

DEQ Public Hearing

NEXT Renewable Fuels

Zoom Meeting | April 27, 2022



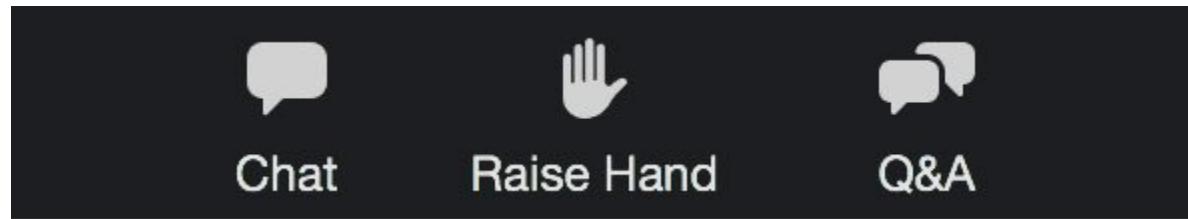
State of Oregon
Department of Environmental Quality

Using Zoom Webinar

- Hear the audio either through your computer or by calling in by phone with the phone number provided upon registration.
- Note that you will not be able to speak unless the host enables your audio and then you unmute.

Asking a Question

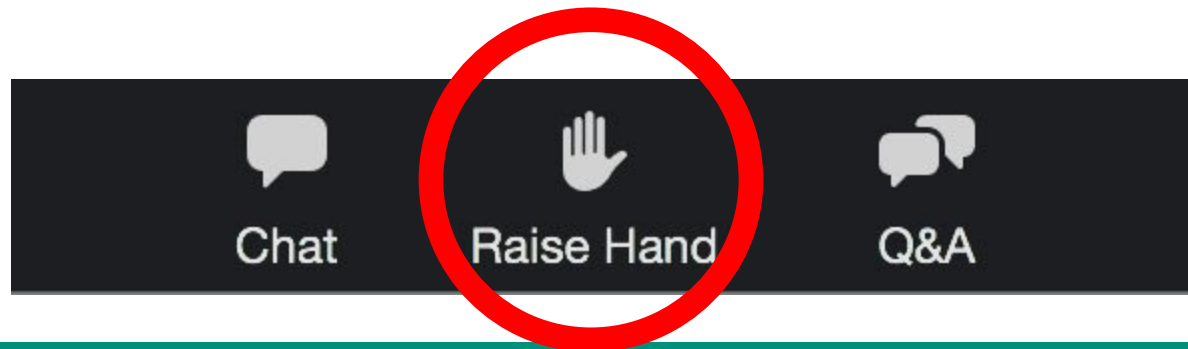
- You should see the following along the bottom of your screen.



- To ask a question: type it into the Q&A or raise your hand and the host will un-mute you. (*9 if you're on the phone)
- Use chat if you're having technical difficulties.

Making a Comment

- During the public hearing portion of the meeting, raise your hand to comment
- We'll call folks in the order their hand was raised
- Remember *9 if you're listening by phone
- State and spell your first and last name



Purpose of Today's Meeting

Why are we here

- Provide information about the air quality permit
- Answer questions
- Receive verbal public comment

As always, please speak for yourself and be respectful of others.

Public Comment Period

- Open now through May 26 at 5 p.m.
- Go to ordeq.org/next-renewables
- Verbal and written comments given equal weight
- DEQ can only consider comments about the air quality permit

