

From: [Michelle Mood](#)
To: [ECY RE WQIA NOI \(WO\)](#); [Tamboer, Noel C. \(ECY\)](#); [Tamboer, Noel C. \(ECY\)](#)
Cc: [Stephen Van Holde](#)
Subject: Comment on Sierra Construction Stormwater Permit
Date: Tuesday, May 3, 2022 11:18:49 AM
Attachments: [Stormwater Permit.docx](#)

Please see attached. Thank you!

-Michelle

Dr. Michelle S. Mood (she, her, hers)

(c) 740-233-6333

A boomer, not a zoomer.

Noel Tamboer
Attn: Water Quality Programs
Construction Stormwater
Washington State Department of Ecology

Thank you for the opportunity to comment on the Sierra Construction Company's request for coverage under the Washington State Department of Ecology's Construction Stormwater NPDES and State Waste Discharge General Permit. Our residence shares a border with this construction.

We wrote an extensive comment on the Bridge Industrial permit LU21-0125, and will reiterate our concerns about this construction here, writing in opposition to the stormwater permit.

The construction will disturb an only partially delisted Superfund site that adjoins a Critical Areas wetland and riparian stream, creating dangerous risks of pollution from arsenic, lead, copper, zinc, carcinogenic polycyclic aromatic hydrocarbons (cPAHs) and polychlorinated biphenyls (PCBs). The buildings are extremely close to the wetlands, preventing the standard wetland buffer. 125 acres of the land (75%) will be covered with impermeable surfaces on top of the aquifer. While we don't believe that Sierra Construction has the necessary expertise to deal with this exacting construction, the problem lies deeper than that – this construction completely goes against the public interest and it will definitely degrade water quality, and thus you must deny this permit.

U.S. District Judge Marsha Pechman of Seattle found that Ecology has “abdicated its duties” to update certain water-quality standards, as required by the federal Clean Water Act, and that the EPA has failed to meet its legal oversight obligations to ensure that adequate water-quality standards are protective of aquatic creatures.

(<https://www.pugetsoundinstitute.org/2021/12/ecology-epa-now-under-the-gun-to-adopt-new-water-quality-criteria-for-aquatic-creatures/>) Now is the time to act and protect the wetlands, stream and aquifer. We understand that there are pressures to support business, but this construction will likely generate only short haul trucking jobs and awful e-commerce warehouse jobs, and its placement in the poorest, brownest, sickest neighborhood (life expectancy 17 to 40 years below other parts of Tacoma), with the concomitant air, stormwater, and noise pollution that increases cardiovascular disease, asthma, low birthweight babies, etc., is not in the public interest.

Tier II antidegradation requirements under WAC 1730201A-320 are clear. Your department has authority related to water quality and measureable change in water quality as per WAC 173-201A-320 and yet the current application does not provide the information necessary. Thus, your office cannot “determine if the lowering of water quality is necessary and in the overriding public interest” without receiving much more information than is available in this application. In fact, a full environmental impact statement is needed. Even so, it seems clear that there is no overriding public interest in lowering water quality of our largest aquifer!

The most striking and confounding problems are, first, issues related to the diversion of stormwater for the stream, wetlands and aquifer quality; second, disturbance of dust, both contaminated and not, on the water quality; and, third,

disturbance and deterioration of wetlands/stream function related to moving the wetlands. Any of these three could severely deteriorate permanently the onsite wetlands/stream as well as the quality of the downstream Flett Creek and Chambers Creek, both salmon-run streams that empty into Puget Sound. And yet, none of the submitted materials propose any benefit to the public beyond jobs (since claims for improved wetlands/streams function are meaningless without current function assessment; see below), while there are a wide spectrum of negative effects, including those outside your purview (air pollution, noise pollution, traffic congestion).

Water Quality Issues:

There are four wetlands and a stream onsite considered Critical Areas, and the site is on top of the largest aquifer in Tacoma, with the area the headwaters of Flett Creek and Chambers Creek, which connect to the Puget Sound and have protected salmon spawning. Any construction disturbance could have a serious impact on the quality of the water. And yet, 125 acres are going to be covered with impermeable materials. The materials submitted do not adequately assess the impact of losing that much permeable land and created that much impermeable surface.

Tier II antidegradation requirements under WAC 1730201A-320 are clear. Your department has authority related to water quality and measureable change in water quality as per WAC 173-201A-320 and yet the current application does not provide the information necessary. Thus, your office cannot “determine if the lowering of water quality is necessary and in the overriding public interest” without receiving much more information than is available in this application. In fact, a full environmental impact statement is needed.

