

Cleaner Air Oregon Update

Agenda Item D
Environmental Quality Commission Meeting
March 25-26, 2021

Ali Mirzakhali, Air Quality Division Administrator
Keith Johnson, CAO Program Manager
J.R. Giska, CAO Program Engineer

Program Accomplishments

- DEQ is approving risk assessments and issuing permits to new facilities that meet health-based standards for surrounding communities
- DEQ is dramatically improving our knowledge of toxic air contaminants being emitted by facilities across Oregon
- DEQ prioritizes communication with facilities and community groups, working closely with both to develop tools to improve implementation of this new program

Cleaner Air Oregon is Health-Based



**Report toxic air
contaminants**



Assess risk



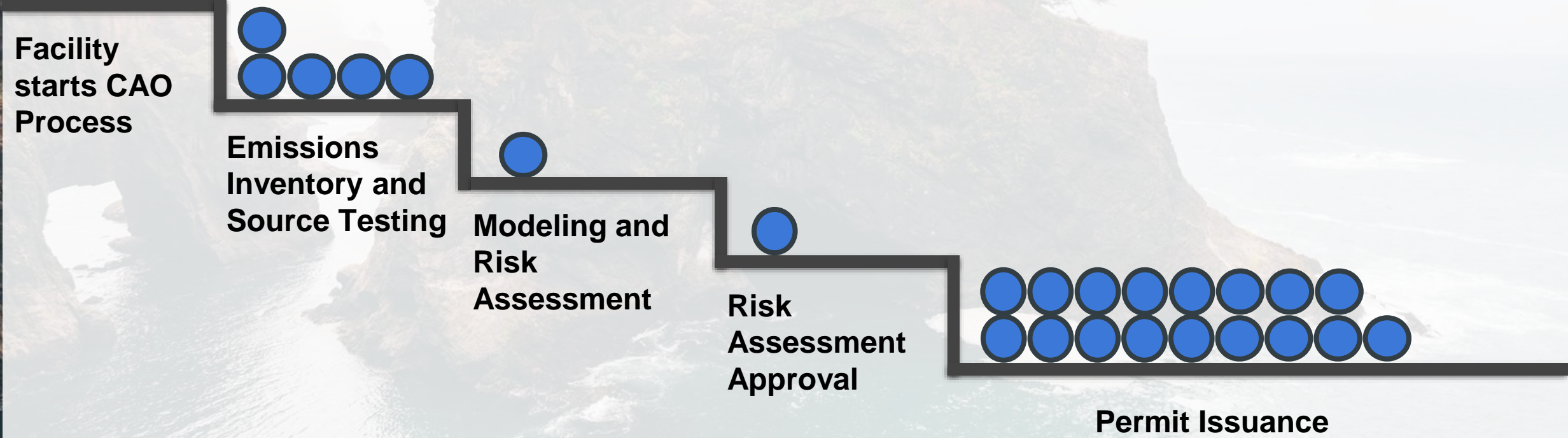
**Regulate to
reduce risk**



community engagement and public involvement



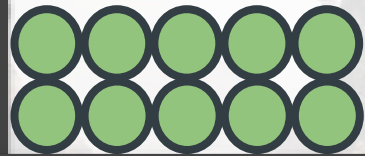
New facilities in Cleaner Air Oregon



Existing facilities in Cleaner Air Oregon



Facility starts CAO Process



Emissions Inventory and Source Testing



Modeling and Risk Assessment



Risk Assessment Approval

Risk Reduction¹

Permit Issuance

¹Risk reduction is only applicable to existing facilities

Comparing Progress



Facility starts CAO Process

Emissions Inventory and Source Testing

Modeling and Risk Assessment

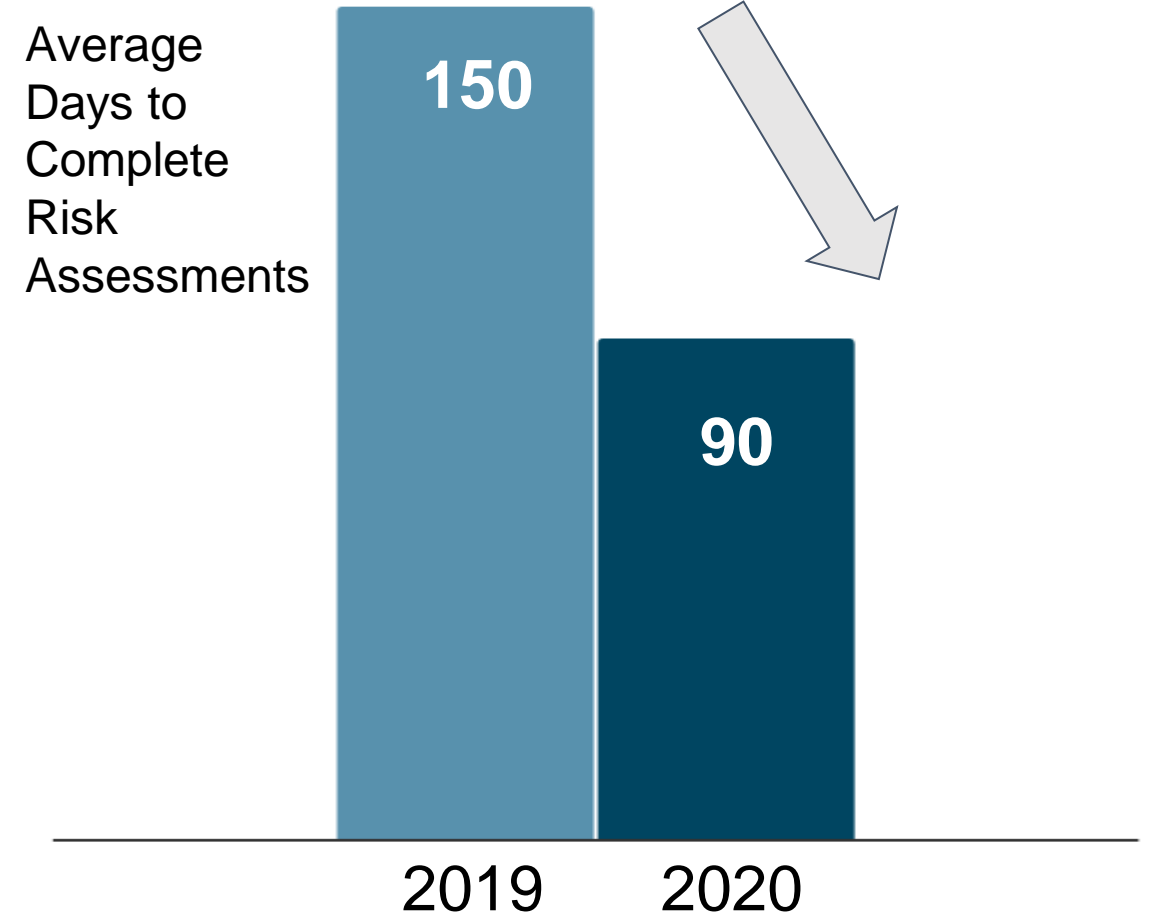
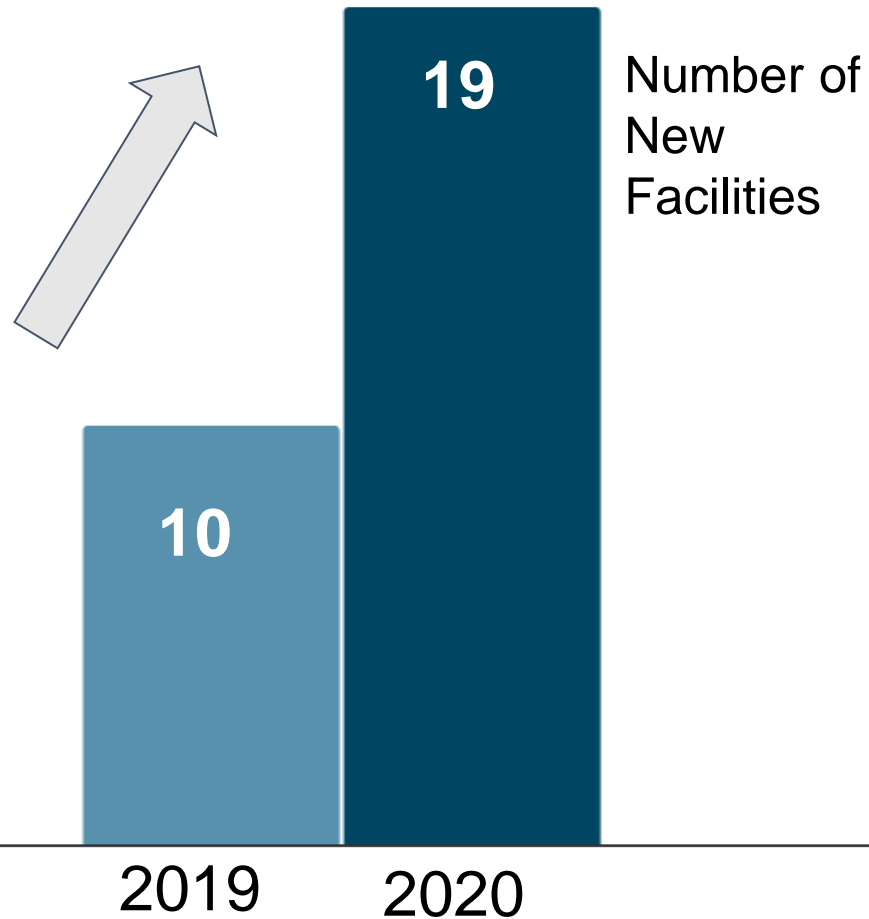
Risk Assessment Approval

