



Oregon Public
Health Association

Oregon Public Health Association

818 SW Third Avenue, #1201, Portland, OR 97204
www.OregonPublicHealth.org

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Cleaner Air Oregon Advisory Committee
Oregon Public Health Association Response to the November 17, 2016 Meeting

Following the November 17, 2016 Advisory Committee meeting, the Oregon Public Health Association Representative (Dr. Rohlman) met with the association to discuss recommendations for the DEQ and OHA. Below are comments representative of the Oregon Public Health Association (OPHA) and the Healthy Environment section within OPHA.

In response to comments made during the Nov. 17 2016 meeting, connecting health and employment: There is some truth to these statements. However, these statements conflate correlation and causation. Simply being employed does not alleviate health impacts, as there are additional variables, such as educational status, socio-economic status, exposure to pollution at work (on-the-job exposure) and environmental justice status (i.e. proximity to sources of pollution. We recommend a 2012 study published in BMC Public Health that identifies a correlation between improved health and employment (Brown et al. 2012). However, this article also identifies many other variables that must be considered in addition to employment. While the study did not evaluate proximity to industrial pollution, the research does highlight the complex nature of these relationships, indicating that employment alone cannot improve health. For example, the study found that employment was not correlated with improved lung function, indicating an environmental variable on health status¹.

Available online: <http://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-12-327>

Revisiting the pollutant scope conversation (working lunch topic)

I greatly appreciated the chance to be able to revisit the pollutant scope discussion we began during the October 18 meeting. Having the table of 660 compounds compiled by DEQ was also very helpful. Regarding the pollutant scope, OPHA feels strongly that a large, inclusive list be used for the following reasons: (1) while certain compounds may not currently be emitted by Oregon industry, we recognize that industry changes, with facilities entering and leaving the state. As such, new compounds may be introduced in the future given new industry and/or new processes and products; (2) Science is also a changing discipline, with new information available annually. As such, RBCs may become available in the future that may indicate necessary regulation. An inclusive list allows for the RBCs to be integrated and then added to existing regulation.

However, we also hear and respect industries need for clear, certain regulation within a specific timeline. OPHA would recommend a tiered approach along the lines of the following for discussion :

Tier 1: All new/modified facilities will be required to regulate the Oregon 52 chemicals that have RBCs and all 187 Federal HAPs. Existing facilities will have 2 years from time of regulation to come into compliance.

Tier 2: In the first 5 years of regulation, all (new/mod/existing) facilities will identify which of the 330 chemicals with RBCs are emitted into the air by their facility. There may also need to be an audit/real-time monitoring process to check self-reported emissions.

Tier 3: All chemicals with RBCs are subject to regulation.

Program Elements 8-10: Cumulative Risk from Multiple Air Toxics from a Single Facility; Cumulative Risk from Multiple Sources Within an Area; Use of Background Concentrations in the Assessment of Risk

From a toxicological perspective, the dose makes the poison- to include high doses and the chronic impact of low-dose exposure. The health of humans and the environment is connected to the level of air toxics, not the source of the toxics. While we recognize that it may not seem fair for facilities to be held accountable for the emissions from other sources, health effects are caused by cumulative risk, independent of who is emitting the toxics. As such, OPHA strongly recommends that DEQ require a cumulative risk assessment that applies to an entire area (multiple sources, background). As an example:

If a facility is required to stay below 10 in a million excess cancer risk, this would set the area at a limit of 10 in a million. However, many areas may have multiple facilities. Therefore, if a neighborhood had 10 facilities, all capped at 10 in a million, this could lead to a neighborhood cumulative risk of 100 in a million. This has direct impacts on environmental justice communities, which often have a greater number of industrial facilities in their midst, often located next to schools and daycares. In addition, such a scenario does not account for 'background' air toxics that may be originating from diesel/traffic exhaust, wood smoke fires, or even pollution from other states.