Air Quality Permit

David Graiver, Permit Writer



State of Oregon
Department of Environmental Quality

What we'll discuss

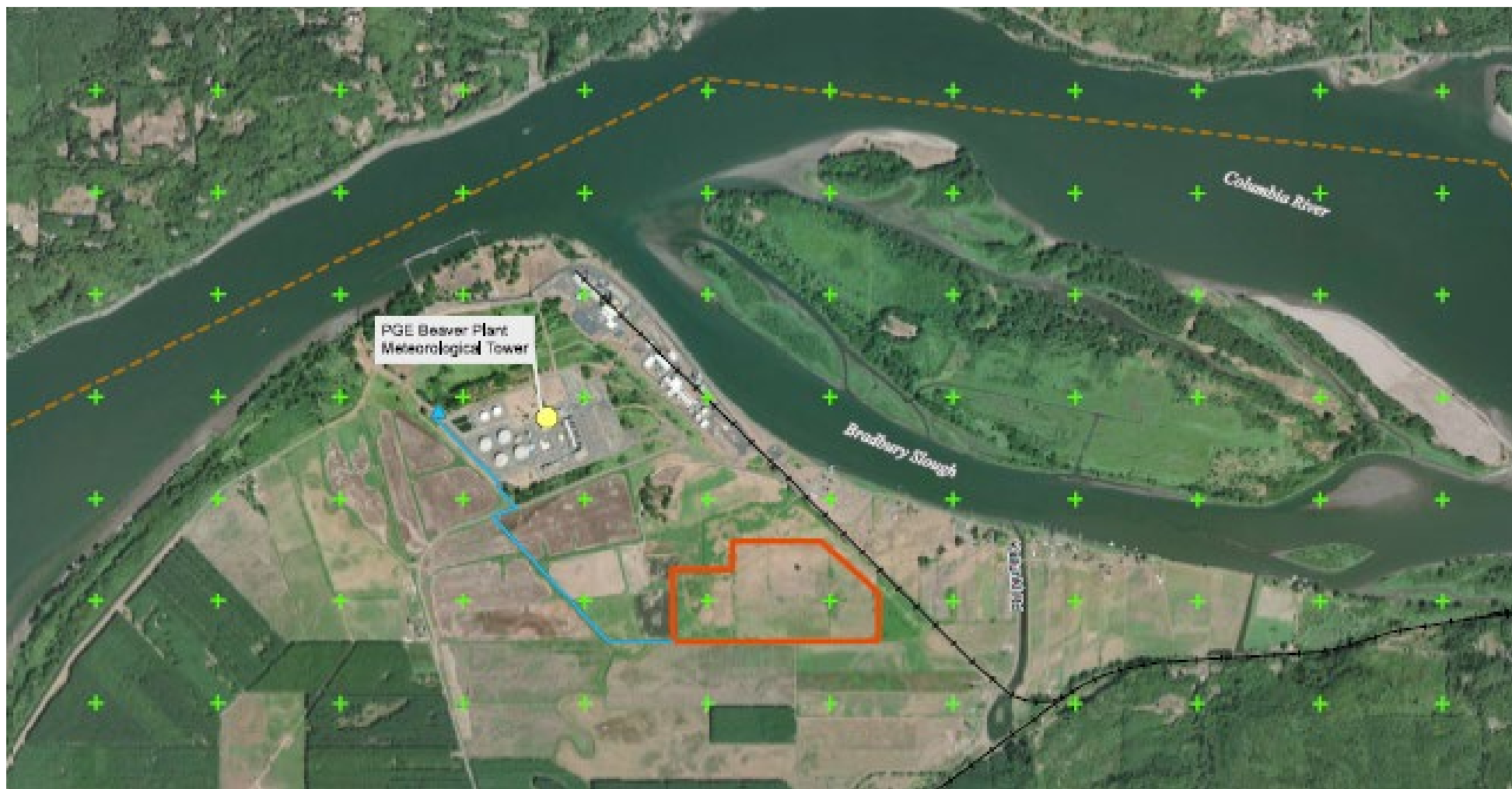
Topics

- What is NEXT?
- Why NEXT needs an air quality permit
- What the permit regulates
- Compliance and monitoring
- Cleaner Air Oregon assessment and requirements

What Will NEXT Do?

- Renewable Fuel Production
- Raw Materials
 - Vegetable oils
 - Animal fats
- Final Products
 - Renewable Diesel
 - Renewable Jet Fuel
 - Renewable Naphtha

NEXT Renewables Location



What is the air quality permit for?

