

NEXT Renewables Information Meeting

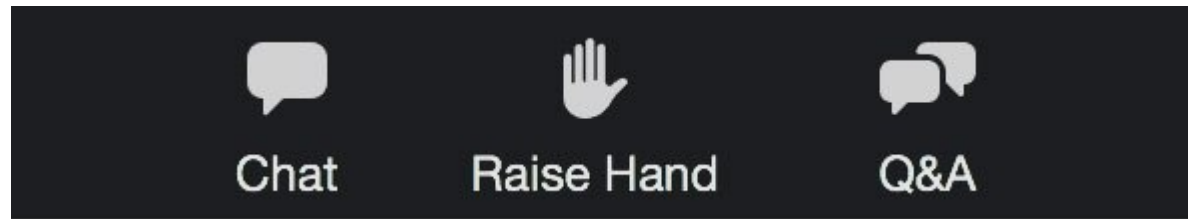
Zoom Meeting | Sept. 7, 2021

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.

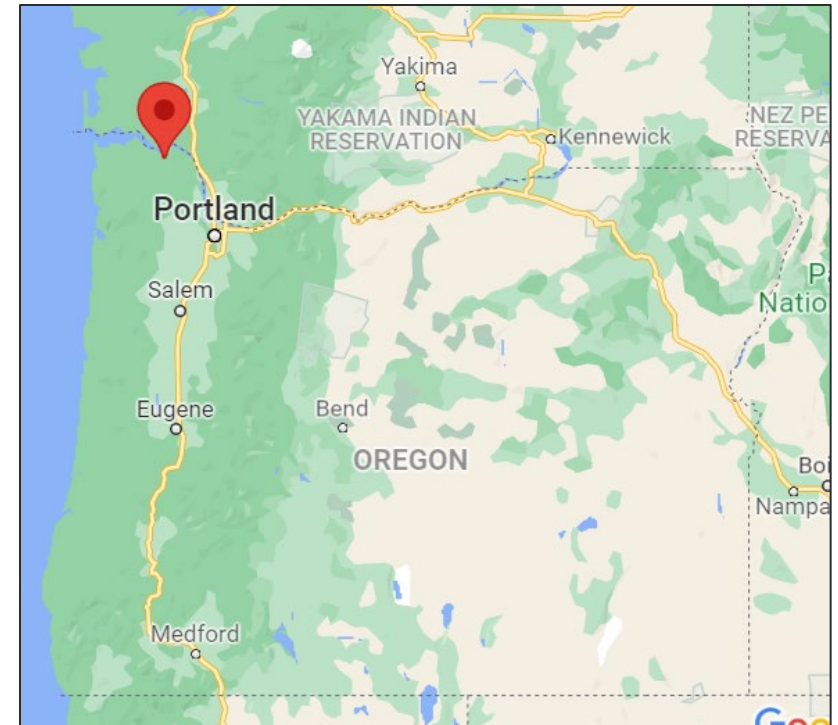
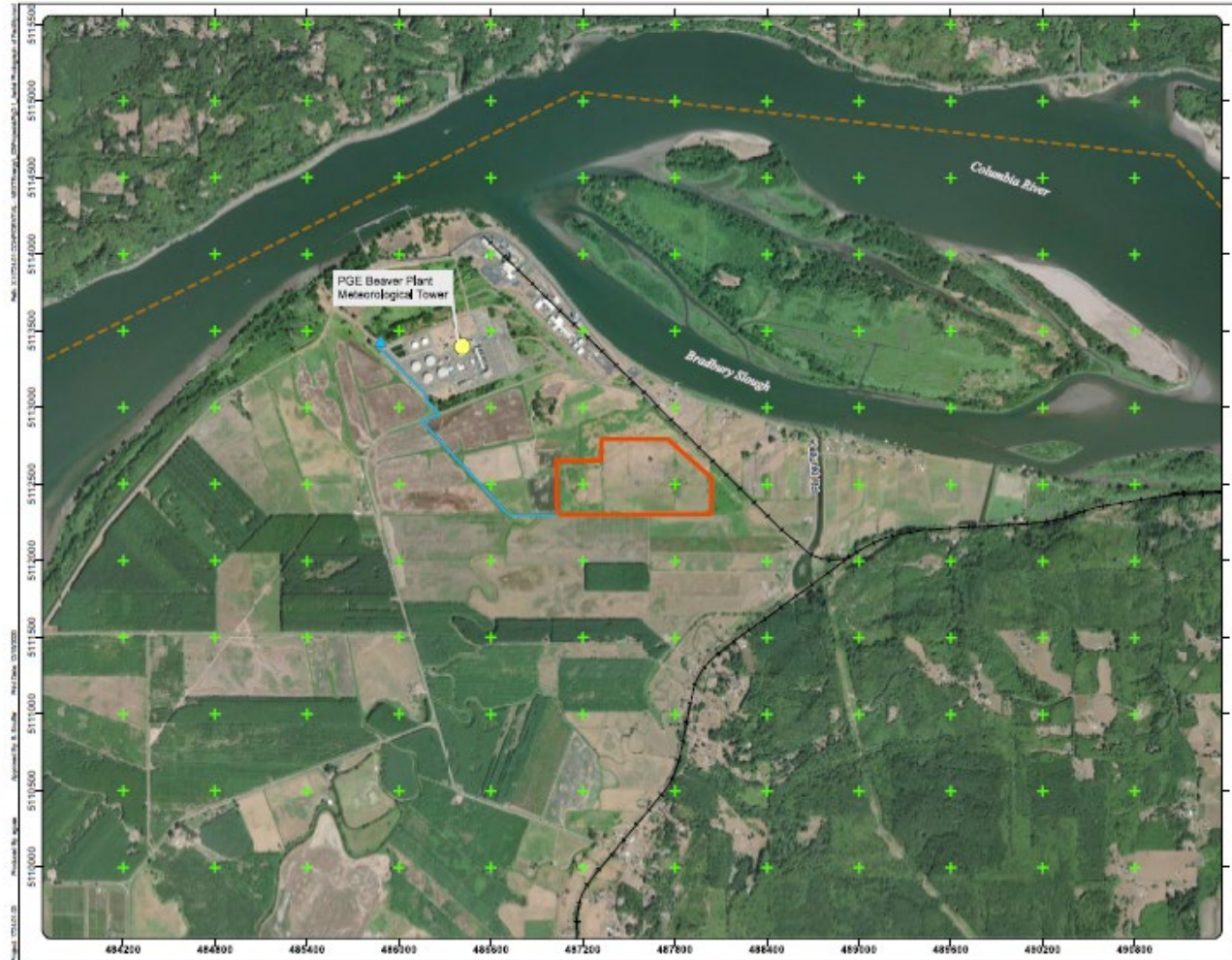
Asking a Question

