**Powertech Dewey-Burdock Emissions Inventory**

Source Apportionment

For calculating the emissions inventory, sources of fugitive dust include mobile equipment and wind erosion on disturbed acreage. Sources of combustion emissions include stationary sources and mobile equipment. For modeling purposes, emissions from the project are characterized as either point, area (polygon) or line (multiple line segment) sources. The spatial orientation of each point, area and line source is expressed in UTM coordinates. Stationary sources correspond one-for-one with point sources. Emissions from mobile equipment and wind erosion, however, do not necessarily correspond one-for-one with area and line sources. The apportionment process therefore distributes these emissions over the appropriate area and line sources in proportion to the relative levels of activity associated with those sources. Table B-1 shows the apportionment of projected, year 7 fugitive dust emissions to the various area and line sources.

**Table B-1: Fugitive Emissions Apportionment**

| Fugitive Area/Line Source | Type | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|
| Disturbed | Area | 256.76 | 26.82 |
| AccessRdSat | Line | 17.41 | 1.74 |
| AccessRdCPP | Line | 34.92 | 3.49 |
| NewWells | Area | 112.06 | 11.21 |
| FacilitiesCPP | Area | 8.68 | 0.87 |
| FacilitiesSat | Area | 4.34 | 0.43 |
| HaulRd | Line | 10.07 | 1.01 |
| OperWells | Area | 32.21 | 3.22 |
| DecomWells | Area | 69.24 | 6.92 |
| LandAPDewey | Area | 5.35 | 0.80 |
| LandAPBurdock | Area | 4.57 | 0.68 |
| AccessRdPublic | Line | 181.31 | 18.13 |
| | | | |
| **Year 7 Totals (tpy)** | | **736.91** | **75.33** |

Off-site fugitive emissions caused by the project were assigned at 100% to the line source, AccessRdPublic.

The equipment activity assignments leading to both fugitive and tailpipe emissions apportionment for year 7 are shown in Table B-2. Equipment with multiple entries in Table B-2 contributes emissions to multiple area and/or line sources (one entry per modeled source). Table B-3 combines the fugitive and tailpipe emissions by modeled source, with Year 7 totals shown at the bottom of the table.

