



State of Oregon Department of Environmental Quality

Draft Cleaner Air Oregon Initial Facility Call-in Prioritization Protocol

About Cleaner Air Oregon

The Cleaner Air Oregon program and rules add public health-based protection from the emissions of toxic air contaminants to the state's existing air permitting regulatory framework. The goal of the Cleaner Air Oregon program is to evaluate the potential health risks to people near commercial and industrial facilities that emit regulated toxic air contaminants, and reduce those risks to below health-based standards.

Recommended call-in prioritization protocol

For existing sources, DEQ will call in sources starting with permitted sources that DEQ determines present higher potential health risks, and in consideration of other factors as listed in this memo. DEQ and OHA will work with as many existing sources as possible based on available resources.

If an existing source proposes a change that triggers New Source Review/Prevention of Significant Deterioration under division 224, the source would also be called into Cleaner Air Oregon, regardless of where that source is in the prioritization list (if not previously called in). The source would be required to get approval under Cleaner Air Oregon at the same time it gets approval under NSR/PSD.

DEQ intends to process applications for new or reconstructed sources, and for new and modified Toxics Emissions Units when required by OAR 340-245-0050(2), on an as-received basis.

1. Risk calculation process

For each existing source, DEQ will calculate a prioritization score to help determine the order of call-in. This score will be calculated using the Level 1 Risk Assessment Tool and demographic statistics that include the percentile ranking of the percent of low-income residents, the percent of minority residents, the percent of residents under 5 years old, and the total number of residents within a one-kilometer radius of the source. The risk assessment will be completed using emissions inventory information previously obtained by DEQ. The demographic statistics for each source will be converted to a percentile relative to the demographics statistics for all other facilities being considered, prior to calculating the facility score. DEQ will use the formulas below to conservatively evaluate risk from existing sources' emissions and determine the order in which sources will be called into the program.

The score will be calculated using the following equations:

Equation 1:

$$Score = Risk^{0.75} * \left(\frac{low\ income + minority + residents < 5 + population}{4} \right)^{0.25}$$

Where:

- Risk means the percentile ranking of the risk score calculated in Equation 2
- Low income means the percentile ranking of the percent of low-income residents
- Minority means the percentile ranking of the percent of minority residents
- Residents < 5 means the percentile ranking of the percent of residents under 5 years old
- Population means the percentile ranking of the total number of residents

Equation 2:

$$Risk = \sum \frac{DF_a * Emissions_i}{25 * RBC_{i,cancer}} + \sum \frac{DF_a * Emissions_i}{RBC_{i,noncancer}} + \sum \frac{DF_d * Emissions_i/365}{RBC_{i,acute}}$$

Where:

- \sum means to sum over all toxic air contaminants i .
- DF means a dispersion factor from OAR 340-245-8010 Table 5. DF_a factors for annual emissions are from Table 5A, and DF_d factors for daily emissions are from Table 5B. A default exposure distance of 50 meters and a default stack height of 5 meters will be used, though differences from this can be considered as listed in "Other Criteria for Prioritization" below.
- RBC_i means the Risk-Based Concentration for chemical i from OAR 340-245-8010 Table 4 (ug/m³).
- $Emissions_i$ means the actual annual emissions of toxic air contaminant i from a source reported to DEQ (lbs/yr).

2. Other Criteria for Prioritization

In addition to the above prioritization score, DEQ and OHA may consider additional factors when prioritizing facilities for call-in. These additional factors account for criteria not considered in the numerical calculation procedures described above. These additional criteria may include (but are not limited to):

- the relative severity of the potential noncancer health effect of a toxic air contaminant emitted by a source;
- whether or not the source has existing control devices to reduce its toxic air contaminant emissions;
- the distance from a source to its closest exposure location;
- information about background exposure from other point and nonpoint sources of air toxics in the area;
- the likelihood that risk from a source may be greater or lower than estimated from the Level 1 Risk Assessment Tool;
- DEQ's knowledge of changes in a source's toxic air contaminant emissions not captured in the emissions data used in the ranking equation; and
- the efficient allocation of DEQ resources.

In consideration to impacts to small businesses, DEQ will also take into consideration resources available to small businesses to address CAO requirements.

3. Final prioritization

DEQ, in consultation with OHA, will evaluate each source based on its calculated risk score and consideration of the additional factors listed in (2), above. Based upon the results of these evaluations, DEQ will then place the source in one of four categories:

- **Category 1:** DEQ will draw from this category for the first round of facilities to be called in to the program. Facilities in Category 1 will have a combination of higher numerical rankings, emissions containing air toxics of higher concern, potential uncertainties of emissions or controls present, and/or other factors identified.
- **Category 2:** second round of facilities to be called based upon prioritization ranking process. Facilities in Category 2 may have a combination of higher numerical rankings, but known controls for emissions, and/or emissions whose impacts are of lesser concern based on toxicity information. Sources in this category may also have lower numerical rankings but uncertainties in emissions type and amounts, and few or no known emissions controls.
- **Category 3:** Sources in this category will have a low ranking score, or a score that is likely higher than expected based upon knowledge of the source. Sources with moderately high prioritization scores may be in this category if the source is known to have effective controls already in place or if information is present that indicates the source may present little to no impact to the community.
- **Category 4:** This category contains source categories (such as gas stations) that DEQ does not currently intend to assess further.

DEQ, in consultation with OHA, may at its discretion move sources from one category to another, based upon any additional information received related to the above criteria.

Voluntary early risk assessments

An application for a Toxic Air Contaminant Permit Addendum from an existing source that voluntarily submits an application before being called into Cleaner Air Oregon will be processed upon submittal, as resources allow.

We are still developing this process and it may change based on input during the public comment period. These procedures are subject to future revisions as DEQ gains experience implementing Cleaner Air Oregon.