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



- To ask a question: type it into the Q and 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.

NEXT Renewables Location



Purpose of Today's Meeting

Why are we here

- Provide information about the ways DEQ regulates the NEXT Renewables production facility
- Answer questions

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

Items Covered Tonight

- Air Quality
 - Permitting
 - Cleaner Air Oregon
- Water Quality
 - Industrial Stormwater Permitting
 - Construction Stormwater Permitting
 - 401 Certification
 - Wastewater from production

Air Quality

David Graiver, Air Quality Permit Writer

J.R. Giska, Cleaner Air Oregon Program Engineer

Air Quality Permit

David Graiver, Air Quality Permit Writer

What is the air quality permit for?

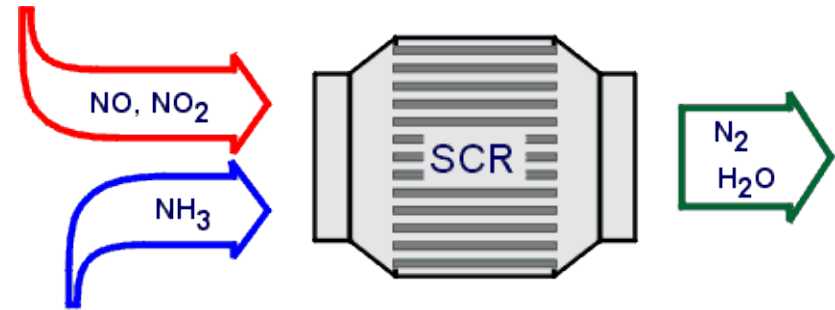
- Standard Air Contaminant Discharge Permit
- Synthetic Minor Source
- Potential to emit:
 - Less than 100 ton/year for all criteria pollutants
 - Less than 10 ton/yr for individual HAP
 - Less than 25 ton/yr for combined HAP

Proposed Emission Limits

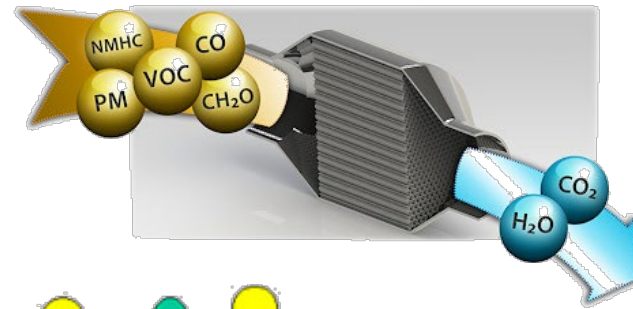
Pollutant	Proposed Limit (ton/year)	DEQ Generic Limit (ton/yr)	State New Source Review?
Total Particulate Matter	27	24	Yes
Coarse Particulate Matter	27	14	Yes
Fine Particulate Matter	27	9	Yes
Oxides of Nitrogen	39	39	No
Carbon Monoxide	99	99	No
Volatile Organic Compounds	72	39	Yes
Sulfur Oxides	39	39	No
Greenhouse Gases (Total)	1,152,675	74,000	No
Greenhouse Gases (Excluding Biogenic)	305,489	74,000	No

