

Engineering and Planning Subcommittee Meeting

Date: April 15, 2009

Attendees: Wes Jorgenson, City of Bellevue; Walt Canter, Cedar River Water and Sewer District; Margaret Wiggins, Northshore Utility District, Scott Thomasson, City of Redmond; Arne Lind and Art Wadekamper, Ronald Wastewater District;

KC Attendees: Greg Bush, Sharman Herrin, Doug Marsano, and Jeff Stern

II. Overview of Lower Duwamish Superfund Clean-up Feasibility Study Alternatives

1. Alternatives background, content, price, cost/benefit

- Greg Bush, Manager of Environmental and Community Services Section gave a brief summary of activities for the last two weeks; 1) the Lower Duwamish Work Group (LDWG) comprised of four agencies (the City of Seattle, King County, the Port of Seattle and the Boeing Company) had a facilitated meeting for Duwamish area businesses on the draft Feasibility Study (FS). The vast majority of participants had received letters from the EPA identifying them as participants and potentially liable for the clean-up. Participants questions included “wouldn’t it be better to pull all of the contaminated sediments and be done with the project?” The other sixty parties to the clean-up are private businesses (or landowners that may have leased their land to businesses) that may have contributed to the contamination over the last 100 years. 2) The draft FS had been released on the ldwg.org website for review. Comments are requested by EPA and Ecology by June 24th.
- Discussed were the range of clean-up alternatives and an explanation of the process. All the alternatives will achieve the clean-up objectives; differences between them are time and cost to achieve the goal. Some dredging is always needed. But there is an equilibrium state that the river bed will achieve in 15-25 years because of sediments depositing in the river, the waterway will equilibrate to a less contaminated level because of natural attenuation. The amount of dredging or capping varies between the alternatives. A question was asked if periodic dredging would be allowed for shipping. Greg answered that yes, it’s not a significant amount but it will continue to happen in the navigation channels.
- In response to a question on river capacity related to floodwaters, Greg replied that he didn’t believe there is a volume capacity problem but that would be handled by the Army Corp of Engineers.
- Greg answered a few questions on contaminants, replying the river is contaminated with PCBs (historical and current in the stormwater), dioxins and furans (combustion byproduct), Arsenic (industrial byproduct) and PAHs(historical and ongoing). Washington State has sediment standards and in addition there are federal standards that set contaminate limits.
- (Refer to Table 11-1) LDWG went through a process that identifies the different clean-ups; EPA/Ecology set the limits for the Remedial Action Objectives (RAOs). The four objectives are for protection of seafood consumption (Asian Pacific Islanders and Tribal communities have very high consumption), direct contact, benthic community (base of the aquatic food web, they live in the sediments and are the most easily affected by contaminants; there are state standards for chemicals in the sediment) and fish and wildlife. There are two

aspects that you have in a cleanup: what level do you have to clean-up to bring the concentrations to a level that meet the objectives and how do you get there (in this case considering the system is recovering naturally on their own).

2. Discussion/Questions on the Alternatives

- Alternative 1: (\$50M) Four hotspots would be cleaned and then no further work would be done, the river would follow the natural attenuation process.
- Alternative 2: (\$215M) In addition to Alternative 1, dredge key hotspots and other areas that likely could be re-exposed by floods
- Alternative 3a-3d: (\$250M-\$345M) In addition to Alternative 1 and 2, cap additional hotspots; relying on containment and capping more and less on natural recovery over time.
- Alternative 4a-4d: (\$420M-\$645M) Similar to Alternative 3, but dredge all the additional hotspot sites with no capping – still allow for some natural attenuation
- Alternative 5: (\$1280M) “The Big Dig” – dredge $\frac{3}{4}$ of the river.
- Dredging can only be done from November to March. A major issue is that in Seattle, dredged sediments would have to go to an upland landfill and only so many rail cars can be filled and sent to the landfill per day from that site. This means that more dredging can take many more years to complete.
- Greg answered a question about deep water dumping; he replied that it is illegal to do that, all open water sites have been closed to these levels of contamination.
- Regarding Alternative 1, questions were asked if no further work was done on the river would there be additional problems. Jeff replied that the modeling analysis of the river estimated the restoration timeframe to meet the objectives would be too long. At the minimum, Alternative 2 would have to be employed.
- Questions were raised about the continuing problem of contamination from upland sites and whether the clean-up alternatives addressed this issue? Jeff replied the county has an active source control program. LDGW has tried to estimate timeframes with the assumption that only so many sites can be cleaned up each year so it does provide time to complete uplands source control. However, incoming contamination in the highly urbanized area will be difficult to tackle.
- Questions posed by members were: how clean do you think we can get the area? What would you term an achievable level? Shouldn't it be sustainable?
- The County is involved in the remediation process and a landowner and regulatory agency. It is likely five County divisions have contributed to the contamination: Stormwater, Facilities, Transportation, Wastewater and Solid Waste.
- Dredging takes longer and costs significantly more than capping but some believe that dredging is permanent because the sediments are removed. Capping involves placing a layer over the contaminated site; the sediments below will not be disturbed and future risk for re-exposure is low.