Risk Reduction¹

Permit Issuance

¹Risk reduction is only applicable to existing facilities

Completing New Facility Risk Assessments



Working with Businesses

- Encourage early and frequent communication with facilities and consultants throughout CAO process
- Provide technical assistance to small businesses
- Attend and support workshops and other forums to share lessons learned and understand challenges
- Share lessons learned using FAQs and guidance

Resources for Facilities and Consultants

State of Oregon Department of Environmental Quality
Cleaner Air Oregon – Toxics Emissions Unit Quick Guide
 Revised On: 7/24/2020

Each type of Toxics Emissions Unit has a different designation and reporting requirement. This table summarizes how to designate and report risk for each TEU type.

TEU Designation	Criteria for Qualification	Report Emissions	Report Risk	Compare to Risk Action Levels
Gas Combustion TEUs	A TEU that combusts natural gas, propane, liquefied petroleum gas or, with written approval, pretreated landfill, digester, or biogas. [OAR 340-245-0050(5)]	Yes	Yes	No ¹
Aggregated TEUs ¹	Multiple TEUs at a facility with cumulative risk below the Aggregate TEU Risk Action Level (OAR 340-245-8010 Table 1) [OAR 340-245-0020(8)]	Yes		
Exempt TEUs ²	Exempt TEUs can be categorically insignificant or trace: • Categorically Insignificant: OAR 340-200-0020, excluding subsection (a) and some maintenance and repair shops • Trace: A TEU that is not likely to emit toxic air contaminants in more than trace amounts, such that it does not appear on Safety Data Sheets. [OAR 340-245-0060(3)]		No ³	
Significant TEUs	A TEU that does not meet the criteria for a gas combustion, aggregated, or exempt TEU.		Yes	

¹ TEUs that emit toxic air contaminants from both a gas combustion exempt process and non-exempt processes can exceed process. Non-exempt processes must compare risk to the Risk Action Levels.
 Written approval from DEQ for Aggregated and Exempt TEUs is required prior to submitting a Risk Assessment.
² If a facility requests to be a de minimis source, risk from approved aggregated TEUs must be added to the Source Risk or Level. For all other sources, the risk from qualified aggregated TEUs do not need to be added to the Source Risk when calculating the Source Risk or Level.
³ Exempt TEUs must be listed in the emissions inventory but the calculation of toxic air contaminant emissions do not need to be included.

RECOMMENDED PROCEDURES FOR TOXIC AIR CONTAMINANT HEALTH RISK ASSESSMENTS

July 2020

Step-by-Step Guide for Facilities

- Cleaner Air Oregon Home
- Background And Overview
- For Community
- For Facilities
 - ▶ **Step-By-Step Guide For Facilities**
- Frequently Asked Questions For Facilities

The Cleaner Air Oregon program evaluates facility risk based on toxic air contaminant emissions and proximity to exposure locations. This step-by-step guide includes instructions and recommended procedures for facilities going through the Cleaner Air Oregon program. A [video tutorial](#) is available to provide an overview of the resources and risk assessment process.

To be transparent with neighboring communities, the status of a facility's risk assessment, submitted documents, and DEQ responses can be found on individual [facility web pages](#). At any point in the process, you can email us at cleanerair@deq.state.or.us or contact your permit writer for assistance.

Step 1: Pre-Application Forms, Fees, and Schedule

Step 2: Emissions Inventory and Source Testing

The Emissions Inventory submittal (AQ405CAO [R](#)) identifies all toxic emission units, process activity levels, toxic air contaminants, appropriate emission factors, material balance, and emissions calculations (including assumptions, references and methodologies). At this stage, DEQ or the facility determines if source testing will be conducted to complete the Emissions Inventory.