Proposed Control Devices

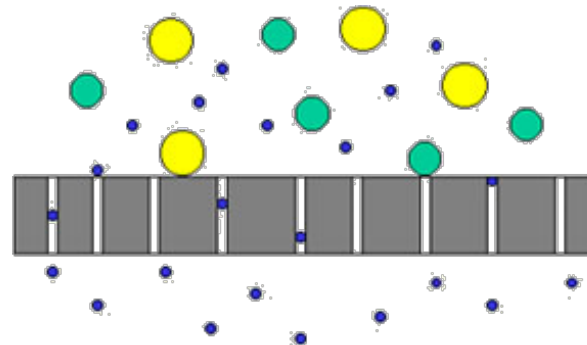
- Selective Catalytic Reduction



- Oxidation Catalyst

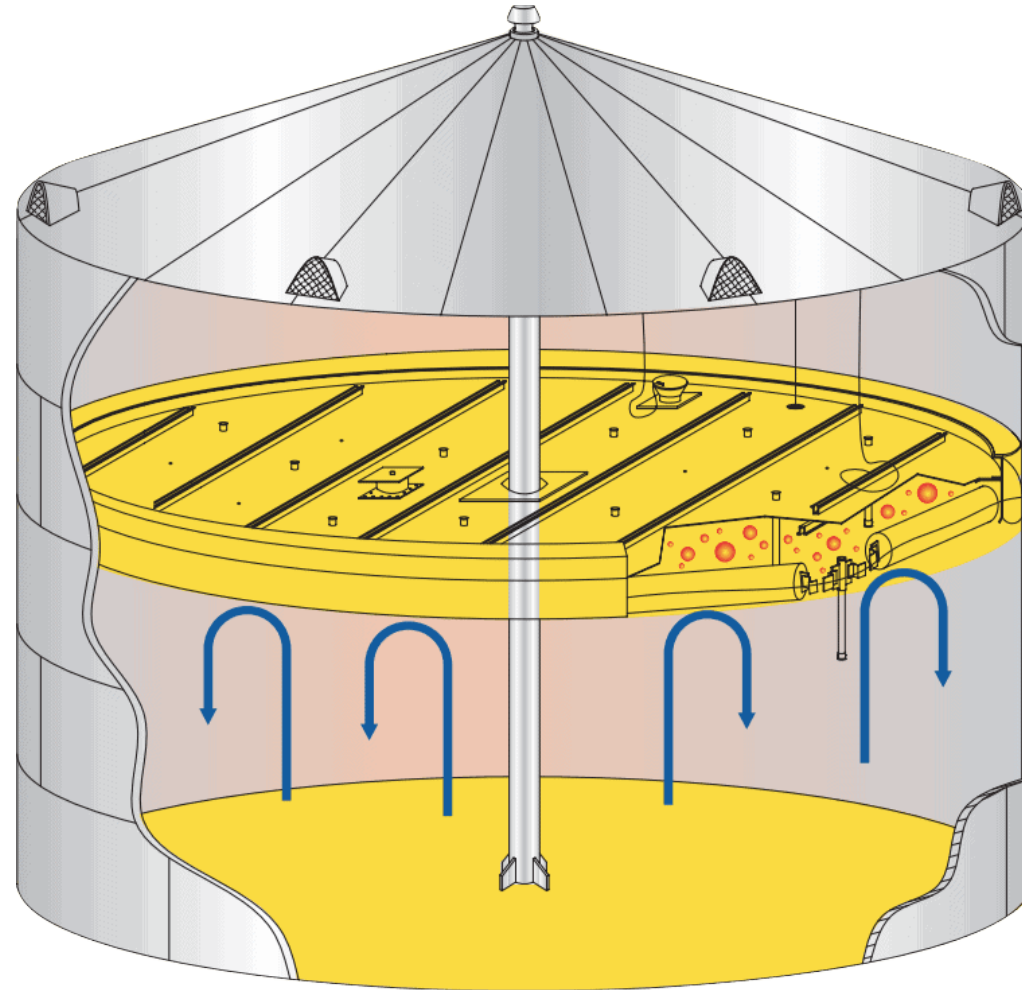


- Particulate Filtration



Proposed Control Devices

- Tank Floating Roofs



- <https://mtrth.com/wp-content/uploads/2020/08/IFR.png>

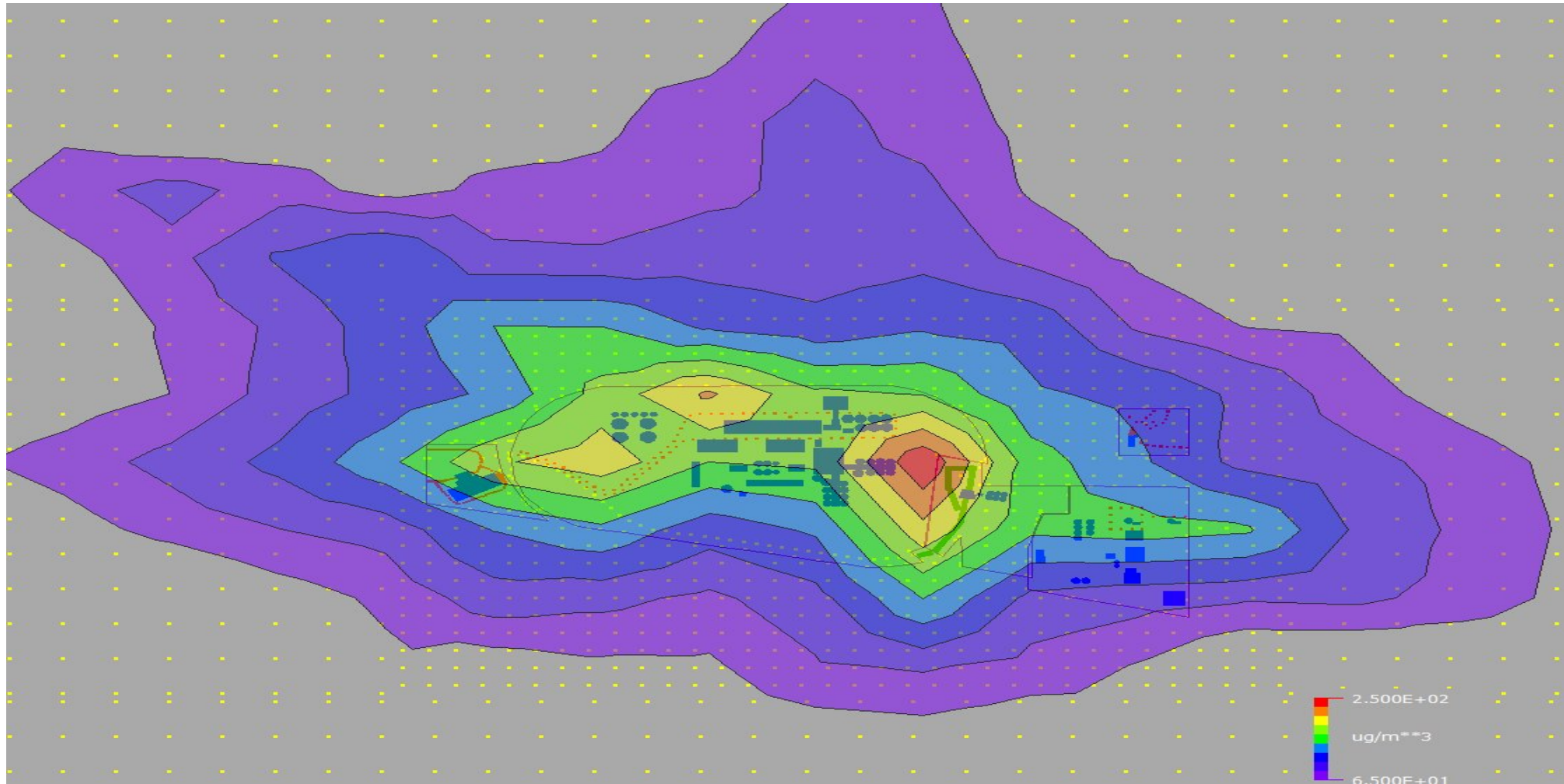
Air Quality Analysis

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

Air Quality Analysis



Air Quality Analysis

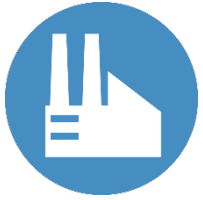


Questions?