- Several questions were asked regarding the County's responsibility for hotspots and if, the CSO Control Program was helping to solve further contamination? Jeff answered, the regulatory agencies will determine who's responsible; they have the authority to have LDWG front the costs and LDWG in turn can sue the other parties to recover costs. The County is currently tracking CSO information to present to EPA/Ecology on how much allocation should be given to WTD for CSOs due to improvements. The County feels the City of Seattle is responsible for 90-95% of current loading to the LDW from stormwater. In the past, the County has had higher contaminates (due to a mandate from DOE that all industries out process water into the sewer), but because of our Industrial Waste program, now CSOs look very much like stormwater discharges in chemical contaminants.
 - There were several questions on what the financial impact to the County will be. Greg replied that there will be an allocation process. Currently, WTD is funding the remediation process; but it will be appropriated to the division/department within the County that has responsibility for contamination. It still has not been determined what WTD's allocation will be. In remediations, the cost is often initially allocated among those who the agencies have the ability to fund the cleanups, and who in turn have to go through the courts for recompense from others who may have contributed to the contamination. WTD receives a 50% grant reimbursement and whatever funds currently and previous spent is applied to total cleanup costs to be allocated. Jeff also commented that we may be close to our likely wastewater share. KC is the largest contributor of CSOs, the City of Seattle is the largest contributor of stormwater, and Port of Seattle and Boeing are the largest landowners.
 - Concerns were raised that the cost is appropriated among the county's divisions/departments correctly and not entirely borne by wastewater.
3. Discussion on Letter of Recommendation: level of detail and scope
- The letter of recommendation would be sent to DOE/EPA. Both regulatory agencies will be weighing all comments received.
 - At this point the County has not adopted a position on any specific alternative - at some point that may change. The County is in agreement with LDWG on the alternatives analysis presented in Table J-5. The County agrees with the FS analyses that Alternative 1 does not meet minimum criteria and Alternative 5 is not further considered because of disproportionate costs.. Environmental groups and businesses have not ruled out Alternative 5. The County is in support of the proposed approach – do the worst sites first, monitor as cleanup progresses to see if natural attenuation is occurring, and adapt the cleanup plan as appropriate.
 - A question was asked about the involvement of the Puget Sound Partnership. Jeff replied that they are competing for the same grant dollars. They have also identified a likely cost for cleaning up Puget Sound and sediment cleanup is part of their identified work. Current remediation efforts will set the

- In response to a question, Jeff explained capping would be a 6 inch thick layer or a 3 foot layer depending on the site. If the sediment is stable at that location and concentrations at depth are not really high then a thin layer may be adequate. If there could be erosion or very high buried concentrations then a 3 foot cap may be necessary.
- In response to a question on the preferred alternative, Jeff answered that MWPAAC should comment on the feasibility study. The county doesn't have a recommended alternative, what is being proposed is the conceptual approach. In reviewing all the alternatives, natural attenuation will happen regardless of the implementation. The preference is to address the worst sites (e.g., those identified for dredging in Alternative 3a-3b), employ a robust monitoring program to evaluate if natural attenuation is working, and adapt the cleanup plan over time as appropriate to meet the objectives as quickly as possible.
- The committee is in agreement with the proposed conceptual approach. Jeff explained that there is a risk factor that should be considered with that approach in that do we leave the public entities vulnerable to more cost as businesses will want to settle for a one-time cost share. As the public entities do not go away, they take the risk that additional work may be needed. More permanent solutions (e.g., more digging) cost a lot more but could get the private entities to hand over more money and leave public with less risk.
- Concerns were raised by members that further remediation may be mandated at a later date.

III. Other Business

- Reclaimed Water Proviso – Dave White
The proviso status update on the existing Reclaimed Water Program that has been requested by the County Council upon adoption of the WTD operating budget. The update is due to the Council by June 1, 2009. Section 105 of the adopted WTD budget stipulates that \$100K should not be expended or encumbered until WTD transmits and the council approves by motion a report on: 1) status of work program related to reclaimed water and the progress on the reclaimed water backbone project; 2) status report on the division's efforts to market and establish contracts for the sale of reclaimed water produced at King County wastewater treatment facilities; and 3) analysis and development of preliminary rate structures and policies for sale of reclaimed water from King County facilities. If the motion is not approved then the \$100K cannot be spent.
- Concerns raised included the need for reclaimed water connection charges and education on the existing reclaimed water program.
- The process for establishing RW rate structured policies is the RW Comp Plan. Policies for pricing and financing will be updated in the Comp Plan. Concerns expressed are that retail and wholesale reclaimed water costs should differ based on locations and application.