- Standard Air Contaminant Discharge Permit
- Synthetic Minor Source
- Potential to emit:
 - Less than 100 ton/year for all criteria pollutants
 - Less than 10 ton/yr for individual HAP
 - Less than 25 ton/yr for combined HAP

Proposed Emission Limits

Pollutant	Proposed Limit (ton/year)	DEQ Generic Limit (ton/yr)	State New Source Review?
Total Particulate Matter	27	24	Yes
Coarse Particulate Matter	27	14	Yes
Fine Particulate Matter	27	9	Yes
Oxides of Nitrogen	39	39	No
Carbon Monoxide	99	99	No
Volatile Organic Compounds	70	39	Yes
Sulfur Oxides	39	39	No
Hydrogen Sulfide	9	9	No
Greenhouse Gases (Total)	1,152,905	74,000	No
Greenhouse Gases (Excluding Biogenic)	436,938	74,000	No



Proposed Emissions Units

- External Combustion Units
- Material Handling (filter aid & bleached earth)
- Liquid Storage Tanks
- Acid Gas Regeneration Unit & Sour Water Stripper
- Emergency Engines
- Emergency Flare
- Liquid Loadout (Rail and Truck)

Proposed Control Devices

- Selective Catalytic Reduction (SCR)
 - Converts Nitrogen Oxides to Nitrogen and Water
 - $\text{NO}_2 + \text{NH}_3 \rightarrow \text{N}_2 + \text{H}_2\text{O}$
- Will Control NOx from:
 - Boilers
 - Feed & Isomerization Heaters
 - Hydrogen Plant
 - Jet Fractionator

Proposed Control Devices

- Oxidation Catalyst
 - Promotes Conversion of Carbon Monoxide to CO₂
 - $\text{CO} + \text{C}_x\text{O}_y \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
- Will Control CO from:
 - Boilers
 - Feed & Isomerization Heaters
 - Hydrogen Plant
 - Jet Fractionator

Proposed Control Devices

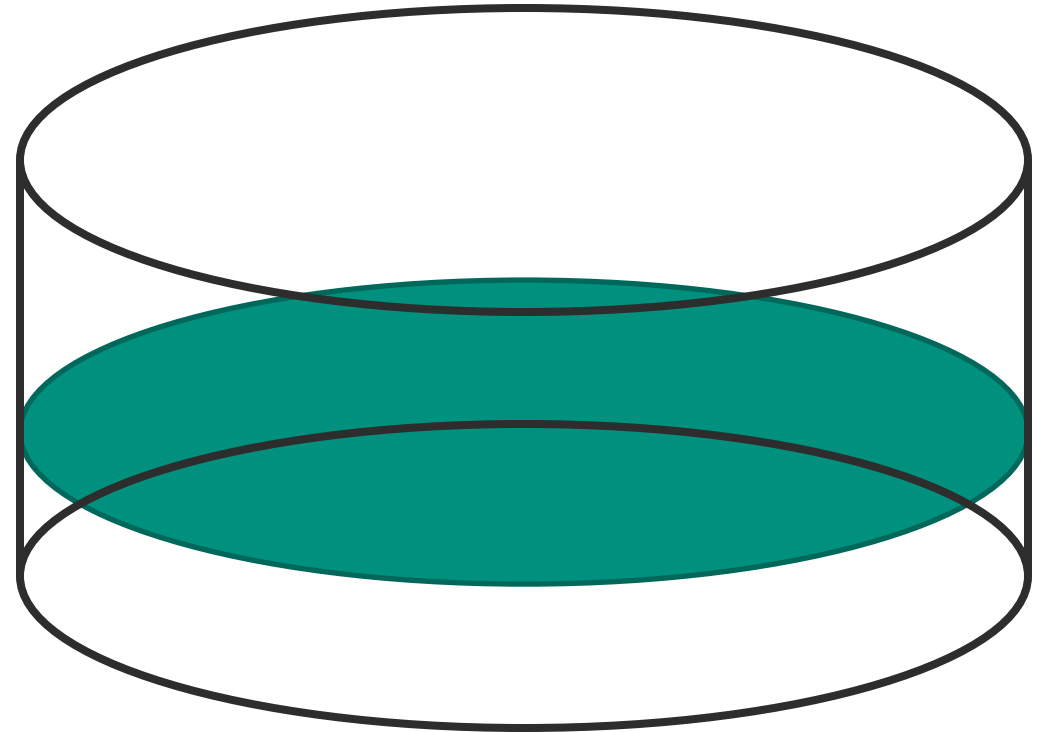
- Particulate Filtration
 - Removes Particulate Matter
 - Like a Furnace Filter or Face Mask
- Tier 4 Certified Engines
 - Reduced NO_x, CO, VOC, and PM

