



July 21, 2016

To: DES Executive Committee for Capitol Lake/Deschutes Estuary Management Process

From: DERT Board of Directors - Contact: Sue Patnude olydert@gmail.com

Subject: DERT Response to the Dual Estuary Lake Idea (DELI)

This document unfolds the Deschutes Estuary Restoration Team's initial response to the Dual Estuary Lake Idea being promoted by Steve Shanewise. DERT has concerns and we feel those concerns need to be addressed as the Department of Enterprise Services Executive Committee moves forward to prepare the initial report to the Legislature due in January of 2017.

While the DELI hybrid option is beneficial toward dam removal, DERT is concerned about constructing yet another "dam" to capture fresh water for swimming and potential potable water should there be a catastrophic event destroying other drinking water availability.

Issues with DELI Claims

DELI Claim 1: The new lake would be fed by the artesian aquifer that is abundant under the City of Olympia. Water rights would not be needed – the lake would simply tap into the aquifer.

DERT Response: We do not know how much water is available in the aquifer and whether or not water rights would be required. DERT, based on knowledge of this process, does believe rights would be required for consumptive use if swimming and/or potable water defined the uses. The water would have to be clean enough on an ongoing basis to meet water quality standards for consumptive use for public health reasons. Ecology has not been contacted to verify. DERT is concerned that this element is being promoted as doable but has not been studied or vetted through regulation.

Questions: *Has the artesian aquifer been studied? What is the potential volume of freshwater input from this aquifer? What is a sufficient flow rate for this basin? How would this fresh water input impact Budd Inlet – or other potential users? What permitting*

challenges are associated with tapping this aquifer? Is this idea consistent with the City's comp plan and critical area ordinance? Would water rights be needed and could they be obtained?

DELI Claim 2: The existing “Wall of Statehood” would be continued around through the water to form the new lake. In the water, it would be built out of rock from Black Hills Quarry – who says they can provide it much cheaper than the estimates in the Deschutes Estuary Feasibility Study (DEFS). Claims are made there is no need to build a sheet pile wall with a depth of 100’ (DEFS) because the railroad bridge is built on rock and is stable. Further claims that DEFS was biased toward estuary restoration and summarily dismissed the dual basin option are also being made.

DELT Response: The rock wall holding the railroad bridge was built before the dam was constructed. Hundreds of feet of silt have built up in the proposed project area since then. DEFS estimates and engineering concerns are definitely warranted. Rock placed in silt would slough and settle – causing another ongoing infrastructure maintenance concern and potential public safety hazards. There is no engineering provided in the DELI concept. When the DEFS looked at the dual basin approach it was examined by qualified coastal engineers who determined a sheet pile wall of 100’ depth was the only way to provide a stable public causeway to contain the lake due to the depth of silt build-up since the dam was constructed. The premise that DEFS was biased toward estuary restoration and summarily dismissed the dual basin idea is preposterous. DEFS stands for Deschutes Estuary Feasibility Study and was undertaken to determine just that – is an estuary feasible?

Questions: What quantifiable evidence is available to dispute qualified coastal engineers’ assertion that sheet piling would be necessary? What engineer is available to sign off on this alternative approach risking license, liability and reputation? How would the rock wall be sealed to prevent marine water from entering the new pool and freshwater from escaping?

DELI Claim 3: The new wall would protect the City from flooding.

DELT Response: A completely restored estuary would be the best flood protection due to increased capacity. Without engineering, the statement being made by DELI is unreliable at best.

Questions: On what study, coastal engineering, or other science is this assertion based? Is this just one person’s opinion? Under this alternative, how high would the wall/berm need to be in light of sea level rise? With sea level rise, wouldn’t the increased pressure on this structure necessitate a sturdier solution, i.e. sheet piling driven to a 100’ depth?

DELI Claim 4: The new lake would stay clean due to artesian water input and also be a place to temporarily store stormwater.

DELT Response: There are over 40 stormwater outfalls into the lake – the majority of those outfalls are in the area proposed in the DELI concept for the new lake. Those outfalls are unmonitored and could contain any number of vile substances to challenge public health, including oil, feces, bacteria and viruses.

Questions: *How can this basin be both “clean” and provide stormwater storage? How would flow have any effect on invasive species, both plant and animal, including the New Zealand Mud Snail? Regardless of the rate or volume of freshwater input, how would another impounded freshwater body of water be any different, or be any less susceptible, to the current challenges facing Capitol Lake?*

DELI Claim 5: The new artesian waters in the lake would be available as potable water when the “big one” hits.

DELT Response: People lined up on the shoreline with buckets and cups? Infrastructure tied into broken existing infrastructure? Stormwater flowing into potable water?

Questions: *How would the newly created lake, having been used for swimming and ???, be available for potable water distribution in the case of a catastrophic event. Would people line up on its shores with buckets and cups, assuming infrastructure was incapacitated? How would the City guarantee safety?*

DELI Claim 6: Dredge the south basin year-round and pump the slurry into a holding pond operated by longshoremen who need work from the failing Port. There the slurry would be dewatered and it would be cheaper to dispose of due to lighter weight.

DELT Response: In this idea, dredging could only occur during the fish window (time when fish are not present or using the river) – a very short time period in the late spring/early summer before fish return and after they leave the river. This would likely accomplish very little. Also – the wetlands currently present in the south basin were mitigation for the fill that created Heritage Park. There is no way that area can be compromised. If sediments are to be managed within some part of what is now the lake, a better solution would be to use containment and trapping methods, with periodic dredging during fish windows. Any solution that involves long term pumping would be costly and subject to technical failures. Working with nature, rather than against it, is preferable for a sustainable solution.

Longshore jobs? Seems unlikely – but??

Questions: *One of the principle financial benefits of a completely restored estuary is the reduced need for dredging over the long term. What would be the dredging needs of this basin be, and what would this cost the citizens of Washington? What would the permitting challenges be in the future? How would this idea fit into a required long term sediment and financial management strategy?*

DELI Claim 7: This is a win/win option. It is the only option that will be accepted because it provides what everyone wants: restored estuary and freshwater lake.

DERT Response: While DERT understands the compromise DELI offers, nowhere is there mentioned how this most expensive project would be funded, and what kind of infrastructure maintenance would occur in perpetuity. Just because an idea is the most palatable on the surface doesn't mean it is feasible or would do anything to protect or restore the ecology of the watershed. To say this is the only acceptable option overlooks the fact that there are solid estuary only supporters and lake supporters. Indeed, it is another option – but doesn't provide the only acceptable outcome.

Questions: *If the DELI option was technically feasible and funding can be found, is the risk of failing to meet its objectives worth trying it anyway? What would be the cost to remove it and restore the enclosed area to an estuary in the event of failure? How do we address the legacy we would be leaving for future generations? Are we just creating another dam – and maintenance nightmare? How would sediment realistically be managed? With this option, we are likely still choosing to compromise estuarine habitat for a reflecting pond and a swimming beach that will only be used for a short time before it becomes another polluted water body. Why not just build an outdoor public swimming pool somewhere in the park, on the isthmus or nearby? Much easier to design and build, less costly to maintain, and will protect public health.*

Conclusion: While DERT questions some of the claims made in the DELI proposal as it is being promoted, we, in good spirit, submit our questions and concerns to foster critical thinking as the Executive Committee and community at large weigh different “management” options. The preferred outcome, of course, has to be financially and ecologically sustainable and not leave a legacy of burden on future generations. DERT wants to thank Steve Shanewise for his creative option and his passion for estuary restoration.