0.005	0.051	0.047	470.126	0.152	0.004
Tractors/Loaders/Backhoes	25	0.590	4.609	3.768	0.005	0.166	0.153	513.852	0.166	0.005
Tractors/Loaders/Backhoes	50	0.590	4.609	3.768	0.005	0.166	0.153	513.852	0.166	0.005
Tractors/Loaders/Backhoes	120	0.227	3.532	2.288	0.005	0.105	0.097	476.731	0.154	0.004
Tractors/Loaders/Backhoes	175	0.176	3.089	1.376	0.005	0.069	0.063	469.403	0.152	0.004
Tractors/Loaders/Backhoes	250	0.168	1.151	1.491	0.005	0.055	0.050	469.914	0.152	0.004
Tractors/Loaders/Backhoes	500	0.150	1.277	1.163	0.005	0.044	0.041	470.084	0.152	0.004
Tractors/Loaders/Backhoes	750	0.221	1.311	2.215	0.005	0.085	0.079	466.638	0.151	0.004
Trenchers	15	0.601	4.233	3.834	0.005	0.197	0.181	527.022	0.170	0.005
Trenchers	25	0.601	4.233	3.834	0.005	0.197	0.181	527.022	0.170	0.005
Trenchers	50	0.601	4.233	3.834	0.005	0.197	0.181	527.022	0.170	0.005
Trenchers	120	0.494	3.769	4.593	0.005	0.318	0.292	475.632	0.154	0.004
Trenchers	175	0.364	3.311	3.667	0.005	0.187	0.172	467.733	0.151	0.004
Trenchers	250	0.312	1.598	3.483	0.005	0.146	0.134	473.846	0.153	0.004
Trenchers	500	0.192	1.668	1.859	0.005	0.080	0.074	469.994	0.152	0.004
Trenchers	750	0.064	0.958	0.304	0.005	0.009	0.008	474.478	0.154	0.004
Welders	15	0.690	3.499	4.316	0.008	0.188	0.188	568.299	0.062	0.005
Welders	25	0.718	2.390	4.426	0.007	0.181	0.181	568.299	0.064	0.005
Welders	50	0.646	4.557	3.782	0.007	0.130	0.130	568.299	0.058	0.005
Welders	120	0.336	3.560	2.430	0.006	0.120	0.120	568.299	0.030	0.004
Welders	175	0.261	3.118	1.541	0.006	0.074	0.074	568.299	0.023	0.004
Welders	250	0.210	1.068	1.234	0.006	0.038	0.038	568.299	0.018	0.004
Welders	500	0.206	1.032	1.135	0.005	0.037	0.037	568.299	0.018	0.004
Water Trucks	175	0.224	3.325	1.494	0.005	0.070	0.064	470.264	0.152	0.004
Water Trucks	250	0.202	1.259	1.355	0.005	0.054	0.050	469.113	0.152	0.004
Water Trucks	500	0.185	1.206	1.235	0.005	0.045	0.041	475.220	0.154	0.004
Water Trucks	750	0.259	1.650	2.085	0.005	0.079	0.073	473.839	0.153	0.004
Water Trucks	1000	0.209	1.200	3.439	0.005	0.069	0.064	473.097	0.153	0.004

2025

2025		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Aerial Lifts	15	0.154	3.088	2.879	0.005	0.021	0.019	525.074	0.170	0.005
Aerial Lifts	25	0.154	3.088	2.879	0.005	0.021	0.019	525.074	0.170	0.005
Aerial Lifts	50	0.154	3.088	2.879	0.005	0.021	0.019	525.074	0.170	0.005
Aerial Lifts	120	0.099	3.167	1.511	0.005	0.026	0.024	472.114	0.153	0.004
Aerial Lifts	500	0.085	0.970	0.649	0.005	0.009	0.009	472.055	0.153	0.004
Aerial Lifts	750	0.153	0.989	0.974	0.005	0.028	0.028	568.299	0.013	0.004
Air Compressors	15	0.683	3.491	4.278	0.008	0.183	0.183	568.300	0.061	0.005
Air Compressors	25	0.709	2.376	4.407	0.007	0.177	0.177	568.299	0.064	0.005
Air Compressors	50	0.659	4.851	3.755	0.007	0.116	0.116	568.299	0.059	0.005