**Table B-2: Tailpipe Emissions Apportionment**

| | | | Pollutant | | | | |
|---|---|---|---|---|---|---|---|
| Equipment Type | Source Name | Portion | $PM_{10}$ | $PM_{2.5}$ | $NO_x$ | $SO_2$ | CO |
| Scraper | DecomWells | 100.00% | 0.08 | 0.08 | 1.59 | 0.49 | 1.38 |
| Bulldozer | DecomWells | 100.00% | 0.02 | 0.02 | 0.47 | 0.15 | 0.41 |
| Compactor | DecomWells | 100.00% | 0.02 | 0.02 | 0.36 | 0.11 | 0.31 |
| Motor Grader | DecomWells | 42.38% | 0.02 | 0.02 | 0.34 | 0.11 | 0.29 |
| Motor Grader | NewWells | 37.29% | 0.01 | 0.01 | 0.30 | 0.09 | 0.26 |
| Motor Grader | OperWells | 20.33% | 0.01 | 0.01 | 0.16 | 0.05 | 0.14 |
| Water Truck (1,500 gal) | Disturbed | 70.00% | 0.23 | 0.22 | 4.64 | 1.44 | 4.02 |
| Water Truck (1,500 gal) | AccessRdCPP | 20.00% | 0.07 | 0.06 | 1.33 | 0.41 | 1.15 |
| Water Truck (1,500 gal) | AccessRdSat | 10.00% | 0.03 | 0.03 | 0.66 | 0.21 | 0.57 |
| Fueling Truck | Disturbed | 100.00% | 0.01 | 0.01 | 0.22 | 0.07 | 0.19 |
| Heavy Duty Diesel Truck | Disturbed | 4.60% | 0.00 | 0.00 | 0.05 | 0.01 | 0.04 |
| Heavy Duty Diesel Truck | AccessRdSat | 1.53% | 0.00 | 0.00 | 0.02 | 0.00 | 0.01 |
| Heavy Duty Diesel Truck | AccessRdCPP | 3.07% | 0.00 | 0.00 | 0.03 | 0.01 | 0.03 |
| Heavy Duty Diesel Truck | AccessRdPublic | 90.80% | 0.05 | 0.05 | 0.95 | 0.29 | 0.82 |
| Logging Truck | NewWells | 100.00% | 0.14 | 0.14 | 2.79 | 0.87 | 2.42 |
| Electrical Pole Truck | NewWells | 100.00% | 0.05 | 0.05 | 0.93 | 0.29 | 0.81 |
| Truck Mounted Drill Rig, Tier 1 | NewWells | 100.00% | 2.65 | 2.57 | 45.22 | 6.13 | 56.03 |
| Deep Well Drill Rig, Tier 1 | FacilitiesCPP | 100.00% | 0.01 | 0.01 | 0.14 | 0.02 | 0.18 |
| Trackhoe | NewWells | 100.00% | 0.08 | 0.08 | 1.57 | 0.49 | 1.36 |
| Backhoe | NewWells | 100.00% | 0.04 | 0.04 | 0.80 | 0.25 | 0.69 |
| Loader | FacilitiesCPP | 66.67% | 0.01 | 0.01 | 0.20 | 0.06 | 0.17 |
| Loader | FacilitiesSat | 33.33% | 0.01 | 0.00 | 0.10 | 0.03 | 0.09 |
| Tractor | DecomWells | 100.00% | 0.03 | 0.03 | 2.66 | 0.18 | 0.49 |
| Resin-hauling Semi Truck | HaulRd | 100.00% | 0.03 | 0.03 | 0.59 | 0.18 | 0.51 |
| Pump Pulling Truck | OperWells | 50.00% | 0.09 | 0.09 | 1.80 | 0.56 | 1.56 |
| Pump Pulling Truck | DecomWells | 50.00% | 0.09 | 0.09 | 1.80 | 0.56 | 1.56 |
| Product Transport Truck | AccessRdCPP | 6.48% | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 |
| Product Transport Truck | AccessRdPublic | 93.52% | 0.01 | 0.01 | 0.11 | 0.03 | 0.10 |
| Crane | FacilitiesCPP | 66.67% | 0.07 | 0.06 | 0.92 | 0.06 | 0.20 |
| Crane | FacilitiesSat | 33.33% | 0.03 | 0.03 | 0.46 | 0.03 | 0.10 |
| Forklift | FacilitiesCPP | 66.67% | 0.21 | 0.20 | 2.97 | 0.20 | 0.64 |
| Forklift | FacilitiesSat | 33.33% | 0.11 | 0.10 | 1.48 | 0.10 | 0.32 |
| Manlift | FacilitiesCPP | 66.67% | 0.03 | 0.03 | 0.38 | 0.03 | 0.08 |
| Manlift | FacilitiesSat | 33.33% | 0.01 | 0.01 | 0.19 | 0.01 | 0.04 |
| Cementer | NewWells | 75.00% | 0.01 | 0.01 | 0.25 | 0.00 | 0.14 |
| Cementer | DecomWells | 25.00% | 0.00 | 0.00 | 0.08 | 0.00 | 0.05 |
| Welding Equipment | NoneYr7 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HDPE Fusion Equipment | NoneYr7 | 0.00% | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Light Duty Pickup | Disturbed | 100.00% | 0.77 | 0.74 | 11.71 | 0.63 | 7.41 |
| Light Duty Passenger Vehicle | AccessRdCPP | 4.47% | 0.01 | 0.01 | 0.08 | 0.00 | 0.05 |
| Light Duty Passenger Vehicle | AccessRdSat | 2.23% | 0.00 | 0.00 | 0.04 | 0.00 | 0.03 |
| Light Duty Passenger Vehicle | AccessRdPublic | 93.30% | 0.11 | 0.11 | 1.72 | 0.09 | 1.09 |
| | **Year 7 Totals** | | **5.14** | **4.99** | **90.13** | **14.25** | **85.75** |