Cleaner Air Oregon Emissions Inventory

J.R. Giska, Cleaner Air Oregon Program Engineer

How Cleaner Air Oregon Works



Report air toxics

Companies to report use of over 600 pollutants to state regulators



Assess risk

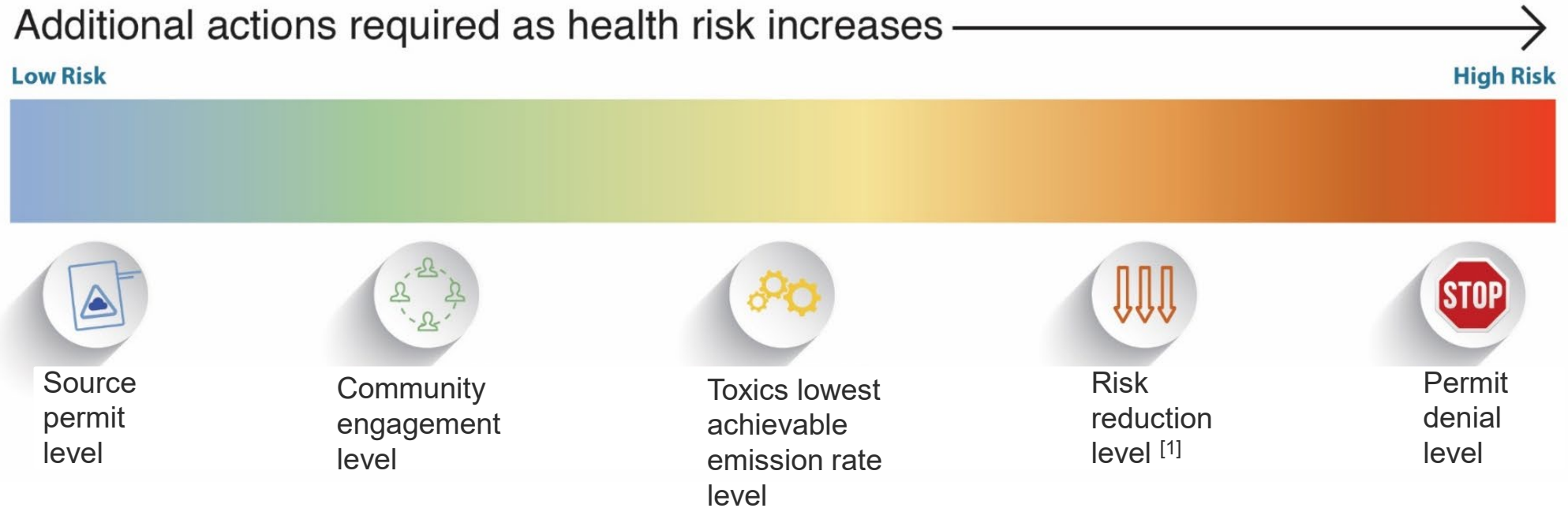
Facilities calculate potential health risks to people who live, work, and go to school nearby



Regulate to reduce risk

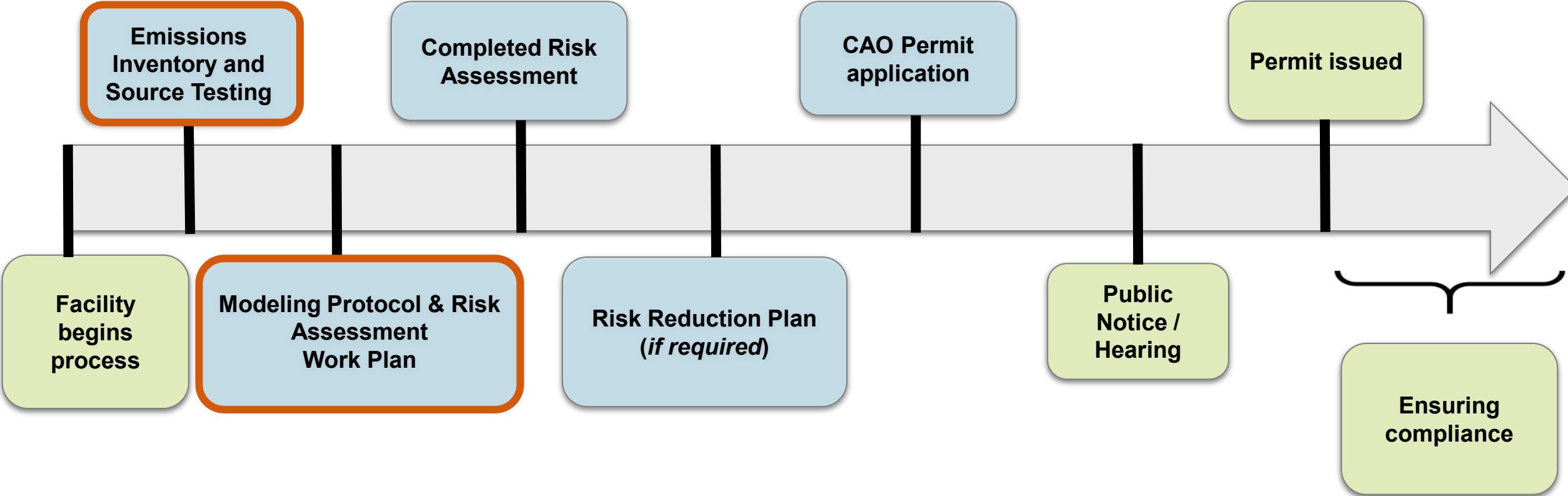
Companies would have to act if the levels of air toxics they emit exceed health risk action levels (RALs)

