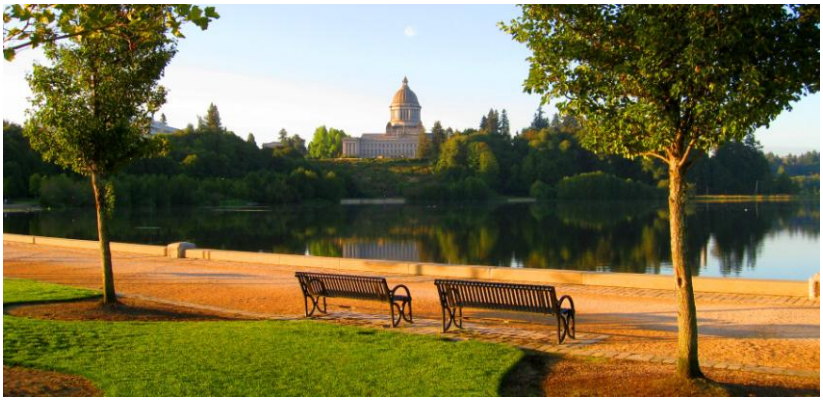

CLIPA
Capitol Lake Improvement and Protection Association

"Save the Lake – Preserve the Past, Improve the Future."

July 2010

Dear Friends of Capitol Lake:

Last summer, our community was stunned by the CLAMP Steering Committee's split vote favoring removal of the dam which creates Capitol Lake. This action would result in reverting the Capitol Lake area back to a tidal mud flat, irretrievably losing Capitol Lake and all that it provides to the citizens, businesses, and community. Almost as startling, the CLAMP study focused on Capitol Lake to the exclusion of the Deschutes Watershed as a whole, missing the opportunity to identify and address water quality and sediment management concerns through more viable, long-term and cost-effective solutions.

In response, a group of concerned citizens, most with strong environmental interests and credentials, formed the non-profit organization "Capitol Lake Improvement and Protection Association" (CLIPA) in order to study the issue and identify more appropriate alternative solutions which would provide for improved water quality and sediment management in the Deschutes Watershed, including Capitol Lake basin and Budd Inlet, while preserving one of our state's most precious icons, Capitol Lake.

This committed grassroots group has worked steadily, creating a strong Science and Policy Panel and challenged the Panel members to create a realistic, scientifically-based and practical plan which would accomplish the above goals. This packet contains the results of those exhaustive efforts. You will note that in addition to our stated position, we provide many options and alternatives. A solution must embrace the many interests in support of aesthetics and ecosystem health, as well as economic vitality and social needs, and be flexible to findings from continued research.

We hope you will read this body of work carefully, as we believe we have addressed environmental, aesthetic, social, economic, and fiscal responsibilities in a balanced manner to the benefit of the public.

Sincerely,
Jack Havens
Chair

Capitol Lake Improvement and Protection Association
120 State Ave NE #1006 Olympia, Washington 98501-8212
www.savecapitollake.org
Friends@savecapitollake.org

Preserving Capitol Lake

A White Paper with Recommendations Prepared by a Consortium of Community Citizens and Organizations

"Save the Lake – Preserve the Past, Improve the Future."

July 2010

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CLIPA

Capitol Lake Improvement and Protection Association

"Save the Lake – Preserve the Past, Improve the Future."

CLIPA Board Members and Science and Policy Panel

CLIPA's mission is to preserve and protect Capitol Lake as part of Washington State's Capitol Campus.

Recognizing the unique amenity of Capitol Lake and its location within an urban environment, CLIPA's goal is to achieve a balanced approach toward human needs with ecosystem management, including the long-term, sustainable improvement of the freshwater and marine system that make up the Deschutes Watershed. CLIPA advocates for enhancing the overall ecosystem, providing for recreational and educational opportunities, and preserving the aesthetics of Capitol Lake.