The Critical Areas will be deeply impacted, but even after a revision, the application materials show no attention to protecting them. City of Tacoma Senior Environmental Analyst Klara Kluge notes in her comments on the revision of Bridge Industrial U21-0125 permit application, “*The proposed mitigation approach is not described with regard to the City of Tacoma critical area code. The proposed referenced recent guidance from DOE which would more appropriately be used as Best Available Science under TMC 13.11.270.M for a "preferred environmental alternative". Provide a response to the code criteria.*” It is up to you to protect our waters. How likely is it that a distribution center mere feet from the wetlands and stream will improve their function after heavy earth moving equipment have gone back and forth over and throughout the Critical Areas? Our discussion below gives more details.

No Wetlands Function or Salmonid Impact Information: In fact, there has been no wetlands function assessment nor an Invertebrate Community Index to determine the health of the wetlands currently. Also, as per City of Tacoma Senior Environmental Specialist’s Klara Kluge’s comments on the LU21-0125 permit application, there may be additional buffers necessary for protecting the Critical Areas. Wetlands BA/C and Wetlands C might be Category II wetlands (C’s functions are all “moderate”) and thus could need a 150 foot buffer, which would prevent the current building size entirely.

The application materials lack construction impact on the Flett Creek/Chambers Creek water quality and quantity on the salmonid and other species downstream in order to assess environmental costs. There has been no Invertebrate Community Index to evaluate stream health. The construction is planning to move the stream before checking for fish – which is in fact required by WAC 222-16-030 and WAC 222-16-031(3). The application mis-classifies Stream Z onsite (Soundview's own Table 7 says it connects to Flett Creek, a fish stream and thus needs a 200 foot buffer; see Appendix 1, Figures 8 & 12, attached in "FINAL LU21-0125 COMMENTS").

I consulted with Dr. M. Siobhan Fennessy, wetlands expert (see Exhibit B for sample publications), and these are her criticisms of the Soundview reports related to the streams and wetlands and planned mitigation (personal communication, 2022 April 12, 16, and 19):

"I do not see evidence or discussion of the current benefits these wetlands and streams [described in LU21-0125] are providing. The functions have not been evaluated. This is a true riparian wetlands and connects to other waters, thus it will affect salmon downstream, and these waters will end up in the Sound. In terms of how one evaluates function of a wetlands, well, I wrote the rules on that for the State of Ohio, and I do not see the wetland functional analysis here. "Degraded" is not a clear term indicating a certain array of functions; a functional evaluation is still needed."

"According to the Wetlands Assessment, 'The stream corridor flows north to south through the western portion of the subject property and was identified as a historic headwaters for Flett Creek. All three wetlands are located adjacent to the identified stream corridor' (p.6). My conclusion: So it must still be a headwater of Flett Creek and on down to the sound. If the wetlands are adjacent they are hydrologically connected and so are part of the headwater area and their ecological functions would include improving water quality, supporting species that rely on wetland stream complexes, providing energy (in the form of plant material that other species use for their food supply) to downstream biota." (emphasis added)

Dr. Fennessy continued: "Again from the Soundview Assessment, 'Stream Z originates from a stormwater outlet northwest of the site' (p.16) This makes it sound bad, but all it means is that storm water runoff is being directed into a culvert (pipe) and directed into the channel. It's not clear whether they are discharging to an existing stream or they created a channel that then goes into an existing stream. It then says: 'No salmonid presence is modeled or documented within the stream.' There may not be salmon that far up but the water flows down to them so any changes could affect the fish. The Soundview Assessment continues: 'Stream Z is potentially regulated by the USACE through Category 2 above, as it is a tributary that is hydrologically connected to the Puget Sound, a traditional navigable water. Wetlands A-D are also potentially regulated by the USACE through Category 4 above as they could be considered wetlands adjacent to jurisdictional waters. Wetlands A-D and Stream Z would be regulated through WSDOE under the Revised Code of Washington (RCW) 90.48.' This means the corps of engineers are likely to be involved since they are the main federal agency that makes decisions on whether wetlands are allowed to be destroyed and then mitigated. By the rules of the Army Corps, wetlands are supposed to be evaluated

on the basis of the beneficial functions (ecosystem services) they provide. There are methods to do this, and the mitigation (replacement wetland) site is supposed to be on track to replace the functions lost. Thus the wetland function absolutely must be calculated for this to be known."

