



State of Oregon Department of Environmental Quality

Notice of Proposed Rulemaking

Oct. 25, 2019

Cleaner Air Oregon Hazard Index Rulemaking

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Introduction

The comment period for this rulemaking has been extended to 4 p.m. Dec. 18, 2019.

The Oregon Department of Environmental Quality invites public input on proposed permanent rule amendments to chapter 340 of the Oregon Administrative Rules. Parameters and requirements for these proposed rules are set forth in Senate Bill 1541, enacted by the 2018 Oregon Legislature.

DEQ proposes the following changes to OAR 340, division 245 that would:

- Adjust the benchmark, or Risk Action Level, at which existing facilities regulated under the Cleaner Air Oregon program must take action to reduce noncancer risk from 156 noncancer toxic air contaminants. This action would lower noncancer Risk Action Level benchmarks for 156 toxic air contaminants from a Hazard Index of 5 to a Hazard Index of 3.
- Provide a calculation for existing facilities to estimate site-specific risk if they emit a mix of noncancer toxic air contaminants that are regulated at both a Risk Action Level of a Hazard Index of 3 and a Hazard Index of 5.

Request for other options

During the public comment period, DEQ asks for public comment on whether there are other options for achieving the rules' substantive goals while reducing the rules' potential negative economic impact on business.

Overview

DEQ proposes these Hazard Index rules, which amend existing program rules that established the Cleaner Air Oregon (CAO) program, a state health risk-based air toxics regulatory program that adds requirements to DEQ's air quality permitting. In April 2018, the Oregon legislature enacted [Senate Bill 1541](#), which authorized and funded the CAO program and set parameters and requirements for future program rules.

SB 1541 established benchmarks, or Risk Action Levels, at which existing permitted facilities must take action to reduce emissions or demonstrate best available controls are in place. SB 1541 also allowed DEQ to establish a process to identify certain chemicals expected to have developmental or other severe human health effects. For these chemicals, SB 1541 allowed DEQ to set benchmarks at existing facilities for Risk Action Levels (RALs) lower than a Hazard Index (HI) of 5, but no lower than an HI of 3.

SB 1541 also requires that the Environmental Quality Commission convene and receive recommendations from a technical advisory committee before adjusting HI benchmarks for certain chemicals expected to have developmental or other severe human health effects. DEQ

convened a Technical Advisory Committee, a Rules Advisory Committee, and a Fiscal Advisory Committee for this rulemaking and considered their science- and policy-based recommendations.

The committees considered toxic air contaminants (identified in the existing CAO program rules) with noncancer effects and how to adjust RALs, or benchmarks, that would apply to emissions from existing facilities. The proposed HI rules lower benchmarks for 156 toxic air contaminants from a RAL of an HI of 5 to an HI of 3. The proposed rules also provide a formula for calculating a Risk Determination Ratio for facilities which emit a mix of toxic air contaminants regulated at a Risk Action Level of HI 3 as well as HI 5. This proposed rulemaking does not change the methods by which the CAO program addresses cancer risk. Facility CAO risk assessments must consider cancer and noncancer risks separately.

Background

Hazard Indices, Toxicity Reference Values, and Risk Action Levels

Noncancer health risk from air contaminants is measured using a Hazard Index. An HI is calculated by comparing the amount of each chemical present in the air with the amount of each chemical that is not expected to harm health. An HI at or below 1 means a person breathing a facility's emissions is not expected to experience health effects. An HI greater than 1 means a person breathing a facility's emissions may experience health effects.

Amounts of chemicals that are not expected to harm health are calculated values known as Toxicity Reference Values, or TRVs. In the context of noncancer risk, TRVs represent concentrations of chemicals that are equivalent to a Hazard Quotient of 1 based on an individual chemical. The sum of Hazard Quotients for multiple individual chemicals is the HI representing total noncancer risk from all chemicals emitted by a facility.

TRVs for both cancer and noncancer effects are available from the regulatory toxicity literature for approximately 259 of the approximately 600 toxic air contaminants regulated under CAO. DEQ obtained TRVs from a specific set of authoritative sources identified in CAO rules. These authoritative sources include:

- Ambient Benchmark Concentrations adopted by Oregon DEQ in 2018 based on recommendations made by DEQ's Air Toxics Science Advisory Committee
- U.S. Environmental Protection Agency's (EPA) Integrated Risk Information System
- U.S. EPA's Provisional Peer-Reviewed Toxicity Values
- Agency for Toxic Substances and Disease Registry
- California's Office of Environmental Health Hazard Assessment

CAO rules list TRVs based on noncancer effects for 182 toxic air contaminants (OAR 340-245-8030, Table 3).

Risk Action Levels, or RALs, are those levels of risk (not concentrations) above which facilities must take some action related to their air toxics emissions. Each RAL has a specific HI

benchmark value. If the noncancer risk related to a facility's emissions exceeds the relevant HI benchmark, then the facility would have to take some action to decrease those emissions and reduce risk.

Hazard Index Technical Advisory Committee

SB 1541 directed the EQC to convene a Hazard Index Technical Advisory Committee (HI TAC) of health and toxicological experts to address and provide recommendations regarding technical aspects of the HI rulemaking. DEQ and Oregon Health Authority (OHA) staff worked together to recruit seven expert volunteers. DEQ and OHA identified and recommended to the EQC five of the HI TAC members who had relevant technical skill sets and recommended an additional two at-large members based on specific criteria from a group of external experts who applied online.

On July 12, 2018, the Environmental Quality Commission appointed the following seven candidates to serve on the Technical Advisory Committee for the CAO Hazard Index rulemaking effort:

- Dr. Amy Padula, University of California at San Francisco
- Dr. John Vandenberg, National Center for Environmental Assessment, U.S. Environmental Protection Agency
- Dr. John Budroe, California Office of Environmental Health Hazard Assessment
- Dr. Steven Gilbert, Institute of Neurotoxicology and Neurological Disorders, and University of Washington
- Dr. Perry Hystad, Oregon State University
- Dr. Kathryn Kelly, Delta Toxicology (at-large)
- Dr. Neeraja Erraguntla, American Chemistry Council (at-large)

For the HI TAC members' qualifications and skill sets, please go to the Hazard Index Technical Advisory Committee web page, located here:

<https://www.oregon.gov/deq/Regulations/rulemaking/Pages/acaohi2019.aspx>

The HI TAC met on Oct. 23, 2018 and Dec. 4, 2018. Prior to and during these meetings, DEQ and OHA staff provided the HI TAC with technical and administrative information regarding a list of chemicals regulated under the CAO program rules that are expected to have noncancer effects. Agencies asked the TAC to review the information and provide input to assist agencies in determining which chemicals had developmental and/or other severe health effects and should be assigned a benchmark of an HI lower than 5, but not lower than 3. DEQ and OHA staff were available during and outside HI TAC meetings to address committee questions and concerns. Agency staff did not direct the committee member decision-making or recommendations, except to explain that the agencies would not be able to consider recommendations that were inconsistent with statute or resources allocated by the Oregon legislature to implement Cleaner Air Oregon.