Risk Action Levels – New Sources



[1] – Not available for new sources.

Cleaner Air Oregon Process



Emissions Inventory

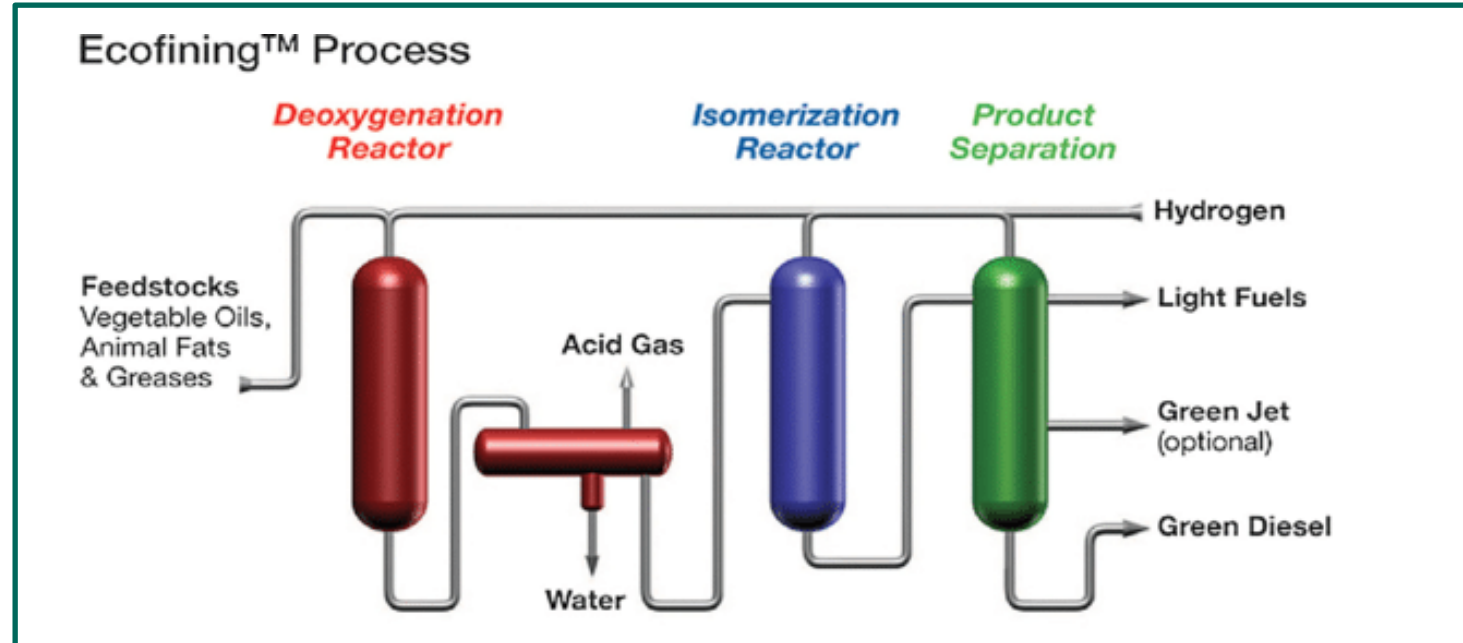
Emissions Inventory Basics

- Which activities emit Toxic Air Contaminants (TACs)?
- Where are each of the emissions coming from?
- What types of TACs are being emitted?
- How much of each TAC is being emitted?
- Are there controls? How well do they work?

NEXT Renewable Energy Production

Ecofining Process

- Feedstocks:
 - Fats
 - Oils
 - Greases
- Products:
 - Diesel
 - Jet Fuel
 - Naphtha



Amin, A. "Review of diesel production from renewable resources: Catalysis, process kinetics and technologies". Ain Shams Engineering Journal. 2019

Next Renewables Primary Emission Sources

- Natural Gas combustion – boilers and process heaters
- Hydrogen Gas Production
- Ecofining Units
- Waste gas treatment
- Product Loading
- Controls

Preliminary Takeaways

- Large, complex source
- NEXT Energy's primary emissions will be from Natural Gas combustion^[1]
- Hydrogen Sulfide is the largest process emission
- The facility is proposing to use several pollution control devices to control emissions