"In terms of how to evaluate the health of a stream, we look at macroinvertebrates, which are biological integrators. What really matters in a stream is biota. We have biological criteria and biodiversity indices. One good way to check for the health of the stream is an Invertebrate Community Index. I see none of that in this report. "Degraded" is not a clear enough indication of the state of the stream and wetlands. "

The actual health of the wetlands, the function of the wetlands, and the biota of the stream must be calculated in terms of the costs of the projects to Tacoma and the public interest, and it is impossible to assert that the wetlands and streams will be healthier without this assessment. Additionally, fish must be looked for as per WAC 222-16-030 and WAC 222-16-031(3). At this point, the report just insists function will improve without any actual functions report.

No Information on Stormwater Diversion Impact: The project will also dramatically change what happens to stormwater on the project site's 147.5 acres, with a myriad of significant environmental impacts. Replacing the existing uncovered site with 75% impervious concrete surfaces means that stormwater at the site that previously was mostly absorbed by soil, native plants, wetlands, and a stream would be diverted to run off somewhere else, with an inevitable increase in stormwater flowing into the municipal stormwater system. With climate changing causing intensification of heavy precipitation, existing stormwater systems may not be able to handle the level of water introduced during increasingly extreme weather events.

Although the proposed stormwater mitigation plan involves creating a "modular wetland system, or approved equivalent"—which appears to refer to small clumps of native plants—to absorb some of the water and above-ground detention basins to collect other water, there is no indication that Bridge Industrial's proposed stormwater mitigation is adequate to address the increased storm intensity expected in the future due to climate change. Indeed, because the Stormwater Site Plan contains only a cursory narrative, it is hard to tell what forecast the plan was based on.

The City should be moving towards low-impact development for stormwater management. The City's own website identifies protecting native vegetation and minimizing impervious surfaces as key principles of low-impact development. But Bridge Industrial's proposed project undermines both of these goals, doubly exacerbating the area's ability to manage stormwater.

The project site is located in a 100-year floodplain. Replacing open land that helps absorb stormwater with impervious surfaces will lead predictably to stormwater system backups and floods, with the project site's neighbors bearing the potentially devastating burden of these events.

Another significant consequence of this change is that it will likely impede the recharge of the South Tacoma Aquifer on which the project site sits.

As the City is no doubt aware, groundwater from the South Tacoma Aquifer typically supplies about 5% of Tacoma's water in the summer, but could supply up to 40% of Tacoma's city water. Bridge Industrial is proposing to build over an aquifer recharge area, where groundwater is currently able to seep into the South Tacoma Aquifer because of the lack of a confining layer. (City of Tacoma, Aquifer Recharge Map, http://cms.cityoftacoma.org/Planning/Shoreline/Maps/10_Aquifer.pdf); City of Tacoma, Aquifer Recharge Areas (Pierce County), <https://geohub.cityoftacoma.org/datasets/tacoma::aquifer-recharge-areas-pierce-county/about>) Although, according to Bridge Industrial, "a portion" of stormwater from the site will be discharged to the ground via a modular wetland system, impairment of aquifer recharge is a significant environmental impact that should be fully studied through a full EIS. Protecting the aquifer is essential. While it is important now, its importance will grow as climate change causes increasingly long periods of extreme heat and drought.

We need an EIS and clear modeling of upstream, downstream, cumulative and long-term impact 20 and 100 years out for total impact on the Flett Creek and the aquifer. Then this South Tacoma aquifer impact must be compared to the requirement of groundwater use modeled in Tacoma Public Utilities Tacoma Water's 2018 Integrated Resource Plan; resource adequacy needs then must be required to trump development if adverse impact discovered. Thus, the project must be modified (even cut in half in size) or denied permitting so as to protect TPU resource adequacy. Additionally, currently only two of the four buildings have infiltration systems for handling rainwater runoff (See fig 3 in TRC Soil Mitigation Plan). All must have clean infiltration to recharge the aquifer if this construction is permitted. And, of course, calculation of water quality impact and "public need and benefit" requires this modeling of the 20 and 100 year impact.

Distribution Center Run-off: Additionally, there is the problem of pollution runoff from the tires of the distribution center while functioning, which would depend on how many more trucks and cars are moving through the site. It looks as though Bridge Industrial's estimate in its land use permit is shockingly low. EarthJustice has submitted a 285-page comment to LU21-0125 in which they uncover that the company, Bridge Industrial, based increased traffic on a "industrial park" model, but what is being built is clearly high cube warehouse suitable for e-commerce – and, indeed, there is solid evidence that Bridge Industrial has been advertising for that. In an article on www.connectcre.com: "Bridge Set to Break Ground Next Year on Bridge Point Tacoma" (Sept. 30, 2021), Mr. Justin Carlucci (partner for Bridge's Northwest Region) stated: "The proximity of this site to so many key transit options, such as the Port of Tacoma and I-5, make it ideal for a variety of users meeting the ever-increasing demand for last mile and next day delivery." EarthJustice's analysis is that the increased traffic will not be under 5000 new vehicle trips, but 11,453 to 12,088! Even if trucks are only 28%, the smaller number is 17% of total vehicles serving all terminals at the Port of Seattle, while the larger number is 30% of current Port haulage! That will create a lot of polluted runoff from the onsite roads and parking and loading zones, especially during our "atmospheric rivers" especially since the steepest part of the hill by the property is going to have the least wetlands buffering. It is highly unlikely that this construction