Air Compressors	120	0.345	3.653	2.313	0.006	0.104	0.104	568.299	0.031	0.004
Air Compressors	175	0.269	3.205	1.383	0.006	0.065	0.065	568.299	0.024	0.004
Air Compressors	250	0.220	1.094	1.086	0.006	0.033	0.033	568.299	0.019	0.004
Air Compressors	500	0.217	1.051	1.001	0.005	0.032	0.032	568.299	0.019	0.004
Air Compressors	750	0.217	1.051	1.021	0.005	0.032	0.032	568.299	0.019	0.004
Air Compressors	1000	0.231	1.079	2.954	0.005	0.055	0.055	568.299	0.020	0.004
Bore/Drill Rigs	15	0.591	4.273	3.978	0.006	0.193	0.178	532.821	0.172	0.005
Bore/Drill Rigs	25	0.591	4.273	3.978	0.006	0.193	0.178	532.821	0.172	0.005
Bore/Drill Rigs	50	0.591	4.273	3.978	0.006	0.193	0.178	532.821	0.172	0.005
Bore/Drill Rigs	120	0.155	3.218	1.964	0.005	0.067	0.062	459.829	0.149	0.004
Bore/Drill Rigs	175	0.114	2.974	0.888	0.005	0.039	0.036	478.266	0.155	0.004
Bore/Drill Rigs	250	0.107	1.045	0.957	0.005	0.031	0.029	470.654	0.152	0.004
Bore/Drill Rigs	500	0.102	0.997	0.823	0.005	0.028	0.026	467.289	0.151	0.004
Bore/Drill Rigs	750	0.085	0.983	0.596	0.005	0.023	0.021	481.250	0.156	0.004
Bore/Drill Rigs	1000	0.062	0.953	2.289	0.005	0.019	0.017	471.917	0.153	0.004
Cement and Mortar Mixers	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Cement and Mortar Mixers	25	0.689	2.344	4.357	0.007	0.168	0.168	568.299	0.062	0.005
Concrete/Industrial Saws	25	0.685	2.339	4.332	0.007	0.161	0.161	568.299	0.061	0.005
Concrete/Industrial Saws	50	0.525	4.297	3.592	0.007	0.099	0.099	568.299	0.047	0.005
Concrete/Industrial Saws	120	0.283	3.495	2.176	0.006	0.089	0.089	568.300	0.025	0.004
Concrete/Industrial Saws	175	0.220	3.073	1.249	0.006	0.056	0.056	568.300	0.019	0.004
Cranes	50	1.811	7.072	5.636	0.005	0.543	0.499	517.872	0.168	0.005
Cranes	120	0.463	3.831	4.135	0.005	0.260	0.240	469.533	0.152	0.004
Cranes	175	0.334	3.335	3.160	0.005	0.166	0.153	474.748	0.154	0.004
Cranes	250	0.265	1.470	2.681	0.005	0.114	0.105	472.980	0.153	0.004
Cranes	500	0.218	1.834	2.154	0.005	0.088	0.081	471.967	0.153	0.004
Cranes	750	0.172	1.274	1.638	0.005	0.068	0.062	470.276	0.152	0.004
Cranes	9999	0.229	1.038	2.422	0.005	0.065	0.060	472.055	0.153	0.004
Crawler Tractors	50	1.744	6.686	4.936	0.005	0.456	0.420	516.128	0.167	0.005
Crawler Tractors	120	0.454	3.788	3.961	0.005	0.285	0.262	476.134	0.154	0.004
Crawler Tractors	175	0.298	3.209	2.688	0.005	0.150	0.138	471.592	0.153	0.004
Crawler Tractors	250	0.232	1.308	2.462	0.005	0.096	0.088	471.622	0.153	0.004
Crawler Tractors	500	0.208	1.717	1.920	0.005	0.081	0.074	474.007	0.153	0.004
Crawler Tractors	750	0.167	1.122	1.545	0.005	0.057	0.052	472.408	0.153	0.004
Crawler Tractors	1000	0.260	1.593	4.598	0.005	0.112	0.103	475.490	0.154	0.004
Crushing/Proc. Equipment	50	0.656	4.982	3.742	0.007	0.107	0.107	568.299	0.059	0.005

