

MEMORANDUM

TO: Joint Interim Committee on the Interstate Bridge
FROM: Martin Slapikas, Hayden Island property owner, Taxpayer
DATE: November 28, 2023
SUBJECT: Joint meeting with the Washington State Legislature’s Joint Legislative Action Committee Regarding the Construction of a new Interstate 5 Bridge.

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The most unending and ambiguous, yet consequential, issue that faced our Hayden Island community - the one that has taken, and continues to take, most of our efforts, the one that influences the local, regional, national, and international economies, is the I-5 Interstate Bridge Replacement Program (IBRP) and the Cascadia Subduction Zone. The [Cascadia Subduction Zone](#), as it is known, stretches from Northern California to Vancouver, B.C. The Hayden Island community is at the epicenter of the Interstate Bridge Replacement program.

A second, dangerous issue has recently surfaced. It is the Critical Energy Infrastructure Hub (CEI Hub) and its impact on the Pacific Northwest if the Hub is struck by a magnitude 8 or 9 Cascadia Subduction Zone (CSZ) earthquake strike.

The CEI Hub is a different animal than the I-5 Bridge. The Hub is a six-mile area in Northwest Portland along the Willamette River. The CEI Hub facilities are critical to Oregon’s fossil fuel infrastructure – over 90 percent of the state’s liquid fuel supply is transported through CEI hub facilities, including gasoline and diesel. It stores and supplies all the jet fuel to Portland International Airport. It holds a combined active storage tank capacity of at least 350.6 million gallons. Zenith passes over Hayden Island to deliver its cargo to the CEI Hub.

The commonality between the I-5 Bridge and the CEI Hub is that both will be affected by the magnitude 8 or 9 Cascadia Subduction Zone (CSZ) earthquake. A destroyed I-5 Columbia River Crossing will affect the I-5 supply chain often described as vital the local, regional, national, and international economies. Such a happening will impact congestion and travel time.

However, Multnomah County emergency staff say a 9.0 magnitude earthquake - which scientists predict could happen in the next 50 years - would likely release deadly plumes of hazardous materials from the CEI HUB industrial facilities. The impact of the CEI Hub earthquake - depending upon the weather and time of day, these plumes could kill thousands of people and injure thousands more.

My Concerns:

- A. The 247-page January 2022 Study was prepared for Multnomah County Office of Sustainability and City of Portland Bureau of Emergency Management. It was prepared by ECONorthwest, SALUS RESILIENCE and ENDURING ECONOMETRICS . Titled, *“ Impacts of Fuel Releases from the CEI Hub Due to a Cascadia Subduction Zone Earthquake”* it consists of four sections. They are
Chapter 1: Impacts of a Cascadia Subduction Zone Earthquake on the CEI hub;
Chapter 2: Impacts from Cascadia Subduction Zone Earthquake at CEI Hub:
Chapter 3: Financial Responsibility for damages resulting from a spill the CEI Hub; and,
Section 4. Summary of Available Data and Report of Expected Earthquake Risk.

The link Below provides access to the full 247-page study. The first 4 pages are an Executive Summary.

<https://multco-web7-psh-files-usw2.s3-us-west-2.amazonaws.com/s3fs-public/Impacts of Fuel Releases from the CEI Hub Report.pdf>

- B. A second study dated October 2023, by Portland State University, Institute for Sustainable Solutions, titled, *“Risk of Earthquake-Induced Hazardous Materials Releases in Multnomah County, Oregon, Two Scenarios Examined”* is included below.

<https://multco-web7-psh-files-usw2.s3-us-west-2.amazonaws.com/s3fs-public/FOUO Report for Multnomah County from ISS, Risk of Earthquake-Induced Hazardous Materials Releases 10-11-2023v1.pdf>

Topics addressed:

Chapter 2: Earthquake-Induced Hazardous Materials Releases Literature Review;
Chapter 3: The Critical Energy Infrastructure Hub Safety Risks and Barriers to Response Operations;

The conclusion of Chapter 3 states,

“The CEI hub located along the Willamette River in Portland OR presents a serious threat in the event of a Cascadia Subduction Zone Earthquake. The CEI Hub through which 90% of Oregon's fuel supply is transported, is estimated to release between 65 and 194 million gallons of petrochemicals due to liquefaction and ground deformation damage from a CSZ earthquake. A release of this magnitude poses significant life safety risks to the more than 45,000 employees and residents who work or live near the CEI Hub and will impact the entire region with reduced air quality.

The greatest life safety risks stem from the high risk for petrochemical fires which may trap employees working in petrochemical facilities, spread into nearby residential areas, or ignite Forest Park. During the summer months Forest Park presents a serious fire risk given its large fuel load and the often dry forest conditions; should a fire start at Forest Park occur it would pose widespread life safety risks to more than 70,000 people and require extensive resources to contain.

Evaporating gasoline and jet fuel pose the next greatest life safety risk for facility personnel and communities downwind from the facility. Those in the immediate vicinity may be exposed to

toxic concentrations of these materials, and those downwind are susceptible to adverse health effects, especially for populations with existing health conditions. Well established casualty estimates for a catastrophic release at the CEI hub are not available and undoubtedly challenging to model, however additional data on the possible injuries in their locations would be invaluable for response planning purposes.

Response operations to mitigate the impacts of a catastrophic release at the CEI hub will be insufficient and face extensive barriers. Damage to infrastructure lifelines will limit access and resources to contain spills or combat fires. Other hazards in the area including hazardous gases and spills will threaten first responder safety and place an increased burden on spill containment efforts. Insufficient response resources in the public and private sector, including limited firefighting personnel and resources, limited clean up and containment contractors, and insufficient first responders will inhibit containment operations as well as health and medical operations to stabilize the incident and protect life safety. Evacuations and shelter in place orders may be necessary to protect people, however current avenues for egress in the surrounding communities are insufficient and may be impassable or dangerous following a CSZ earthquake. Due to the risks posed by a catastrophic release at the CEI Hub continued mitigation and response preparedness efforts are critical.”

Chapter 4: Laws Pertaining to Hazardous Materials in the United States and in Oregon;
Chapter 5: Hazard Assessment for Toxic Inhalation Hazardous Material Releases from
Multnomah County’s Highway 30 and North Portland industrial Areas.

When the report was delivered, Multnomah County Chair Jessica Vega Pederson said she would send it to Oregon Governor Tina Kotek along with a *letter “...requesting an urgent public policy response. We will work towards solutions that these threats demand of us and ask the state to act quickly and thoughtfully to address the crisis.”*

The Modified Locally Preferred Alternative (MLPA), the alternative that the IBR Program staff expect to submit for additional federal funding, does not address the issue of a lifeline or evacuation route for North Portland, Hayden Island, City of Portland, nor even Vancouver, Washington when citizens attempt to return to their homes or escape the collateral damage that the CSZ 8 or 9 earthquake is expected to inflict on us. Nor do the two studies mentioned above in A & B.

The Critical Energy Infrastructure Hub has additional studies going back to 2013. It surprises me that it hasn’t been addressed earlier.

I-5 is the current lifeline for Hayden Island. Will it remain so during construction?

A third crossing, bridge, or immersed tube tunnel, across the Columbia River should be first on priority, not just to reduce congestion and improve travel time, but to offer an evacuation route (a lifeline) to save lives should such an earthquake and toxic event happen.

What I am suggesting is - The right crossing, right sized, in the proper Location.

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