won't pollute the wetlands and stream and downstream salmon, and we urge you to block this dangerous construction.

Contaminated Soil and Water Table Impact Absent: Calculate impact on groundwater of compressing contaminated soil 7-11 feet deep since the water table is calculated at 7-25 feet deep (see TRC SMP Figure 6). Environmental and health impact cannot be calculated without this.

Missing Documents; Mislabeled Figures: The missing information is crippling. No determination of significance can be completed without this, nor can your office calculate Public Benefit without including this information, nor can mitigation be lawful, nor can soil management be accurate.

- a. Wetlands document is missing Appendix F Wetlands Ratings Map
- b. Data list of species missing in Biologic Assessment and Wetlands, Fish & Wildlife Assessment.
- c. Require the correction of all maps to include complete and accurate legends and markings (examples include all the wetlands documentation, which wetlands authority Dr. Siobhan Fennessy found incomplete, as well as Exhibit A Existing Conditions of Soundview, "Adjacent Ownership" is not only incomplete, but #1-9 of the legend are missing on the map entirely; the BNSF Tacoma Mitigation Viewport does not have the grey blocks or the wide black dashed lines explained (See Appendix 1, Figures 10, 11, attached); phone calls to Soundview have not been returned)
- d. Use Table 7 of Soundview Wetlands, Fish & Habitat Assessment to identify Stream Z as connecting to Flett Creek, and thus requiring 200 foot buffer, not 75, since it is NOT Type Ns2.
- e. Recognize that the Soundview Conceptual Mitigation Plan does not justify buffer averaging; does not meet the requirement that there is no feasible alternative. Deny buffer averaging plans unless adequate justification provided. (A full response from City of Tacoma Senior Environmental Specialist Klara Kluge shows how much missing information there is. Please see Exhibit A of this comment.)

Dust Issues

Dust could end up severely changing the quality of the water.

The permit application relies on construction workers' on-the-spot observance of soil to find unexpected pockets of additional chemical pollution of the site (TRC OMP, 2.0 [p.9]). *Will the workers be incentivized by bonuses to report such pockets? Will their English language be sufficient to communicate? Will they have the agency and power to stop construction for additional testing? It seems a slender thread to rely on subordinate, on-the-ground workers to report if they see some discoloration in the soil.* Instead, city officials must be on site to monitor and implement the TRC OMP practices.

The permit materials are absolutely inadequate with regard to control and containment of the site contaminants -- arsenic, lead, copper, zinc, carcinogenic polycyclic aromatic hydrocarbons (cPAHs) and polychlorinated biphenyls (PCBs). Groundwater contamination is rejected outright a priori even though rain during

construction is said to create contaminated sediment that will be tested for arsenic and lead regularly ((TRC OMP3.3 [p.15]). The infiltrated water must be tested. How many chemicals will be added to the groundwater via rainstorms during construction? Other chemicals must be monitored and tested for.

The distribution center needs a loading dock – and for some reason, instead of building that on less contaminated soil (of which there is 136 acres), the permit plans for it to be on the twelve most contaminated acres (TRC OMD, 2.0) which also are the closest to the stream and wetlands! This is the color blue on TRC OMP Figure 2 (the cut is showed on Figure 3) – containing arsenic above the levels of 570 mg/kg, lead over 18,000 mg/kg, and both cPAHs and PCBs over 50 mg/kg. Compare that to the “yellow” on TRC OMP Figure 2, which has much, much less arsenic and lead -- arsenic levels of 20-200 mg/kg and lead 250-1000 mg/kg. *Why in the world are they picking the most contaminated section to dig up for the loading dock?* They must not! This 12-acre “blue” section has the same levels of lead, cPAHs and PCBs as the highly contaminated but treated soil (1.4 acres, “orange” on the map) but itself was never excavated and consolidated because it was not “cost effective” (TRC OMD, 2.0, p. 6. Note, there is a 12 acre section with somewhat lower levels that is not marked clearly, but TRC has not returned my calls to clarify. However, the cut is clearly in the “blue”). So dangerous and expensive to “excavate and consolidate” that it was never handled thus, and yet somehow appropriate to excavate? There is *no* reason the community should bear the additional risk of excavating a cut for a loading dock in the most contaminated soil when there are multiple other places on site that can suffice the needs of the builder without disturbing the “blue” soil. *This permit must not be allowed to go forward. But if it does, the loading dock absolutely must not be in the proposed location.*