DEQ and OHA staff also provided the HI TAC with an initial list of the target organs affected by each chemical, which staff compiled in a Target Organ Spreadsheet. DEQ obtained toxicological information for the spreadsheet from the list of authoritative sources identified in OAR 340-245-0300(1)(a) through (e). DEQ and OHA drafted a set of inclusion criteria for determining which types of toxicological information could consistently be judged as credible, accurate, and complete. DEQ and OHA then shared these inclusion criteria with the HI TAC for the committee's input. Agency staff incorporated the resulting HI TAC recommendations into the final inclusion criteria, which agency staff then used to conduct quality assurance peer-review of the data contained in the Target Organ Spreadsheet.

A majority of HI TAC members recommended or agreed that:

- Developmental and reproductive effects be assessed as a single effect because they are very closely related, rather than separately.
- Hazard identification, rather than dose response, is the appropriate metric to use for classifying a chemical as a developmental toxic air contaminant. Toxic air contaminants should be deemed to have developmental effects even if developmental effects are not the most sensitive impact. For example, a toxic air contaminant may have a TRV that is based on kidney damage, but at a higher concentration developmental effects also occur.
- Determining which health effects, outside of those that cause developmental and reproductive effects, can be considered "severe" is too difficult a task without knowing the legislative intent or legislative establishment of other criteria associated with the word "severe", since the scientific literature classifies health effects by the organ or system affected (e.g., neurological, developmental, respiratory). The majority of the HI TAC agreed that whether an effect is severe or not is dependent on the individual person; some individuals might suffer permanent damage or death from exposure to a chemical that might only cause minor health effects to other individuals. For example, some people have no reaction to a bee sting, while for others a bee sting is life-threatening due to anaphylaxis. There is too much variation in a human population to state that a chemical can cause no severe reaction for any of them.

Other opinions and input were expressed by individual HI TAC members. Documentation of this information in HI TAC meeting minutes and in member comment letters received after those meetings can be found [here](#).

Hazard Index Rules Advisory Committee and Fiscal Advisory Committee

DEQ convened the Hazard Index Rules Advisory Committee (RAC), which included 19 of the previous 2016-2018 CAO rules advisory committee members or their current replacements. The RAC met on July 10, 2019 to review and discuss two possible Hazard Index rule options

presented by DEQ. These options were presented as illustrative examples of what HI rules could look like for the committee to discuss, not as explicit rule options themselves:

- 1) Option 1: Adjust the benchmark of all 182 toxic air contaminants that have noncancer toxicity reference values to an HI of 3. All of these chemicals have an effect on one or more target organs/systems, which include kidney, liver, blood, endocrine system, musculoskeletal system, eyes, skin, central nervous system, peripheral nervous system, cardiovascular system, immune system, respiratory system, reproductive system, gastrointestinal system, and developmental effects. Since any human population will contain some members for which any of the above effects could have a severe health effect, all 182 toxic air contaminants could be considered to have developmental or other severe health effects.
- 2) Option 2: Adjust the benchmark of toxic air contaminants that have developmental and/or reproductive effects to an HI of 3. Leave the existing benchmarks of the remaining toxic air contaminants without developmental and/or reproductive effects unchanged at an HI of 5.

Many RAC members expressed support for Option 1. None of the RAC members fully supported Option 2.

One RAC member suggested that toxic air contaminants having TRVs that are based on more than one target organ effect should be considered severe. Another expressed concern that phosgene, a toxic air contaminant known to be extremely hazardous to human health, should be regulated at a RAL of an HI of 3, but would not be regulated at a RAL of an HI of 3 under Option 2.

DEQ invited all RAC members to serve as members of the Fiscal Advisory Committee (FAC). The FAC is required to consider the potential fiscal impacts of the proposed Hazard Index rules, whether there is a significant fiscal impact to small businesses, and if there is, provide suggestions on how that impact to small businesses might be mitigated. On Sept. 13, 2019, DEQ shared with FAC members draft rules reflecting input from the HI TAC and the RAC, and additional modifications identified by staff in advance of a Sept. 23, 2019 FAC meeting. The FAC as a whole did think the proposed HI rules would cause fiscal impacts, but were divided on the question of whether or not small businesses would be significantly impacted, and also gave recommendations on possible mitigation strategies for small businesses. A more detailed account of the FAC discussions are available in the [FAC meeting summary](#), and also in the section in this Notice entitled “Advisory committee fiscal review”.

Conclusions applied to proposed HI rule revisions

After reviewing and considering all the input provided by all three Advisory Committees (Technical, Rules, and Fiscal), DEQ is proposing 156 noncancer air toxic contaminants to be regulated at a RAL of an HI of 3 for existing facilities.

DEQ’s proposal considers four criteria for the 156 noncancer air toxic contaminants to be regulated at an HI of 3 (Table 1).

Table 1.

	Number of Toxic Air Contaminants	
Developmental Health Effects	132	
	Reproductive Health Effects	116
Other Severe Health Effects	Multiple Target Organs	63
	U.S. Department of Transportation Inhalation Hazards	13
Expected to have Developmental and/or Other Severe Health Effects		156

Note that the number of toxic air contaminants identified in each Table 1 category do not add up to 156. This is because 114 (75%) of these chemicals are found in more than one list; thus, there are multiple lines of evidence indicating that these chemicals are expected to have other severe human health effects. These categories are described in more detail below.

Toxic Air Contaminants with Developmental Effects

- 132 toxic air contaminants are expected to have developmental effects. Developmental health effects are adverse health outcomes in offspring which occur from chemical exposure during development, beginning with parental germ cells and continuing through all following stages of development. As a result of input from the HI Technical Advisory Committee members, if a chemical had a developmental health effect at any dose, then it was classified as a toxic air contaminant with developmental effects, even if the contaminant also caused other health effects at lower doses.

Toxic Air Contaminants with Other Severe Health Effects

- **Reproductive Health Effects** - 116 toxic air contaminants are proposed to be regulated to a benchmark of an HI of 3 because they are expected to have reproductive effects. Reproductive human health effects are closely related to

developmental health effects. DEQ is proposing that reproductive effects be classified as other severe human health effects.

- **Multiple Target Organs** – 63 toxic air contaminants are proposed to be regulated to a benchmark of an HI of 3 because the chemical’s TRV is based on effects on more than one target organ or organ system..
- **U.S. Department of Transportation Inhalation Hazards** - In response to a concern voiced during the Rules Advisory Committee, DEQ and OHA considered information from the U.S. Department of Transportation, which lists chemicals that are inhalation hazards under Hazard Classes 2.3 and 6.1. These chemicals are “known to be so toxic to humans as to pose a hazard to health during transportation” (49 CFR 173.115). Phosgene is one such chemical that poses an inhalation hazard according to the U.S. DOT. These chemicals pose inhalation hazards during transportation via volatilization, aerosolization, or particulate dispersion. There are 13 chemicals that are classified by the U.S. DOT as inhalation hazards and that DEQ and OHA listed in the CAO program rules (OAR 340-245-8030) as having noncancer health effects. Several of these overlap with the list of 156 toxic air contaminants with developmental human health effects, reproductive effects, and/or those that affect multiple target organ systems. DEQ is proposing to recommend to EQC that two toxic air contaminants from the DOT list that are not already listed under other criteria be added to the list of chemicals that DEQ may regulate at an HI of 3. These chemicals are phosgene and chloropicrin.

