

Imagine the Estuary

Where the river meets the sea



A newsletter of the Deschutes Estuary Restoration Team

Summer 2014 • Volume 1, Issue 4

Clean water. Clean economy.
Clean fun!

West Bay Herons Threatened by Development

By Daniel Einstein

Photo by Meesh Reault Miller



The Great Blue Heron that we see flying over Budd Inlet, fishing in the Deschutes estuary, or waiting patiently by the 5th Avenue Dam and fish ladder, are imminently threatened. The Site

Plan Review Committee is poised to approve a land use permit that will enable the development of a townhouse development in the woods adjoining the only colony of the Great Blue Heron in Olympia City limits. Even more devastating, the committee is poised to approve a four hundred foot access driveway that passes within twenty feet of the tall nesting trees of these great birds.

We have been here before. Back in early 2009, the access road was logged, exposing the forest canopy and subjecting the West Bay colony to predation from the Bald Eagle. From 2009 to 2013, no chicks survived the end of the summer. The herons were left alone for six years, and several chicks successfully fledged this summer. Their trials are not over. It is estimated that 40-50% of fledged heron will survive their first year. More glaringly, the pressures of development have returned.

Continued inside.....

When you say yes to the Deschutes estuary, you say yes to clean water, recreational access, and a local economy that benefits the natural world.



Yestuary T-shirts and stickers are available on our website. Your purchase supports the Deschutes Estuary Restoration Team!

www.deschutes-estuary.org

Save the Date!

Join us for a fun evening celebrating our natural and cultural heritage: the Deschutes Estuary!

Our annual event will take place on

October 24 from 7pm-9pm

at Traditions Café in downtown Olympia.



What stands in the way of Deschutes estuary restoration?

Besides a dam, of course....

By Dani Madrone

As the summer passes, it's difficult not to notice the green algae blooms in Capitol Lake. Those who spend time around the lake have noticed the smell of soggy decay. It does not take a scientist to know that the water is unhealthy and neglected.

And that is exactly what the scientists are saying. In a recent publication from Department of Ecology, they state: "Overall, the Capitol Lake dam has a detrimental impact on Budd Inlet dissolved oxygen concentrations. The negative impact results from the combined effects of circulation in southern Budd Inlet, carbon loading from Capitol Lake, and nitrogen loading from Capitol Lake."

Dissolved oxygen is critical to underwater ecosystems. As the green mats of algae perish and sink to the bottom,

"Eventually, the businesses that have come to depend on the 5th Avenue Dam will have to face that dam removal is inevitable, given water quality violations. They will need to come to the table and discuss how to make restoration work for their businesses and for Puget Sound."

the decomposition process removes oxygen from the water. Insufficient dissolved oxygen leads to dead zones, since life cannot exist without oxygen.

Those who wish to maintain Capitol Lake have rallied around the work of Dr. David Milne, a retired Evergreen faculty who claims that the lake

improves water quality for Budd Inlet by acting like a LOTT treatment facility for nitrogen pollution. This claim has already been rebutted and dismissed by Ecology.

Meanwhile, Ecology continues the research mandated by the Clean Water Act, always with the same conclusions of deteriorating water quality as a result of the dam. The Capitol Lake Adaptive Management Plan committee voted to restore the estuary in 2009, after years of peer-reviewed research. Dam removal remains on the near-term action agenda of Puget Sound Partnership and a priority project of the Puget Sound Nearshore Ecosystem Restoration Project. More and more people in the community are raising their voice to remove the dam.

What stands in the way? First, let's follow the money.

Capitol Lake has a direct benefit for the Port of Olympia,

Olympia Yacht Club, and Fiddlehead Marina. Since 1951, only minimal sediment amounts have entered Budd Inlet as a result of the dam. These maritime industries do not need to dredge as often as they once did. As the lake fills and sediment begins to spill over the dam, they are now preparing to lobby the State to perform a maintenance dredging of Capitol Lake: on the taxpayers' dime.

Eventually, the businesses that have come to depend on the 5th Avenue Dam will have to face that dam removal is inevitable, given water quality violations. They will need to come to the table and discuss how to make restoration work for their businesses and for Puget Sound. They cannot continue to externalize the cost of doing business at the expense of the environment. Washington state taxpayers cannot continue to subsidize marina owners and the Port of Olympia.

