Welcome to a discussion with the Oregon Department of Environmental Quality and Oregon Health Authority

An Informational Summary of Hollingsworth & Vose's Health Risk Assessment

Presentation followed by Q&A
June 30, 2025
Corvallis, Oregon

Using Zoom

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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. (Press *9 if you're on the phone.)

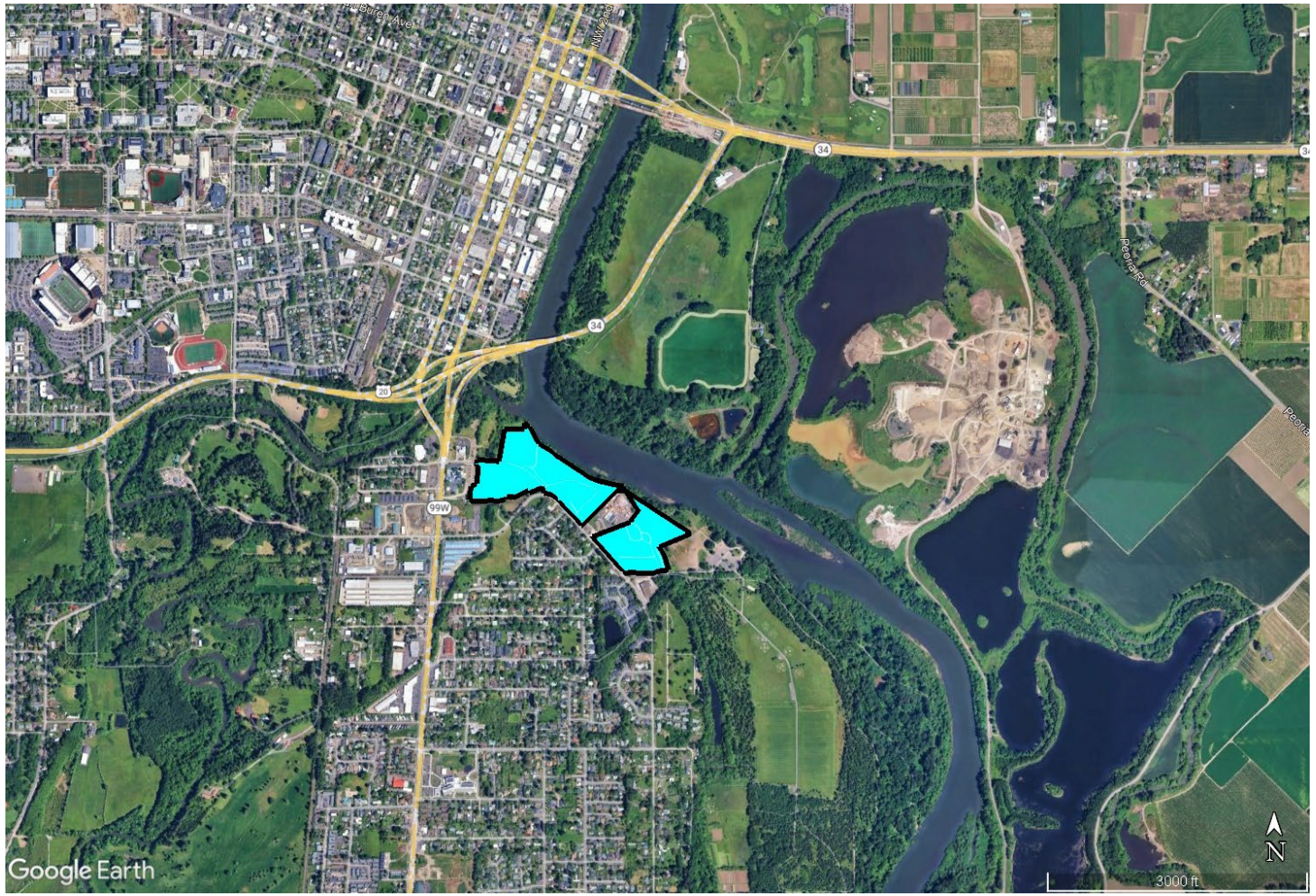
Introductions

- Julia DeGagne, Cleaner Air Oregon Project Engineer, DEQ
- Holly Dixon, Public Health Toxicologist, Oregon Health Authority
- Michael Eisele, Western Region Air Quality, DEQ
- Alex Haulman, Natural Resource Specialist, Western Region Air Quality, DEQ
- J.R. Giska, Cleaner Air Oregon Manager
- Mary Camarata, Regional Solutions Team, Western Region, DEQ
- Ryan Bellinson, Community Engagement Analyst, DEQ
- Dylan Darling, Western Region Public Affairs Specialist, DEQ

Overview for Today's Meeting

1. Presentation of Hollingsworth & Vose's Cleaner Air Oregon Health Risk Assessment
   - Background on Cleaner Air Oregon
   - Risk Assessment results and outcome
   - Discussion on glass fibers
2. Q&A and discussion: DEQ and OHA will answer questions and respond to concerns.

Hollingsworth & Vose Location and Orientation



- Located along the Willamette River in Corvallis, OR
- Manufacturers glass fibers
- Property boundary shown in blue

