

Regna Merritt

Please accept attached comments from Regna Merritt, PA and Thomas T Ward, MD

9 October 2020

Director Laura Watson
Washington Department of Ecology
300 Desmond Drive SE
Lacey, WA 98503

Submitted via Ecology's web portal and email to laura.watson@ecy.wa.gov

Re: Comments on the Draft Second Supplemental Environmental Impact Statement (DSSEIS) for Northwest Innovation Works (NWIW) Methanol Refinery and Export Terminal

Dear Director Watson,

We write today to provide comments and relay our deepest concerns regarding the DSSEIS for the NWIW methanol refinery and export terminal, which would increase local and regional emissions of GHG pollutants, degrade air quality and harm the health of residents of Kalama, Cowlitz County and the State of Washington. The DSSEIS contains technical flaws which have the effect of minimizing the amount of GHG pollution to be emitted over 40 years. We believe the proposed facility presents a grave danger to public health and should be rejected.

I'm a retired Physician Assistant and have worked in the Emergency Department of a Regional Trauma Center and in Family Medicine. I participated, as did health professionals and many concerned Cowlitz County residents, in the development of the November 27, 2018 Health Impact Assessment (HIA) for the Millennium Bulk Terminal-Longview proposal. My husband is an Infectious Disease physician and Emeritus Professor at Oregon Health Sciences University (OHSU).

One of several goals of the HIA was to increase understanding among Cowlitz County residents about the connections between major development projects and health and health equity. Those who engaged in the HIA process are well aware of the documented health status of many residents of Cowlitz County and Kalama and the issue of **environmental injustice**.

<http://www.co.cowlitz.wa.us/DocumentCenter/View/15492/MBTL-HIA-and-Apps---November-2018---WEB?bidId=>

From the [HIA](#) (p. 25): "Health data shows that the people of Cowlitz County already experience rates of death and hospitalization for some diseases related to air pollution that are higher than the Washington state average, especially lung and heart diseases."

"When disease rates are higher than the state average in a community, especially when that community is experiencing social and economic conditions that contribute to these differences, it is considered a health disparity. If an additional risk is added, such as increased air pollution to a community that already has health disparities, it is considered an environmental justice issue. Cowlitz County and affected neighborhoods

are more vulnerable to the types of health risks associated with increased air pollution than other parts of Washington State would be.”

p. 59

HIA Table 3 : Mortality Rates per 100,000 Population for Selected Cardiovascular Conditions Related to Air Quality and Noise Exposure (2011-2015)

Kalama's mortality rate for myocardial infarction is statistically significantly higher than the state rate (p<0.05).

p. 25

Deaths from heart disease in Cowlitz County were about 10% higher than the state average.

p. 25

Deaths from combined chronic lower respiratory diseases were about 52% higher in Cowlitz County compared to Washington State as a whole.

p. 31

Cowlitz County consistently ranks near the bottom of Washington counties in health indicators.

pp. 40 and D-10

“What is certain, if increasing global GHG emissions from human activities continues on a “business as usual path,” residents in Washington State and Cowlitz County will experience far greater harm than if the level of GHG emissions at the global level are dramatically reduced sufficient to arrest the increase in atmospheric GHG concentrations and limit global warming to under 2⁰ C.”

My husband and I are acutely aware of the increased threat from exposure to GHG emissions and other toxic pollutants during production and transport of methane, during transformation of this fracked gas to methanol, during further transport and through controversial end uses. We cannot and must not ignore these negative impacts of new GHG emissions on human health.

We are concerned about potentially disastrous cumulative impacts – adverse impacts that cannot be mitigated by unenforceable voluntary actions offered by NWIW, a company that has made contradictory and false statements (regarding end uses of the methanol) to the State of Washington or potential investors or both.