**Table B-3: Total Fugitive and Tailpipe Emissions Apportionment**

| Area/Line Source Totals | $PM_{10}$ | $PM_{2.5}$ | $NO_x$ | $SO_2$ | CO |
|---|---|---|---|---|---|
| Disturbed | 257.78 | 27.81 | 16.62 | 2.15 | 11.67 |
| AccessRdSat | 17.44 | 1.78 | 0.72 | 0.21 | 0.61 |
| AccessRdCPP | 34.99 | 3.56 | 1.45 | 0.43 | 1.24 |
| NewWells | 115.04 | 14.10 | 51.85 | 8.11 | 61.71 |
| FacilitiesCPP | 9.00 | 1.18 | 4.62 | 0.36 | 1.27 |
| FacilitiesSat | 4.50 | 0.59 | 2.24 | 0.17 | 0.55 |
| HaulRd | 10.10 | 1.04 | 0.59 | 0.18 | 0.51 |
| OperWells | 32.30 | 3.32 | 1.96 | 0.61 | 1.70 |
| DecomWells | 69.50 | 7.18 | 7.30 | 1.59 | 4.49 |
| LandAPDewey | 5.35 | 0.80 | | | |
| LandAPBurdock | 4.57 | 0.68 | | | |
| AccessRdPublic | 181.48 | 18.29 | 2.78 | 0.42 | 2.00 |
| | | | | | |
| **Year 7 Totals (tpy)** | **742.05** | **80.32** | **90.13** | **14.25** | **85.75** |

Source Timing

In order to match the modeled, short-term averaging periods, it is necessary to account for the variability in emission rates from combustion and fugitive emissions. For example, most of the activities planned for the Dewey-Burdock project will occur during the day shift, certain activities will only be carried out during early summer, commuter traffic to and from the site will occur predominantly in the two hours before 8:00 am and the two hours after 4:00 pm, and so forth. To convert equipment duty cycles to variable emission rates, each equipment item was assigned to specific months of the year, days of the week, and hours of the day. Some equipment items are projected to operate less than 10 hours per day, although the reduced hours are still distributed over the entire day. In cases such as this, where actual times during the day are either random or ambiguous, the variable emission rates are calculated on the basis of a 10-hour work day. Table B-4 presents the active months, days and hours expected for each equipment type and associated modeled source for year 7. This information formed the basis of the AERMOD variable rate emission factors for each modeled source. Table B-5 presents similar information, simplified in order to accommodate the variable rate factor feature in CALPUFF.

Each of the source types in Table B-3 contains one or more modeled area sources, where each modeled area source constitutes a single contiguous area (such as a well field). This requires a double allocation of equipment emissions. The first allocation is to the source type, based on the emissions apportionment shown in Table B-3. The second allocation is from source type to individual modeled sources, based strictly on area proportions.

The logic in Tables B-4 and B-5 was used to compute variable emission contributions from each equipment class to each source type, for each pollutant, month (or season), day-of-week, and hour-of-day. These contributions were then totaled for each source type and apportioned to the modeled sources according to relative areas. The apportioned emissions were summed for each modeled source and each time slice (month, day, hour). Each resulting total was converted to an emission rate applicable to its respective time slice, then divided by the annual average emission rate to get a variable rate factor for that time slice. These factors ranged from 0 (e.g., equipment not operating during the night) to 7 or more (emissions concentrated in time, such as commuter traffic). The rate factors were applied to each modeled source and pollutant, then emissions were summed to verify that the totals matched the emissions inventory. Following is a mathematical description of the algorithm.

**Algorithm for Determining Variable Emission Rates: Dewey-Burdock Area Sources**

Given

$E_i$ = Annual emissions for emitter "i", where 1 ≤ i ≤ total number of emitters

$\alpha_{ij}$ = Fraction of emissions from emitter "i" apportioned to source type "j", where 1 ≤ j ≤ total number of source types

$A_j$ = Combined area ($ft^2$) of source type "j"

$S_k$ = Area ($ft^2$) of individual modeled area source "k", where 1 ≤ k ≤ total number of modeled area sources

$R_k$ = Annual average emission rate ($lb/hr/ft^2$) for modeled source "k"