Air pollution in the TRC OMD is focused on dust created by construction (with a brief mention of diesel emissions). The construction will disturb highly contaminated soil. Allegedly all construction will cease when dust is present and if winds are over 20 m.p.h. when moving untreated, contaminated soil. Water will be used to reduce dust as well as tarps on soil, speed limits on vehicles, and gravel (to get dirt off of wheels?) (TRC OMD Appendix A 11.1). Air will be monitored for the neighborhood only when the most contaminated soil is being moved (the “blue” highly contaminated soil, for Building A) (Ibid., 11.2.1).

There are several problems with this. Again, will workers and staff feel empowered to stop construction to water or wait for winds to die down? Will they be paid when labor must stop, or will it be in their interest to not mention dust? *And why 20 m.p.h?* The National Weather Service says that *dust is lifted up and moves along at 13-18 m.p.h.* (see my attached Appendix I: Figure 9). Checks and balances must be put in place to make sure no dust is produced – city agencies must be present and monitoring, and winds of 3 mph should be the threshold to stop construction.

Most concerning, air will only be monitored for lead within the active excavation areas and downwind and other locations within approximately fifty feet of active excavation limits (TRC OMD Appendix A: 11.2 [p.15]). Both the monitoring devices and the placement are inadequate to secure the health of the wetlands and neighboring residents, as the following discussion will make clear.

The “hand-held continuous real-time air monitoring instrumentation” such as X MIE DataRAM Model 1000 (TRC OMD Appendix A: 11.2) will not be handheld by workers in the midst of the construction, but fixed in place, numbering only four for this huge site, and are incapable of giving real time concentrations of arsenic and lead (“actual concentrations of arsenic and lead in air cannot be measured in real time” Ibid., p. 16) and, in fact, will “only indicate total particulate levels and not specific contaminant concentrations” (Ibid.). The permit alleges that “results from previously collected soil samples” will allow a total particulate Site action level to be calculated – but note that there is no evidence of actual exposure. Thus, dust will be allowed, because dust is being used to calculate at what level of dust the work must be stopped (Ibid.). *And yet the components of the dust will not be known and the permitting materials do not give a justification for only calculating the exposure for lead* (11.2.2.2). Specific and sufficient means to track pollution in real time must be put in place and compliance monitored by city agencies. Better yet, deny this permit entirely to protect our water quality.

And why have arsenic and lead been identified as the primary chemicals of concern (Ibid.)? There is no justification of this given in the materials. *With the high levels of cancer in the community already and the stream connecting to salmon rivers, on what grounds are the cPAHs and PCBs ignored? All chemicals must be monitored.*

According to submitted materials supporting LU21-0125, when “operations are performed in sensitive areas” “where the nature of the construction” result in a greater risk of exposure, “including residents,” the air samples will only be taken at “4 to 5 feet above ground” and sent out to a laboratory for (again) only lead and arsenic (Ibid., 11.2.4). There is no information about turnaround time, about other chemicals, nor about what will be done if there has been exposure to the residents, their homes, pets, vegetation and yards. A full EIS and Health Impact assessment needs to be done due to this significant effect to the area and full monitoring must be done with agency oversight. Or stand up and protect our water quality and deny this permit.

Thus, at this point, there is insufficient information about the contaminants that spread due to the construction, possibly to the detriment of the surrounding natural water features, plants, wildlife, and nearby residents.

The decontamination of earth moving equipment and trucks is similarly inadequate to the toxicity of the material on equipment. Gravel at the entrances and exits of the site will not be sufficient to clean excavators, trucks, and so on (Ibid, 13.0), while hosing down generates water to store until testing (13.2). Again, the testing is not comprehensive. It must be. But can we really trust a construction company to go above and beyond in order to protect water? No. You must deny this permit.

The supporting materials for LU-21-0125 says it will use clean fill the “source of fill is unknown” (SEPA Checklist LU21-0125). A plan is needed, when the surrounding soil is lightly contaminated and the property has had a longterm occupation by homeless residents, and there might be needles, etc. The Department of Ecology response to LU21-0125 says *testing must be done to find out if there is clean fill* – while the application admits not all pollutants’ locations are known, and plans on relying on

workers using backhoes and excavators to notice when and if there is unexpected "soil discoloration."