Board of Directors members are:

Jack Havens, Chair
Jay Allen, Membership
Jewel Goddard, Treasurer
Bob Barnes
John DeMeyer
Les Eldridge
Brenda Hood
Jim Lengenfelder
Allen Miller
Ron Rants
Robert Utter
Bob Wubbena

Marc Horton is the Chair of CLIPA's Science and Policy Panel. Marc is currently working as an Environmental Consultant, and formerly served as Deputy Director of the Washington State Department of Ecology (DoE).

Science and Policy Panel Subject Matter Experts are:

Bob Barnes	Public Events Planning
Harvey Childs	Fiscal Budget and Public Administration
Denis Curry	Organizational Management and Economics
Curtis Dahlgren	Fisheries and Environmental Permitting
John DeMeyer	Forestry and Aquatic Land Management
Les Eldridge	Water Quality and Shoreline Policy
Jack Havens	Wildlife / Aquatic Information Coordination
Brenda Hood	Policy Analysis, Public Administration and Research
Marc Horton	Water Quality, Permitting, and Environmental Policy
Eric Hurlburt	Shellfish, Aquaculture and Economic Development
Norman Johnston	Architectural Historian of State Capitol Campus Design
Gary Larson	General Administration History and Capitol Lake Management
Jim Lengenfelder	Social Science and Economics
Allen Miller	Heritage Park Development / Capitol Campus Design and Development
Ron Rants	Community Development
Oscar Soule	Environmental Policy and Science
Robert Utter	Environmental Law
Bob Van Schoorl	Port Operations
Bob Wubbena	Watershed Management and Marina Operations

CLIPA's White Paper
for
How to Manage Capitol Lake for Future Generations

"Save the Lake – Preserve the Past, Improve the Future."

July 2010

CLIPA

Capitol Lake Improvement and Protection Association

"Save the Lake – Preserve the Past, Improve the Future."

Executive Summary

Findings

Managing Capitol Lake as a central design element of the Washington State Capitol Campus and the surrounding communities has become a focused discussion, and deservedly so as the treasured icon of our state. The Washington State Department of General Administration (GA) has the responsibility from the State Legislature to manage Capitol Lake as part of the Capitol Campus Grounds "as a lake" (see below for RCW references). However, since 1986 the State has not acted on the mandate to provide stewardship, preservation and maintenance of this public asset with respect to carrying out a maintenance dredging program. We applaud the State and GA for many beneficial improvements around Capitol Lake. However, immediate funding is needed to restore the lake through dredging.

The purpose of this White Paper and attached Maintenance Plan and Financial Projections is to strongly advocate for the State to actively carry out its mandate, providing for a more comprehensive, responsive, and sustained management of Capitol Lake and the adjacent marine water areas of lower Budd Inlet. These areas require a dredging and maintenance plan as a part of a publicly approved management program. This program also must consider the larger Deschutes Watershed ecosystem, and the priorities of the surrounding communities. ***By collaborating with public and private partners, we believe these goals are very achievable through innovative watershed-wide ideas and solutions.***

A recent GA advisory committee ("CLAMP") focused its efforts on exploring the option of reverting the Capitol Lake area to a tidal mud flat over the next 50 to 80 years. The advisory committee recommended (on a split vote) to remove the dam that separates Capitol Lake from lower Budd Inlet and proceed with an estimated $250-$300 million project, including removal of the dam, building a new 5th Avenue bridge and many other costly changes. The value of this work even within the limited scope of the CLAMP study highlights for the community how the lack of attention to the Deschutes Watershed and Capitol Lake environment has led to systemic degradation of Capitol Lake, the larger ecosystem, and valued community uses of the area.

While the CLAMP study suggested that reverting to tidal mud flats may provide water quality benefits for lower Budd Inlet, it failed to address the underlying problems and the need for an overall management of the Deschutes Watershed as part of a comprehensive and long-term strategy for both water quality and sediment management. Also worrisome is that the CLAMP study did not fully acknowledge the extensive public investments in making the Olympia waterfront a multiple purpose environment. These investments accommodate not only the Capitol Campus and its aesthetics, but also recreational uses as well as residential, business, and urban watershed interests. It is a place where people come to live, work, and play.