Therefore, OPHA recommends that DEQ and OHA instead use existing databases and if necessary, generate the research, to create a map/database to show the following:

- Location of EJ communities
- Existing 'background' concentrations in neighborhoods
 - o Washington suggests using a 1.5km distance, which provides a specific distance.
 - o Nov. 18 discussions focused on looking specifically at air-sheds, but it is unclear if this would be protective of small EJ communities with tight clusters of industrial facilities. I.e. the total airshed may have a low toxics concentration, but the specific community may be exposed to a higher concentration due to their proximity to the source.
 - o Diesel particulate maps currently exist (census tract level)
- We recognize the concern of double- or triple-counting industrial emissions in the background concentrations, but are hopeful that specific monitoring/modeling should parse out contributions from out-of-state, traffic (i.e. I-5) emissions, etc. can be accurately identified.
- Two background concentrations may need to be identified:
 - o Existing cancer risk
 - o Existing non-cancer risk (hazard index)

Note: Some of this information exists at the census-tract level from EPA's National Air Toxics Assessment. It includes HI and Cancer Risk from all 187 federal HAPs and provides source-specific risk estimates, i.e. from mobile source pollution.

Should such an approach be undertaken, permitting for a single facility will necessarily be dependent upon the background concentrations and existing emissions from additional sources in the area. We recognize that there could be a 'fairness' issue here, in that it may be difficult for new/mod industries to receive permits in areas where the background concentration is already high. However, such an approach will be necessary to protect human health, especially health in vulnerable populations that are often located near to multiple sources.

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Program Element 11: Cross-media exposure pathways

Without a discussion about existing regulations that pertain to water quality, soil, etc. it is uncertain if such a programmatic element would place an undue burden on industry and may in fact be duplicative. Of note, should the regulatory program include background concentrations in the permitting process, this may be protective of cross-media exposure pathways by limiting cumulative risk within an area from all sources.

Program Element 12: Past exposure to air toxics

We are unsure how past exposures would be used within the permitting process. Following initiation of the new regulations, it may be beneficial for DEQ/OHA to maintain records for use in research.

Program Element 13: Setting the initial screening levels for allowable cancer and non-cancer risk

We recognize that while initial screening levels for an individual chemical and piece of equipment may be useful for an initial screen, we recommend that there be an area-wide cap on industrial emissions. For reference, we recommend the California approach of multiple tiers. This approach provides sufficient information to facilities to determine which tier they are in, and the regulations they are subject to (see the "Summary of Six Air Toxics Programs", specifically the program adopted by California and their tiered approach).

Program Element 14: Allowable risks levels

We believe this element introduces an area where incentives can be integrated into the program to reward facilities for being under allowable risk levels.

In short, we strongly agree with the following summary from the Individual Environmental Justice Task Force Member Input: "Using a cumulative risk assessment methodology, each permit should be considered in the context of whether it will disproportionately impact communities with environmental justice concerns..." To address this input, OPHA recommends that an allowable risk be set for an area (neighborhood, census tract, airshed). This model will then incorporate background levels. See example below for how such a model would work (numbers are for example only- the Rules Committee would need to set appropriate threshold concentrations).

A 10 in a million cancer risk is set for an area. The background is at 2 in a million cancer risk. This means all sources in the area must be capped at 8 in a million cancer risk. If levels are above this, pollution prevention plans must be instituted.

Program Element 15: Different risk levels for existing and new sources

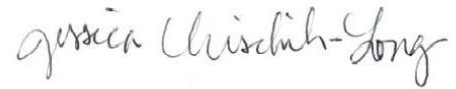
OPHA recommends permitting new/modified/existing sources. However, there may be a tiered approach, where new regulations are immediately instituted for new/mod permits, and existing sources have 1-3 years to come into compliance, recognizing that for existing sources there may be additional monetary considerations.

Same levels, but existing sources may have 1-3 years to come into compliance

Thank you for your consideration of these comments.



Diana Rohlman, PhD
OPHA Committee Representative



Jessica Nischik-Long, MPH
Executive Director

1. Brown, J.; Demou, E.; Tristram, M. A.; Gilmour, H.; Sanati, K. A.; Macdonald, E. B., Employment status and health: understanding the health of the economically inactive population in Scotland. *BMC Public Health* **2012**, *12*, (1), 327.