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Salish Sea Ecosystem Conference

2018 Salish Sea Ecosystem Conference
(Seattle, Wash.)

Apr 4th, 2:15 PM - 2:30 PM

Policy, science, economics and culture at a crossroads: restoring the Deschutes River estuary

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<https://cedar.wwu.edu/ssec/2018ssec/allsessions/40>

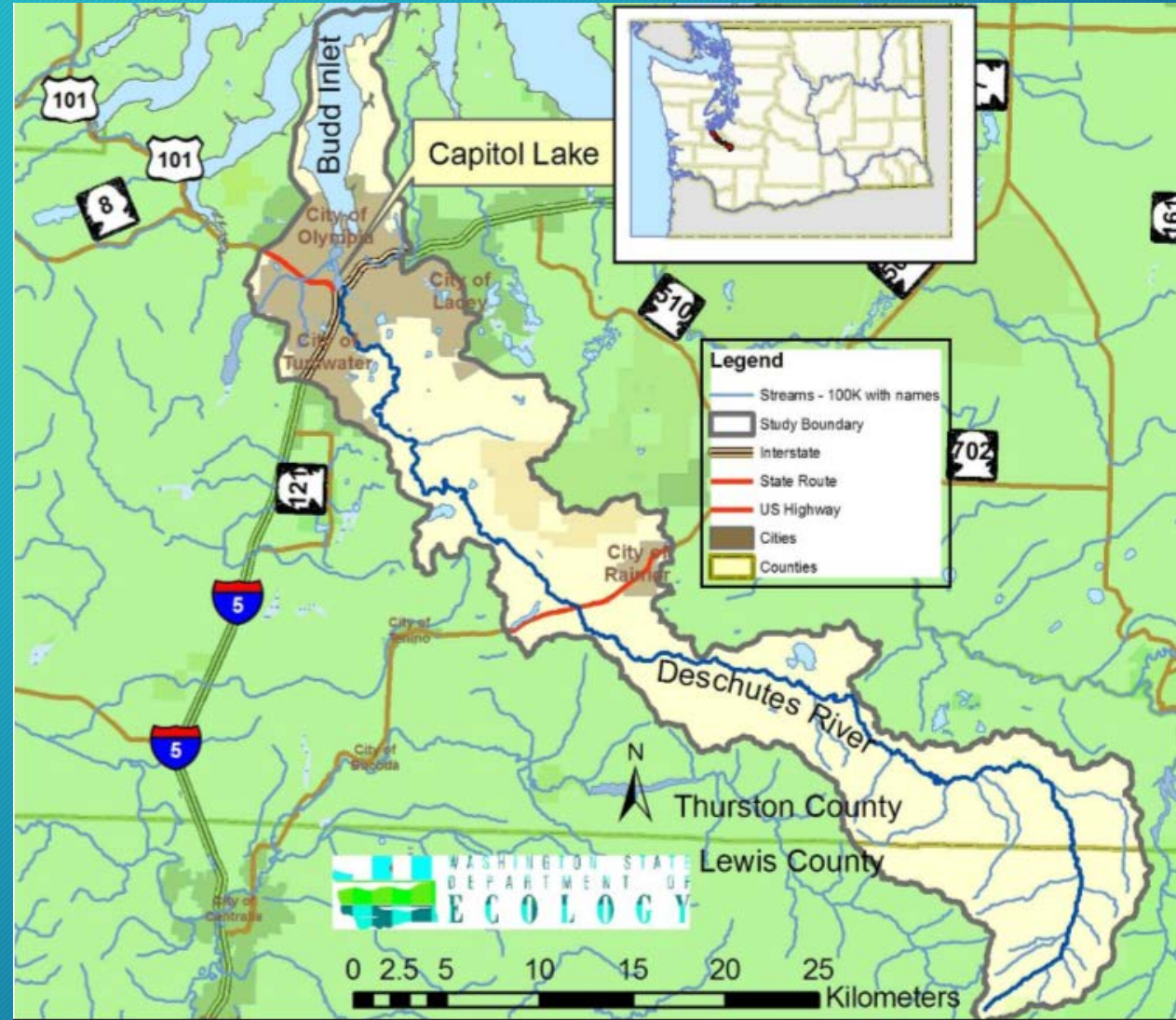
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Restoring the Deschutes River Estuary