H&V Emission Release Points

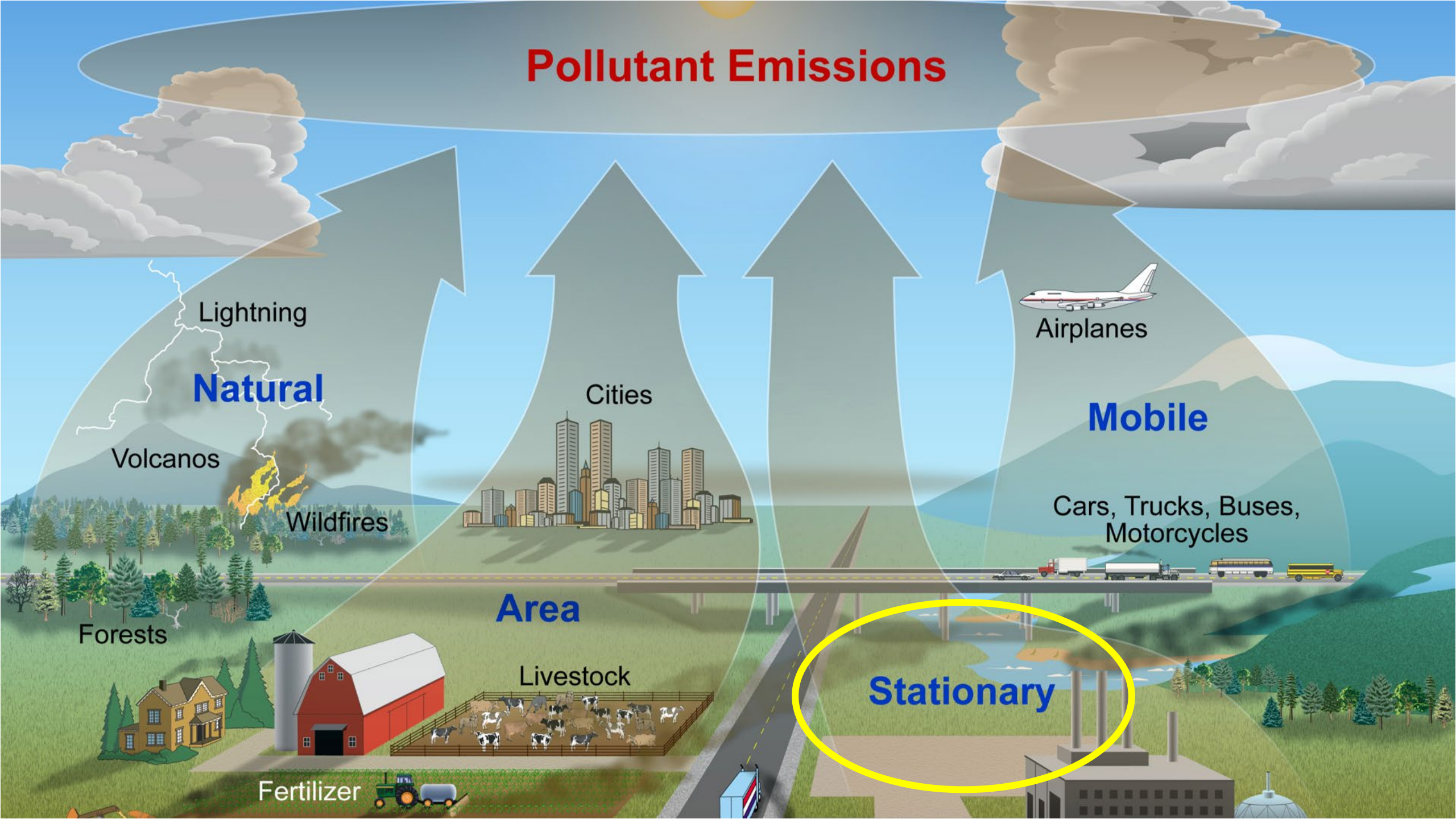
- Primary areas of glass production emissions

Other emitting units and supporting activities:

- Waste handling
- Emergency generators
- Cooling towers
- Storage silos
- Natural gas heaters
- Spray painting

Cleaner Air Oregon Overview

State of Oregon
DEQ Department of Environmental Quality


Pollutant Emissions
Lightning
Natural
Volcanos
Wildfires
Forests
Cities
Area
Livestock
Fertilizer
Airplanes
Mobile
Cars, Trucks, Buses,
Motorcycles
Stationary

The Cleaner Air Oregon Program

Report air toxics

Companies to report use of **over 600 pollutants** to DEQ.

Assess risk

Facilities calculate **potential health risk** to people who live, work, and go to school nearby.

Regulate to reduce risk

The **higher** the potential health risk the **more actions** the facility must take.

What is health risk?
How does CAO assess health risk?

Health Risks vs. Outcomes

Health Risk

Chance or probability of health problem happening

≠

Health Outcome

Health problems that have happened

Key Information for Risk Assessments

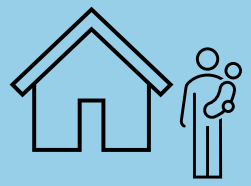
Toxicity

How harmful is a contaminant if someone's exposed to it?

Exposure

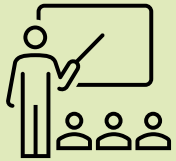
How often and for how long is someone exposed to a contaminant?