Risk Determination Ratio

A Risk Determination Ratio formula (Equation 1) weights the noncancer risk from a mixture of toxic air contaminants being emitted from an individual air contamination source that is regulated based on two different benchmarks for excess noncancer risk (i.e. benchmarks of both HI 3 and HI 5). This would allow mixtures of toxic air contaminants that are regulated at two different Risk Action Levels to be equivalently considered in order to calculate a unique risk value for the emissions from that particular source. The Risk Determination Ratio addresses in part requirements of Senate Bill 1541 that direct the commission to establish standards and criteria for determining the degree to which the department can adjust a noncancer benchmark for existing facilities.

Equation 1. Calculating a Risk Determination Ratio.

$$Risk_{HI3} = \sum_{HI3 \text{ chemicals}} \frac{Concentration}{Risk \text{ Based Concentration}}$$

$$Risk_{HI5} = \sum_{HI5 \text{ chemicals}} \frac{Concentration}{Risk \text{ Based Concentration}}$$

$$\text{Risk Determination Ratio} = \frac{\text{Risk}_{HI3}}{3} + \frac{\text{Risk}_{HI5}}{5}$$

HI3 = Toxic air contaminants assigned noncancer TBACT RAL of 3 (OAR 340-245-8030, Table 3 and OAR 340-245-8040, Table 4 draft).

HI5 = Toxic air contaminants assigned noncancer TBACT RAL of 5 (OAR 340-245-8030, Table 3 and OAR 340-245-8040, Table 4 draft).

RBC = Risk-based concentration (OAR 340-245-8040, Table 4 draft).

Procedural summary

More information

Information about this rulemaking is on this rulemaking's web page:

<https://www.oregon.gov/deq/Regulations/rulemaking/Pages/rcaohi2019.aspx>

Public Hearings

DEQ plans to hold one public hearing. Anyone can attend a hearing in person, or by webinar or teleconference.

Date: Monday, Nov. 18, 2019

Start time: 6 p.m. to 8 p.m.

Street address: 700 NE Multnomah St

Room: Conference room 300 (3rd floor)

City: Portland, OR 97232

Teleconference phone number: 888-278-0296

Participant code: 8040259

Webinar link: [Webinar login page](#)

Instructions on how to join webinar or teleconference: [Webinar/teleconference instructions](#)

How to comment on this rulemaking proposal

DEQ is asking for public comment on the proposed rules. Anyone can submit comments and questions about this rulemaking. A person can submit comments via email, by regular mail or at the public hearing.

Comment deadline

DEQ will only consider comments on the proposed rules that DEQ receives by 4 p.m., on Dec. 18, 2019.

Submit comment by email

Any person can submit comments by sending an email. Commenters should include "Cleaner Air Oregon Hazard Index Rulemaking Comment" in the email subject line. Submit emails to:

caohi2019@deq.state.or.us

Note for public university students:

ORS 192.345(29) allows Oregon public university and OHSU students to protect their university email addresses from disclosure under Oregon’s public records law. If you are an Oregon public university or OHSU student, notify DEQ that you wish to keep your email address confidential.

By mail

Oregon DEQ
Attn: Sue MacMillan
700 NE Multnomah St., Suite 600
Portland, OR 97232-4100

At hearing

Monday, Nov. 18, 2019 6 p.m. to 8 p.m.

Sign up for rulemaking notices

Get email or text updates about this rulemaking by either:

- Signing up through this link: [Cleaner Air Oregon Email List](#);
- Signing up on the rulemaking web site: [Cleaner Air Oregon Hazard Index rulemaking web page](#).

Get email or text updates about other, future DEQ rulemaking by signing up through this link: [DEQ Email Notice List](#).

What will happen next?

DEQ will include a written response to all public comments received. These responses will be contained in a staff report DEQ will submit to the Environmental Quality Commission. DEQ may modify the rule proposal based on the comments received.

Proposed rules only become effective if the Environmental Quality Commission adopts them. DEQ’s intended action is to present the proposed rule changes to the EQC as soon as possible after the earliest date on which the rule changes could take effect. DEQ intends to submit the proposed rule changes to the EQC on or after Dec. 18, 2019.

Statement of need

Proposed Rule or Topic	Discussion
What need would the proposed rule address?	The proposed rule addresses provisions of SB 1541 that allow DEQ to establish more protective health standards for noncancer toxic air contaminants that are expected to cause developmental or other severe human health impacts. The proposed rules base the RALs, or benchmarks, for existing sources emitting these chemicals on a noncancer HI value of 3, if the chemical is expected to cause developmental or other severe human health effects.
How would the proposed rule address the need?	The proposed rules establish more protective standards for these chemicals based upon a review of available scientific evidence from authoritative sources. The rules will apply to existing facilities that emit toxic air contaminants that have noncancer effects. Facilities would calculate their emissions and the potential noncancer health risk the emissions pose to nearby people. If the noncancer risk is above RALs set in the rules, the facility would need to reduce the risk or take other actions.
How will DEQ know the rule addressed the need?	CAO program health risk assessments will give DEQ and OHA a detailed understanding of the potential health impacts of toxic air contaminants from existing facilities, including those causing noncancer human health effects.

Rules affected, authorities, supporting documents

Lead division

Cleaner Air Oregon/ Air Quality, Headquarters

Program or activity

Cleaner Air Oregon

Chapter 340 action

Adopt				
340-245-0320				
Amend				
340-245-0005	340-245-0020	340-245-0050	340-245-0200	340-245-8010
340-245-8030	340-245-8040			

Statutory Authority - ORS				
468.020	468A.025	468A.050	468A.155	2018 Or. Laws Chapter 102.
468.065	468A.040	468A.070	468A.315	

Statutes Implemented - ORS				
468.065	468A.015	468A.035	468A.050	468A.155
468A.010	468A.025	468A.040	468A.070	468A.315
2018 Or. Laws Chapter 102				

Legislation

Senate Bill 1541, approved in April of 2018, established the basis for this Hazard Index rulemaking.

Documents relied on for rulemaking

Document title	Document location
Cleaner Air Oregon rulemaking Staff Report	https://www.oregon.gov/deq/regulations/rulemaking/pages/rcleanerair2017.aspx

Fee Analysis

This rulemaking does not involve any fees in addition to those already required under the Cleaner Air Oregon program.

Statement of fiscal and economic impact

This Hazard Index rulemaking proposes amendments and updates to the existing CAO program rules, adopted by the Environmental Quality Commission in November of 2018. In the program rules, a noncancer hazard index benchmark (known as the “Risk Action Level”) for existing facility risk assessments of 5 was adopted, as established in Senate Bill 1541 (SB 1541) enacted by the 2018 Oregon legislature. In addition to establishing program requirements for CAO rules, SB 1541 includes a provision that allows the Department to develop regulations to set lower noncancer hazard index benchmarks for certain toxic air contaminants that are expected to cause severe human health impacts. This language is contained in Section 7 of SB 1541.