2025

2025		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Crushing/Proc. Equipment	120	0.345	3.694	2.248	0.006	0.095	0.095	568.299	0.031	0.004
Crushing/Proc. Equipment	175	0.270	3.246	1.301	0.006	0.060	0.060	568.299	0.024	0.004
Crushing/Proc. Equipment	250	0.224	1.108	1.012	0.006	0.031	0.031	568.299	0.020	0.004
Crushing/Proc. Equipment	500	0.221	1.061	0.937	0.005	0.030	0.030	568.299	0.020	0.004
Crushing/Proc. Equipment	750	0.222	1.061	0.955	0.005	0.030	0.030	568.299	0.020	0.004
Crushing/Proc. Equipment	9999	0.261	1.087	2.910	0.005	0.053	0.053	568.299	0.023	0.004
Dumpers/Tenders	25	0.685	2.339	4.332	0.007	0.161	0.161	568.299	0.061	0.005
Excavators	25	0.403	4.219	3.453	0.005	0.107	0.099	525.777	0.170	0.005
Excavators	50	0.403	4.219	3.453	0.005	0.107	0.099	525.777	0.170	0.005
Excavators	120	0.201	3.439	2.082	0.005	0.085	0.078	466.738	0.151	0.004
Excavators	175	0.158	3.078	1.154	0.005	0.057	0.052	472.496	0.153	0.004
Excavators	250	0.131	1.081	0.962	0.005	0.032	0.029	472.560	0.153	0.004
Excavators	500	0.115	1.051	0.726	0.005	0.026	0.024	470.292	0.152	0.004
Excavators	750	0.139	1.135	1.026	0.005	0.038	0.035	468.558	0.152	0.004
Forklifts	50	0.636	5.029	3.932	0.005	0.178	0.164	525.483	0.170	0.005
Forklifts	120	0.277	3.611	2.607	0.005	0.140	0.128	471.529	0.153	0.004
Forklifts	175	0.209	3.170	1.653	0.005	0.084	0.078	472.106	0.153	0.004
Forklifts	250	0.191	1.214	1.466	0.005	0.056	0.052	473.326	0.153	0.004
Forklifts	500	0.215	1.222	1.658	0.005	0.062	0.057	473.615	0.153	0.004
Generator Sets	15	0.607	3.491	4.269	0.008	0.178	0.178	568.299	0.054	0.005
Generator Sets	25	0.694	2.376	4.407	0.007	0.175	0.175	568.299	0.062	0.005
Generator Sets	50	0.440	3.758	3.481	0.007	0.093	0.093	568.300	0.039	0.005
Generator Sets	120	0.243	3.338	2.185	0.006	0.087	0.087	568.299	0.021	0.004
Generator Sets	175	0.184	2.930	1.297	0.006	0.053	0.053	568.299	0.016	0.004
Generator Sets	250	0.147	1.000	1.020	0.006	0.028	0.028	568.299	0.013	0.004
Generator Sets	500	0.144	0.981	0.945	0.005	0.027	0.027	568.300	0.013	0.004
Generator Sets	750	0.145	0.981	0.964	0.005	0.027	0.027	568.299	0.013	0.004
Generator Sets	9999	0.173	1.008	2.812	0.005	0.047	0.047	568.299	0.015	0.004
Graders	50	1.864	7.125	5.043	0.005	0.522	0.480	493.532	0.160	0.005
Graders	120	0.638	4.149	5.074	0.005	0.371	0.342	468.316	0.152	0.004
Graders	175	0.329	3.418	2.774	0.005	0.152	0.140	478.508	0.155	0.004
Graders	250	0.230	1.179	2.556	0.005	0.082	0.076	473.470	0.153	0.004
Graders	500	0.280	1.315	2.265	0.005	0.088	0.081	470.753	0.152	0.004
Graders	750	0.253	1.141	1.125	0.005	0.041	0.041	568.300	0.022	0.004
Off-Highway Tractors	120	0.276	3.669	2.707	0.005	0.144	0.132	476.921	0.154	0.004
Off-Highway Tractors	175	0.175	3.142	1.349	0.005	0.065	0.060	473.302	0.153	0.004