Locations where CAO Risk is Calculated



People in homes

- 24 hours per day
- 365 days per year
- 70 years



Children at school or child care

- 8 hours per day
- 250 days per year
- 12 years

Workers

- 8 hours per day
- 250 days per year
- 25 years

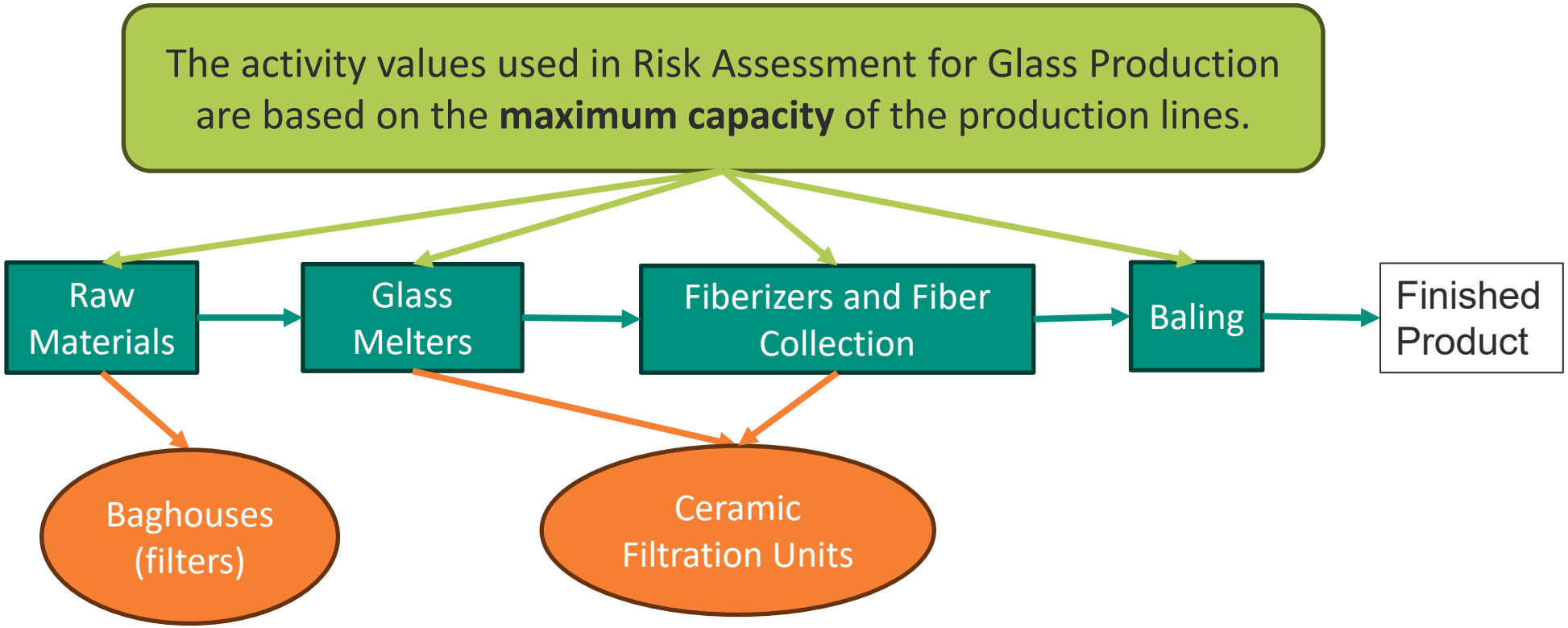
Places where people can spend several hours up to a day

Hollingsworth & Vose Cleaner Air Oregon Health Risk Assessment

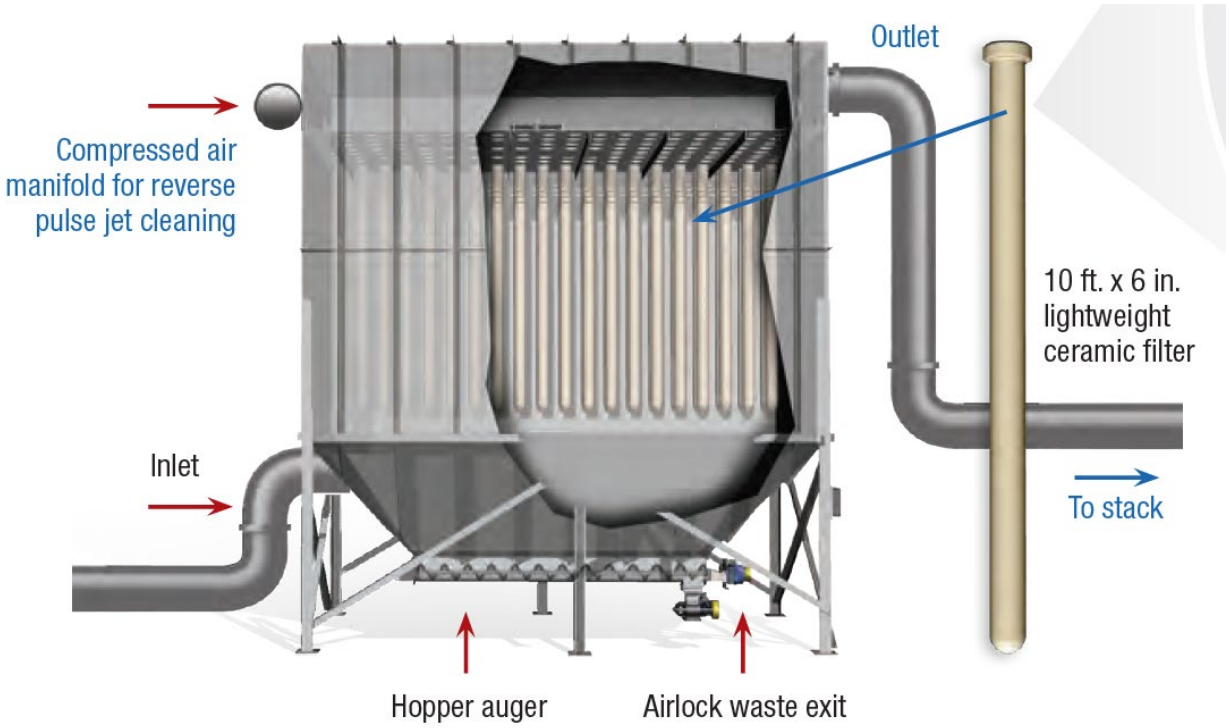
State of Oregon
DEQ Department of Environmental Quality