The CLAMP study's recommended plan is irreversible. It has the potential of destroying the design of the Capitol Campus, and of seriously undermining the aesthetic appeal and viability of the Olympia waterfront and the economic and social vitality of Olympia's city center.

The call to action is compelling. As a result of the growing problems and controversy surrounding the future of Capitol Lake, a consortium of community organizations and citizens with diverse interests and expertise have joined together to form the "Capitol Lake Improvement and Protection Association" (CLIPA). CLIPA is a grassroots non-profit organization dedicated to saving Capitol Lake. In this packet we present a scientifically-based policy and operations strategy that reflects a broad-based community and urban watershed interest.

Recommendations

1. **Immediate investment**: CLIPA estimates a minimum initial expenditure of about $4.5 million will address the accumulated sediment build-up and begin to reverse the damage to the surrounding environment caused by almost 25 years of neglect. We advocate for a plan in the first biennium that will initiate a positive and environmentally sensitive management program that considers both the urban and the ecosystem benefits.

2. **Joint coordination**: CLIPA also recommends an interest-based "coordinating board" be formed and authorized to develop a long-term maintenance and public/private financing plan to maintain Capitol Lake as it was envisioned by the Wilder and White Plan of 1911, and coordinate a proactive management approach for the Deschutes Watershed as a whole.

3. **Broaden focus to watershed for improved water quality**: The CLIPA findings support more effective management of the upper Deschutes Watershed to address water quality issues including: dissolved oxygen, temperature, nutrient loading, sediment control, and removal of point discharges of other contaminants. Invasive species, such as the New Zealand mud snail (prominent in many west coast bays and estuaries) will continue to be a challenge throughout the life of the watershed, regardless of the alternative chosen for the Deschutes Watershed, and must be dealt with as a current management issue and not a short-term cause to modify the long-term plan as suggested by the CLAMP study.[1]

4. **Proactive lake management**: We recommend the State move forward with a revisioning plan for Capitol Lake, one that takes into account the aesthetic value of the lake for the Capitol Campus as well as the explicit management of this urban lake for water quality, sediment management, recreation, and other valued uses. The immediate maintenance dredging of Capitol Lake and continued use of the lake as a "sediment trap" for the estimated 35,000 cubic yards of annually transported runoff sediment from the upper Deschutes Watershed is the most cost-effective and environmentally sensitive management program for this urban landscape.

5. **Long-term sustainable approach**: CLIPA has developed and is recommending a two, ten and fifty-year management program for consideration by the General Administration, the State Capitol Committee, the State Legislature, and affected local governments to consider as an immediate approach to address the need to manage our ***shared*** Capitol Lake and marine waterfront. The actions we take now will impact many future generations.

[1] Sources find that the New Zealand mud snail is in many west coast bays and estuaries such as Alberni, Longbeach, Columbia, Tillamook, Rogue, and Alsea.

Purpose of White Paper and Packet

The purpose of this White Paper is to present a 21st century vision and plan for Capitol Lake that integrates our aesthetic values for the Capitol Campus along with our environmental values for a healthy watershed and our social values for a functional and thriving urban landscape. This paper seeks to present a reasoned, scientifically-based, holistic approach to a complex problem.

Background and Why the Call to Action is Compelling

In the early 1900's, the State of Washington chose an inspired vision developed by Wilder and White for the Capitol Campus. As part of this vision, Capitol Lake was created on the basis of its aesthetic value and ability to transform the downtown into a more vibrant capital city.[2]

In 1951, the State of Washington created Capitol Lake by constructing the current 5th Avenue dam. The lake consists of the three basins (South, Middle or "Mid," and North – we capitalize to draw attention to each individual basin). As part of this broader vision, the dam reduced the need for major dredging of lower Budd Inlet to maintain water depths needed for navigation, and as a result the city waterfront began evolving into its present form. Our State Capitol Campus quickly became a national and state-wide iconic treasure.