Proposed Control Devices

- Particulate Filtration with Sorbent Injection
 - Sorbent Converts SO_2 to Na or Ca Sulfate
 - Sulfate particle captured by Filter
- Leak Detection and Repair (LDAR)
 - Periodically monitor piping for leaks

Proposed Control Devices

- Tank Floating Roofs
 - Reduce air space between liquid surface and roof
 - Roof moves as liquid volume changes



Proposed Control Devices

- Thermal Oxidizer
 - Combust VOCs
 - Convert TRS to SO₂
 - Part of Acid Gas Regenerator Unit & Sour Water Stripper
- Vapor Combustion Unit
 - Combust VOC vapors from Rail & Truck Loadout

Continuous Emissions Monitoring

- Boilers, Jet Fractionator, Hydrogen Plant
 - Continuously monitor NO_x emissions
 - Emission Action Level set at 5 ppm NO_x
 - Permittee must take immediate action to return emissions to 5 ppm or below
- Monitor Must Meet:
 - DEQ Continuous Monitoring Manual, and
 - EPA Requirements (40 CFR 60 Appendices B and F)

Other Permit Conditions

- Performance Testing
- Emission Standards and Performance Standards
- Plant Site Emission Limits (PSEL)
- Compliance Demonstration Formulas
- Monitoring and Recording Requirements
- Reporting and Notification Requirements

Air Quality Analysis

- Air Dispersion Modeling
 - Coarse Particulate Matter (PM₁₀)
 - Fine Particulate Matter (PM_{2.5})
 - Nitrogen Dioxide (NO₂)

Air Quality Analysis

NEXT Renewables							
Total Modeled concentrations compared to the SILs							
Pollutant	Averaging Period	Operating Scenario	Maximum Direct Impact ug/m3	Secondary PM2.5 ug/m3	Total Impact ug/m3	Class II SIL ug/m3	Exceed SIL y/n
PM10	24-hr	Normal	0.96		0.96	1.0	n
		Startup	0.94		0.94	1.0	n
		Shutdown	0.92		0.92	1.0	n
	Annual	Normal	0.11		0.11	0.2	n
		Startup	0.11		0.11	0.2	n
		Shutdown	0.11		0.11	0.2	n
PM2.5	24-hr	Normal	0.95	0.038	0.99	1.2	n
		Startup	0.94	0.038	0.98	1.2	n
		Shutdown	0.92	0.038	0.96	1.2	n
	Annual	Normal	0.11	0.0019	0.11	0.3	n
		Startup	0.11	0.0019	0.11	0.3	n
		Shutdown	0.11	0.0019	0.11	0.3	n
NO2	1-hr	Normal	7.89		7.89	8.0	n
		Startup	5.66		5.66	8.0	n
		Shutdown	5.23		5.23	8.0	n