Off-Highway Tractors	250	0.155	1.130	1.116	0.005	0.040	0.037	470.861	0.152	0.004
Off-Highway Tractors	750	0.167	1.135	1.118	0.005	0.045	0.041	471.917	0.153	0.004
Off-Highway Tractors	1000	0.198	1.077	2.482	0.005	0.070	0.064	472.055	0.153	0.004
Off-Highway Trucks	175	0.214	3.328	1.335	0.005	0.065	0.060	470.004	0.152	0.004
Off-Highway Trucks	250	0.185	1.213	1.129	0.005	0.043	0.040	469.126	0.152	0.004
Off-Highway Trucks	500	0.177	1.182	1.064	0.005	0.038	0.035	474.970	0.154	0.004
Off-Highway Trucks	750	0.235	1.578	1.751	0.005	0.066	0.061	476.314	0.154	0.004
Off-Highway Trucks	1000	0.187	1.146	3.135	0.005	0.057	0.052	473.369	0.153	0.004
Other Construction Equipment	15	0.757	4.874	4.306	0.006	0.268	0.246	528.954	0.171	0.005
Other Construction Equipment	25	0.757	4.874	4.306	0.006	0.268	0.246	528.954	0.171	0.005

2025

2025		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Other Construction Equipment	50	0.757	4.874	4.306	0.006	0.268	0.246	528.954	0.171	0.005
Other Construction Equipment	120	0.341	3.584	3.252	0.005	0.203	0.187	472.748	0.153	0.004
Other Construction Equipment	175	0.235	3.136	2.167	0.005	0.112	0.103	469.843	0.152	0.004
Other Construction Equipment	500	0.168	1.358	1.552	0.005	0.059	0.055	476.296	0.154	0.004
Other General Industrial Equipment	15	0.492	4.680	3.717	0.005	0.136	0.125	526.176	0.170	0.005
Other General Industrial Equipment	25	0.492	4.680	3.717	0.005	0.136	0.125	526.176	0.170	0.005
Other General Industrial Equipment	50	0.492	4.680	3.717	0.005	0.136	0.125	526.176	0.170	0.005
Other General Industrial Equipment	120	0.258	3.612	2.439	0.005	0.118	0.109	470.000	0.152	0.004
Other General Industrial Equipment	175	0.189	3.204	1.364	0.005	0.070	0.065	471.850	0.153	0.004
Other General Industrial Equipment	250	0.155	1.132	1.028	0.005	0.036	0.033	473.223	0.153	0.004
Other General Industrial Equipment	500	0.152	1.109	1.053	0.005	0.035	0.033	472.929	0.153	0.004
Other General Industrial Equipment	750	0.117	1.115	0.629	0.005	0.023	0.021	473.464	0.153	0.004
Other General Industrial Equipment	1000	0.203	1.067	3.985	0.005	0.081	0.074	472.055	0.153	0.004
Other Material Handling Equipment	50	0.744	5.248	4.233	0.005	0.239	0.219	523.709	0.169	0.005
Other Material Handling Equipment	120	0.203	3.497	2.055	0.005	0.081	0.074	473.588	0.153	0.004
Other Material Handling Equipment	175	0.189	3.168	1.396	0.005	0.072	0.067	472.219	0.153	0.004
Other Material Handling Equipment	250	0.200	1.197	1.774	0.005	0.060	0.055	471.482	0.153	0.004
Other Material Handling Equipment	500	0.204	1.260	1.601	0.005	0.067	0.061	470.297	0.152	0.004
Other Material Handling Equipment	9999	0.065	0.959	2.298	0.005	0.019	0.017	472.055	0.153	0.004
Pavers	25	0.918	4.945	4.131	0.005	0.265	0.243	526.853	0.170	0.005
