

# Bullseye Glass Company Public Health Assessment

## Summary Factsheet

From 2013 to 2015, the U.S. Forest Service (USFS) helped the Oregon Department of Environmental Quality (DEQ) locate possible sources of cadmium emissions. USFS collected tree moss samples around the city of Portland. The moss showed high cadmium levels near Bullseye Glass Company, an art glass manufacturing factory in the Brooklyn neighborhood of southeast Portland.

DEQ placed an air quality monitor near Bullseye Glass in October 2015. The purpose was to:

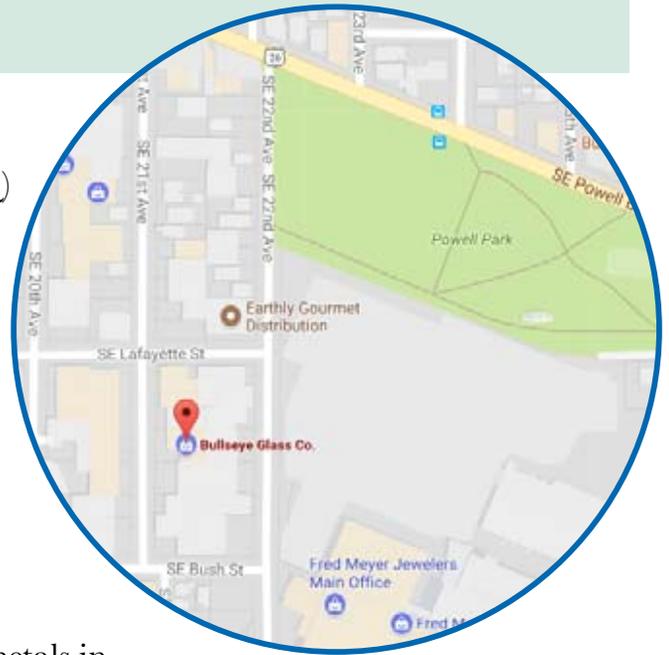
- Confirm whether the facility was the source of heavy metals in the air, and
- Compare levels of heavy metals in the air to levels of metals in the nearby moss samples.

Results of the air sampling first became available in late January of 2016. The results confirmed:

- Bullseye Glass was the likely source of these emissions, and
- That the levels were high enough to possibly risk human health.

In February 2016, state agencies took actions to require the facility to reduce its air emissions to protect public health. Parents of children at nearby daycares and schools, as well as residents throughout Portland, asked the Oregon Health Authority's Public Health Division (OHA-PHD) about long-term health risks from exposure to air affected by these emissions.

OHA responded by conducting a Public Health Assessment (PHA) to evaluate the short- and long-term risks of exposure to metals emissions of Bullseye Glass.



# What did the Bullseye Glass PHA\* find?

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## After analyzing the data, OHA determined:

- There is not enough information about conditions before emissions were reduced (February 2016) to answer community questions of whether long-term past exposure to the air around Bullseye Glass could harm or have harmed people's health
- Levels of metals measured in the air around Bullseye Glass during October 2015 were not high enough to harm the health of people who only breathed it during that one month
- Had emissions from Bullseye Glass not been reduced and levels of metals measured in October 2015 been allowed to persist, long-term exposure to that air could have harmed the health of people breathing it
- Based on the October 2015 air monitoring data, the contaminants that posed the greatest risk around Bullseye Glass were **cadmium and arsenic**
- Exposure to soil, garden produce and air, since February 2016, around Bullseye Glass will not harm health, and
- Interventions to reduce emissions from Bullseye Glass reduced current and future cancer risk over 50 times and non-cancer risk over 100 times.

➤ To view the full report, visit [www.healthoregon.org/ehap](http://www.healthoregon.org/ehap).

OHA conducted the PHA with the input of a community advisory committee. The committee was made up of people living in southeast Portland neighborhoods. The findings of the PHA are based on air and soil data.