We are thus highly skeptical that Sierra Construction has the experience and the interest in following the soil mitigation plans without external oversight, which would increase costs to the city. Better yet, deny the permit rather than risk this contaminated dust spreading to the riparian wetlands.

Given the inadequate measures to control dust, the inadequate testing of airborne contaminants, *this construction will have a significant impact on the community and must be stopped or undergo a full EIS at the very least.*

Stream/Wetlands Relocation Issues

The construction will reduce the buffers to the Critical Areas and relocate the stream for more than 1000 feet. First, to clarify, according to the EPA, here are wetlands' roles:

***The functions of a wetland and the values of these functions to human society depend on a complex set of relationships between the wetland and the other ecosystems in the watershed.** A watershed is a geographic area in which water, sediments and dissolved materials drain from higher elevations to a common low-lying outlet or basin or a point on a larger stream, lake, underlying aquifer or estuary.*

*Wetlands play an integral role in the ecology of the watershed. The combination of **shallow water, high levels of nutrients and primary productivity is ideal for the development of organisms that form the base of the food web and feed many species of fish, amphibians, shellfish and insects. Many species of birds and mammals rely on wetlands for food, water and shelter, especially during migration and breeding.***

*Wetlands' microbes, plants and wildlife are part of global cycles for water, nitrogen and sulfur. Furthermore, scientists are beginning to realize that **atmospheric maintenance** may be an additional wetlands function. Wetlands **store carbon** within their plant communities and soil instead of releasing it to the atmosphere as carbon dioxide. Thus, wetlands help to moderate global climate conditions.*

<https://www.epa.gov/wetlands/how-do-wetlands-function-and-why-are-they-valuable>

Dr. Siobhan Fennessy explained how bad stream relocation could be: "Stream relocation as per the mitigation plan is not all positive, unfortunately. From a recent study, "In reviewing 40 different projects across Maryland, researchers at the University of Maryland laboratory didn't find many ecological benefits. The number and type of aquatic insects — food for fish and key indicators of stream health — didn't improve. According to ecologist Bob Hilderbrand, the study's lead author, there's evidence that a stream's ecosystem can benefit from restoration if the stream wasn't severely impaired to begin with. But in badly degraded urban and suburban streams, he added, "there's not much evidence ... that we can bring the ecology back. And in some cases, he said, his research suggests **the aquatic habitat and life in streams that have undergone restoration work actually wind up worse off than if left alone**" (emphasis added). (https://www.bayjournal.com/news/pollution/stream-restoration-techniques-draw-pushback/article_ffc96960-0895-11eb-b36f-efa466158524.html)

Dr. Fennessy continues, "That study also looks into cutting down trees to move the stream, which can make things much worse. A study in Washington also reported on the outcomes of this as well, noting that replanting woody species cover 'did not measurably affect bank erosion rates.' <https://habitat.fisheries.org/time-for-reflection-does-stream-restoration-work/>" She concludes, "Riparian zones are the areas along stream banks that are a critical part of the stream/river ecosystem, for instance by keeping soils in place. If bank erosion isn't bad when they move the

stream it could definitely increase and lead to more sediment moving downstream. This is bad news for fish that might be on site, and also could also lead to more sediment moving downstream, which is very bad for fish!"

"At the watershed level, wetlands work in the aggregate to provide functions that provide habitat, and improve water quality and minimize flooding downstream. For example, to salmon downstream. The WA Dept of Ecology says this: *'Since the 1780s, Washington has lost 31 percent of its wetland areas, from 1.35 million acres to 938,000 acres. Wetlands are critical to the overall health of watersheds. We are responsible for protecting, restoring, and managing the state's remaining wetland resources because of their key role in watershed health.'* (<https://ecology.wa.gov/Water-Shorelines/Wetlands/Wetlands-overview#:~:text=Since%20the%201780s%2C%20Washington%20has,key%20role%20in%20watershed%20health>)

Dr. M. Siobhan Fennessy, personal communication)

The disturbance of the current stream and wetlands will most likely not improve the wetlands functions of this riparian wetlands that has been undisturbed for 20 years. The discussion above also makes clear the current wetlands functional analysis has not been done, nor has the health of the stream been measured by an Invertebrate Community Index, nor has the presence of fish been tested.