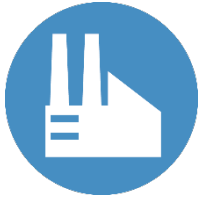
Cleaner Air Oregon

Kenzie Billings, CAO Project Manager



State of Oregon
Department of Environmental Quality

How Cleaner Air Oregon Works



Report air toxics

Companies to report use of over 600 pollutants to state regulators



Assess risk

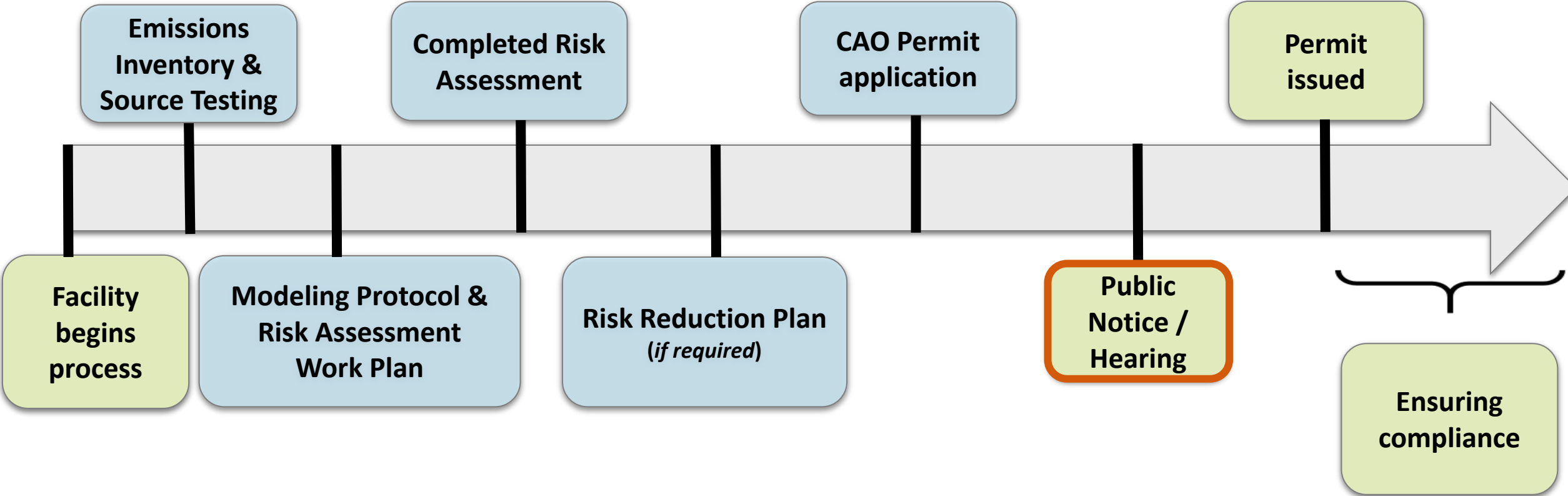
Facilities calculate potential health risks to people who live, work, and go to school nearby