Pavers	50	0.918	4.945	4.131	0.005	0.265	0.243	526.853	0.170	0.005
Pavers	120	0.314	3.493	3.068	0.005	0.191	0.175	469.899	0.152	0.004
Pavers	175	0.181	3.007	1.644	0.005	0.077	0.071	472.485	0.153	0.004
Pavers	250	0.107	1.004	1.035	0.005	0.034	0.031	473.483	0.153	0.004
Pavers	500	0.115	0.969	1.134	0.005	0.039	0.036	465.882	0.151	0.004
Paving Equipment	25	0.476	4.203	3.627	0.005	0.142	0.130	520.998	0.169	0.005
Paving Equipment	50	0.476	4.203	3.627	0.005	0.142	0.130	520.998	0.169	0.005
Paving Equipment	120	0.242	3.483	2.496	0.005	0.118	0.108	473.424	0.153	0.004
Paving Equipment	175	0.175	3.038	1.509	0.005	0.075	0.069	470.484	0.152	0.004
Paving Equipment	250	0.133	1.117	1.110	0.005	0.043	0.040	472.234	0.153	0.004
Plate Compactors	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005

2025

2025		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Pressure Washers	15	0.607	3.491	4.269	0.008	0.178	0.178	568.299	0.054	0.005
Pressure Washers	25	0.694	2.376	4.407	0.007	0.175	0.175	568.299	0.062	0.005
Pressure Washers	50	0.306	3.210	3.344	0.007	0.075	0.075	568.299	0.027	0.005
Pressure Washers	120	0.189	3.186	2.100	0.006	0.072	0.072	568.299	0.017	0.004
Pressure Washers	175	0.178	2.907	1.310	0.006	0.053	0.053	568.299	0.016	0.004
Pressure Washers	250	0.098	0.986	0.265	0.006	0.009	0.009	568.299	0.008	0.004
Pumps	15	0.683	3.491	4.278	0.008	0.183	0.183	568.299	0.061	0.005
Pumps	25	0.709	2.376	4.407	0.007	0.177	0.177	568.299	0.064	0.005
Pumps	50	0.485	3.943	3.528	0.007	0.099	0.099	568.299	0.043	0.005
Pumps	120	0.261	3.389	2.213	0.006	0.092	0.092	568.299	0.023	0.004
Pumps	175	0.199	2.974	1.318	0.006	0.056	0.056	568.300	0.018	0.004
Pumps	250	0.159	1.016	1.038	0.006	0.029	0.029	568.299	0.014	0.004
Pumps	500	0.156	0.992	0.958	0.005	0.028	0.028	568.300	0.014	0.004
Pumps	750	0.157	0.992	0.977	0.005	0.029	0.029	568.300	0.014	0.004
Pumps	9999	0.186	1.020	2.840	0.005	0.049	0.049	568.299	0.016	0.004
Rollers	15	0.569	4.125	3.689	0.005	0.167	0.154	526.141	0.170	0.005
Rollers	25	0.569	4.125	3.689	0.005	0.167	0.154	526.141	0.170	0.005
Rollers	50	0.569	4.125	3.689	0.005	0.167	0.154	526.141	0.170	0.005
Rollers	120	0.255	3.444	2.691	0.005	0.135	0.125	473.851	0.153	0.004
Rollers	175	0.127	2.909	1.101	0.005	0.049	0.046	471.970	0.153	0.004
Rollers	250	0.173	1.215	1.783	0.005	0.066	0.060	473.681	0.153	0.004
Rollers	500	0.212	1.968	2.200	0.005	0.091	0.083	477.573	0.155	0.004
Rough Terrain Forklifts	50	0.456	3.740	3.477	0.005	0.128	0.118	525.027	0.170	0.005
Rough Terrain Forklifts	120	0.137	3.240	1.821	0.005	0.051	0.047	473.037	0.153	0.004
Rough Terrain Forklifts	175	0.087	2.821	0.786	0.005	0.030	0.028	471.475	0.153	0.004
Rough Terrain Forklifts	250	0.123	1.001	1.489	0.005	0.035	0.033	472.927	0.153	0.004
Rough Terrain Forklifts	500	0.069	0.942	0.477	0.005	0.009	0.008	466.541	0.151	0.004
