

COMMUNITY SOUNDING BOARD (CSB) FOR THE CAPITOL LAKE – DESCHUTES ESTUARY EIS

FOLLOW-UP COMMENTS ON MEEETING OF NOVEMBER 14, 2019

The CLIPA board has reviewed the project team’s presentation and the discussion from the CSB meeting. We have several comments for your consideration. But first, let us say that we are pleased with your development of the optimized plans for each of the three alternatives. The project area layouts and the descriptive text boxes for each area help us to visualize the project scope and how each of the project goals is intended to be met. We support this approach in the development of the alternatives for the EIS. Our comments reference the layouts for the three alternatives and the various text boxes, as well as a couple general comments.

Overall Impression

Your optimized Managed Lake Alternative closely follows CLIPA’s presentations and includes many of the features that we believe will make this the preferred alternative.

We were also interested to see how the optimized Estuary Alternative was presented, because other than removing the tide lock, we had been unable to determine features and operational details for this alternative from its supporters.

Also, as suspected, we learned that the optimized Hybrid Alternative is essentially the same as the Estuary Alternative, but with the addition of a saltwater reflecting pool. It does not include an artesian fed freshwater reflecting pool or a narrow, eighty foot opening at the tide lock as recommended in the DELI proposal. We agree with your description of the optimized alternative, which eliminates these two DELI features.

Comment on Removal of the Fifth Avenue Dam (Estuary and Hybrid Alternative Text Box)

The project area layouts for these optimized alternatives show a 500 foot opening at the current site of the tide lock. Because of the importance of this design element, the project team must thoroughly investigate the opening size before it is finalized. The following discussion is intended to provide some of CLIPAS’s concerns for your consideration.

A key design element of the Estuary and Hybrid Alternatives is the size of the waterway opening between Budd Bay and the proposed estuary. The width of this opening significantly affects the transportation and infrastructure features of these alternatives, which will, in turn, impact the project cost/benefit analysis. This feature will change, and potentially disrupt the City of Olympia’s basic community transportation services between West Olympia and the Downtown area. The size of the opening will have a dramatic impact on the viability or presumed benefits that an Estuary might be credited with.

Both of the tide lock removal alternatives will require enlargement of the waterway and a completely new Fifth Avenue Bridge. Reconstruction of the existing Fourth Avenue Bridge will also likely be required. The connecting link to the Deschutes Parkway, an important transportation link to Thurston County Government and the West Side, will be a major undertaking. To better understand the scope of this issue,

CLIPA obtained the services of C. Stewart Gloyd, the Washington State Department of Transportation Chief Bridge Engineer (retired). Mr. Gloyd prepared a written evaluation of the State's previous Consultant's pre- design report on this issue. His full report and conclusions are available on the CLIPA Website. His basic conclusions were that the redesign of the Fifth Avenue Bridge and the new transportation corridor will require a major rerouting of the Deschutes Parkway, and most likely a large roundabout. He also concludes that routing of Fifth Avenue leading to the new bridge will take up much of the west half of the isthmus. This will be required to retain the City and County's ground transportation capacity east and west, and to the County Courthouse area. Depending on the width of the opening, the Fourth Avenue bridge abutment structures may also require extensive redesign.

The width of the waterway opening will significantly impact hydraulic surges during tidal changes. This affects the safe public access to and through the waterway. In addition to being the entrance to the proposed estuary, this waterway is in the center of the urban area. The project team needs to provide an accurate estimate of the flows through this waterway, to assure an acceptable level of recreational safety during peak tidal change.

Past State agency and committee reports need to be revalidated before they are used for evaluating the selected Estuary/Hybrid impacts in the EIS. Currently we are unsure which of the State's long bibliography of baseline reports properly reflect the currently planned Estuary waterway opening and how they will need to change.

The proposed Estuary design alternative uses an opening width of 500 feet. The Department of Ecology has used an opening width of 650 feet (200 meters) for their last five years of water quality modeling, which informs their reporting and conclusions on the projected downstream impacts from the Lake. The difference between these two widths, not to mention the formerly proposed 80 foot Hybrid Alternative, will have a significant effect on water quality, hydraulics and hydrology. If Ecology's 650 foot opening width is not used, their modelling and conclusions will be subject to question, and their validity for use in evaluating the alternatives for the EIS will be problematic.