Capitol Lake itself represents the heart and soul of our area, providing a strong sense of community.

Nautical charts from the mid-19th century show that all of lower Budd Inlet was an extensive mud flat at low tide, requiring a mile-long pier to gain access to water depths suitable for navigation. The Deschutes River system produces and delivers approximately 35,000 cubic yards of sediment per year (more or less – for example, significantly more in 2008 and 2009). During the early 20th century, the first of several major dredge operations occurred. The dredging spoils were used to enlarge and further develop downtown Olympia and the Port of Olympia. Dredging also ensured adequate water depth for navigation purposes.

The sediment from the Deschutes River flowed into lower Budd Inlet prior to the construction of the dam, creating the extensive and growing mud flats. Now, much of that sediment settles into Capitol Lake, with most of the siltation settling into the North basin. The most recent Capitol Lake dredging occurred in 1986, almost 25 years ago. Dredging in the marina waterfront occurred in the early 1980s and at the Port of Olympia Turning Basin in 2009. The pre-1986 Capitol Lake North basin water depth was about 15 feet, but is currently at about 8 feet. Water depths in the Middle and South basins have declined by 3.6 feet between 1949 (immediately pre-dam) and 2004 due to siltation.

The Department of General Administration (GA), which has been directed by the State Legislature to manage Capitol Lake "as a lake" as part of the State Capitol Campus has completed multiple studies and analyses since the 1970s. There has been no report that has been accepted by the State or any

[2] As quoted from a 1911 report signed by Wilder and White: "A tide lock at the Boulevard (5th Ave) would form a lake and the whole effect would be visible from most parts of the city as well as from the sound" (from Norman J. Johnston's book *"Washington's Audacious State Capitol and Its Builders,"* p.33). The 1912 Olmsted Brothers landscape plan also shows a "salt water pond" independent of the Deschutes River.

recommendation proposing a change in the status of Capitol Lake ***as a lake*** that appears to have gained widespread acceptance by the public. The "no action alternative" taking place by default since the mid-1980s due to the lack of active management by the State is not and never has been acknowledged by anyone to be an acceptable management practice. The failure to act by the State is creating an increased liability in terms of overall water quality and sediment management, navigation in lower Budd Inlet, maintenance and preservation of Capitol Lake as part of the Capitol Campus, and use and enjoyment of this asset by citizens.

Authority for the Stewardship and Preservation of Capitol Lake

The laws of Washington State, as contained in the Revised Code of Washington (RCW), make it clear that Capitol Lake is an essential part of the state capitol grounds and that the Department of General Administration is responsible for the stewardship, preservation and maintenance of this asset. The pertinent RCWs include:

- RCW 43.34.090 section 4 states: For purposes of this section, "state capitol grounds" means buildings and land owned by the state and otherwise designated as state capitol grounds, including the west capitol campus, the east capitol campus, the north capitol campus, the Tumwater campus, the Lacey campus, Sylvester Park, Centennial Park, the Old Capitol Building, ***and Capitol Lake***.

- RCW 79.24.720 states: The department of general administration is responsible for the ***stewardship, preservation, operation, and maintenance of the public and historic facilities of the state capitol,*** subject to the policy direction of the state capitol committee and the legislative buildings committee as created in chapter . . . (*House Bill No. 1301), Laws of 2005, and the guidance of the capitol campus design advisory committee.

- RCW 79.24.530 states: The department of general administration shall develop, amend and modify an overall plan for the design and establishment of state capitol buildings and grounds … ***in accordance with current and prospective requisites of a state capitol befitting the state of Washington***. The overall plan, amendments and modifications thereto shall be subject to the approval of the state capitol committee.