Rubber Tired Dozers	175	0.461	3.612	4.229	0.005	0.231	0.212	474.103	0.153	0.004
Rubber Tired Dozers	250	0.372	1.720	3.805	0.005	0.167	0.153	474.573	0.154	0.004
Rubber Tired Dozers	500	0.367	2.959	3.370	0.005	0.151	0.139	479.092	0.155	0.004
Rubber Tired Dozers	750	0.428	2.601	5.333	0.005	0.196	0.181	472.998	0.153	0.004
Rubber Tired Dozers	1000	0.414	1.725	4.365	0.005	0.115	0.115	568.299	0.037	0.004
Rubber Tired Loaders	25	0.960	5.941	4.348	0.005	0.259	0.238	523.908	0.169	0.005
Rubber Tired Loaders	50	0.960	5.941	4.348	0.005	0.259	0.238	523.908	0.169	0.005
Rubber Tired Loaders	120	0.352	3.791	2.970	0.005	0.179	0.165	466.898	0.151	0.004
Rubber Tired Loaders	175	0.224	3.281	1.590	0.005	0.084	0.077	470.459	0.152	0.004
Rubber Tired Loaders	250	0.177	1.142	1.442	0.005	0.048	0.045	469.871	0.152	0.004
Rubber Tired Loaders	500	0.193	1.276	1.433	0.005	0.053	0.048	469.143	0.152	0.004
Rubber Tired Loaders	750	0.212	1.333	1.654	0.005	0.064	0.059	465.052	0.150	0.004
Rubber Tired Loaders	1000	0.166	1.122	3.089	0.005	0.052	0.048	472.456	0.153	0.004
Scrapers	120	0.566	4.094	5.503	0.005	0.405	0.372	482.363	0.156	0.004
Scrapers	175	0.290	3.321	2.631	0.005	0.137	0.126	478.948	0.155	0.004
Scrapers	250	0.291	1.602	2.803	0.005	0.125	0.115	469.446	0.152	0.004
Scrapers	500	0.216	1.732	2.051	0.005	0.081	0.074	472.539	0.153	0.004
Scrapers	750	0.184	1.338	1.713	0.005	0.064	0.059	472.115	0.153	0.004
Signal Boards	15	0.661	3.469	4.142	0.008	0.161	0.161	568.299	0.059	0.005
Signal Boards	50	0.522	4.217	3.561	0.007	0.098	0.098	568.299	0.047	0.005
Signal Boards	120	0.278	3.470	2.179	0.006	0.089	0.089	568.299	0.025	0.004

2025

2025		g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr	g/hp/hr
Equipment	**MaxHP**	ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	N2O
Signal Boards	175	0.215	3.049	1.262	0.006	0.055	0.055	568.299	0.019	0.004
Signal Boards	250	0.213	1.257	1.192	0.007	0.035	0.035	686.695	0.019	0.004
Skid Steer Loaders	25	0.341	3.660	3.309	0.006	0.084	0.077	527.861	0.171	0.005
Skid Steer Loaders	50	0.341	3.660	3.309	0.006	0.084	0.077	527.861	0.171	0.005
Skid Steer Loaders	120	0.140	3.252	1.867	0.005	0.057	0.052	472.630	0.153	0.004
Surfacing Equipment	50	0.235	3.537	3.576	0.006	0.082	0.075	536.140	0.173	0.005
Surfacing Equipment	120	0.232	3.385	2.659	0.005	0.124	0.114	476.766	0.154	0.004
Surfacing Equipment	175	0.187	2.926	1.999	0.005	0.094	0.087	471.040	0.152	0.004
Surfacing Equipment	250	0.148	1.143	1.747	0.005	0.055	0.051	477.110	0.154	0.004
Surfacing Equipment	500	0.128	1.169	1.327	0.005	0.051	0.047	470.283	0.152	0.004
Surfacing Equipment	750	0.085	0.978	0.768	0.005	0.027	0.025	470.551	0.152	0.004
Sweepers/Scrubbers	15	0.622	4.768	3.856	0.005	0.191	0.176	525.328	0.170	0.005