Process and Emissions Overview

1. Activity
2. Emission Units
3. Controls



Controls: Ceramic Filtration Units



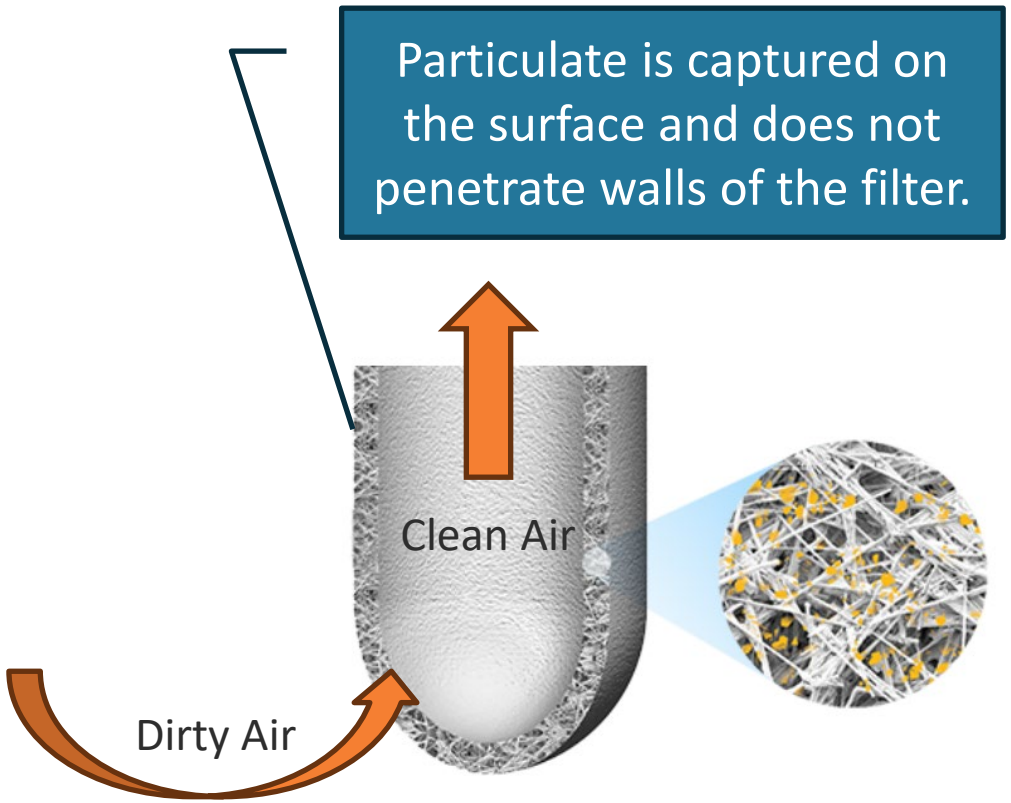
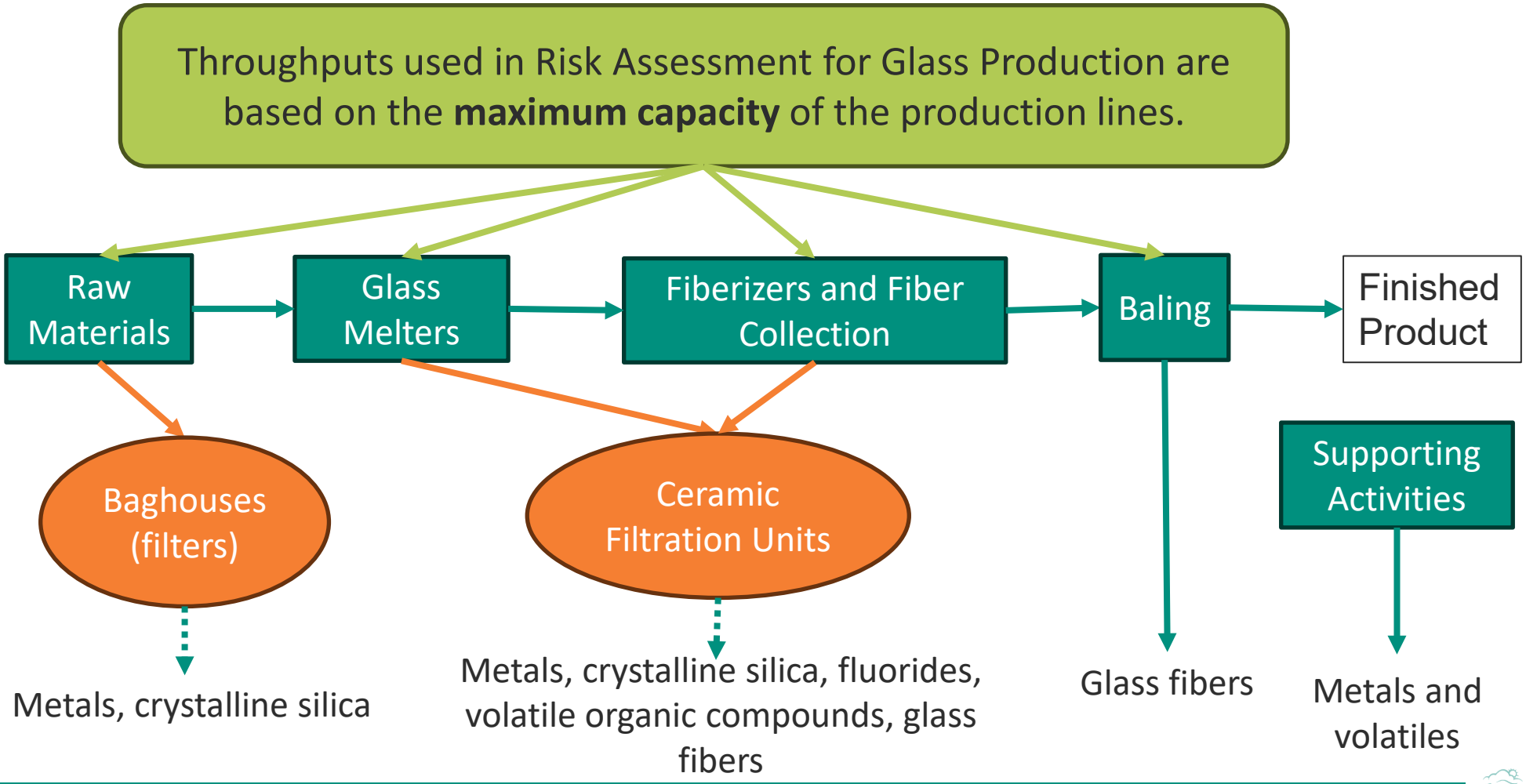