The proposed HI rules would amend the existing CAO program rules by changing the RALs for certain noncancer toxic air contaminants and adding implementation requirements to the existing CAO program rules. The proposed rules would:

- lower the TBACT Risk Action Levels for 156 contaminants from an HI 5 to an HI 3, out of a total of 182 contaminants with noncancer health effects regulated under the CAO program;
- establish a methodology to calculate a TBACT Risk Action Level for existing facilities that emit a mixture of noncancer toxic air contaminants regulated at both HI 3 and HI 5; and
- update other Risk Action Levels (Risk Reduction Level, Immediate Curtailment Level).

Adoption of the proposed HI rules is not expected to generate significant fiscal impacts. Fiscal impacts considered can be positive or negative. As examples, reducing health costs to the public would be a positive impact, and increasing costs of regulatory compliance for businesses would be a negative impact.

There are approximately 2,701 facilities (private businesses and some government and public entities) that hold air contamination discharge permits and that would be subject to these rules. Under the CAO program, DEQ expects that approximately 15 to 20 total existing facilities will be called-in each year to demonstrate compliance. The proposed rules apply to existing facilities that emit toxic air contaminants with noncancer health effects, when such facilities are called-in to demonstrate compliance with CAO rules. Under the proposed rules, these facilities may be required to reduce toxic air contaminant emissions to a more health-protective benchmark, or Risk Action Level. The proposed rules are expected to have mostly minimal and in some cases insignificant overall fiscal and economic impacts, but could have more significant impacts on a limited number of existing facilities.

The rules also may result in health benefits to the public.

Relationship to Prior Cleaner Air Oregon Fiscal Impact Statement

In the 2018 Fiscal Impact Statement provided by the Oregon Department of Environmental Quality for the CAO program rules, DEQ assumed that 182 chemicals with noncancer effects emitted from existing sources would be assigned a non-cancer hazard index benchmark of 5.

DEQ used the best available information to estimate potential fiscal impacts for the CAO program rules. Table 2 of this HI Fiscal Impact Statement summarizes information developed for the Cleaner Air Oregon program's Fiscal Impact Statement (presented there as Table 8). That analysis concluded it was not possible to quantify fiscal impacts due to the lack of detailed facility-specific data and completed risk analyses, and therefore the cost of any controls that may be required. A similar conclusion was reached regarding potential fiscal impacts related to benefits to public health in affected communities. However, DEQ determined that CAO rules could cause a significant fiscal impact for small businesses. The CAO Fiscal Impact Statement describes cost mitigation measures included in the proposed rules to reduce the overall potential costs of the CAO regulations to both small and large businesses.

The 2018 Fiscal Impact Statement information is relevant to and informs this current HI rulemaking Fiscal Impact Statement, which is limited to potential fiscal impacts associated with the proposed change to current CAO program rules. This HI rulemaking will affect potential risk reduction activities that existing facilities may be required to undertake if they emit toxic air contaminants designated in these rules as HI3 contaminants and if their assessed risk exceeds the revised RALs of these rules. The impact would be incremental if the facility would also exceed the existing benchmark of HI5. New facilities are unaffected by these rules, and are regulated based on an HI of 1. While exact cost impacts remain unquantifiable (consistent with the conclusions of the CAO program Fiscal Impact Statement), the overall fiscal impacts of this HI rulemaking are anticipated to be significantly lower due to the limited scope of impact of these proposed rules when compared to the overall CAO program.

Fiscal and Economic Impact

Adoption of the proposed HI rules is not expected to generate significant fiscal impacts. There may be minimal impacts to some sources. For a limited number of the existing facilities, including small businesses, which are to be regulated under the proposed HI rules, it is possible that the proposed rules could have a more significant impact. However, until more facilities complete health risk assessments that include changes related to the proposed HI rules, exact cost estimates are not quantifiable.

Statement of Cost of Compliance

State and federal agencies

There may be direct impacts to DEQ due to assistance and review of deliverables that will be related to the requirements of the proposed Hazard Index rules. Impacts could include

increased review time of analyses and reports for facilities emitting a mixture of chemicals with different benchmarks. However, these impacts are likely to be minimal in light of the larger related resources needed by DEQ to oversee facilities regulated by Cleaner Air Oregon.

Because the Cleaner Air Oregon program rules regulate emissions sources that are privately owned, state and federal agencies are expected to be minimally or not directly impacted by the proposed HI rules. However, existing state and federal agencies that operate facilities that emit toxic air contaminants may be required to reduce toxic air contaminant emissions if the predicted noncancer risk exceeds the proposed TBACT Risk Action Level based on the proposed lowered benchmarks. The impact would be incremental if the facility would also exceed the existing TBACT Risk Action Level of HI 5.

As of August 21, 2019, state agencies own 24 permitted facilities and federal agencies own 7 permitted facilities. Currently there are no tribally owned permitted facilities.

Local governments

Currently, local governments own or operate 69 facilities requiring an air quality permit, some of which may include toxic air contaminants affected by the proposed HI rules. When called in to demonstrate compliance with the CAO rules, some agencies may choose to perform a more in-depth risk assessment to demonstrate compliance with lower Risk Action Levels, which would increase assessment costs and permitting fees. These potential impacts to local government agencies would be minimal.

Facilities that exceed the proposed Risk Action Levels, but do not exceed the existing Risk Action Levels may be required to reduce risk to demonstrate compliance with lower Risk Action Levels. The impact would be incremental if the facility would also exceed the existing benchmark of HI 5. Depending on the size and nature of the operation, pollution control costs could be much less than, or in some cases the same as, the cost ranges for different types of control equipment found in Table 2.

Table 2 summarizes information developed for the overall Cleaner Air Oregon program's Fiscal Impact Statement. If the calculated noncancer risk were above the new proposed Risk Action Levels (but not the existing Action Levels), the proposed rules could result in additional costs ranging from approximately \$13,000 to \$18,500,000 for initial equipment including purchase and labor, and ranging from approximately \$400 to \$7,600,000 in annual operating costs. A facility could offset these costs through other reduction options, such as production changes, product substitution, and pollution prevention actions.

DEQ is not able to quantify these fiscal impacts until additional risk assessments have been completed. Based upon a review of completed risk assessment for facilities in other states, it is likely few existing facilities will incur increased cost as many similar facilities pose little risk.

Public

The existing Cleaner Air Oregon program has the potential to meaningfully impact public health in the state by reducing toxic air contaminant emissions. The toxic air contaminants that are regulated by Cleaner Air Oregon rules are known to increase risk of a wide range of health outcomes including cardiovascular and respiratory illness, lung disease, birth defects, premature births, developmental disorders, central nervous system damage, intellectual disability, and premature death.