Some think that financial barriers prevent dam removal and restoration. It is true that restoration comes with a sizeable price tag. However, lake management comes at a greater cost. Regular maintenance dredging of the lake and eventual replacement of the dam costs more over time than dredging once, removing the dam, and building a bridge. A decision to maintain the lake is a financial burden on future generations.

It's not just a financial burden, but also an environmental burden. Dredging the lake without removing the dam will not improve water quality. The Capitol Campus Design Advisory Committee recently commissioned a study on the permitting process for dredging, which will be required with either a lake or an estuary outcome. The notes of the final presentation state that, under the lake scenario, "dredging is very expensive and the state would be investing funds into a maintenance dredge activity where no environmental benefit has been identified."

Additionally, when there is no environmental benefit, there is no funding to dredge. Where there is environmental benefit, such as coming into compliance with the Clean Water Act and Puget Sound restoration, there is funding.

Dredging will also not remove the New Zealand mud snails. The estuary scenario allows greater control over the freshwater invasive species. From the same presentation: "In general, the estuarine environment would provide better habitat or benefit for more desired species and a more negative impact on some of the invasive species."

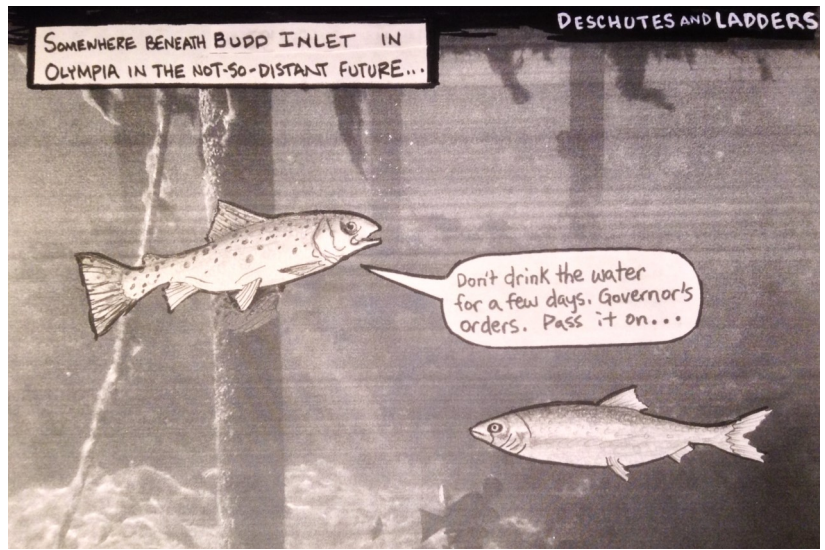
The study also showed that, without a final decision on the outcome, permits would be difficult to obtain. The State will need to decide between the lake and the estuary to do any dredging at all.

Continued on back page.....

Milne's Thesis Falls Apart Under Technical Review

Dr. David Milne, a retired Evergreen faculty, recently published a thesis claiming that Capitol Lake benefits water quality in Budd Inlet. He challenged the research from Department of Ecology that shows that the 5th Avenue Dam causes of water quality violations.

Ecology defended their peer-reviewed work against Milne's accusations that they misinterpreted their data. They published a document called *Questions and Answers about Deschutes River, Capitol Lake, and Budd Inlet*, which can be found online.



<http://www.ecy.wa.gov/programs/wq/tmdl/deschutes/qa.html>

At the request of the Squaxin Island Tribe, Jonathan Frodge, board member and past president of the Washington Lakes Protection Association, provided an independent technical review of Milne's paper. He disagreed with Milne's assertion that Capitol Lake prevents and reduces water quality degradation in Budd Inlet. The tribe also challenged Milne's unqualified and inadequate "peer review."

"Plant growth in Capitol Lake discharges more organic carbon to Budd Inlet than would occur if the Deschutes River and Percival Creek flowed into Budd Inlet directly. As the organic carbon decays, oxygen is used up in the process. This causes lower oxygen levels than would occur without the dam in place."

-Department of Ecology, response to Milne

<http://www.deschutesestuary.org/2014/08/milnes-thesis-falls-apart-under-review/>

West Bay Herons continued from front.....