In 1997, a multi-jurisdictional advisory committee known as the Capitol Lake Adaptive Management Plan ("CLAMP") Steering Committee was established to advise GA's Director on management of the lake. The committee shifted direction and focused its effort primarily toward advocating for the reversion of the area into tidal mud flats, at great immediate expense, over the next 50 to 80 years. The findings from this effort are problematic and numerous. Below we outline some of the more significant issues.

Water Quality Issues

Incomplete and misapplication of the science within the CLAMP 2009 Capitol Lake Alternatives Analysis – Public Review Draft (CLAMP study) includes the assumed benefits to water quality created by such a reversion. WAC 173.201A-020 provides water quality definitions for a lake versus a river. Different standards exist for lake systems compared to river systems. The CLAMP study applied the

river definition to Capitol Lake. In doing so, it misreports that the mud flats concept provides a water quality benefit, even though there is no change in pollutant or sediment loading. Instead, these "reported benefits" occur because the standards of measure are arbitrarily (and inappropriately) changed from "lake" standards to "river" standards. The CLAMP study fails to state this major change.

Second, the Department of Ecology (DoE) as a member of CLAMP advisory committee is conceding an argument it has objected to consistently over the past 40 years – the argument that "the solution to pollution is dilution." It is a well known fact of lake ecosystems that lakes must be managed because their tendency is to fill naturally. In the case of Capitol Lake, this is caused by accumulated sediment deposition from the upper Deschutes; in other lakes, the filling may be due to nutrients and plants. This management requirement was recognized by the State when Capitol Lake was created, but not acted on over the past 25 years. The recent CLAMP study confuses this issue, and misses the opportunity to identify and address sources of water quality and sedimentation problems and viable solutions.

The CLAMP study properly recognizes that "water quality violations related to dissolved oxygen are predicted to occur whether the system is managed as a lake or as an estuary." (p.74) Destruction of Capitol Lake and the 5th Avenue dam is no solution to this challenge. However, a comprehensive watershed management plan is a solution, which we advocate and further explain below.

The key take-away points are:

- ***The solution to pollution is NOT dilution.***
- ***Changing the definition of a water quality standard does not by itself change water quality.***

Impact on Public Facilities and Economy

The CLAMP study insufficiently addresses the lost public investment of over $80 million in public facilities, should Capitol Lake be allowed by design or default to return to a tidal mud flat environment. In addition to the existing investments, the CLAMP study does not address the newly planned public investments, such as that of the remodeled Percival Boardwalk. Of great concern, the costs and impacts are missing from the study for the every three-year dredging which would be required to keep Percival Landing and the public docks open, and to upgrade/replace the transportation, storm drainage systems, and other infrastructure that is currently designed for a lake environment.

The 2009 CLAMP study proposal would place the entire public investment in Capitol Lake, the North Capitol Campus, the Olympia waterfront, and lower Budd Inlet in irreversible jeopardy.

The key take-away points include:

- ***Over $80 million investment in infrastructure put at risk.***
- ***Recreation and public events would decline dramatically.***
- ***The Port of Olympia might have to discontinue ocean shipping.***
- ***Downtown and waterfront businesses would lose business.***
- ***Extensive, active boating would decline as a recreation and business stimulus.***

Misclassification of Reversion and Assumed Benefits

The CLAMP study's conclusion that the reversion of Capitol Lake to a tidal mud flat environment would be an environmental benefit compared to the planned Capitol Lake management program is unrealistic. The widely circulated images of emergent vegetation are misleading. A Deschutes Watershed reversion should more accurately be termed a "tidal basin," not an "estuary" as the CLAMP study describes it. The future of such action would be similar to what is now occurring in the Mud Bay and East Bay estuary environments, ***not*** the Nisqually Delta as has been suggested. Our organization strongly supports funding directed at appropriate estuary locations such as the Nisqually Delta.