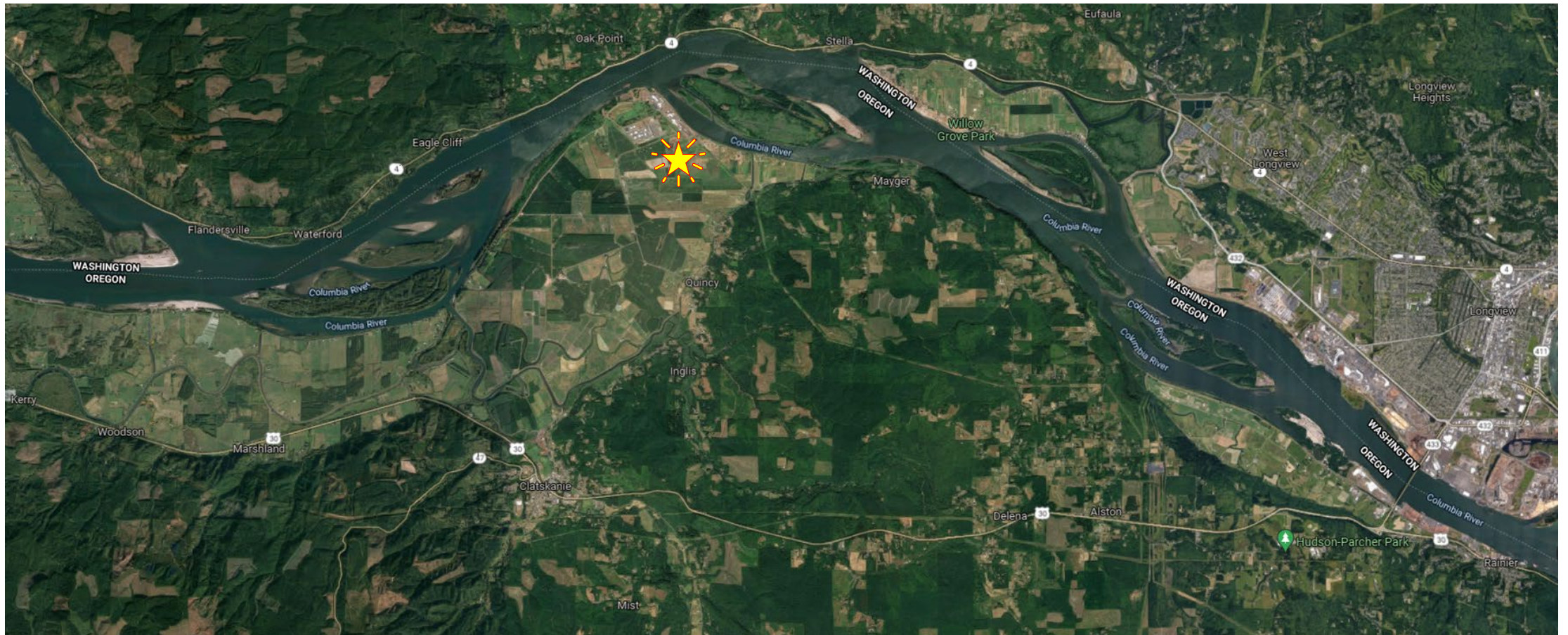
[1] – The CAO program has a gas combustion exemption for compliance of final Source Risk.

