OUR DUWAMISH

King County

June 2014

Lower Duwamish Waterway Cleanup – Transportation and Emissions Studies

Cleanup of the Lower Duwamish Waterway will be a positive step toward improving public health and the environment. Still, when the cleanup activities get under way, people who live and work nearby can expect construction-related impacts.

During public comments on the Environmental Protection Agency's (EPA) draft proposed cleanup plan for the Lower Duwamish Waterway last year, King County heard significant concerns and questions about the analysis and communication of potential truck traffic impacts of different cleanup alternatives on traffic and air pollution.

To better understand potential construction-related impacts of a range of cleanup alternatives, King County recently commissioned two studies to look at how truck use could affect traffic and air quality under different scenarios for transporting dredged material via a combination of truck, barge, and rail. King County also analyzed the potential to reduce air pollution by shifting to use of ultra-low sulfur fuels.

For comparison of cleanup alternatives in a Feasibility Study, EPA assumed all dredged material would be transported by truck to trains. While this assumption allows for an "apples to apples" comparison of the clean-up alternatives, actual impacts on the community will be dependent on the final cleanup design, permit requirements, and the mix of truck, barge and rail used for transporting dredged material. The Duwamish River Cleanup Coalition also contacted the county seeking additional information about likely air quality impacts with upcoming federal standards for cleaner fuel.

How does King County plan to use the information from these studies?

EPA is expected to make a final recommendation on the cleanup plan around the end of 2014. No matter which cleanup alternative EPA selects, King County is committed to working with the community to find ways to minimize impacts of the cleanup construction. A final cleanup decision will set the stage for exploring transportation alternatives, including barge-to-train-loading.

Before beginning any construction project, King County seeks ways to avoid or reduce community impacts. Some impacts, such as some use of trucks and heavy equipment, cannot be avoided.

Construction on Lower Duwamish Cleanup will include a permitting process to determine hauling routes, work hours, and more. For example, truck hauling routes may avoid or minimize use of residential roadways.

These additional traffic and emissions studies are intended to build on the Feasibility Study and begin to paint a clearer picture of potential impacts to the community for a range of clean-up alternative. These studies will help to inform early design work. King County has shared these studies with EPA, Lower Duwamish Waterway Group Partners, and the Duwamish River Cleanup Coalition.

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What does the traffic study tell us?

In order to evaluate potential traffic and air impacts, we looked at a range of hypothetical transport scenarios for three different clean-up alternatives. The scenarios ranged from no direct barge-to-rail transport to 78 percent direct barge-to-rail transport of dredged material. Key findings:

- As with EPA's Feasibility Study, the studies found that more dredging means transporting more contaminated mud and prolonging the duration of the construction, traffic and air impacts related to the cleanup.
- As the use of direct barge-to- rail for local transport increases, there can be a reduction in local truck traffic. Depending on how much direct barge-to-rail transport is applied, the study shows that the predicted number of truck trips generated by the construction on an average day under any cleanup alternative could range from 112 truck trips per day (about 11 truck trips per hour) to as few as 24 truck trips per day (three truck trips per hour).
- The traffic study found that because of other industrial activity with high volumes of trucks and heavy equipment already in the area, the additional trucks are expected to have a minimal additional effect on traffic with slightly longer delays (measured in seconds) at intersections in the Duwamish Valley. For people who work and live near transload facilities, the predicted increase will likely be noticeable.
- Barging dredged mud closer to a rail loading site could reduce truck traffic. Currently there is one location where the contaminated mud can be loaded on the trains from barges. In order to reduce the use of trucks, more train loading sites would likely need to be sited and constructed. Trucks cannot be completely eliminated since some areas (about 22 percent) must be dredged by equipment on land.
- The studies did not look at the added construction impacts of building new train loading sites or the impact of increased train traffic they would create at railroad crossings in communities.

What does the emissions study tell us?

- By the year 2030, EPA expects to phase in air quality requirement for certain vehicles to use cleaner ultra-low sulfur diesel fuel and better emission filters. Depending on the phase-in approach, these new requirements can reduce air pollution during the cleanup compared to the projections in EPA's Feasibility Study issued in 2012.
- In comparison to the Feasibility Study, this study estimated that cleaner fuels under any cleanup alternative may decrease the greenhouse gas carbon dioxide (CO_2) by 8 percent, nitrogen oxides (NO_x) by 46 percent, sulfur oxides (SO_x) by 78 percent, and particulate matter (as measured by PM_{10}) by 58 percent. Reducing particulate matter is important as high levels in air can trigger asthma.
- Emissions from trucks transporting material are predicted to be small compared to emissions from the overall clean-up project. Maximizing the use of direct to rail for dredged sediments are expected to reduce emissions from the cleanup by less than 2 percent. Most cleanup emissions

- come from the heavy equipment and barges used to remove the contaminated mud from the river and the trains that will carry it to landfills.
- For comparison purposes, the yearly emissions during the cleanup from river dredging, local transport, and transport to landfills are predicted to be the equivalent of 1 to 4 percent of local existing Port emissions.

For the full text of the traffic and emissions studies and more information on the Duwamish cleanup, please go to www.kingcounty.gov/ourduwamish or call King County's Wastewater Treatment Division at 206-477-5371.

Alternative formats available by calling 206-477-5371 or 711 TTY Relay

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