We strongly urge you to require an EIS before even considering permitting this project. There are too many issues relative to stormwater management to risk public health, public benefit and climate resilience. The application lacks data on quality and quantity of jobs and does not factor in the loss of greenspace, aquifer recharge, increased pollution burden, loss of potential community gardens, etc. Thus far the project ONLY mentions JOBS as a possible benefit, despite providing no information about longterm job quality and pay. Your office cannot calculate "public need and benefit" or public health impact without including all the above missing and incomplete information. Even with it, we urge you to deny this permit.

Perhaps key to all of this is the fact that the city right now is considering a zoning change to reverse the historic sacrifice of our poorest, sickest and brownest residents. The South Tacoma Neighborhood Council has put together a plan that will support eco-industry instead of this destructive e-commerce high cube warehouse construction. All construction and new permitting must be stopped until this new South Tacoma Economic Green Zone has made it through the permitting process.

To review the law (as you well know) -- for the purpose of making a significance determination, "environmental quality" encompasses impacts on air (including air quality and odor); climate and energy; traffic and public safety; water (including stormwater runoff, absorption, water quality, and sewer impacts); and noise and recreation, in addition to several other categories of considerations. See WAC 197-11-444. In evaluating whether a project is reasonably likely to have more than moderate adverse environmental impacts, decisionmakers must look at all parts of the project proposal, and consider both short-term project impacts and the long-term effects for the lifetime of the project or longer. WAC 197-11-060(3)(b), (4)(c). They must consider both direct and indirect impacts, including the precedent that the project will set, and future actions that may become more likely as a result of the project. WAC 197-11-060(4)(d). They must consider not just local impacts, but global impacts. See RCW

43.21C.030(f) (agencies must "recognize the worldwide and long-range character of environmental problems"). A mitigated determination of non-significance (MDNS) is a permissible threshold determination under SEPA only if the proposed mitigation measures for the project reduce the project's impacts are sufficient to reduce the project's environmental impacts to insignificance. See generally WAC 197-11-350. If the project "continues to have a probable significant adverse environmental impact"—as broadly defined under SEPA—"even with mitigation measures," then a full EIS is required. WAC 197-11-350(2).

It is our conclusion that the construction will radically change the rainwater runoff and its ability to nourish the stream and wetlands and to replenish the aquifer. The construction as per the schematics will butts right next to the wetlands. The buffering for the wetlands violates the law, with permanent negative effects on the wetlands function, and disastrous effects during construction that the wetlands may not recover from. The very stream will be relocated and there is a high chance it will never regain its function.

We urge you to deny this permit. We have seen no evidence that this company has the skill set or the oversight to comply with the very exacting requirements of working in an active Superfund site (it is only partially decommissioned) and a Critical Area. The permit application from Bridge Industrial was insufficient, as were the expert plans commissioned. The water quality of the stream, wetlands, downstream salmon-spawning Flett Creek and Chambers Creek connecting to the Puget Sound, and aquifer will all be compromised at best and devastated by forever chemicals and pollution at worst. Additionally, the proposed construction will dramatically lower the quality of life and even life expectancy of the surrounding community while offering only low quality jobs. The cost to our wetlands and aquifer are not worth that. Use your authority and deny this permit entirely. Failing that, request an EIS.

Sincerely,

Stephen E. Van Holde and Michelle S. Mood
3719 South Gunnison St
Tacoma, WA 98409

EXHIBIT A: Senior Environmental Specialist Klara Kluge's comments on LU21-0125
1/25/2022 Critical Area Comments

1. Biodiversity Areas/Corridors have now been identified and generally described within the Revised December 2021 Conceptual Mitigation Plan. A Biodiversity Area/Corridor was verified along Wetland B; however, it was not included in the wetland rating form. BA/C are another type of priority habitat that would be checked off on the Wetland Rating Forms, increasing the habitat total by 1 point. Wetland B was rated a Category II and even with an additional point, the rating would not change.

However, an additional BA/C may be also present within and adjacent to Wetland A. This area does appear to contain tiered vegetation, although somewhat broken along the wetland and buffer area. The tiered vegetation would not need to be continuous or all native to be a Biodiversity Corridor, even if does not meet the criteria for a Biodiversity Area. The 1-point increase would change the wetland rating for Wetland A to a Category II with a 150 foot buffer rather than a 75-foot buffer. Although the vegetation is much more sparse along Wetland C, additional information is required to verify that a BA/C does not exist along this wetland as well. An additional point would also change the category of this wetland from Category III to Category II; however, I think this is much less likely.

Additional information is required documenting whether the tiered vegetated areas along the wetlands meet the criteria for either a Biodiversity Area or Biodiversity Corridor. The BA/C's must also be more precisely delineated on the plan sheets and the code criteria found at TMC 13.11.510.B.1.b. be more thoroughly evaluated. Considerations to include or exclude potential BA/C's can be found in this section. This criteria, in addition to the definitions per TMC 13.01.110 will be used to determine whether these areas should be identified as BA/C's.