Modeling Protocol and Risk Assessment Work Plan

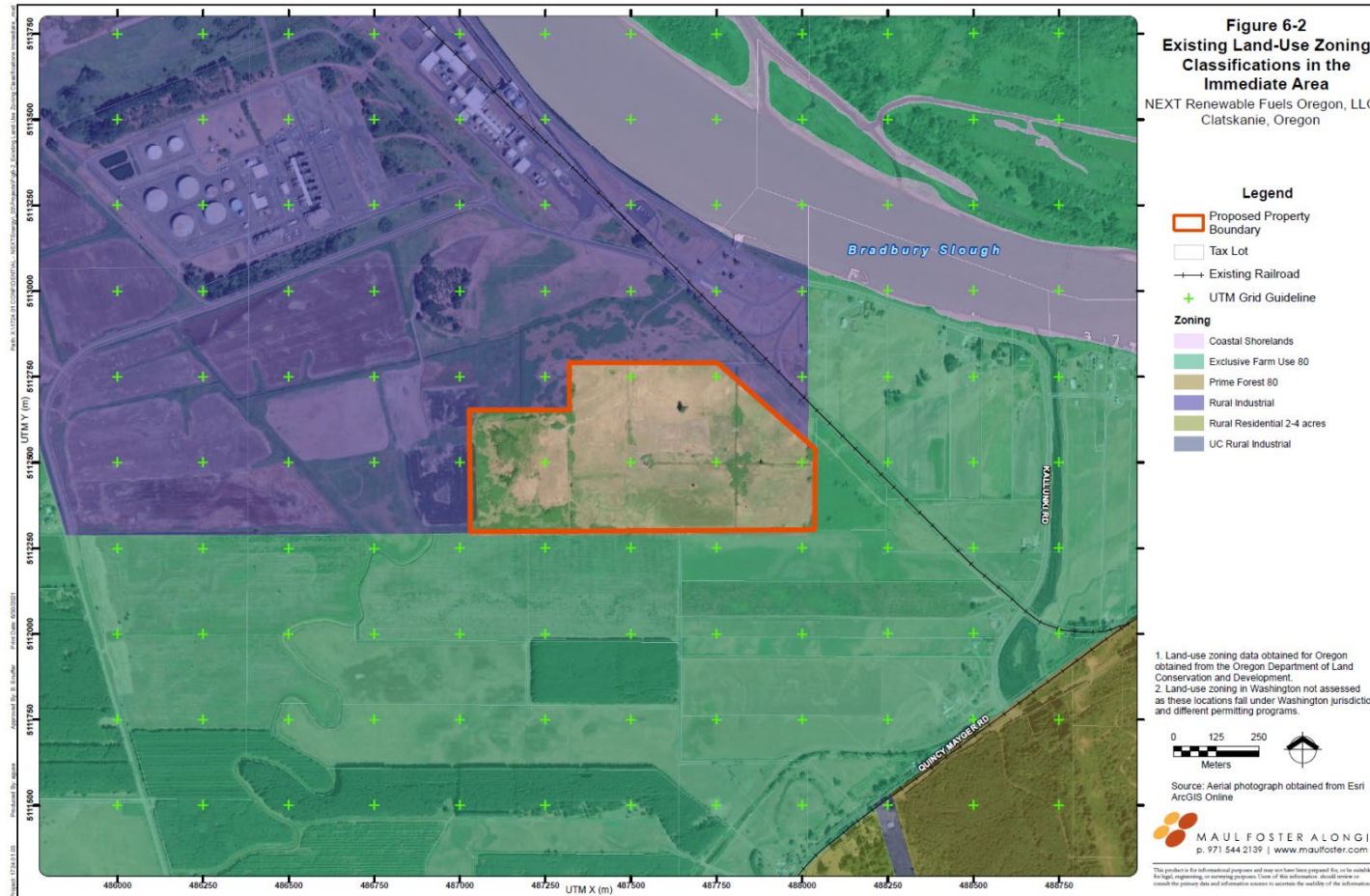
Modeling Protocol and Work Plan Data

- Where are Toxic Air Contaminants (TACs) emitted?
 - Stacks: height, temperature, velocity
 - Fugitives: location and type
- Which way does the wind blow?
 - Meteorological data
- What does the surrounding community look like?
 - Zoning
 - Exposure Locations (e.g., Residential, School, Acute)