Please consider this additional information from the 2018 Health Impact Assessment which demonstrates the risks of increased GHG emissions, climate change, related air pollution and environmental injustice to Cowlitz County residents:

Impacts on Health of from Climate Change due to project GHGs: Appendix D

p. D-1

The effects of climate change vary by location. In Washington State, some changes already observed include an average temperature increase of 1.30 F and a lengthening of the frost free season by 35 days (+/- 6 days) between 1895 to 2011, as well as more frequent nighttime heat waves.[7] Overall, glaciers and springtime snowpack has declined, with a 49% decline in glaciated area on Mt. Adams between 1904 and 2006.[7]

p. D-4

Projected future changes in Washington's climate include further decline in snowpack and a shift away from snow-dominant and mixed rain-snow dominant watersheds toward rain-dominant watersheds (Figure D-6). Changes in Washington's climate in the near-term and mid-term future will likely increase hazards to human health. Without preventive and protective measures, this will worsen a variety of health outcomes at the population level. Climate change is also expected to increase health disparities by disproportionately impacting those who already bear a larger burden of risk factors and illness, such as people with lower income, people with existing chronic disease, the socially isolated, those with a disability, immigrant and refugee populations who may have less English language fluency, and some communities of color.

p. D-5

Hazards to health that are climate-sensitive and likely to grow as the effects of global warming intensify include:

Heat-related Illnesses. Currently in Washington State, between 25 to 113 people are hospitalized for heat illnesses every year, about 50% of whom are age 65 and older.[10] Risk for heat-related illness, hospitalization, and death increases during extreme heat events,[11, 12] although hot weather safety measures can protect people from exposure.[10] Bethel and colleagues have predicted that more frequent heat waves in the northwest will increase the burden of heat-related illness such as heat stroke, and exacerbate chronic illness for people with cardiovascular, respiratory, and kidney disease. Other populations at risk include outdoor laborers, children, and people ages 65 and older.[13] Figure D-7 shows extremely hot days in Washington. Cowlitz County experienced more extremely hot days in 2016 than other parts of the state.[14]

Respiratory and Other Conditions Exacerbated by Pollen and Wildfire

Smoke. Researchers expect the pollination season to lengthen and the production of allergy-causing proteins to increase.[9, 15] A longer and more intense allergy season would increase the burden of allergy and asthma symptoms. Drier, warmer conditions are expected to increase the number of acres burned by wildfire in Washington,[7] increasing the potential for exposure to wildfire smoke[13] and exacerbating heart and lung disease. Wildfire smoke events are associated with an increase in emergency room visits and hospitalizations for respiratory-related illness.[16, 17, 18, 19]

Vector Borne and Zoonotic Diseases. Diseases such as West Nile virus, Zika virus, Lyme disease, Hanta virus, and others transmitted by vectors (e.g., mosquitos, ticks, rodents) are influenced by climate's direct effects on habitat, the pathogen, the vector, the vertebrate reservoir host (e.g., birds and mammals), and their interactions with one another. Climate change is expected to alter the distribution of vector species and may increase the extent of suitable habitat for some vectors, thus increasing risk of exposure and disease. For example, M. Hahn and colleagues predict more suitable habitat in southwest Washington counties for the tick *Ixodes* spp (Figure D-8).[20] The genus *Ixodes* spp includes *Ixodes pacificus*, which carries Lyme disease, is the more prevalent species in Washington. (SW WA counties more suitable habitat for tick *Ixodes*.)

p. D-6

Water-Borne and Food-Borne Disease. Risks to water quality may grow as a result of increasing frequency of heavy precipitation events, flooding, and sea-level rise, as well as from drought and wildfire. Drinking water systems, including private wells, inundated with flood waters could affect water quality and increase risk of water borne illness or disrupt drinking water services. The risk of exposure to harmful toxins found in some types of algal blooms is also expected to increase. Harmful algal blooms in freshwater bodies pose risks to health if the water body is a source of drinking water. Toxic algal blooms can also affect health if people use the contaminated water for recreational activities like swimming. Marine biotoxins can contaminate shellfish and temporarily increase the risk of foodborne illness.[9]

p. D-7

Risks from Extreme Events. Power outages and other impacts of storms, flooding, drought, and wildfire can interrupt provision or access to critical services, destroy property, and displace people. The mental health effects of these traumas can have long lasting effects.[9] More frequent, more extreme, and more overlapping events are anticipated across the United States and in the northwest.