## Additional analysis

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**Urine tests produced uncertain results.** Results of urine cadmium tests reported to OHA have too many uncertainties and scientific limitations to draw a health conclusion in this assessment.

**No elevated rates of key cancers are associated with exposure to Bullseye-related metals.** OHA found that lung and bladder cancer rates in the three census tracts around Bullseye Glass, from 1999-2013, were not higher than expected.

**Eating homegrown produce is OK.** Produce harvested around Bullseye Glass is unlikely to harm the health of adults or children. Typical urban gardening guidance is recommended.

**No further action is needed to reduce exposure to emissions from Bullseye Glass. Medical tests to find out if emissions from Bullseye Glass caused health effects are not available. You can talk to your health care provider and share the results of the PHA.**

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\* In any PHA, there are uncertainties. Scientists use assumptions, judgments and limited data sets. These contribute to uncertainty in the estimate of risk. A detailed description of the uncertainties and limitations is in the full report.

# How did OHA approach the assessment?

OHA uses the U.S. Department of Health and Human Service’s Agency for Toxic Substance and Disease Registry (ATSDR) PHA guidance to evaluate health risks of site-specific contamination. OHA used this approach to answer the questions below. The data used to answer these questions are included.

Questions	Data DEQ collected to answer questions
What are the health risks to people who breathed the air around Bullseye Glass during the 31 days of October 2015?	18 air samples over 31 days in October 2015.
If emissions had not been reduced and people continued to breathe the air around Bullseye Glass what would have been the health risks?	18 air samples over 31 days in October 2015.
What are the health risks to people currently (since February 2016) breathing air around Bullseye Glass?	1,013 air samples from four locations March 1, 2016 to March 30, 2017.
What are the health risks from exposure to soil and garden produce?	<ul style="list-style-type: none"><li>• 48 soil samples from February 12-17, 2016 from the nearby daycare, Powell Park, and Fred Meyer corporate offices, and</li><li>• 22 soil samples on July 28, 2016, from parking strips in residential neighborhoods northwest and southeast of Bullseye Glass.</li></ul>

## Community engagement

OHA’s Environmental Health Assessment Program (EHAP) held six Community Advisory Committee (CAC) meetings between May 2016 and February 2020, made up of people who live or spend time near Bullseye Glass. Meetings were held to accomplish these goals:

1. Receive input and feedback from the local residents.
2. Educate participants about the process of a PHA.
3. Develop relationships with local residents.
4. Identify the most relevant ways of communicating the PHA with the broader community.
5. Ensure the PHA incorporates and addresses community concerns.

Health experts also incorporated findings of the Oregon State Cancer Registry’s review of lung and bladder cancer rates in the neighborhood. They also looked at cadmium results from urine tests reported to the state. However, these data had too many uncertainties to help answer the health questions community members had.



Photo courtesy of the Oregon Department of Environmental Quality

# Next steps for better air quality and health

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**Cleaner Air Oregon:** In November 2018, DEQ adopted new state-wide rules for industrial facilities that emit toxic air contaminants in Oregon. This program is called Cleaner Air Oregon. Cleaner Air Oregon regulates emissions based on health risks to near neighbors to prevent situations like this from happening again. OHA works closely with DEQ to ensure that the standards used in the program are protective of the most vulnerable people in Oregon. Learn more at <http://cleanerair.oregon.gov/>.

## For more information

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To read the full report – [www.healthoregon.org/bullseyepha](http://www.healthoregon.org/bullseyepha)

To learn about a protective healthy diet – [www.healthoregon.org/ehap](http://www.healthoregon.org/ehap)

To access healthy gardening resources – [www.healthoregon.org/gardening](http://www.healthoregon.org/gardening)

Learn more about Cleaner Air Oregon – [www.cleanerair.oregon.gov](http://www.cleanerair.oregon.gov)

For more information about this PHA, please contact OHA's EHAP at [ehap.info@odhsoha.oregon.gov](mailto:ehap.info@odhsoha.oregon.gov) or call: 971-673-0440.



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