The location at the southernmost end of Puget Sound would result in continued accumulated deposits in lower Budd Inlet with the removal of the dam. The sediment would not be carried away by currents in the manner that occurs at Nisqually. In this scenario, the CLAMP study did not account for 30% of the sediment dispersal. It stated that it just "dissipated." However, upon questioning this assumption, we were told by GA that this sediment does not "dissipate," rather it would stay within Budd Inlet, filling in the western side of the inlet. The science supports this, indicating that sediment tends to "clump" in salt water much more than fresh water. With the two daily incoming tides, removal of the dam could lead to accelerated accumulation of sediment in the lower Budd Inlet than with the dam.

The CLAMP study acknowledges that the transition from the initial process of estuary formation to the time when it would produce any potentially measureable environmental benefits would be 50-plus years. Even then, those benefits would be disrupted every three years, according to the study, by the need to dredge the lower Budd Inlet portion of the proposed Deschutes Watershed tidal mud flats.

Restoring Capitol Lake to Achieve Sediment Management and a Watershed Solution

CLIPA's group of experts serving as a "Science and Policy Panel" (Panel) has identified and reviewed over 150 various studies and reports, many of which are State-funded studies, that have evaluated how best to manage Capitol Lake. For example, the Panel reviewed the 2004 Department of Ecology WRIA 13 Deschutes Watershed Plan and the 1996 Department of General Administration Plan to complete a maintenance dredging program, as some of the baseline documents for the long-term plan. The Panel researched those documents, keeping in mind the intentions of the original Capitol Campus design plans, to form this vision and action plan.

Immediate Dredging Activity and Future Options

The Capitol Lake Adaptive Management Plan Final Environmental Impact Statement (FEIS) of May 20, 1999, prepared by GA on behalf of the State, identified six alternatives for the long-term management of Capitol Lake. The FEIS referred to adoption of the 2003-2013 Capitol Lake Adaptive Management Plan, a portion of which calls for interim dredging to address current problems and develop a longer-term lake management program.[3] The science is understood in this area, and the need for an active and ongoing sediment management maintenance program is defined and should proceed

[3] It should be noted that the estuary option was an alternative that was not selected by the GA as a project to pursue.

by fiscal year 2013 to avoid further damage caused by the lack of maintenance dredging. This recommendation was included in the 1999 FEIS and could proceed under the immediate authorization of the State Legislature and the filing for the Corps of Engineers dredging permit by GA.

The State-funded studies and the experience of environmental, regulatory, design, operation, and public policy experts assembled by CLIPA for this review support the conclusion that little additional study is needed to make an informed decision on how best to manage Capitol Lake as an integral part of the State Capitol Campus, the City of Olympia, and the larger Deschutes River Watershed including lower Budd Inlet.

The Panel's recommendations include immediate steps during the next biennium (2011-2013) to complete predesign studies, design, and implementation of a maintenance dredge of the North basin of Capitol Lake. The dredge would begin to partially reverse the damages to both public and private investments stemming from the current "do nothing" approach. CLIPA estimates the first two-year pre-design, dredging, and damage control project would cost about $4.5 million. We note that this dredging and damage control project would be required regardless of which long-term management program for the Capitol Lake and lower Budd Inlet is advanced.[4] This first phase of activity also would include dredging of the lower Budd Inlet in the third year of the project (in the 2013-2015 biennium).

CLIPA's vision of the Deschutes Watershed and Capitol Lake continues to advocate for the three-basin area known as Capitol Lake to be restored and maintained. However, at least in the short-term, CLIPA acknowledges that a more feasible solution of restoring and maintaining the North basin, with the possibility of some or all of the Middle basin being restored at a later date, may be a more cost-effective and viable solution. CLIPA offers these thoughts on what this plan might look like with the caveat that additional information produced during the predesign phase may indicate options in favor of a greater percentage of Capitol Lake being restored and maintained.[5] For example, the three basins may be necessary if a comprehensive management plan is not developed, funded, and implemented for the Deschutes Watershed. Lack of such a plan would allow the continuation of 35,000 cubic yards of sediment to flow annually to Capitol Lake and lower Budd Inlet.