Image: Tri-Mer UltraCat Catalytic Filter Systems

Process and Emissions Overview

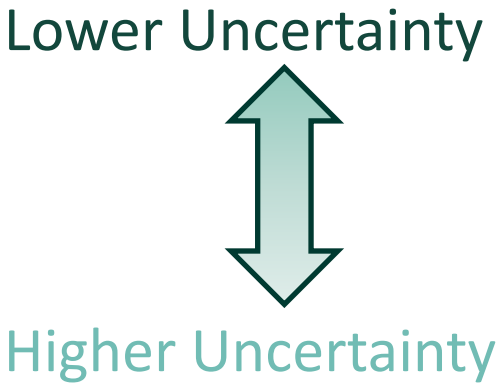
1. Throughputs
2. Emitting Units
3. Controls
4. Toxic Air Contaminants



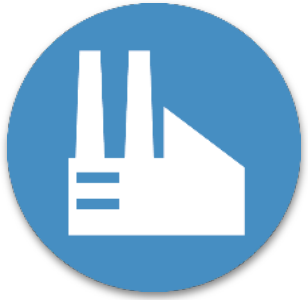
Emission Factor Development

Activity (for example, amount of product)	X	**Emission Factor** (pounds of contaminant per throughput unit)	=	**Emissions Rate** (pounds of contaminant emitted per year or day)

1. Site-specific stack testing
2. Representative emission factors
3. Engineering estimates



Air Dispersion Modeling



Facility emits pollutants
Measured as mass over time (pounds per year or day)

"AERMOD" Dispersion Model

People breathe in pollution
Measured as mass per volume of air (ug/m^3)

Emission rates are used to estimate concentrations in the air, considering **meteorology, terrain, and more.**

Risk Assessment Exposure Locations

Schools & Child Care

Homes

Workplaces

Parks

What do the results mean for my health?

Cancer Risk

Cancer risk is expressed as a probability in terms of additional cancer cases in a population

Represents 1,000 people

Background Cancer Rate
400,000 in a Million

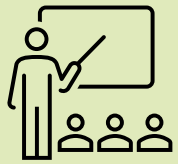
Excess Cancer Risk

One in a million
excess cancer risk
(400,001 cancer case)

Cancer Risk from H&V is Very Low

People in Homes

- 2.9 in a million excess cancer risk



Children at Schools or Child Care

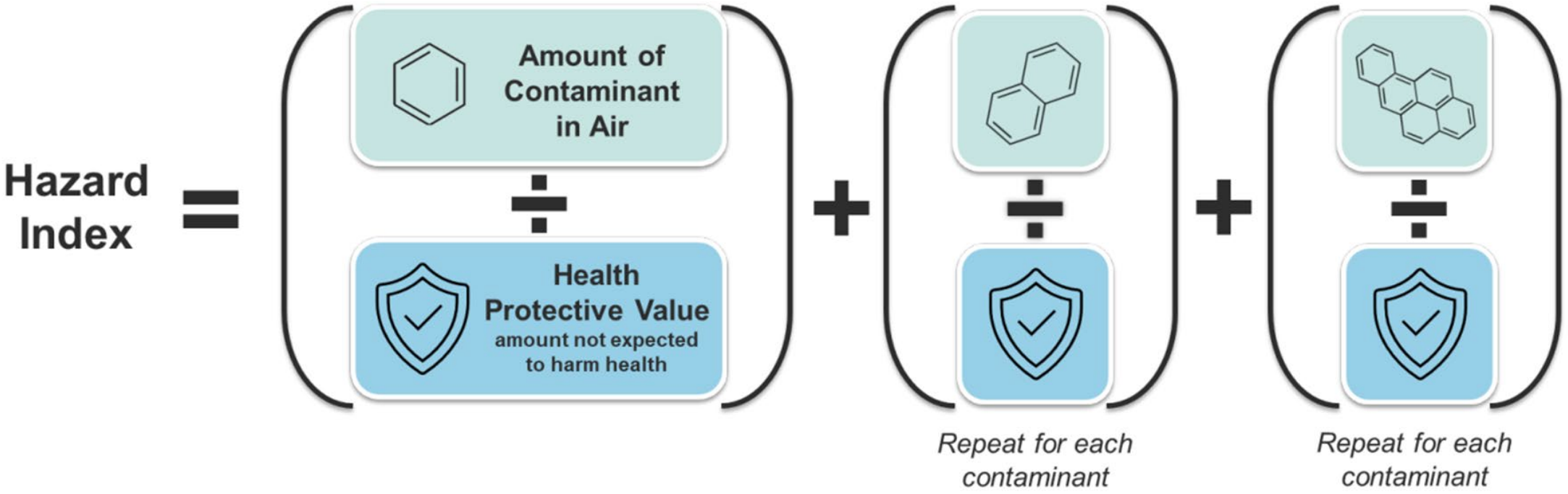
- Less than 0.1 in a million excess cancer risk

Workers

- 0.3 in a million excess cancer risk

Noncancer Health Risk Background

We use a Hazard Index calculation to determine whether health effects are possible.



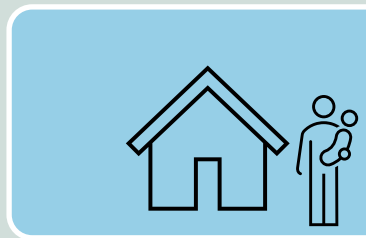
Noncancer Health Risk Background

We use a Hazard Index calculation to determine whether health effects are possible.