These proposed HI rules may lower the level of community exposures allowed under Cleaner Air Oregon for a subset of regulated toxic air contaminants that are expected to cause developmental problems in babies and children, or cause other severe human health effects. Lowering the level of allowed community exposures to this subset of toxic air contaminants would mean that communities surrounding existing facilities will have greater public health protection than in the current rules.

DEQ and OHA do not currently have enough information about how many people are exposed to specific concentrations of industrial and commercial toxic air contaminant emissions to quantify the reduced health care costs that may result from the proposed rules. In addition, communities are exposed to risk from other sources of air pollution not associated with nearby industrial emissions, such as from vehicle engines, construction equipment and wood burning. It is difficult to estimate the relative actual contribution of toxic air contaminants to disease to know how reducing emissions will translate to improved public health and the associated reduced health care costs associated with these potential improvements at industrial facilities. Therefore, in this analysis it is not possible to predict the total reduced medical costs that would result from the proposed HI rules.

Large businesses - businesses with more than 50 employees

There are approximately 1,152 existing large businesses holding air quality permits. Under the CAO program, DEQ expects that approximately 15 to 20 total sources (mainly larger businesses) will be called in each year to demonstrate compliance. When called in to demonstrate compliance with CAO rules, DEQ anticipates that the proposed HI rules could have fiscal or economic impacts on such businesses. To demonstrate compliance with the CAO rules, some large businesses may choose to perform a more in-depth risk assessment to demonstrate compliance with lower Risk Action Levels, which would increase assessment costs and permitting fees.

If the facility's noncancer risk exceeds the lower proposed TBACT Risk Action Level (Toxics Best Available Control Technologies), but would not have exceeded the current HI 5 TBACT Risk Action Level, the facility would be required to take action to reduce toxic air contaminant emissions or show that TBACT is in place or will be installed. Taking those steps would have a fiscal impact on such a facility. The impact would be incremental if the facility would also exceed the existing benchmark of HI 5. Incremental additional costs may be incurred if the facility also would exceed the revised Risk Reduction Level or Curtailment Levels, but would not have exceeded the existing levels.

Depending on the size and nature of a large business's operation, pollution control costs could be much less than, or in some cases the same as, the cost ranges for different types of control equipment found in Table 2. Table 2 summarizes information developed for the Cleaner Air Oregon program's Fiscal Impact Statement and presented there as Table 8. If a large business's noncancer risk were above the new proposed Risk Action Levels (but not the existing Action Levels), the proposed rules could result in additional costs ranging from approximately \$13,000 to \$18,500,000 for initial equipment including purchase and labor, and ranging from approximately \$400 to \$7,600,000 in annual operating costs. A facility could offset these costs through other reduction options, such as production changes, product substitution, and pollution prevention actions.

However, determining which permitted facilities would incur this incremental cost requires a completed risk assessment. Because no risk assessments of existing facilities have been completed, DEQ does not have adequate information to estimate potential total costs to existing facilities being regulated under the proposed HI rules.

Small businesses – businesses with 50 or fewer employees

There are approximately 1,046 small businesses with air permits that are subject to these rules. These businesses include asphalt plants, auto body shops, chromium electroplaters, dry cleaners, ethylene oxide sterilizers, grain elevators, gas stations, lumber mills, metal fabricators, metal foundries, and surface coatiers.

In addition, there are 503 businesses with AQ permits that have not provided DEQ with information on the number of employees at each business, but are likely to be small businesses with 50 or fewer employees. The majority (397) of these businesses with unknown numbers of employees are gasoline stations with convenience stores, or other types of gasoline stations that may also provide other services such as vehicle repair and selling automotive oils and replacement parts. Thirty (30) of the 503 facilities are dry-cleaning businesses. These types of businesses are likely to have 50 or less employees. Of the 503 businesses with unknown numbers of employees, 492 have Basic or General ACDP permits. As described below, DEQ will likely perform Level I risk assessments for facilities having Basic or General permits, which will mitigate costs to those businesses.

Under the CAO program, DEQ expects that approximately 15 to 20 total sources (mainly larger businesses) will be called in each year to demonstrate compliance. When called-in to demonstrate compliance with CAO rules, DEQ anticipates that the proposed HI rules could have fiscal or economic impacts on such small businesses. If the facility's noncancer risk exceeds the lower proposed TBACT Risk Action Level, but would not have exceeded the current HI 5 TBACT Risk Action Level, the facility would be required to take action to reduce toxic air contaminant emissions or show that best available control technologies for air toxics are in place or will be installed. Taking those steps would have a fiscal impact on such a facility. The impact would be incremental if the facility would also exceed the existing benchmark of HI 5. Incremental additional costs may be incurred if the facility also

would exceed the revised Risk Reduction Level or Curtailment Levels, but would not have exceeded the existing levels.

Many of the small businesses subject to the Cleaner Air Oregon rules would only be required to submit triennial reports of toxic air contaminant emissions and would face no additional cost from these proposed rules.

Some small businesses may be required to further reduce toxic air contaminant emissions through either permit limits, pollution prevention or pollution control equipment if risk is above the lower Risk Action Level. The impact would be incremental if the facility would also exceed the existing benchmark of HI 5. However, DEQ does not have adequate data to estimate how many small businesses may be required to comply with a lower Action Level as a result of the proposed HI rules. In addition, many permitted small businesses with General or Basic permits are currently not being called in to complete risk assessments.

Therefore, the exact fiscal impact of the proposed HI rules cannot be calculated, but is expected to have minimal additional fiscal impacts to small businesses.

Cost of Compliance for Small Businesses

1. Estimated number of small businesses and types of businesses and industries with small businesses subject to proposed rule.

There are approximately 1,046 documented small businesses in Oregon subject to CAO rules as of August 2019. These businesses include asphalt plants, auto body shops, chromium electroplaters, ethylene oxide sterilizers, grain elevators, lumber mills, metal fabricators, metal foundries, and surface coatiers. If one of these small businesses is called in to demonstrate compliance with CAO rules, it would be subject to, and could be affected by, these HI rules.

2. Projected reporting, recordkeeping and other administrative activities, including costs of professional services, required for small businesses to comply with the proposed rule.

Again, this rule may apply to a small business only if they are one of the 15-20 sources that are called in annually to demonstrate compliance with CAO rules. At that time, if the small business's calculated noncancer risk exceeds the lower proposed Risk Action Levels, but would not have exceeded the current HI 5 Risk Action Levels, the facility would be required to take action to reduce toxic air contaminant emissions or show that best available control technologies for air toxics are in place or will be installed. Taking those steps would have a fiscal impact on that small business, including increased recordkeeping and reporting requirements. Administrative activities, including costs of professional services required for small businesses to comply with the proposed rule, may increase in a range from \$100 to \$500,000 above current costs if the small business is required to perform computer modeling

or a health risk assessment and cancer risk, chronic noncancer risk or acute noncancer risk is above the proposed Risk Action Levels.

DEQ does not have information about how many more small businesses would be required to take action to reduce risks under the proposed rules, and therefore cannot accurately estimate an incremental increase in costs.

3. Projected equipment, supplies, labor and increased administration required for small businesses to comply with the proposed rule.