The following information should be provided:

- Required Form: [AQ405CAO \[R\]\(#\)](#)
- Identification of Toxic Emission Units (TEUs) [R](#) (Quick Guide)
- Activity by TEU (e.g., actual, requested potential, capacity, maximum daily)
- Identification of Toxic Air Contaminants (TACs) by TEU
- Identification of control devices and efficiencies by TEU
- Identification of emission factors by TEU
- Identification of material balance emission approach by TEU

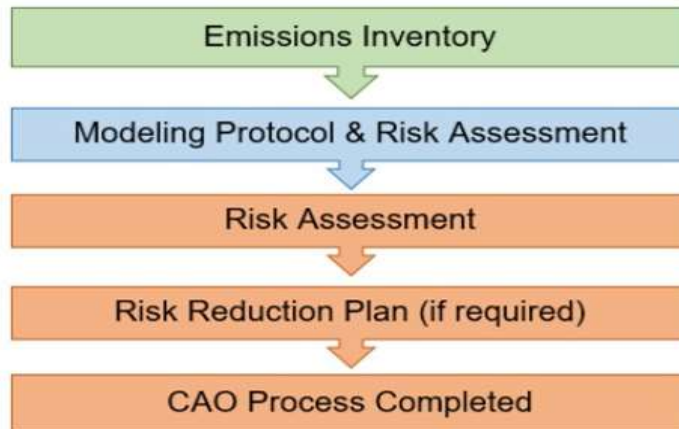
Working with Communities

- Work closely with community members and other interested parties to provide information about emissions and risks, and get input that can help improve accuracy of assessments
- Recently hired full time Community Engagement liaison and coordinator
- Building capacity in vulnerable and disproportionately impacted communities
- Use web-based resources to provide current information about assessments

Resources for Community Members

Facility-Specific Web Pages

Air Toxics assessment process



Legend: Risk Assessment Process

- Not Submitted
- Submitted and in review
- Approved by DEQ
- Not Required

Emissions Inventory

Aug. 26, 2019: Facility called in to CAO program.

- [DEQ call-in letter](#)

Nov. 25, 2019: Facility submitted Emissions Inventory

Jan. 23, 2020: DEQ sent comment letter requesting supporting information

- [DEQ response letter](#)

Feb. 19, 2020: Facility submitted the following documents in response to DEQ's comment letter:

- Cover Letter
- Attachment 1: Revised AQ405CAO (approved)
- Attachment 2: [Supporting Calculations](#)
- Attachment 3: [Safety Data Sheets](#)

March 9, 2020: DEQ approves Emissions Inventory

- [DEQ approval letter](#)
- [Approved Emissions Inventory](#)

Modeling Protocol & Risk Assessment

DEQ's Draft Community Engagement Toolkit



This block contains four icons arranged vertically on the left side of a grey rectangular area. From top to bottom: a yellow circular map with a grid; a clipboard with a checklist and a pencil; a grid of 12 small portrait photos of diverse people; and a tablet displaying a survey form. To the right of these icons, the words "Assess", "Plan", "Engage", and "Evaluate" are stacked vertically in a large, black, sans-serif font.

Case Studies



Case Study: Metal Foundry

Existing Facility
New Facility

Metal Foundry

Data Center

Wood Products

Portable Incinerator

Food Processor

EI

MP

WP

RA

P

CAO Status
Emissions Inventory



Lessons Learned

- High community interest
- Unique source testing challenges
- New emissions data from this sector

Case Study: Data Center

Existing Facility
New Facility

Metal Foundry

Data Center

Wood Products

Portable Incinerator

Food Processor



CAO Status
Modeling Protocol & Risk
Assessment Work Plan



Lessons Learned

- New emissions data for emergency generators
- Increased familiarity = shorter time to issue permit

Case Study: Wood Products

Existing Facility
New Facility

Metal Foundry

Data Center

Wood Products

Portable Incinerator

Food Processor



CAO Status
Risk Assessment



Lessons Learned

- High-quality emissions data available for this industry = faster EI approval
- Larger source with low risk

Case Study: Portable Source

Existing Facility
New Facility

Metal Foundry

Data Center

Wood Products

Portable Incinerator

Food Processor

EI

MP

WP

RA

P

CAO Status
Permit Issuance



Photo Credit: Vern Fisher - Monterey Herald

Lessons Learned

- Modeling tools developed for a portable source = faster approval for future ACIs
- Unique community engagement challenges

Case Study: Food Processor

Existing Facility
New Facility

Metal Foundry

Data Center

Wood Products

Portable Incinerator

Food Processor



CAO Status
Permit Issuance



Lessons Learned

- Findings from the risk assessment at this facility will speed up CAO process for other, similar facilities in the state
- Low risk source

Takeaways and Opportunities

- Existing facility risk assessments are complex, timely issuance of new permits is a priority
- Program implementation requires coordination and integration with existing DEQ staff and resources
- Community members want their input addressed in assessments and permitting outcomes
- As we gain experience, program updates will help streamline and clarify requirements, and further develop DEQ's air toxics programs

Future EQC Involvement