The Great Blue Heron in Olympia are a unique non-migratory subspecies, *Ardea herodias fannini*, found only in the Salish Sea that stretches from Prince William Sound to Puget Sound. As far as we know, the herons in Olympia represent the southernmost colony of the *fannini* subspecies. According to testimony from Elizabeth Roderick of the Audubon Society, in 1976 there were ten nesting colonies of *fannini* in Thurston County. At last count, in 2009, there were only five. In 2006, the last comprehensive survey of *fannini* in the Salish Sea, there were only ~9000 left. Let me be clear on this point. That means there were only ~9000 *fannini* left in the entire world. We do not have an accurate account for 2014, but various sources have put the population at about half that number.

Great Blue Heron are a sentinel of the biological health of the Puget Sound coastal forest and shorelines. Herons are particularly sensitive to human development, human disturbance and noise. They rely on healthy eelgrass beds, and are threatened by impacts on their feeding grounds, including water acidification, water temperature changes, toxic chemicals, erosion and invasive species. River estuaries in particular are important year-round habitat for *fannini*, providing abundant year-round prey as well as seasonal foraging of anadromous fish species.

The Olympia Coalition for Ecosystems Preservation was established to preserve through advocacy and organization the vanishing ecosystems of the Great Blue Heron and related species in our increasingly crowded urban setting. We recognize that the Great Blue Herons in Olympia are an integral part of a larger ecosystem that includes the woods at West Bay, Schneider Creek and the nearby shoreline, including the dammed tidal waters of the Deschutes River Estuary, and resolve to work with DERT to assure quality habitat for these great bird in perpetuity. If you care about these birds and the health of our shorelines, please become involved now.

Daniel Einstein is a local scientist who moved with his wife from Seattle to a farm in Olympia near Woodard Bay in 2000, where they enjoyed watching the great blue herons from the Woodard Bay colony. In 2006, they moved to their current residence in West Olympia, where their daughter was born. From their front porch, they have enjoyed watching the West Bay colony during their raucous breeding season, and have followed with increasing concern the progressive destruction of their nesting grounds.

Follow the issue on Facebook:
<https://www.facebook.com/OlyEcosystems>



What stands in the way of estuary restoration? continued from inside.....

An economic benefit that is often overlooked is the rise of the restoration economy. With restoration funds streaming into the community, we can provide jobs in science, engineering, planning, construction, plant breeding and more. A report from Restore America's Estuaries titled *Jobs & Dollars* says "restoring our coasts can create more than 30 jobs for each million dollars invested. That's more than twice as many jobs as the oil and gas and road construction industries combined."

Restoration of the estuary will also bring people to downtown Olympia, not just for new jobs, but also for recreation and education. Runners and walkers will still enjoy the mile and a half loop around healthier water. Kayakers and other boaters will return. Wildlife enthusiasts will come to watch shorebirds, seals and salmon. Educators will bring students of all ages to observe the Deschutes estuary come back to life.

Another economic benefit is the enhancement of salmon habitat. Salmon are an economic driver in South Sound, especially for the Squaxin Island Tribe. The Tribe has been researching salmon activity in Budd Inlet, and they are finding that 73% of the juvenile salmon found in the inlet are coming down from the Puyallup and Green River watersheds.

According to the Tribe: "This isn't really surprising. Deep south Puget Sound is one of the most productive areas in the world for the food juvenile salmon need. It's natural that they would evolve to migrate to a place with a lot of food before heading out to the ocean. To increase the hab-

itat they prefer here would only benefit them." Restoring the Deschutes estuary will return 260 acres of habitat to salmon all over South and Central Puget Sound.

The other barrier against estuary restoration comes from those that insist that we preserve our Capitol Lake heritage. They cling to the notion of a freshwater reflection pond below the State Capitol. These days, with the pollution, stagnation, and layers of scum across the surface, it no longer serves to provide a decent reflection. At least in the literal sense.

It's true Capitol Lake has been a part of our recent past, with fond memories for many people. Some learned to swim there when the lake was still open. Lakefair used to include boat racing and other activities on the water. As fond as these memories are, no amount of dredging will bring us back to those days. Only removing the dam and restoring the Deschutes estuary will clean our waters, improve public health, restore recreational access, and control invasive species.

Our heritage goes back longer than the 60 years of Capitol Lake. The estuary has been here for thousands of years. Indian tribes and white settlers chose the mouth of the Deschutes River, a once productive ecosystem, as a center for settlement and trade.

If the water is to define our history, I would like to choose the heritage I leave for my child. I choose clean water. I choose recreation. I choose an economy that benefits our community and the natural world. I choose new beginnings. What's your choice?

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Become a member!

I say **yes** to the Deschutes estuary!

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