Mental Health Effects. Changes in climate are expected to take an increasingly large toll on mental health and wellbeing as a result of both increasing acute and gradual effects of climate change. Some populations are more vulnerable to these effects than others, including children, the elderly, people with pre-existing mental illness, the economically disadvantaged, the homeless, first responders, and those whose sustenance and livelihood depend on the natural environment. The threat of climate change itself has been shown to have a negative impact on mental health.[9]

p. 58

Baseline Health of Cowlitz County Baseline conditions in Cowlitz County and neighborhoods along the rail line assessed as part of this Health Impact Assessment were found to be experiencing health disparities. Health disparities are preventable differences in the burden of disease, injury, or opportunity to achieve optimal health experienced by socially disadvantaged groups. Examples of preventable differences in the burden of disease can be seen in the tables below. Some notable differences include:

- Some neighborhoods had more than double the rate of death from chronic lower respiratory diseases compared to the state average.
- Some neighborhoods and Cowlitz County had statistically significantly higher rates of death from heart disease.
- No neighborhood had a rate of disease or death that was statistically significantly lower than the state average for any condition assessed. Health disparities are experienced by socially disadvantaged groups. In Cowlitz County, these groups include a higher proportion of the population who have less than a high school degree, are living with a disability, are living in a mobile home, are unemployed, and/or are living in poverty.
- More information about the social and economic determinants of health for Cowlitz County and the neighborhoods near the rail line can be found in this Health Impact Assessment in Appendix E, *Population Characteristics*.

p. C-20

The health effects related to air pollution would more likely be experienced in people with pre-existing conditions, such as heart and lung diseases, respiratory infections, cerebrovascular disease, and diabetes, as well as in infants, children, pregnant women, and people over 65 years of age. Health data from 2011 through 2015 indicates the people of Cowlitz County and some neighborhoods that would have air pollution impacts in the study area, already experience rates of death and hospitalization for some diseases related to air pollution, especially respiratory diseases that are higher than the state average. This indicates the population of Cowlitz County and affected neighborhoods would be at even greater risk of experiencing health effects than other parts of Washington.

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We are very disappointed in the approach used by DOE, with technical flaws that appear to mask or ignore the burdens that will be placed on Kalama, Cowlitz County and the State of Washington should the project be approved. The projected GHG emissions are based on speculation and support of a worst-case scenario in 40 years. This represents a failure to consider that Washington may continue efforts to meet and exceed climate goals. Never has the American public been so aware of and concerned about climate chaos, the overlapping risks to air quality and water quality, forests and our health. There is a failure to consider a scenario whereby, on a national level, reasonable climate goals/GHG goals may be implemented during the next administration. There is a failure to consider the scenario in which China meets or beats its recently stated goal to be carbon-neutral by 2060.

We also urge you to consider an appropriate methodology that utilizes more robust measurements of methane release/escape from fracked gas infrastructure. Please use fly-over data, so as not to undercount dangerous emissions.

We face sufficient challenges to deal with existing sources of GHG gases. Decision-makers must not commit to massive new fossil fuel infrastructure that is guaranteed to emit at least 4.6 million tons of GHG pollutants each year for 40 years.

If this project is approved, a vicious cycle will be expanded and locked in:

- Increased GHG emissions
- Increased emissions of Toxic Air Pollutants
- Degraded air quality increases risks to the health of Kalama, Cowlitz County and Washington residents
- Increased risk of deadly forest fires in Washington
- Degraded air quality from forest fire smoke exacerbates heart and lung disease, increasing morbidity and mortality.
- Increased health risks, especially for vulnerable populations, result in worsening health outcomes for Covid-19 patients and/or victims of future pandemics

We must prevent what we cannot cure. Please do not approve this project, which would be the largest fracked-gas-to-methanol facility in the world. Please do not make a mockery of Washington's climate and public health goals. Please do not exacerbate health risks at this pivotal moment in our history.

Take action and help prevent catastrophic climate disruption that will harm the health and safety of Cowlitz County and Washington residents. We urgently and respectfully request that you reject the flawed sections of analysis for this project, reject the methanol refinery, deny the Shoreline Permit and protect the health of our communities, our climate and our precious Earth. Thank you for considering our comments.

Sincerely,

Regna Merritt, PA (retired) Member Advisory Board and Healthy Climate Action Team

Oregon Physicians for Social Responsibility

Thomas T. Ward, MD Emeritus Professor of Infectious Diseases