The removal of the tide lock and resulting waterway for these alternatives also opens the entire Lake basin to the challenges presented by the seawater rise protection plans. This issue is not addressed in the Text Box or elsewhere for these alternatives.

Also, the proposed Estuary and Hybrid Alternative layouts show no change to the Railroad Bridge opening at Marathon Park or infrastructure changes at the park. This is inconsistent with the prior consultant's report which included a full 500 foot opening. The width and nature of this opening, as with the opening to Budd Bay, will significantly change the hydraulics and functional operation of the Estuary. This again raises the question of which of the prior reports and studies will be used for the final EIS Alternatives Designs.

Comment on Elevations and Color Coding Key (All Alternatives)

The box in the lower left corner for each alternative provides a key for the proposed habitats at various elevations. The color coding needs to be reviewed to more accurately represent conditions for each alternative. As an example, for the estuary alternative, for elevations below the normal high tide level, a mudflat will be the predominate habitat type, as described in the textbox for the Middle and North Basins. Much of this area is currently depicted in green shading, but would convey a more accurate picture for the public if it were shaded as brown or gray.

For the Managed Lake Alternative, use of the term subtidal in the key should probably be replaced with something like 'lake levels' to be clear that these depths are fixed and don't vary with the tides.

For the Estuary and Hybrid Alternatives, it would also help to inform the public by including depictions of varying water levels at the different tidal stages. We recognize the difficulty for the project team in balancing concise, yet complete depictions for the variety of conditions. We look forward to reviewing your proposals for this issue. As in the comment for the width of the waterway opening, the following discussion is intended to provide some of CLIPAS's concerns for your consideration.

Under the Estuary and Hybrid Alternatives, the habitat of the tidal mudflat will be similar to that currently occurring in East Bay. No plant life is ever seen in East Bay except above the high tide mark. These alternatives project that marine water flows and conditions will extend to the base of Tumwater Falls. For comparison, we can look at the elevation of the plant life around East Bay to project what the plant life in the project area will look like in a few years when the Capital Lake tide lock is removed. All of the existing plant life below the elevation of about 10 feet will essentially die off and not return. Mud Bay area is another example that supports this conclusion. This is not what is portrayed in the key or on the draft depictions.

If these alternatives anticipate the creation of "islands from dredge material" in the project area, we need an understanding of what height above high tide (MHHL) will be required before any plant life will return. Also, some consideration of what the surge from a Deschutes River flood event will do to these created islands under lower tide conditions will need to be discussed in the Sediment Management review and findings.

Following up on our earlier comment, additional clarification is desirable to better capture what the public will see at various heights of the tide, and how it varies seasonally. A seasonal nomograph that depicts what will be seen on the average day, for instance, at the dam looking towards the Capitol throughout the summer days is needed. During the summer, the lower, low tide is during the day, which will leave the mudflats exposed for most of the daylight hours. Conversely, the higher, high tide is overnight. We can see this in East Bay, where during most of the summer daylight hours, it is drained by the lowering tide and the mud flats are all that are visible. At night the tide comes in and the water reflection is seen.

Recognizing the significant increase of mudflat exposure inherent with either of the Estuary or Hybrid options, we believe it would be helpful to inform the community of possible negative effects regarding odor and safety in this urban area. A short report prepared by Drs. Oscar Soule and K. V. Ladd from the Evergreen State College faculty illustrates this need. (See attached report which is also on the CLIPA website at www.savecapitollake.org.) The authors conclude, "Mudflats are anaerobic environments. Chief

among the organisms are bacteria which reduce sulfate to sulfides. The problem for humans is that one of the sulfides is hydrogen sulfide which not only smells bad, but is toxic to humans.”

Comment on Maintenance Dredging to Remove Accumulated Sediment (All Alternatives)

For the Managed Lake Alternative, a comment could be added to emphasize that all dredge spoils could be retained within the project area. A second comment could be added that with retention of the tide lock, sediment deposition downstream in Budd Inlet would be minimized.

For both the Estuary and Hybrid Alternatives, it should be made clear that the maintenance dredge spoils will require disposal outside of the project area due to legacy contamination (at considerably higher cost). Currently, questions remain whether deep water deposition, or a secure landfill, will be required for these contaminated dredge spoils.