Policy, Science, Economics and Culture
At a Crossroads

By Dave Peeler & Sue Patnude





Budd Inlet and Deschutes Watershed



Drawn by W. H. Clifton, Portland, Oregon.

Based according to Act of Congress, in the year 1854, by E. S. Clow, in the Office of the Librarian of Congress.

A. L. Bennett & Co., Lithographers, San Francisco.

TUMWATER.

REFERENCES:

- | | |
|---------------------------|-------------------------|
| 1. Capitol Building. | 6. Masonic Hall. |
| 2. Public School. | 8. Baptist Church. |
| 3. Congregational Church. | 7. Unitarian Church. |
| 4. Catholic Church. | 8. Presbyterian Church. |

75-693049

BIRD'S-EYE VIEW OF THE
CITY OF OLYMPIA,
EAST OLYMPIA AND TUMWATER.

Puget Sound, Washington Territory.

1879.

REFERENCES:

- | | |
|------------------------|--------------------------|
| 9. Episcopal Church. | 13. Methodist Church. |
| 10. Court House. | 14. Champion Hill. |
| 11. Old Fellows' Hall. | 15. Good Templar's Hall. |
| 12. Town Hall. | |

BUDD'S INLET.

Copy 1
1879
1879
1879



1879
drawing
pre-
dredge &
fill



M. O'CONNOR.

VIEW OF OLYMPIA, WASH.



Little Hollywood – *Susan Parrish Collection*

Old Vision -- Creation of Capitol Lake

- 1949 -- Deschutes Basin appropriation bill passed
- 1951 -- Dam completed following decades of controversy
 - First lake algae appears that summer, prompting calls to the health department
- 1951 -- Deschutes Parkway built
- 1950s:
 - 1st Olympia sewage treatment plant built
 - Brewery begins wastewater treatment
 - I-5 freeway construction begins



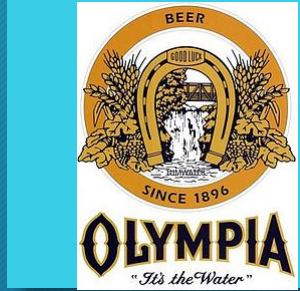
Image U.S. Geological Survey

Historical conditions and comments:

- Capital Campus vision with lake as reflecting pool was created by architects and landscapers, not by hydrologists or ecosystem experts
- That vision was supported by real estate, transportation and maritime interests for their own purposes
- Fishermen and brewery opposed the dam; tribes likely not consulted
- Water and health conditions prior to the 1950s were not good -- direct discharges of untreated human and industrial wastes to the estuary
- Residents of Little Hollywood were forcibly removed and structures burned
- This vision requires regular dredging of the lake by the state