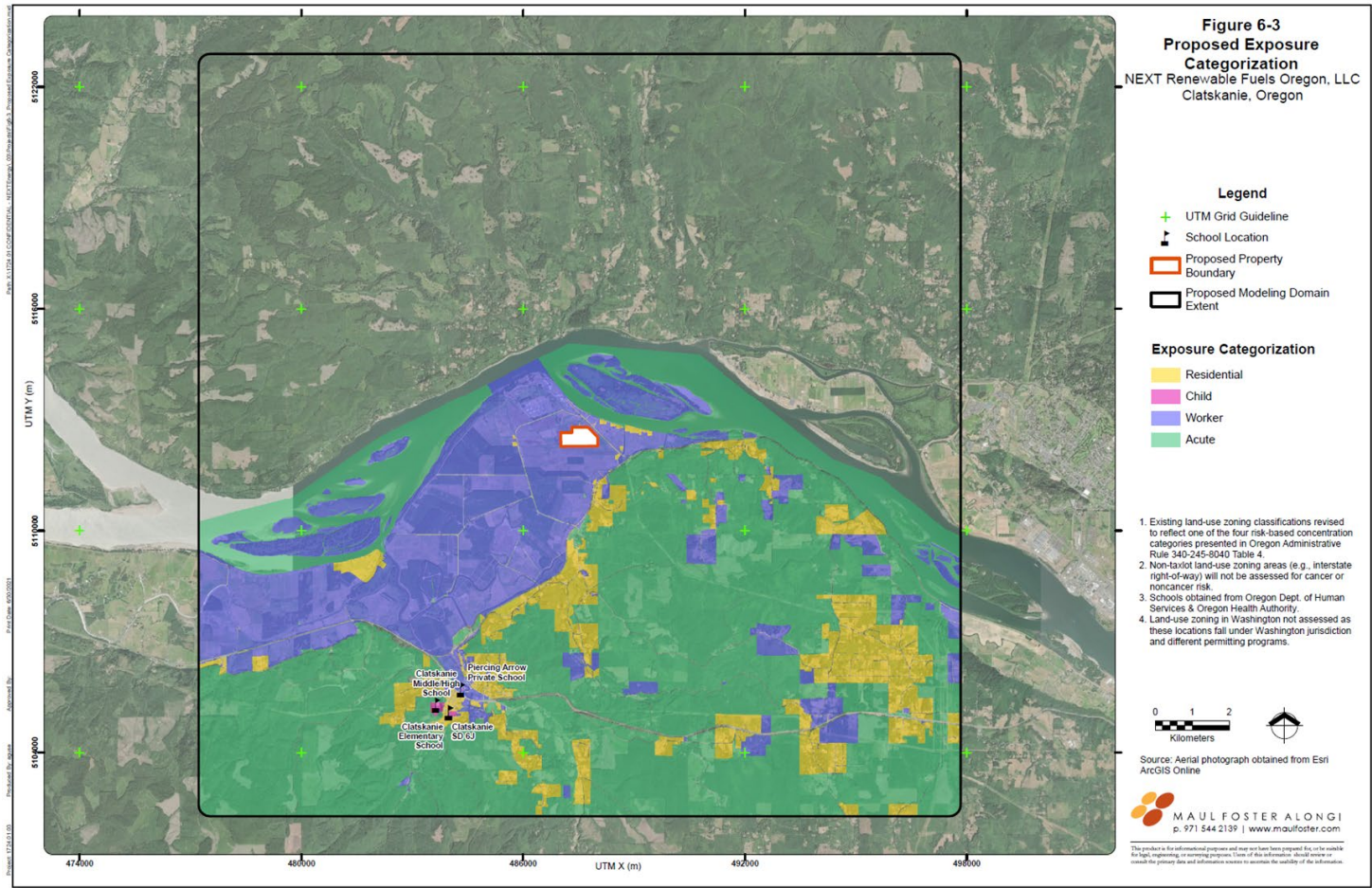
Next Renewables Location



Modeling Data - Zoning



Modeling Data – Exposure Locations

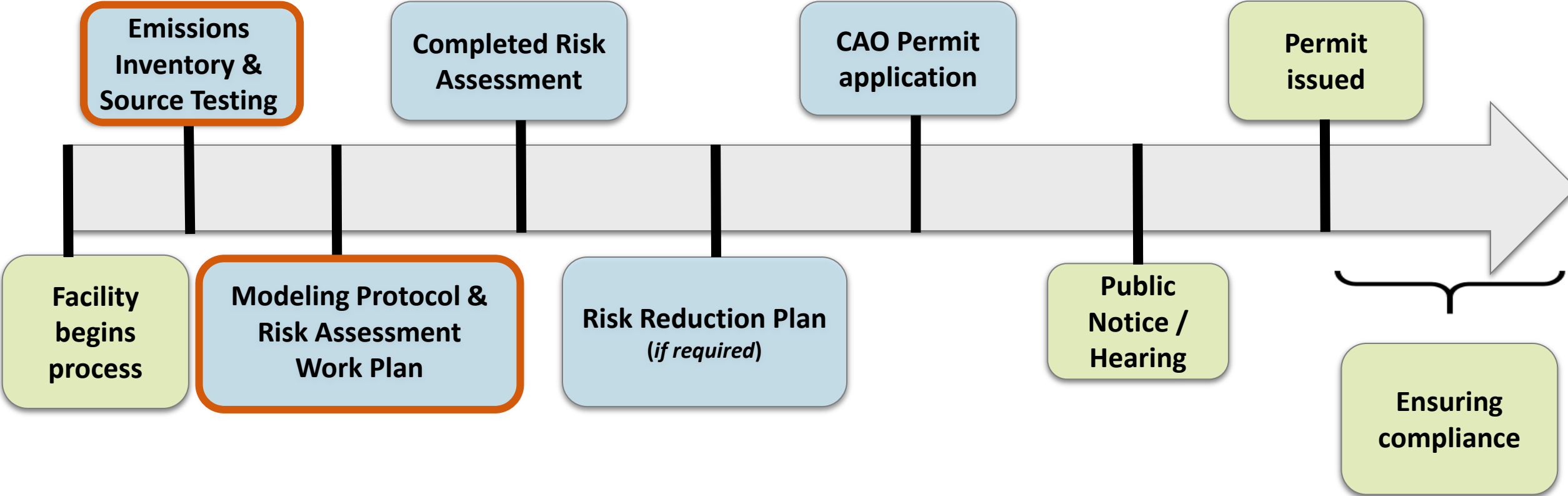


Preliminary Takeaways

- Large, complex source
- Primarily adult, nonresidential (Worker) exposure locations
- Tax lots with homes specified
- Far from sensitive receptors
- Community input on exposure locations encouraged

Next Steps

Cleaner Air Oregon Process



Cleaner Air Oregon Next Steps

- DEQ is finalizing review of the Emissions Inventory, Modeling Protocol, and Risk Assessment Work Plan
- Upon approval, NEXT will submit their final risk assessment for DEQ review
- Further steps depend on the results of the risk assessment

Other Relevant AQ Programs

- Green House Gas Reporting Program
- Clean Fuels Program
- Climate Protection Program

Questions?

Water Quality

Mike Kennedy, Water Quality Specialist

Jeff Brittain, 401 Program Coordinator

Tiffany Yelton Bram, Wastewater Permit Manager

Stormwater Permits

Mike Kennedy, Water Quality Specialist

NEXT Renewables Stormwater Permits

- Industrial stormwater permit
- Construction stormwater permit
- ***What's the difference?***

Industrial Stormwater General Permit

- 1200-Z industrial stormwater general permit for on-going stormwater management at the facility
- NEXT has not applied for 1200-Z permit coverage at this point.

Industrial Stormwater General Permit

What is required?

- Stormwater permit application
- Stormwater Pollution Control Plan
- Land Use Compatibility Statement

Construction Stormwater General Permit

- General permit means each permit is the same with no special conditions for different facilities
- **Need a permit because:** construction work will disturb more than one acre
- **Permit is for:** construction activities associated with the proposed NEXT Renewables project

Construction Stormwater General Permit

What is required?

- Stormwater permit application
- Erosion and Sediment Control Plan
- Land Use Compatibility Statement

Questions?

401 Water Quality Certification

Jeff Brittain, 401 Program Coordinator

401 Water Quality Certifications

- Required for federal permits or licenses which result in discharge to federally jurisdictional waters
- Allows state to certify that a projects meet:
 - Certain Clean Water Act requirements
 - State water quality standards
 - Other water quality requirements of State law

401 Water Quality Certifications

- Projects are evaluated based on potential impacts to
 - Water quality criteria
 - Beneficial Uses
 - Antidegradation
- Decision options
 - Certify, waive, deny

401 Water Quality Certifications

- Opportunity for public comment
 - Joint public notice with US Army Corps of Engineers
 - To be available on the Corps public notice page [here](#)
 - Additional notices as appropriate

401 Water Quality Certifications

- Status of NEXT Renewable Fuels Oregon review?
 - Initial request and application submitted in January 2021
 - Revised application submitted July 2021
 - Denial issued by DEQ September 2021
 - DEQ is awaiting a new request for certification and additional information
 - Public comment period (TBD) to be established by US Army Corps of Engineers once a complete application is received

Questions?

Wastewater Permit

Tiffany Yelton-Bram, Wastewater Permit Manager

Wastewater once facility is in production

- The port of Columbia County has a permit under which they collect certain wastewaters from tenants and treat that wastewater before discharge to the Columbia
- The wastewater from production at NEXT is covered under this permit.
- The wastewater will be collected at NEXT and sent via pipe to the Port's treatment facility. The Port is responsible for compliance with their permit and for treating the wastewaters they accept from their tenants.
- Sewage from employee bathrooms and kitchen facilities will be treated in an onsite septic system.

Questions?

What's Next

- Air Quality
 - ACDP: When the draft is complete, DEQ will make it available for public comment, followed by a public hearing
- Water Quality
 - Stormwater: public comment periods for both the 1200-C and the 1200-Z
 - 401 certification: public comment period established by US Army Corps of Engineers

Sign up to get more information about all public notices at

<http://ordeq.org/publicnotices>

Thank you!