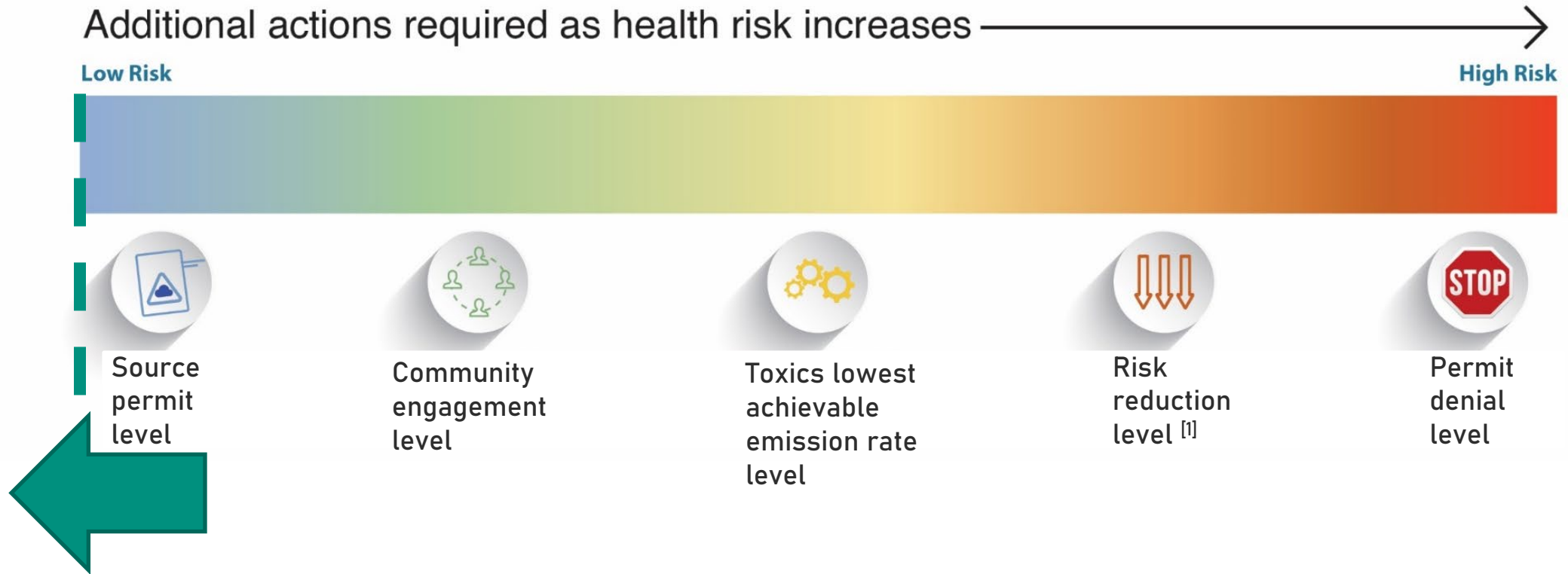
Regulate to reduce risk

Companies would have to act if the levels of air toxics they emit exceed health risk action levels (RALs)

Cleaner Air Oregon Process



Risk Action Levels – New Sources



[1] – Not available for new sources.

After the Public Comment Period

- DEQ evaluates all written and verbal comments (written comments due by 5 p.m. May 26)
- Send comments by email to:
NWRAQPermits@deq.state.or.us
- DEQ may modify the proposed permit based on comments

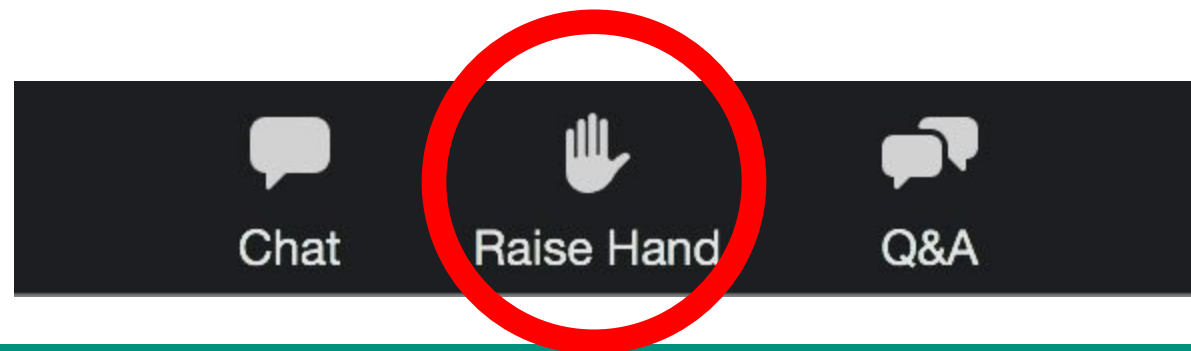
Questions?



State of Oregon
DEQ Department of Environmental Quality

Public Hearing

- Raise your hand to comment
- We'll call folks in the order their hand was raised
- Remember *9 if you're listening by phone
- State and spell your first and last name



1 minute left

15 seconds left

Please wrap up

Thank you!



State of Oregon
Department of Environmental Quality