Comment on Water Quality (All Alternatives)

For the Managed Lake Alternative, we agree that the adaptive management approach described here will have the best chance to improve water quality in the project area, and also downstream in Budd Inlet. As an aside, water quality parameters in the project area are not in question. These parameters have met all current WDOE standards for many years and Capitol Lake has, by far, more dissolved oxygen (DO) than anywhere else in the Deschutes River or downstream of the tide lock.

For both the Estuary and Hybrid Alternatives, the text box in the upper left corner misstates the effect of dam removal on water quality. Water quality parameters in the project area will likely be negatively impacted by tide lock removal. First, freshwater DO in the project area is now typically in the range of 10-12 mg/l, while Budd Inlet marine water is in the range of 5-6 mg/l. The twice daily tides, resulting in emptying the basin and refilling with marine water will cut the DO approximately in half in the project area. Second, legacy contamination exists in Budd Inlet and the Port area. Progress has been made in remediating this contamination, but recent dredging projects at the South end of the inlet and at the Port show that contamination remains. Without the tide lock as a barrier, over time, the tidewaters have the potential to bring these contaminants into the project area. And third, the activities of the Port, commercial areas and the boat basins in Budd Inlet have the potential for discharges and spills, which, like the existing legacy contamination, could move with the tidal flow into the project area. For these reasons, restoring tidal flow to the basin is not likely to improve water quality in the project area. In addition to modifying the text, the ‘improving water quality’ icon should be removed from both of these alternatives.

General Comment on Flood Control and Sea Level Rise (Managed Lake Alternative)

Manipulation of the lake level to manage flooding in downtown Olympia is an important feature of the Managed Lake Alternative that should be recognized in comments on the layout. This is a management technique used by DES that has been effective when King tides combine with high stormwater flows in the Deschutes River. Removal of the tide lock will eliminate this protection. As we see more frequent high tides due to sea level rise, the disparity between the alternatives will be more pronounced. Eventually however, sea level rise is predicted to reach levels that only more robust barriers will be able to contain. In the meantime, the tide lock offers a degree of protection not available with the Estuary and Hybrid Alternatives.

It should also be noted that the tide lock is included as an integral part of the Corps of Engineer's federal mandate to manage the Port of Olympia shipping channel.

Comment on New Text Box Related to Fish Habitat (Enhancing Ecological Functions Goal)

The impact of each alternative on fish habitat and survival should be an important discussion point throughout the Lake/Estuary selection process. A text box addressing this part of the Ecological Functions goal for each alternative would be helpful to inform the public about this important issue. Members of CLIPA have accumulated a substantial body of evidence on this subject which is available on the website. We offer the following brief comments for your consideration.

The previous water quality comments are important for the understanding of how the various alternatives impact the habitat for Chinook juveniles currently reared in Capitol Lake, which ultimately nurtures our Southern Resident Orcas, a threatened species. The tide lock at 5th Avenue currently protects the freshwater in Capitol Lake from the lower DO and relatively high levels of toxic contaminants found in the marine waters of Budd Inlet.

Publicly funded reports from researchers such as Michelle Koehler, et. al. and Robert Engstrom-Hegg have shown that juvenile Chinook can and do thrive in a lake environment. These fish prefer Chironomidae and Daphne as primary food sources, both of which are found in abundance in the freshwater of Capitol Lake, probably due to its high benthic oxygen content. According to Engstrom-Hegg, "The data...show growth of Chinook salmon in Capitol Lake to be extremely rapid, greatly exceeding that attained by fish of the same stock held in hatcheries."

Koehler et al mention that predation should be a priority consideration regarding Chinook survival. If we value our declining Southern Resident orca pods, depiction of compression bottlenecks (perhaps 150 ft. or less) advantageous for marine predators of Chinook should be shown for each management system to allow for better evaluation of this threat to these orcas.

To fully evaluate the optimized alternatives, it would be appropriate to establish what the effect of lowered DO in the project area would have on these juveniles and their preferred food sources. The same question arises regarding the effect of present and future Budd Inlet toxic contaminants described above. According to the Southern Resident Orca Task Force report and recommendations commissioned by

Governor Inslee and released in November of 2018 regarding PCB's, "...survival of juvenile Chinook salmon from these urbanized estuaries was 45% lower than Chinook collected from uncontaminated estuaries."