Alternatively, some freshwater wetlands in the South basin and a portion of the Middle basin could be part of the final community strategy along with an extensive educational trails system within this urban environment (see the Lake Maintenance Plan, attached, for further details). If the upper Deschutes Watershed is managed to minimize sediment transfer and to improve water quality, the possibility of cost savings may translate into opportunities to develop such a mixed landscape. We support inclusion of an extensive environmental education and urban trails system in this program.

[4] The CLAMP study develop questionable cost estimates of dredging as high as $250,000,000 to $300,000,000 with predicted delays that will increase the cost of associated damages to public and private investments already made. CLIPA used actual costs from the Port of Olympia recent dredging activities and other State information that provided more accurate assessments of costs and timing.

[5] At a minimum, predesign elements for this type of project should include the following: sediment removal options; how to dispose of sediment (e.g., sites, transport methods, etc.); flooding/hydrology studies; schedule and schedule constraints (e.g., fish windows); cost factors; water quality/management of land including invasive species; habitat restoration; recreation opportunities; adjacent entities planning efforts/activities (e.g., City of Olympia Boardwalk and Percival Landing); opportunities for partnerships; funding strategy (e.g., federal grants, public/private partnerships, etc.).

Monitoring and Management

Regardless of which approach is taken, we have taken a strong position that any plan adopted and funded by the Legislature must include ongoing data collection, scientific study, performance monitoring, and reporting. What the CLAMP study brought to light by its limitations is the need for a more comprehensive, watershed-wide management planning and oversight group. CLIPA recommends the State Legislature begin discussions around either a "coordinating board" or perhaps a Public Facilities Deschutes/Capitol Lake Management District to oversee this monitoring and reporting, and ensure a responsive approach is implemented[6].

Our recommendations include:

1. Establishing a long-term management program that incorporates the protection and enhancement of an environmental and community treasure – the entire Deschutes Watershed – under the direction of a public/private "coordinating board." The board would include representation of the impacted groups and governmental agencies and, under the authority of the State Legislature, would operate with GA functioning as the coordinating board's technical staff.
2. We recommend that a Deschutes Watershed Adaptive Management Plan be developed and implemented (with Legislative review) under the guidance of this newly established "coordinating board." This board would begin the process of developing a rich and complementary public/private partnership, including a plan for public/private cost sharing. For example, this "coordinating board" could facilitate partnering with the Natural Resource Conservation Service and Washington Department of Transportation among others to develop sediment management plans.
3. Our recommendations consider the 2011-2015 predesign study and dredging program of the Capitol Lake North basin and lower Budd Inlet/boat basin as an interim step, while the ten and twenty-year management program update is further documented in an update to the 2013 Adaptive Management Plan that will define how much of the Middle and South basins are dredged or converted to a freshwater wetland, using dredge spoils to enhance a recreation and education area.
4. The updated plan will then be integrated into the more comprehensive sediment management program for the entire Capitol Lake and related Deschutes Watershed Adaptive Management Plan for implementation by the new "coordinating board."

Evolving Ideas toward a Deschutes Watershed Solution

Almost every State funded study relating to Capitol Lake, with State regulatory and resource management agency input, concludes that the most appropriate method to manage the water environment, the 35,000 cubic yards of annual sediment, and the public use and benefit of the

[6] At the time of this White Paper, we had not yet fully researched the options of a "district" designation and intend to do so. This may or may not be a beneficial designation; some other approach may be more viable and effective. We also had not fully researched various models and structures for a "coordinating board." For example, the Nisqually River watershed plan development and management process may be a useful model for these purposes, to ensure no new level of government, but to establish a new coordinating entity (e.g., the Nisqually River Council). This White Paper is intended as a starting point for such conversations.