Hazard Index less than or equal to	**1**	**Health effects are not expected**
Hazard Index greater than	**1**	**Health effects are possible, but not certain**

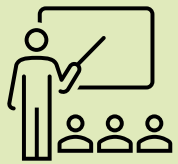
Noncancer Health Effects are Not Expected

All Hazard Indices (HIs) are less than 1 around H&V



People in Homes

- HI less than 1

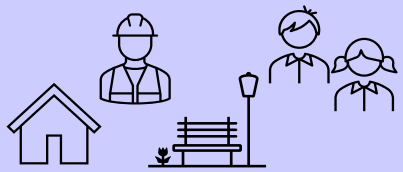


Children at Schools or Child Care

- HI less than 1

Workers

- HI less than 1

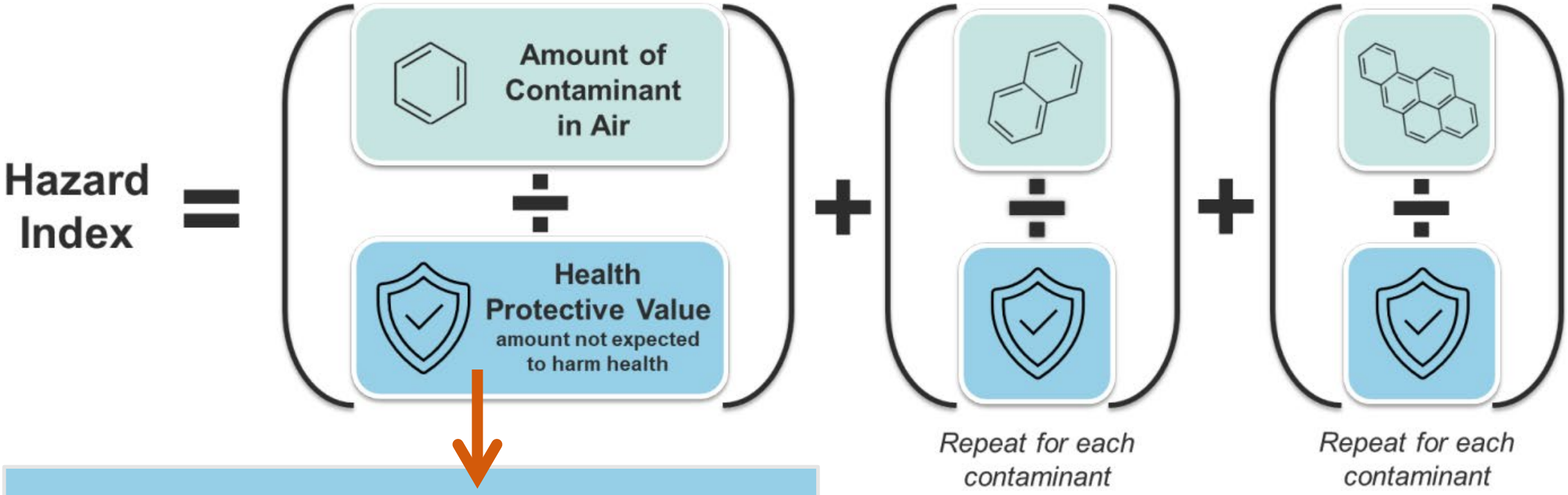


Places Where People Spend a Few Hours

- HI less than 1

What do we know about glass fibers?