As described above, the proposed HI rules may require some small businesses to take action to reduce risk that otherwise would not have had to. Depending on the size and nature of a small business's operation, pollution control costs could be much less than, or in some cases the same as, the cost ranges for different types of control equipment found in Table 2. Table 2 summarizes information developed for the Cleaner Air Oregon program's Fiscal Impact Statement and presented there as Table 8.

If a small business's noncancer risk were above the new proposed Risk Action Levels (but not the existing Action Levels), the proposed rules could result in additional costs ranging from approximately \$13,000 to \$18,500,000 for initial equipment including purchase and labor, and ranging from approximately \$400 to \$7,600,000 in annual operating costs. A facility could offset these costs through other reduction options, such as production changes, product substitution, and pollution prevention actions.

DEQ does not have information about how many more small businesses would be required to take action to reduce risks under the proposed rules, and therefore cannot accurately estimate an incremental increase in costs. Considering existing program implementation, it is predicted that this could affect a very small number of businesses.

4. Describe how DEQ involved small businesses in developing this proposed rule.

DEQ notified small businesses during HI rule development by email through GovDelivery, announcements on the DEQ website, at HI Rules Advisory Committee meetings, and through Twitter and Facebook. Small business representatives were on the HI Rules Advisory Committee and Fiscal Advisory Committee during HI rule development. At the onset of the public comment period, DEQ will notify small businesses by email and through notices in the Secretary of State Bulletin.

Mitigation measures for small businesses

The extent of the small business fiscal impact is unknown and cannot be accurately quantified for analysis because it depends on future analysis of noncancer risk for existing facilities.

These proposed rules do not establish any new mitigation measures for small businesses. However, consistent with existing CAO rules, the majority of small business facilities with few emission units and on General or Basic Air Contaminant Discharge Permits are not currently required to perform a Cleaner Air Oregon risk assessment or address reductions; DEQ will perform the risk assessments for these businesses. As described on page 49 of the FIS for the CAO program rule, DEQ established the following mitigation measures:

- Tiered implementation of the program which would delay regulatory costs for most smaller businesses
- Additional time for compliance with risk levels through extensions and postponement proposals
- DEQ doing level 1 risk assessments for sources on General and Basic Air Contaminant Discharge Permits
- Process to allow postponement of risk reduction requirements based on financial hardship
- DEQ and OHA staff positions for technical assistance

Table 2
Pollution Control Equipment for Toxic Air Contaminant Emissions

Control Device Type	Types of Pollutants it can reduce	Examples of facilities where this could be used	Initial costs ^{[1], [2]}		Annual Operating Costs	
			low	high	low	high
Fabric filter (baghouse)	Particulate matter (PM), hazardous air pollutant (HAP) PM	Asphalt batch plants, concrete batch kilns, steel mills, foundries, fertilizer plants, and other industrial processes. Colored art glass manufacturers.	\$360,000 - \$18,500,000		\$180,000 - \$6,200,000	
Electrostatic precipitator (ESP)	PM, HAP PM	Power plants, steel and paper mills, smelters, cement plants, oil refineries	\$320,000 - \$10,000,000		\$100,000 - \$7,600,000	

^[1] Costs are from examples in the EPA Air Pollution Control Cost Manual, Report No. 452/B-02-001, EPA Air Pollution Control Technology Fact Sheets, and information provided by permitted facilities and regulatory agencies.

^[2] Costs are estimated based on best available information, but may be higher or lower than shown, depending on facility-specific conditions and business decisions.

Control Device Type	Types of Pollutants it can reduce	Examples of facilities where this could be used	Initial costs ^{[1], [2]}		Annual Operating Costs	
			low	high	low	high
Enclosure	Fugitive PM or volatile organic compounds (VOCs)	Any process or operation where emissions capture is required, i.e., printing, coating, laminating	\$14,000 - \$420,000		\$400 - \$10,000	
HEPA filter	Chrome emissions	chrome plating	\$13,000 - \$240,000		Application specific	
Wet scrubber (packed towers, spray chambers, Venturi scrubbers)	Gases, vapors, sulfur oxides, corrosive acidic or basic gas streams, solid particles, liquid droplets	Asphalt and concrete batch plants; coal-burning power plants; facilities that emit sulfur oxides, hydrogen sulfide, hydrogen chloride, ammonia, and other gases that can be absorbed into water and neutralized with the appropriate reagent.	\$25,000 - \$750,000		\$19,000 - \$830,000	
Wet scrubber with mercury controls (carbon injection or flue gas desulfurization)	Gases, vapors, sulfur oxides, corrosive acidic or basic gas streams, solid particles, liquid droplets, mercury	Coal-fired power generation	Low end cost not available High end cost \$516,803,000		Not available	
Semi-dry scrubber with carbon injection mercury controls	Gases, vapors, sulfur oxides, corrosive acidic or basic gas streams, solid particles, liquid	Coal-fired power generation	Ranges not available, estimated cost: \$470,803,000		Ranges not available, estimated cost: \$74,807,000	

Control Device Type	Types of Pollutants it can reduce	Examples of facilities where this could be used	Initial costs ^{[1], [2]}		Annual Operating Costs	
			low	high	low	high
	droplets, mercury					
Flue gas desulfurization with limestone injection	mercury	Coal-fired power generation	\$75,000,000-	\$247,000,000	\$3,500,000	
Activated carbon injection	mercury	Coal-fired power generation	\$960,000-	\$5,000,000	\$1,800,000	
Thermal oxidizer	VOCs, gases, fumes, hazardous organics, odors, PM	Landfills, crematories, inks from graphic arts production and printing, can and coil plants, hazardous waste disposal. semiconductor manufacturing	\$17,000 -	\$6,200,000	\$3,500 - \$5,200,000	
Regenerative thermal oxidizer	VOCs	Paint booths, printing, paper mills, municipal waste treatment facilities	\$940,000 -	\$7,700,000	\$110,000 - \$550,000	
Catalytic reactor	VOCs, gases	Landfills, oil refineries, printing or paint shops	\$21,000 -	\$6,200,000	\$3,900 - \$1,700,000	

Control Device Type	Types of Pollutants it can reduce	Examples of facilities where this could be used	Initial costs ^{[1], [2]}		Annual Operating Costs	
			low	high	low	high
Carbon adsorber	Vapor-phase VOCs, hazardous air pollutants (HAPs)	Soil remediation facilities, oil refineries, steel mills, printers, wastewater treatment plants	\$360,000 - \$2,500,000		Not available	
Biofilter	VOCs, odors, hydrogen sulfide (H ₂ S), mercaptans (organic sulfides)	Wastewater treatment plants, wood products facilities, industrial processes	\$360,000 - \$3,600,000		Not available	
Fume suppressants	Chromic acid mist, chromium, cadmium and other plating metals	Chromic acid anodizing and chrome plating operations	Up to \$122,000		Not available	

These cost ranges were researched in 2018. The Consumer Price Index measures the change in prices paid by consumers for goods and services in the United States. In 2018, the CPI rose approximately 2 percent, and 2019 appears to be on track for a similar rise. Assuming that one year has passed since the cost ranges were identified in 2018 in the CAO Fiscal Impact Statement, it is logical to assume that there will be a total of a 2 percent increase for each of the cost ranges. DEQ does not expect that the fiscal impacts of this proposed rulemaking would be outside the estimated ranges documented in the CAO Fiscal Impact Statement.