Deschutes Watershed, Capitol Lake and the southernmost part of Budd Inlet, is the routine dredging of the Capitol Lake basins and lower Budd Inlet. Such dredging is necessary to prevent the accumulating sediment deposition from the Deschutes Watershed from choking off open waterways and navigation. While the 2009 CLAMP study focused only on Capitol Lake and the tidal mud flat ("estuary") alternatives, it, too, recognized that the North basin and the lower Budd Inlet need to be dredged as a first priority if the estuary proposal is advanced.

In developing a vision for the future that addresses overall ecosystem health and water quality, CLIPA was surprised to discover that the CLAMP study and previous studies excluded a Deschutes Watershed-wide approach. In our collective mind, a solution should include a watershed and basin management plan, including these goals:

1. Development and enforcement of land use policies above Deschutes Falls to increase water quality, address contaminants, and decrease sediment transport downriver. Note that harmful chemicals bind with sediment and are carried downriver and into Puget Sound. Solutions should include the following:
    a. Abate stormwater runoff.
    b. Localize sediments upriver via sediment management "traps."[7]
    c. Monitor and report the percent of sediment reduction upstream, and concomitant reductions in Capitol Lake.
    d. Decrease water temperature to healthy limits. (Increase riparian shade via tree planting, etc.)[8]
    e. Increase dissolved oxygen levels.
    f. Increase water circulation.
    g. Retain aesthetics.
    h. Incorporate TDML (total daily maximum load) findings from the Department of Ecology study.
    i. Track and report on bacteria entering the Deschutes River system.
2. A riparian system management plan.
3. A dredging management plan that takes into account fisheries resources, a distribution plan for dredge materials, armoring and contouring issues, and recreation opportunities.
4. Ongoing data collection, analysis, and reporting with an updated management plan at least every 10 years.
5. Formalized coordination among various jurisdictions regarding stormwater drainage, nonpoint source and point source control, sediment management, watershed improvement planning, recreation and other uses, storm event management, etc.
6. Further modeling and study of the relationship between incoming tides and outgoing tides regarding sedimentation transport.
7. A plan to engineer the lake floor topography to positively impact future sediment deposition.

[7] Also, according to the Department of Ecology, woody debris could help by protecting river banks.

[8] For example, according to a Department of Ecology staffer speaking at a Deschutes TMDL Advisory Group meeting, many areas of the middle Deschutes Watershed are in violation of water temperature standards (some in the lethal range for fish, as temperature correlates inversely with dissolved oxygen – the main influence on dissolved oxygen in this portion of the watershed is temperature, not nutrients such as nitrogen and phosphorus). Some of these areas could be improved by as much as 5 degrees Celsius/9 Fahrenheit during the summer by providing shade. Shaded areas in the middle Deschutes River Basin average 40% but could be improved to as much as 80% with proper riparian planting. This is especially true between Deschutes Falls and Offut Lake.

Conclusions

CLIPA believes that a public/private partnership is urgently needed to create, coordinate, and oversee a comprehensive management program that incorporates the entire Deschutes Watershed, including Capitol Lake and lower Budd Inlet. Our intent is not to create another "layer" of bureaucracy, and it is hoped such a forum could facilitate more innovative ideas and solutions. This is integral to the future interests of the State of Washington, local governments, and all citizens.

We further believe that the time to act is ***now*** with development and implementation of a two, ten and fifty-year plan. This plan should be guided by a "coordinating board" of affected parties that has the direct responsibility to ensure that the plan is designed, funded, and implemented with a balanced approach to address multiple statewide interests.

Inaction is not an acceptable option; and reversion to tidal mud flats is just that – going backwards toward problems we worked hard to overcome.

By moving forward with a 21st century vision, and embracing ecosystem principles and repurposing Capitol Lake for its aesthetic values, as a sediment trap, and as a community gathering place, we will benefit all with immediate and long-term benefits.