What We Do Not Know About Glass Fibers



We do <u>not</u> have a health protective value for <u>glass fibers</u>

What We Do Know About Glass Fibers

Glass Fibers

A type of Synthetic Vitreous Fiber

Asbestos Fibers

Less Toxic

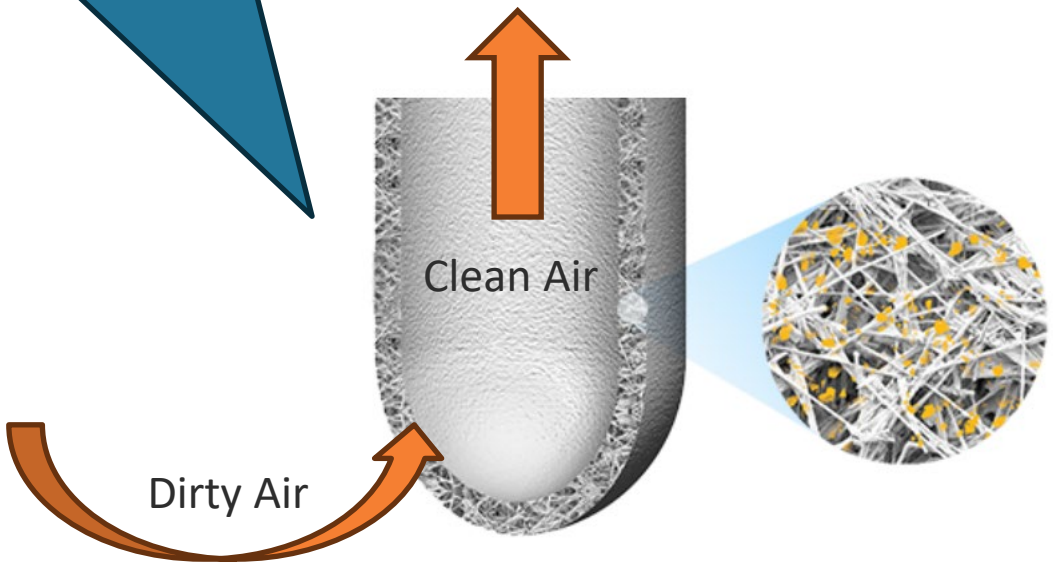
Based on scientific evidence

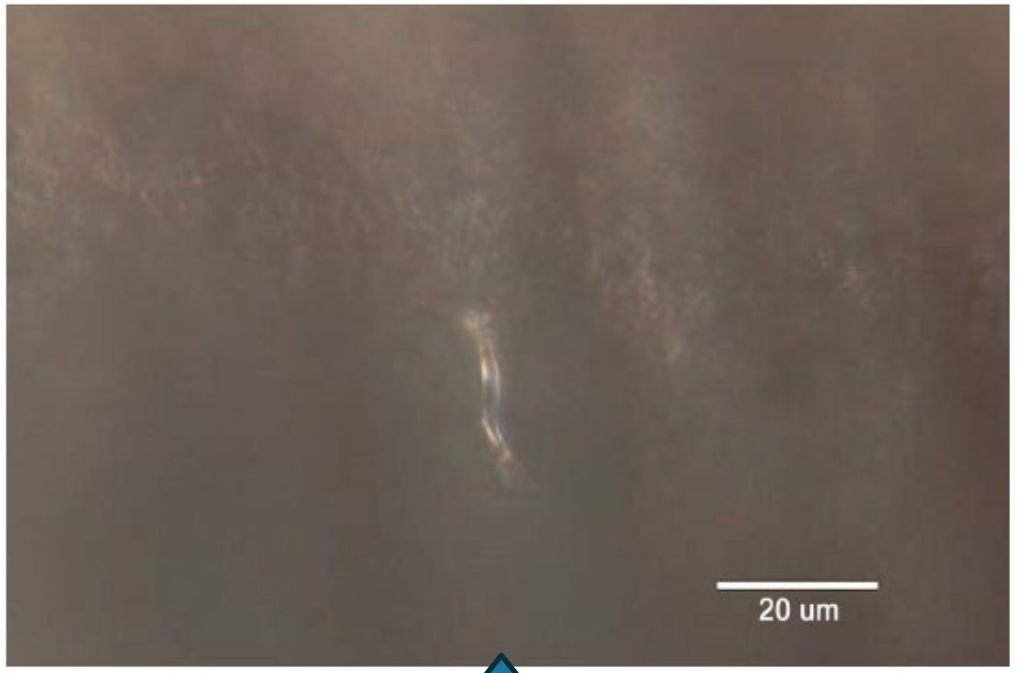
More Toxic

Source: Agency for Toxic Substances and Disease Registry (ATSDR)

Glass Fiber Controls and Testing at CFUs

Glass fibers are captured on the surface and do not penetrate walls of the filter.