$\rho_{ijuvw}$ = 1 if emitter "i" is active in source type "j" during the time block defined by month "u", hour of day "v", and day of week (DOW) type "w", where 1 ≤ u ≤ 12, 1 ≤ v ≤ 24, and w = 1 for weekdays and w = 2 for weekends (Saturdays and Sundays); $\rho_{ijuvw}$ = 0 otherwise

$\tau_{uvw}$ = number of hours in time block u,v,w = 365/12 X 1 X 5/7 if w = 1, and 365/12 X 1 X 2/7 if w = 2, (i.e., average week days per month are 21.72619 and average weekend days per month are 8.690476)

Find

$\sigma_{kuvw}$ = sum of all hourly emission rate contributions to modeled area "k" during the time block defined by month "u", hour of day "v", and day of week (DOW) type "w"

$f_{kuvw}$ = dimensionless factor applied to average emission rate $R_k$ for modeled area "k" and time block u,v,w in order to yield actual emission rate for that same modeled area and time block (this becomes the input value for the AERMOD variable emission rate for each source, month, hour, and DOW type)

Analysis

Total emission rate contributions to time block u,v,w from emitter "i" in source type "j" are calculated as the sum of the annual emissions from each emitter "i" and source type "j" divided by the product of the modeled source area $S_k$ and the total hours that emitter "i" is active in modeled area "k". Note that since the modeled areas are merely spatial subdivisions of a given source type, the active hours of a given emitter in modeled area "k" are synonymous to the active hours of that emitter in source type "j". Multiplying the result of this sum by 2,000 this gives units of $lbs/hr/ft^2$.

$$\sigma_{kuvw} = \Sigma_i \Sigma_j \left[ \frac{2000 E_i \alpha_{ij} \beta_{jk}}{S_k \sum_u \sum_v \sum_w \rho_{ijuvw} \tau_{uvw}} \right] \quad \text{and} \quad f_{kuvw} = \frac{\sigma_{kuvw}}{R_k}$$

This process must be repeated for each pollutant, as the emission factors for individual emitters are generally not of uniform proportions. For example, $PM_{2.5}$ is 97% of $PM_{10}$ for tailpipe emissions, 10% of $PM_{10}$ for unpaved road emissions, and 15% of $PM_{10}$ for wind erosion emissions. Gaseous tailpipe emission factors also differ in proportion between Tier 1 diesel, Tier 3 diesel, and gasoline engines.

**Table B-4: Timing of Equipment Activity and Modeled Source Emissions, AERMOD**

| | | Month | | | | | | | | | | | | Hour | | | | | | | | | | | | | | | | | | | | | | | | Day of Week | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | Source Name | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | M-F | Sat | Sun |
| Scraper | DecomWells | | | | | X | X | X | X | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Bulldozer | DecomWells | | | | | X | X | X | X | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Compactor | DecomWells | | | | | X | X | X | X | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Motor Grader | DecomWells | | | | | X | X | X | X | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Motor Grader | NewWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Motor Grader | OperWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Water Truck (1,500 gal) | Disturbed | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Water Truck (1,500 gal) | AccessRdCPP | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Water Truck (1,500 gal) | AccessRdSat | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Fueling Truck | Disturbed | | | | | X | X | X | X | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Heavy Duty Diesel Truck | Disturbed | | | | | X | X | X | X | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Heavy Duty Diesel Truck | AccessRdSat | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Heavy Duty Diesel Truck | AccessRdCPP | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Heavy Duty Diesel Truck | AccessRdPublic | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Logging Truck | NewWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Electrical Pole Truck | NewWells | | | | | X | X | X | X | X | X | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Truck Mounted Drill Rig, Tier 1 | NewWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Deep Well Drill Rig, Tier 1 | FacilitiesCPP | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Trackhoe | NewWells | | | | | X | X | X | X | X | X | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Backhoe | NewWells | | | | | X | X | X | X | X | X | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Loader | FacilitiesCPP | | | | | X | X | X | X | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Loader | FacilitiesSat | | | | | X | X | X | X | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Tractor | DecomWells | | | | | X | X | X | X | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Resin-hauling Semi Truck | HaulRd | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Pump Pulling Truck | OperWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Pump Pulling Truck | DecomWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Product Transport Truck | AccessRdCPP | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Product Transport Truck | AccessRdPublic | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Crane | FacilitiesCPP | | | | | X | X | X | X | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Crane | FacilitiesSat | | | | | X | X | X | X | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Forklift | FacilitiesCPP | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Forklift | FacilitiesSat | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Manlift | FacilitiesCPP | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Manlift | FacilitiesSat | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Cementer | NewWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Cementer | DecomWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Welding Equipment | NoneYr7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HDPE Fusion Equipment | NoneYr7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Light Duty Pickup | Disturbed | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Light Duty Passenger Vehicle | AccessRdCPP | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Light Duty Passenger Vehicle | AccessRdSat | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Satellite Plant Heater | SATHTR | X | X | X | X | | | | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Satellite Plant Fire Pump | SATPUMP | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Central Plant Thermal Dryer | CPPDRY | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Central Plant Heaters | CPPHTR | X | X | X | X | | | | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Central Plant Fire Pump | CPPPUMP | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Light Duty Passenger Vehicle | AccessRdPublic | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | X | X | | | | | | | | | X | X | | | | | | | X | | |

