

Dear Dr. Fox,

Thank you for inviting me to review the MBTL HIA.

First, let me compliment you and the entire writing and research team for an incredibly comprehensive, well-researched report. The HIA was written in a manner that is accessible to non-technical audiences, and incredibly thoughtful in the response to community questions regarding the health impacts (both direct from exposure and indirect through economic, built environment, and social changes that may result through the terminal development.) I appreciate that air quality, noise, water quality and climate change were all addressed in the report. These viewpoints help put the local and the global impacts of the MBTL into perspective.

I have three major comments regarding the report:

1) HIA is generally a broad term that encompasses a wide variety of activities. In the end, the purpose of the document is to estimate what the projected impacts from any changes in the projected activity. I feel that the report shied away from making any conclusive statements as to what the overall health impact might be from the MBTL development activities. For example, the only section labeled "Conclusion" is included in Appendix 1 that covers health effects. I would have liked to see section summaries for each of the community questions that provided a brief conclusion on if the writing team (based on expert opinion and existing evidence) thought that there would be a net positive or overall negative impact on health. I realize this is hard to gauge conclusively, but I believe would greatly assist with interpretation of your research.

One of the models for writing conclusion sections I have appreciated comes from this HEI report on traffic-related air pollution. Although a bit different from your HIA (this is a broad literature review), the authors classified outcomes to evaluate if there was enough evidence to support a causal relationship. I know it's difficult to say that there would be a large enough increase in emissions to demonstrate a significant increase in emphysema for instance, but it could be written that there is a link between air pollution and health effects, and that increase air pollution is associated with increase health effects.

The report I mentioned can be found at this link: <https://www.healtheffects.org/publication/traffic-related-air-pollution-critical-review-literature-emissions-exposure-and-health>

2) I very much appreciated the drivers' license analysis included in the HIA - what a innovative approach. However, this drivers' license approach focuses mainly on cancer, which is critical, but a small part of the outcomes related to increased air pollution exposure. I was wondering if you could include an option to the community (and document in the report) that performing a quantitative HIA to look at more short-term outcomes (example, ED visits, hospitalizations, asthma attacks) using a tool such as EPA's BenMAP. This may require additional resources, but

is a tool that seems well-suited to provide more quantitative data on health effects in addition to cancer.

3) I noted that the determinants of health Table 4 are very similar to the County Health Rankings format, which is available for the whole state (please see <http://www.countyhealthrankings.org/app/washington/2017/rankings/outcomes/overall>). Over reading the report that examined health impacts for Cowlitz county, Longview and individual neighborhoods, it struck me that it would be worth putting some of these data in to the context of other findings in the state. The County Health Rankings has all of those data available, and I believe would help with some interpretation of the health data. Although Cowlitz county is not the lowest ranked county in Washington, it is part of the lowest ranked quartile in the state.

Following this comment, given the health data and social context of both Longview and individual communities, I did wonder why the term "environmental justice/environmental injustice" was not a term that was used in the report. I don't know if this was a deliberate decision by the committee, but it does strike me that given some of the health outcomes, the MBTL terminals might be developed in area that already suffers from comparatively high prevalence of health outcomes, and relatively lower SES.

Minor notes: the document could benefit from some careful copyediting (which is not my strength!) There were some stray punctuation marks, in addition to a few misspellings, and an IARC citation that was not in numerical format (page 39, under the coal dust section.)

Thank you again for allowing me to review the HIA. Please don't hesitate to contact me if you have any further questions or concerns.

Kind regards,

Sheryl

Sheryl Magzamen

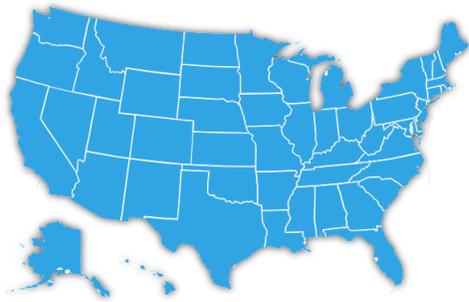
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