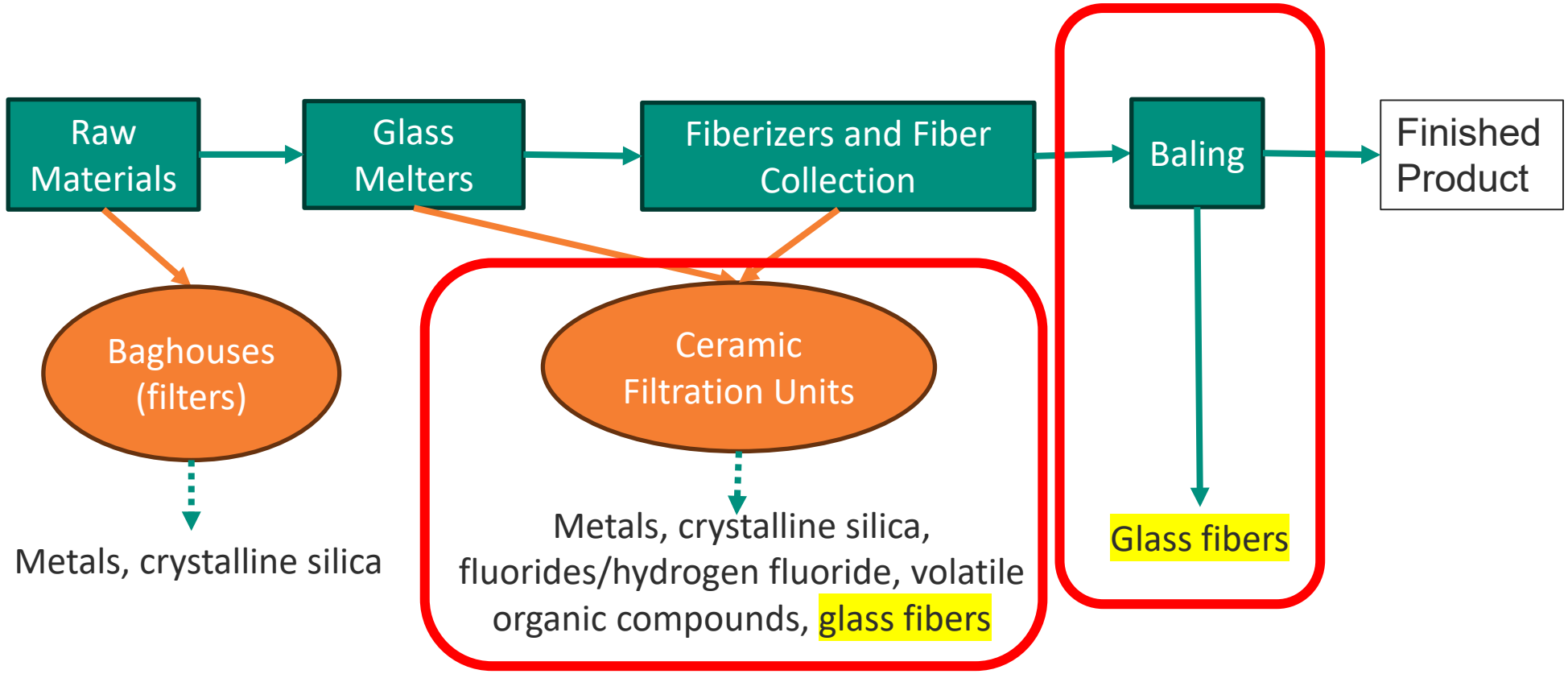




Glass fiber – few to none found

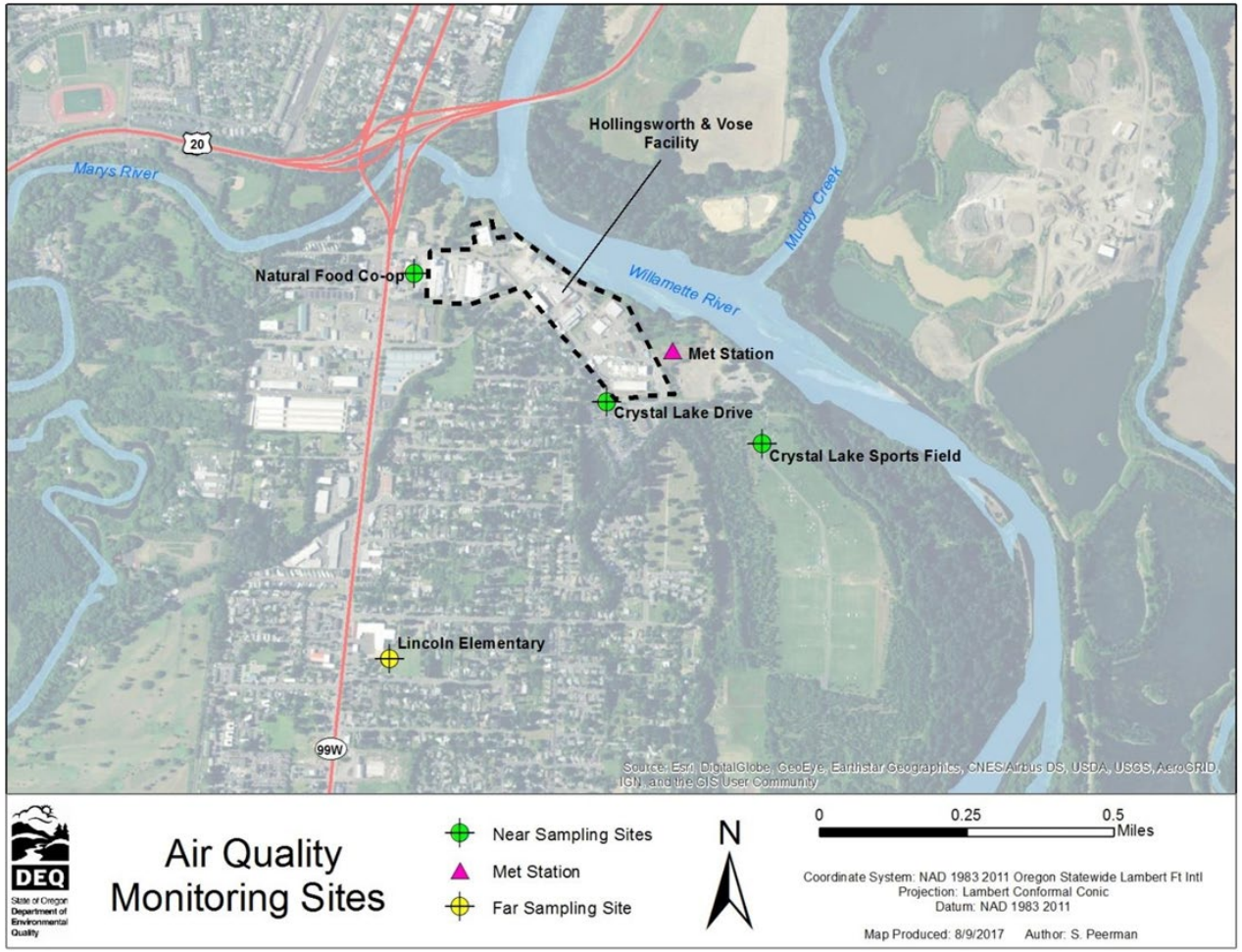
Image: Tri-Mer UltraCat Catalytic Filter Systems

Process and Emissions Overview



2017 Glass Fiber Sampling

- 38 samples collected from 4 locations
- Respiratory health impacts from glass fibers were unlikely to occur



Full report: https://www.oregon.gov/deq/FilterDocs/hvaqsamplerep.pdf

How will DEQ regulate H&V's Air Toxic emissions?

How does risk impact permitting?

Risk Action Levels

Exposure	Calculated Risk	Source Le		TBACT Level	Risk Reduction Level	Immediate Curtailment Level
	Cancer Risk					
Residential	2.9	5	25	50	200	500
Child	<0.1					
Worker	0.3					
	Non-Cancer Risk					
Residential	0.2	0.5	1	5	10	20
Child	<0.1					
Worker	0.1					
Acute	0.2					

The numbers here are the **potential** health risk from H&V.

How does risk impact permitting?

Risk Action Levels

Exposure	Calculated Risk	Source Permit Level	Community Engagement Level	TBACT Level	Risk Reduction Level	Immediate Curtailment Level
	Cancer Risk					
	2.9	5	25	50	200	500
	<0.1					
	0.3					
	Non-Cancer Risk					
Residential	0.2	0.5	1	5	10	20
Child	<0.1					
Worker	0.1					
Acute	0.2					

Risk is compared to these numbers
To establish what **additional regulations** DEQ can apply to H&V.

How does risk impact permitting?

Risk Action Levels

Exposure	Calculated Risk	Source Permit Level	Community Engagement Level	TBACT Level	Risk Reduction Level	Immediate Curtailment Level
	Cancer Risk					
Residential	2.9	5	25			
Child	<0.1					
Worker	0.3					
	Non-Cancer Risk					
Residential	0.2	0.5	1			
Child	<0.1					
Worker	0.1					
Acute	0.2					

Chronic Cancer Risk, Chronic Non-Cancer Risk, and Acute risk are all **below** the lowest Risk Action Level.

H&V's health risk is very low for all exposure scenarios

New CAO Permit Conditions

- Additional recordkeeping requirements
- Additional operating requirements (controls and capture)
- General Conditions that ensure risk is reassessed when needed.

Conditions ensuring proper operation of ceramic filtration units are currently included in the permit

How can I stay involved?

- DEQ expects that CAO Permit Conditions will be included in the Draft Title V Operating Permit, which will have its own **public comment period**.

- If the comments reveal **significant environmental concerns**, DEQ may modify the permit to address warranted concerns.

Summary: H&V's CAO Risk Assessment

- ✓ Health risk estimates are very low and additional controls or risk reduction are not necessary
- ✓ Improved controls at facility lowered emissions
- ✓ DEQ has high confidence in the emissions inventory and risk assessment results

Questions?

State of Oregon
DEQ Department of Environmental Quality

Additional Resources

- CAO Community Resource Corner: https://www.oregon.gov/deq/aq/cao/Pages/Community-Resource-Corner.aspx
- H&V's CAO webpage: https://www.oregon.gov/deq/aq/cao/wr/Pages/Hollingsworth-and-Vose.aspx
- DEQ contacts:
  - CAO: Julia.degagne@oregon.deq.gov
  - Title V and ACDP Permit: alex.haulman@oregon.deq.gov

Thank you!

State of Oregon
DEQ Department of Environmental Quality

Title VI and alternative formats

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