General Comment on Adaptive Management (Throughout All Alternatives)

As mentioned previously, we were pleased to see the use of the concept of Adaptive Management for the Managed Lake Alternative. This, in many ways, is the most significant element in our plans to meet the project goals, without taking an irrevocable step, and spending an inordinate amount of the public's limited resources. Likewise, in the text box in the lower right corner for all the alternatives, the use of Adaptive Management to deal with invasive and nuisance species is likely to result in the best outcome over time.

However, the use of this concept for the reflecting pool for the Hybrid Alternative doesn't seem appropriate. This alternative, in reality, is primarily an estuary. And removal of the tide lock to create this estuary is the antithesis of Adaptive Management. Once the tide lock is removed, there's no going back. The minor options to modify the reflecting basin don't rise to the level of overall project adaptive management. It's not clear why the 'improving water quality' icon should be attached to this area.

Comment on Invasive and Nuisance Species (All Alternatives)

When the Community Sounding Board met, we had not yet received some of the information we later heard at the Technical Committee Meeting. We understand the challenges the project team has in both conveying new and technically complex data across four differing focus groups. We think you are doing a good balancing job, so the following comments are intended to be helpful, not critical of your efforts.

Capital Lake is the only known quarantined body of water in the Western USA due to the NZMS. At the same time, WDFW has also identified the presence of NZMS in at least 30 locations in Western Washington. Many of these areas have similar numbers of NZMS, and none of these areas are quarantined. The State of Colorado has reportedly just recently decertified the NZMS as an invasive species and is no longer trying to manage it. The reality is that the NZMS will have similar impact on all three alternatives and should be managed in the same manner as other sites in Western Washington.

We heard reference to a State Committee that declared the deep water disposal of sediments from the Lake as "too risky due to the potential spread of the NZMS". We later heard the representative from WDFW say that yes the NZMS can live in brackish waters and floating debris from the project area to Budd Inlet could have NZMS attached to it. Without a more comprehensive understanding of the NZMS issues, the EIS alternatives may be constrained by the comments of a few of these agency representatives. You should not allow your designs to be limited by ignoring newer information or potentially valid options. To create a project constraint that may cause millions of dollars of unnecessary project costs without a more careful review and explanation is not consistent with a properly developed EIS evaluation process. This issue impacts sediment management and disposal, water contact recreation and access throughout the

project area, and as mentioned previously, is an area appropriate for the adaptive management approach as we develop a more comprehensive understanding.

CLIPA has commissioned an independent consultant, Kelly Stockton-Fiti to review the NZMS issue. This report is on the CLIPA website and may be reviewed in full. Her conclusions include, "It is WDFW and WDES responsibility to the public to use consistent messaging and provide access to state owned areas. "The Capitol Lake area will still harbor NZMS, even as an estuary or with the dam removed....Regardless of the management action chosen for Capitol Lake, the area must be open for public use. Implementing prevention tools for NZMS at Capitol Lake, such as gear decontamination stations, and implementing management actions, such as chemical treatment, will reduce the risk of spread to other areas." We would add that exploring deep ocean disposal of dredge spoils would be prudent.

Thank you for the opportunity to participate in the Community Sounding Board, and present these comments on your optimized plans for each of the three alternatives. As we mentioned in the opening, we see this as a promising start to provide an accurate visual depiction of the project area for each alternative. Extending these plans to include daily and seasonal variations, although challenging, will provide the public with a more complete picture. The identification of the project goals on the project area map, using text boxes to briefly describe the attributes of each alternative, is also helpful for a more complete understanding.

As further feedback on the November meeting, we appreciate the meeting management, which encouraged the active participation of all members. A good exchange of ideas was facilitated, both between members and with the project team. We believe more opportunities such as this, with the ability to follow up with comments such as we have provided, has a better chance of reaching an outcome we can all support. With this background, and as we move forward, we suggest at least quarterly meetings in person, and discourage web based or phone based events.

Respectfully,

Bob Holman and Bob Wubbena, Members, Community Sounding Board

Jack Havens, Co-Chair, CLIPA Board of Directors