Sweepers/Scrubbers	25	0.622	4.768	3.856	0.005	0.191	0.176	525.328	0.170	0.005
Sweepers/Scrubbers	50	0.622	4.768	3.856	0.005	0.191	0.176	525.328	0.170	0.005
Sweepers/Scrubbers	120	0.303	3.664	2.817	0.005	0.160	0.147	474.116	0.153	0.004
Sweepers/Scrubbers	175	0.213	3.201	1.638	0.005	0.072	0.066	473.122	0.153	0.004
Sweepers/Scrubbers	250	0.170	1.140	1.616	0.005	0.051	0.047	470.126	0.152	0.004
Tractors/Loaders/Backhoes	25	0.550	4.560	3.662	0.005	0.145	0.133	513.803	0.166	0.005
Tractors/Loaders/Backhoes	50	0.550	4.560	3.662	0.005	0.145	0.133	513.803	0.166	0.005
Tractors/Loaders/Backhoes	120	0.209	3.522	2.109	0.005	0.086	0.079	477.188	0.154	0.004
Tractors/Loaders/Backhoes	175	0.162	3.083	1.180	0.005	0.059	0.054	469.329	0.152	0.004
Tractors/Loaders/Backhoes	250	0.154	1.146	1.235	0.005	0.047	0.044	470.598	0.152	0.004
Tractors/Loaders/Backhoes	500	0.144	1.234	1.046	0.005	0.039	0.036	470.910	0.152	0.004
Tractors/Loaders/Backhoes	750	0.187	1.261	1.649	0.005	0.067	0.062	466.452	0.151	0.004
Trenchers	15	0.542	4.120	3.657	0.005	0.163	0.150	527.160	0.171	0.005
Trenchers	25	0.542	4.120	3.657	0.005	0.163	0.150	527.160	0.171	0.005
Trenchers	50	0.542	4.120	3.657	0.005	0.163	0.150	527.160	0.171	0.005
Trenchers	120	0.457	3.734	4.279	0.005	0.285	0.262	475.901	0.154	0.004
Trenchers	175	0.358	3.309	3.549	0.005	0.179	0.165	467.732	0.151	0.004
Trenchers	250	0.307	1.601	3.315	0.005	0.144	0.133	473.917	0.153	0.004
Trenchers	500	0.191	1.676	1.826	0.005	0.079	0.072	470.439	0.152	0.004
Trenchers	750	0.067	0.962	0.305	0.005	0.009	0.009	474.486	0.154	0.004
Welders	15	0.683	3.491	4.278	0.008	0.183	0.183	568.300	0.061	0.005
Welders	25	0.709	2.376	4.407	0.007	0.177	0.177	568.299	0.064	0.005
Welders	50	0.602	4.524	3.676	0.007	0.112	0.112	568.299	0.054	0.005
Welders	120	0.316	3.557	2.283	0.006	0.102	0.102	568.299	0.028	0.004
Welders	175	0.245	3.121	1.365	0.006	0.063	0.063	568.299	0.022	0.004
Welders	250	0.199	1.065	1.075	0.006	0.032	0.032	568.299	0.018	0.004
Welders	500	0.196	1.029	0.990	0.005	0.031	0.031	568.299	0.017	0.004
Water Trucks	175	0.214	3.328	1.335	0.005	0.065	0.060	470.004	0.152	0.004
Water Trucks	250	0.185	1.213	1.129	0.005	0.043	0.040	469.126	0.152	0.004
Water Trucks	500	0.177	1.182	1.064	0.005	0.038	0.035	474.970	0.154	0.004
Water Trucks	750	0.235	1.578	1.751	0.005	0.066	0.061	476.314	0.154	0.004
Water Trucks	1000	0.187	1.146	3.135	0.005	0.057	0.052	473.369	0.153	0.004

Basic Conversions	Factor	Value	Units	Source
	1 pound equals	453.592	grams	
	1 MT equals	1.102	tons	
	Total # of days in a week	7	days	
	1 kg equals	1,000	grams	
	1 Year equals	365	days	
	1 ton equals	2,000	pounds	
	Global Warming Potential of CH4	25	N/A	http://www.arb.ca.gov/cc/inve
	Global Warming Potential of N2O	298	N/A	http://www.arb.ca.gov/cc/inve