In addition, applicable application submittal requirements under TMC 13.11.230.B require information for application or compensatory mitigation. This information will help inform a Biodiversity Area/Corridor determination. The following gaps were noted in the Conceptual Mitigation Plan:

B.2.e. All critical areas locations and the square feet, including Biodiversity Areas/Corridors

B.3.j. Provide the species and size of trees. At a minimum the average diameter at breast height (DBH) for each species and the location of any conifer greater than 30 inches must be provided. Describe the coniferous component as dominant, co-dominant, or sub-dominant. A tree survey is required to identify the location of trees of local significance or trees groves. (see definitions in TMC 13..11.110) I will need to see the trees proposed for removal on the site plan.

Describe habitat elements that are preset such as duff layer, cliffs, downed wood and snags.

B.3.k. For Biodiversity Areas/Corridors provide the overall size of the area including off-site vegetated areas. Provide the average width for corridors.

B.4.j. A hydrologic report including any mitigative measures for alterations of the hydroperiod. the City may required additional pre-and post-development field studies and/or monitoring to establish water levels, hydroperiods, and water quality. Water

quality shall be required for pollution generating surfaces using all known, available, and reasonable methods of prevention, control and treatment.

B.4.k. when mitigation includes creation or restoration of critical areas, surface and subsurface hydrologic conditions including existing and proposed hydrologic regimes shall be provided. Describe the anticipated hydrogeomorphical class and illustrate how data for existing hydrologic conditions were utilized to form estimates of future hydrologic conditions.

B.4.j and B.4.k should include the proposed compensatory storage areas and how they function with these considerations.

2. I am concerned with the function of the buffer being disturbed in the areas where compensatory storage is being proposed. Additional information is required describing the appropriateness for the compensatory floodplain areas proposed within the wetland and stream buffers. Please provide storm modeling showing how long these areas will be flooded and correlate that to the species proposed to be planted. Provide cross sections showing depth of water and proposed plants and how the water will drain out of the areas without scour or disturbing and washing out the plants within the compensatory storage area, or within the receiving wetland and stream.

3. The proposed mitigation approach is not described with regard to the City of Tacoma critical area code. The proposed referenced recent guidance from DOE which would more appropriately be used as Best Available Science under TMC 13.11.270.M for a "preferred environmental alternative".

Provide a response to the code criteria. The proposed wetland creation or enlargement would offer higher functions than additional buffer area provided the existing buffer will continue to function. Similarly, how does Best Available Science how does tie back to the compensatory storage areas and their function?

4. Provide a response for access provisions for long term maintenance monitoring access to the wetlands and stream buffers.

Exhibit B: Sample Publications by Dr. M. Siobhan Fennessy
(see her Wetlands Assessment review and discussion in Section II.B.)

Julie K. Cronk and M. Siobhan Fennessy, *Wetland Plants: Biology and Ecology*,
Routledge, 2016

M. Siobhan Fennessy, Amy D. Jacobs, Mary E. Kentula, "An Evaluation of Rapid Methods
for Assessing the Ecological Condition of Wetlands," *Wetlands*, Vol 27, Issue 3, 2007, pp.543-
560

D. Gardner, R.C., Finlayson, C.M., Davidson, N., Fennessy, M.S., Coates, D., van Dam, A., Baker, C., Kumar, R., Stroud "Global Wetland Outlook: State of the World's Wetlands and Their Services to People," Ramsar Convention Secretariat, 2018

Teresa K. Magee, Karen A. Blocksom, & M. Siobhan Fennessy, "A National-scale Vegetation Multimetric Index (VMMI) as an Indicator of Wetland Condition Across the Conterminous United States," *Environmental Monitoring and Assessment*, Vol 191, Article No. 322 (2019)

Amanda M. Nahlik, M. Siobhan Fennessy, "Carbon Storage in US Wetlands," *Natural Communications*, Vol 7, Issue 1, 2016, pp.1-9

Jake Rice, CS Seixas, ME Zaccagnini, M Bedoya-Gaitán, N Valderrama, CB Anderson, MTK Arroyo, M Bustamante, J Cavender-Bares, A Diaz-de-Leon, S Fennessy, JRG Márquez, K Garcia, EH Helmer, B Herrera, B Klatt, JP Ometo, VR Osuna, FR Scarano, S Schill, JS Farinaci, "The IPBES Regional Assessment Report on Biodiversity and Ecosystem Services for the Americas,": Bonn, Germany, 2018