Documents relied on for fiscal and economic impact

The documents listed below are related to Table 2. Table 2 presents information from Table 8 in the Cleaner Air Oregon program Fiscal Impact Statement, which itself is a source of information for preparing this Fiscal Impact Statement.

Document title	Document location
Cleaner Air Oregon Staff Report	https://www.oregon.gov/deq/EQCdocs/11152018_ItemG_CAORepor.pdf
EPA Air Pollution Control Cost Manual, Report No. 452/B-02-001, December 1995, Section 5, Chapter 1, SO ₂ and Acid Gas Controls	http://www.epa.gov/ttn/catc/dir1/cost_toc.pdf
EPA Air Pollution Control Cost Manual, Report No. 452/B-02-001, January 2002, Section 6, Chapter 1, Baghouses and Filters	http://www.epa.gov/ttn/catc/dir1/cost_toc.pdf
EPA Air Pollution Control Cost Manual, Report No. 452/B-02-001, September 1999, Section 6, Chapter 3, Electrostatic Precipitators	https://www3.epa.gov/ttn/ecas/docs/cs6ch3.pdf
EPA Technical Bulletin Choosing an Adsorption System for VOC: Carbon, Zeolite, or Polymers? May 1999	https://www3.epa.gov/ttn/catc1/cica/files/fadsorb.pdf
EPA Pollution Control Technology Fact Sheet Spray-Chamber/Spray-Tower Wet Scrubber, EPA-452/F-03-016	https://www3.epa.gov/ttn/catc1/cica/files/fsprytwr.pdf
EPA Air Pollution Control Technology Fact Sheet Catalytic Incinerator, EPA-452/F-03-018	https://www3.epa.gov/ttn/catc1/cica/files/fcataly.pdf
EPA Air Pollution Control Technology Fact Sheet Regenerative Incinerator, EPA- 452/F-03-021	https://www3.epa.gov/ttn/catc1/cica/files/fregen.pdf
EPA Air Pollution Control Technology Fact Sheet Thermal Incinerator, EPA-452/F-03-022	https://www3.epa.gov/ttn/catc1/cica/files/fthermal.pdf
EPA Air Pollution Control Technology Fact Sheet, Paper/Nonwoven Filter – High Efficiency Particle Air (HEPA) Filter, EPA-452/F-03-023	https://www3.epa.gov/ttn/catc1/cica/files/ff-hepa.pdf
EPA Pollution Control Technology Fact Sheet Fabric Filter – Mechanical Shaker Cleaned Type, EPA-452/F-03-024	https://www3.epa.gov/ttn/catc1/cica/files/ff-shaker.pdf
EPA Air Pollution Control Technology Fact Sheet Dry Electrostatic Precipitator (ESP) – Wire-Plate Type, EPA-452/F-03-028	https://www3.epa.gov/ttn/catc1/cica/files/fdespwp.pdf
EPA Air Pollution Control Technology Fact Sheet Permanent Total Enclosures (PTEs), EPA-452/F-03-033	https://www3.epa.gov/ttn/catc1/cica/files/fpte.pdf

Advisory committee fiscal review

DEQ appointed a Fiscal Advisory Committee, or FAC, which met on Sept. 23, 2019 to discuss the draft Fiscal Impact Statement presented by DEQ.

As ORS 183.33 requires, DEQ asked for the committee's recommendations on:

- Whether the proposed rules would have a fiscal impact,
- The extent of the impact, and
- Whether the proposed rules would have a significant adverse impact on small businesses; and if so, then how DEQ can comply with ORS 183.540 reduce that impact.

The committee reviewed the draft fiscal and economic impact statement and its findings are summarized in the approved minutes dated Sept. 23, 2019, found [here](#).

All committee members agreed that the proposed rules would have a fiscal impact. In regard to the extent of the fiscal impact, the committee members provided a number of responses, which are available in the approved minutes mentioned above.

The committee discussed whether the proposed rules would have a significant adverse fiscal impact on small businesses in Oregon. Some members felt the proposed rules would have little to no fiscal impact, while others felt that the proposed rules could have significant impacts. To address any potential significant impacts to small businesses, a number of mitigating actions were suggested:

- 1.) DEQ should provide technical assistance to small businesses.
 - Assist small businesses with health risk assessment preparation.
 - Collect and share information, resources, and data regarding the CAO program to help small businesses better understand requirements of the rules and related health impacts.
 - Provide assistance to make sure affected communicates are engaged.
- 2.) DEQ should provide financial assistance to small businesses.
 - Set aside money for a grant program to help small businesses purchase pollution control equipment or for assistance with pollution prevention studies.
 - Waive or reduce certain program fees for small businesses.
 - Provide low-interest loans or bonds to small businesses for work related to the rule.
 - Use a portion of required compliance fees to help with costs to small businesses.
 - Discount the fees for small businesses.
- 3.) Extend compliance timelines for small businesses.
 - Consider extending timelines for small businesses because of the uncertainty that some committee members felt was inherent in the propose rulemaking.

- One committee member thought that the proposed shift from an HI benchmark of 5 to an HI benchmark of 3 should be deferred until 2029.

4.) Additional suggestions.

- Mitigation activities for small businesses should also be applied to large businesses.
- Be very aware of the possible cumulative health benefits that public health officials believe will occur as a result of reducing hazardous chemicals from our environment.
- Make sure that DEQ staff are updated regularly on regulations, impacts and improvements.
- DEQ should present mitigation ideas and measures to the EQC so that they can help keep all benefits to public health and to businesses maximized.
- Be more specific in the Fiscal Impact Statement about the likelihood of small businesses being impacted in the short run.

Housing cost

As required by ORS 183.534, DEQ evaluated whether the proposed rules would have an effect on the development cost of a 6,000-square-foot parcel and construction of a 1,200-square-foot detached, single-family dwelling on that parcel.

While DEQ determined that the Cleaner Air Oregon program rules may have an effect on the development cost of a 6,000-square-foot parcel and construction of a 1,200-square-foot detached, single-family dwelling on that parcel, these proposed HI rules are predicted to have little to no impact on housing cost. The possible impact of these potential changes appears to be minimal. DEQ cannot quantify the impact at this time because the available information does not indicate whether the costs would be passed on to consumers and any such estimate would be speculative.

Federal relationship

ORS 183.332, 468A.327 and OAR 340-011-0029 require DEQ to attempt to adopt rules that correspond with existing equivalent federal laws and rules unless there are reasons not to do so.

DEQ adopted CAO rules in 2018 that are in addition to federal requirements because regulatory gaps existed in the state's air toxics rules prior to 2018. The proposed HI rules will be an addition to the existing CAO rules.