**Table B-5: Timing of Equipment Activity and Modeled Source Emissions, CALPUFF**

| | | Month | | | | | | | | | | | | Hour | | | | | | | | | | | | | | | | | | | | | | | | Day of Week | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equipment Type | Source Name | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | M-F | Sat | Sun |
| Scraper | DecomWells | | | | X | X | X | X | X | X | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Bulldozer | DecomWells | | | | X | X | X | X | X | X | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Compactor | DecomWells | | | | X | X | X | X | X | X | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Motor Grader | DecomWells | | | | X | X | X | X | X | X | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Motor Grader | NewWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Motor Grader | OperWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Water Truck (1,500 gal) | Disturbed | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Water Truck (1,500 gal) | AccessRdCPP | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Water Truck (1,500 gal) | AccessRdSat | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Fueling Truck | Disturbed | | | | X | X | X | X | X | X | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Heavy Duty Diesel Truck | Disturbed | | | | X | X | X | X | X | X | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Heavy Duty Diesel Truck | AccessRdSat | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Heavy Duty Diesel Truck | AccessRdCPP | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Heavy Duty Diesel Truck | AccessRdPublic | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Logging Truck | NewWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Electrical Pole Truck | NewWells | | | | X | X | X | X | X | X | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Truck Mounted Drill Rig, Tier 1 | NewWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Deep Well Drill Rig, Tier 1 | FacilitiesCPP | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Trackhoe | NewWells | | | | X | X | X | X | X | X | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Backhoe | NewWells | | | | X | X | X | X | X | X | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Loader | FacilitiesCPP | | | | X | X | X | X | X | X | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Loader | FacilitiesSat | | | | X | X | X | X | X | X | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Tractor | DecomWells | | | | X | X | X | X | X | X | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Resin-hauling Semi Truck | HaulRd | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Pump Pulling Truck | OperWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Pump Pulling Truck | DecomWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Product Transport Truck | AccessRdCPP | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Product Transport Truck | AccessRdPublic | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Crane | FacilitiesCPP | | | | X | X | X | X | X | X | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Crane | FacilitiesSat | | | | X | X | X | X | X | X | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Forklift | FacilitiesCPP | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Forklift | FacilitiesSat | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Manlift | FacilitiesCPP | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Manlift | FacilitiesSat | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Cementer | NewWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Cementer | DecomWells | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Welding Equipment | NoneYr7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HDPE Fusion Equipment | NoneYr7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Light Duty Pickup | Disturbed | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Light Duty Passenger Vehicle | AccessRdCPP | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Light Duty Passenger Vehicle | AccessRdSat | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | X | X | X | X | X | X | X | X | X | | | | | | | | X | | |
| Satellite Plant Heater | SATHTR | X | X | X | | | | | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Satellite Plant Fire Pump | SATPUMP | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Central Plant Thermal Dryer | CPPDRY | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Central Plant Heaters | CPPHTR | X | X | X | | | | | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Central Plant Fire Pump | CPPPUMP | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Light Duty Passenger Vehicle | AccessRdPublic | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | X | X | | | | | | | | | X | X | | | | | | | X | | |