Land use

Land-use considerations

In adopting new or amended rules, ORS 197.180 and OAR 340-018-0070 require DEQ to determine whether the proposed rules significantly affect land use. If so, DEQ must explain how the proposed rules comply with state wide land-use planning goals and local acknowledged comprehensive plans.

Under OAR 660-030-0005 and OAR 340 Division 18, DEQ considers that rules affect land use if:

- The statewide land use planning goals specifically refer to the rule or program, or
- The rule or program is reasonably expected to have significant effects on:
 - Resources, objects, or areas identified in the statewide planning goals, or
 - Present or future land uses identified in acknowledge comprehensive plans

DEQ determined whether the proposed rules involve programs or actions that affect land use by reviewing its Statewide Agency Coordination plan. The plan describes the programs that DEQ determined significantly affect land use. DEQ considers that its programs specifically relate to the following statewide goals:

Goal	Title
5	Natural Resources, Scenic and Historic Areas, and Open Spaces
6	Air, Water and Land Resources Quality
11	Public Facilities and Services
16	Estuarine Resources
19	Ocean Resources

Statewide goals also specifically reference the following DEQ programs:

- Nonpoint source discharge water quality program – Goal 16
- Water quality and sewage disposal systems – Goal 16
- Water quality permits and oil spill regulations – Goal 19

Determination

DEQ determined that these proposed rules do not affect land use under OAR 340-018-0030 or DEQ’s State Agency Coordination Program.

EQC prior involvement

DEQ shared information about this rulemaking with the EQC on multiple occasions, including:

- As an Informational Item (Item B, Cleaner Air Oregon updates) on the March 2018 EQC meeting agenda.
- As an Action Item (Item G, Cleaner Air Oregon Hazard Index Technical Advisory Committee) on the July 2018 EQC meeting agenda
- As an Informational Item (Item F, Director's Report) on the January 2019 EQC meeting agenda
- During staff conference calls with individual EQC members on Sept. 9, 10, 13, and 16, 2019.

Advisory Committee

Background

DEQ convened the Cleaner Air Oregon Hazard Index Rules Advisory Committee in a public meeting on July 10, 2019. The committee met once. On Sept. 23, 2019, the committee met again as the Fiscal Advisory Committee in a public meeting to consider the HI rules and draft FIS. Advisory committee members are listed in the table below and additional information is available on the committee’s web page, located [here](#).

The committee members were:

CAO Hazard Index Rules Advisory Committee	
Name	Representing
Steven Anderson	City of Salem Neighborhood Associations (neighborhood-level community-based group)
Jessica Applegate	Eastside Portland Air Coalition (neighborhood-level community-based group)
Lisa Arkin	Beyond Toxics
Lee Fortier	Rogue Disposal (business owner small business)
Linda George	Portland State University (academic)
Scott Henriksen	Eastside Plating (small business)
Christine Kendrick	City of Portland (large cities)
Patrick Luedtke	Community Health Centers of Lane County (health official, Lane County)
Paul Lewis	Multnomah County (tri-county health official – Multnomah, Washington, Clackamas counties)
Sharla Moffett	Oregon Business and Industry (small business)
Huy Ong	Organizing People/Activating Leaders (community organization -general)
Mary Peveto	Neighbors for Clean Air
Ellen Porter	LMI Environmental, Inc.
Mark Riskedahl	Northwest Environmental Defense Center

Diana Rohlman	Oregon Public Health Association (health professional)
Laura Seyler	International Paper Springfield Mill (engineer/experience in pollution control technology for air toxics)
Kathryn VanNatta	Northwest Pulp and Paper Association (business owner large business)
Thomas Wood	Oregon Business and Industry (large business)
Gordon Zimmerman	City of Cascade Locks (small cities)

Meeting notifications

To notify people about the advisory committee’s activities, DEQ:

- Sent GovDelivery bulletins, a free e-mail subscription service, to the following lists:
 - Rulemaking
 - Air Toxics State-wide
 - Cleaner Air Oregon Regulatory Overhaul
 - DEQ Public Notices
 - Title V Permit Program
- Added advisory committee announcements to DEQ’s calendar of public meetings at [DEQ Calendar](#).

Committee discussions

The committee evaluated, discussed, and gave recommendations regarding the potential rule proposals and fiscal impacts during public meetings held on July 10, 2019 and September 23, 2019. Detailed information on the information the committee reviewed and on their discussions and recommendations can be found [here](#).

Public engagement

Public notice

DEQ provided notice of the proposed rulemaking and rulemaking hearing by:

- On Oct. 25, 2019 Filing notice with the Oregon Secretary of State for publication in the Nov. 1, 2019 Oregon Bulletin;
- Posting the Notice, Invitation to Comment and Draft Rules on the web page for this rulemaking, located at:
<https://www.oregon.gov/deq/Regulations/rulemaking/Pages/rcaohi2019.aspx> ;
- Emailing approximately 14,221 interested parties on the following DEQ lists through GovDelivery:
 - Rulemaking
 - DEQ Public Notices
 - Cleaner Air Oregon
 - Air Toxics State-wide
- Emailing the following key legislators required under [ORS 183.335](#):
 - Representative Karin Power, Chair, House Committee on Energy and Environment
 - Senator Michael Dembrow, Chair, Senate Committee on Environment and Natural Resources
 - Senator Peter Courtney, Senate President
 - Representative Tina Kotek, Speak of the House of Representatives
- Emailing advisory committee members,

Posting on the DEQ event calendar: [DEQ Calendar](#)

How to comment on this rulemaking proposal

DEQ is asking for public comment on the proposed rules. Anyone can submit comments and questions about this rulemaking. A person can submit comments via email, by regular mail or at the public hearing.

Comment deadline

DEQ will only consider comments on the proposed rules that DEQ receives by 4 p.m., on Dec. 18, 2019.

Submit comment by email

Any person can submit comments by sending an email. Commenters should include “Cleaner Air Oregon Hazard Index Rulemaking Comment” in the email subject line. Submit emails to: caohi2019@deq.state.or.us

Note for public university students:

ORS 192.345(29) allows Oregon public university and OHSU students to protect their university email addresses from disclosure under Oregon's public records law. If you are an Oregon public university or OHSU student, notify DEQ that you wish to keep your email address confidential.

By mail

Oregon DEQ
Attn: Sue MacMillan
700 NE Multnomah St., Suite 600
Portland, OR 97232-4100

At hearing

The Hazard Index rulemaking hearing will take place from 6 p.m. to 8 p.m. on Nov. 18, 2019.

Public hearing

DEQ plans to hold one public hearing. Anyone can attend a hearing in person, or by webinar or teleconference.

Date: Nov. 18, 2019
Start time: 6 p.m.
Street address: 700 NE Multnomah St
Room: Conference room 300 (3rd floor)
City: Portland, OR 97232

Teleconference phone number: 888-278-0296
Participant code: 8040259
Webinar link: [Webinar login](#)

Instructions on how to join webinar or teleconference: [Webinar/teleconference instructions](#)

DEQ will consider all comments and testimony received before the closing date. DEQ will summarize all comments and respond to comments in the Environmental Quality Commission staff report.

Accessibility information

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.