Aerial view
of Budd Inlet,
Capitol Lake
and
downtown
Olympia



Old Olympia
Beer
Brewhouse
at base of
Tumwater
Falls

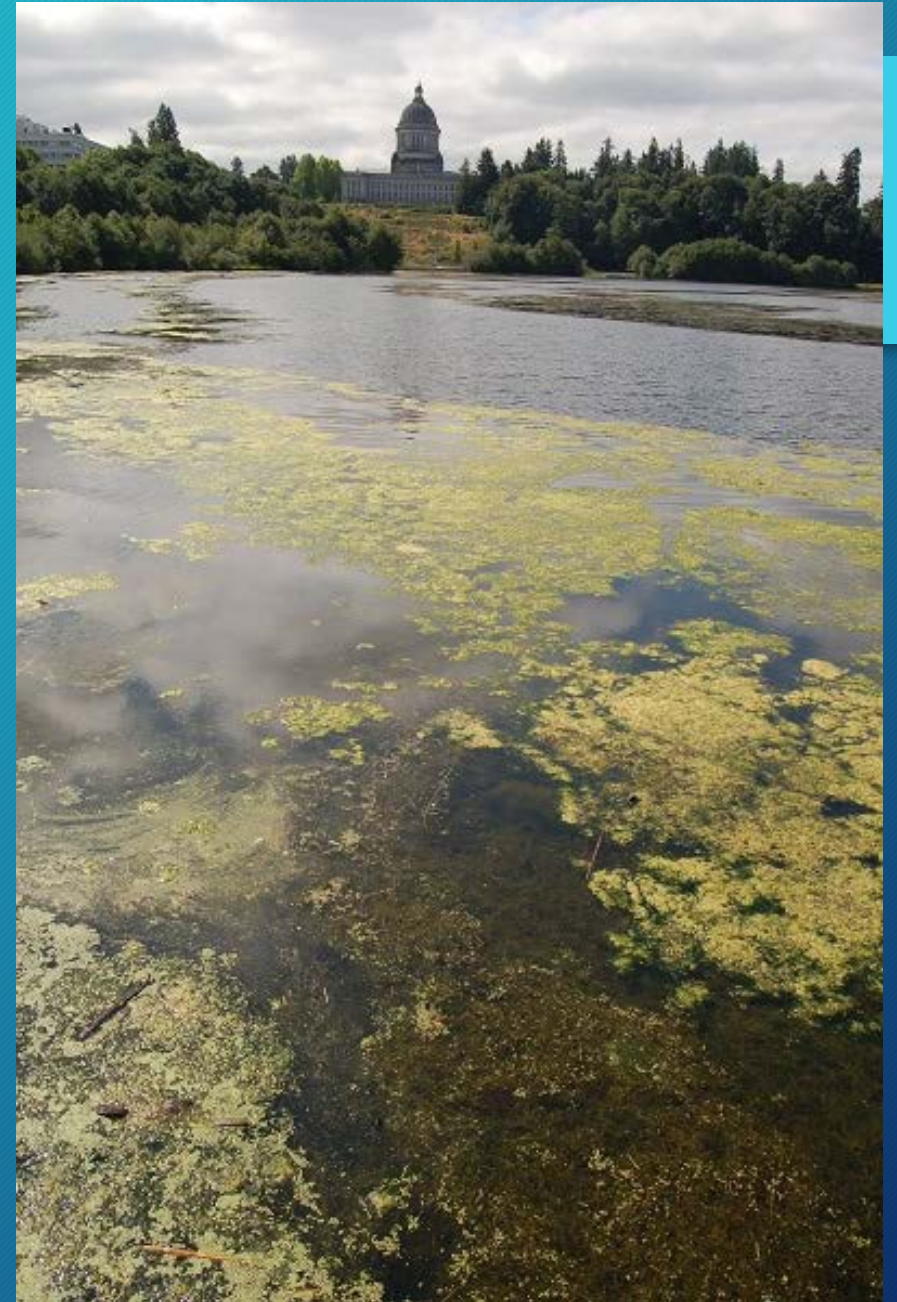


Capitol Campus,
north basin of lake,
Heritage Park and
two bridges



Lake as reflecting pool

Typical modern summer view:
Algal mats in middle and south basins





Public access
prohibited due to
invasive species

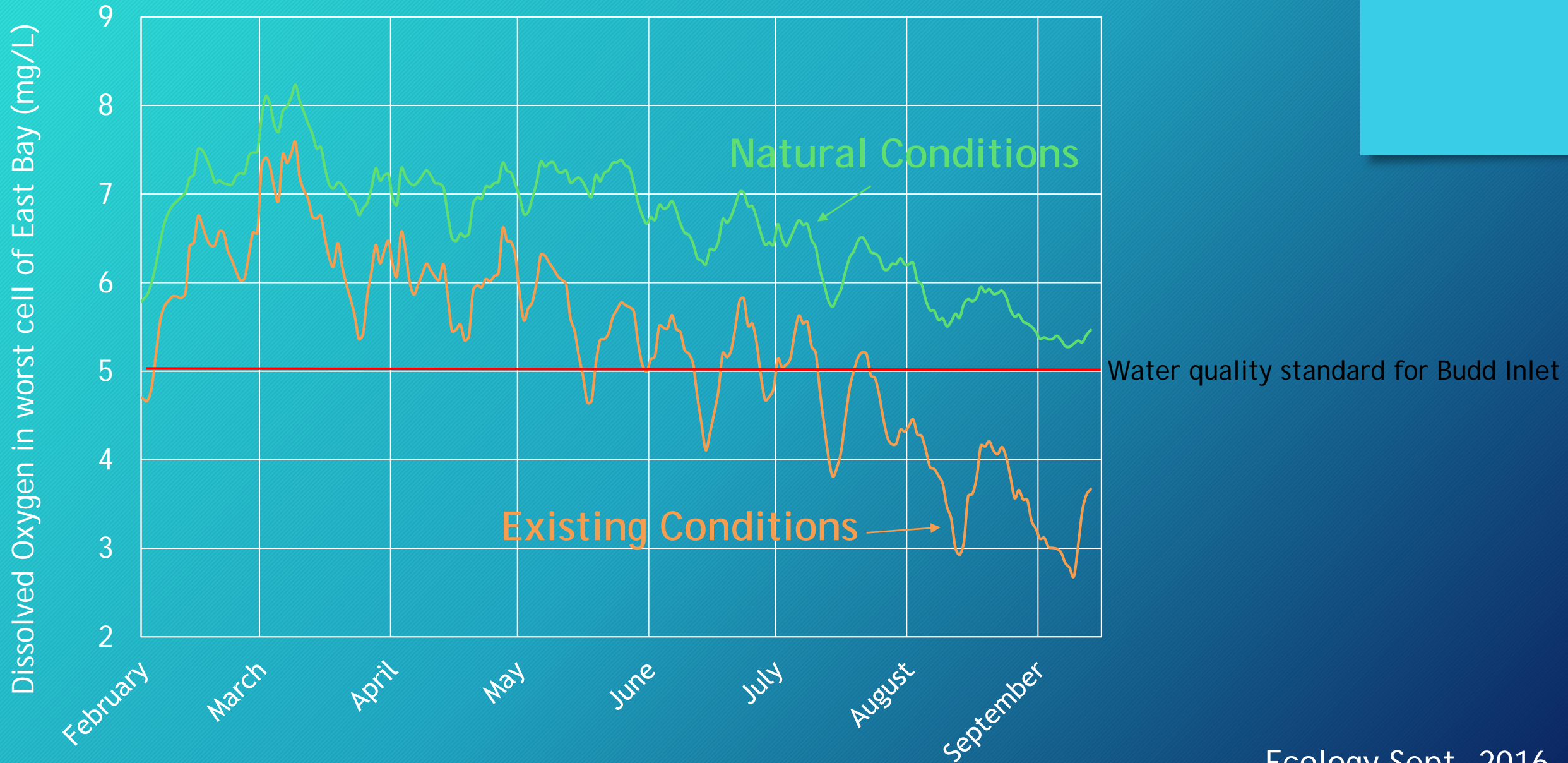
Need for Restoration

- Capitol Lake Dam has the largest impact on Clean Water Act violations in Budd Inlet (Ecology, 2012, 2015 & 2016)
- Very poor survival of juvenile salmon
- Invasive species - New Zealand mud snail and many others
- On-water recreation is prohibited
- Estuary restoration is a priority for Puget Sound Recovery by the Puget Sound Partnership - largest single habitat project in South Puget Sound

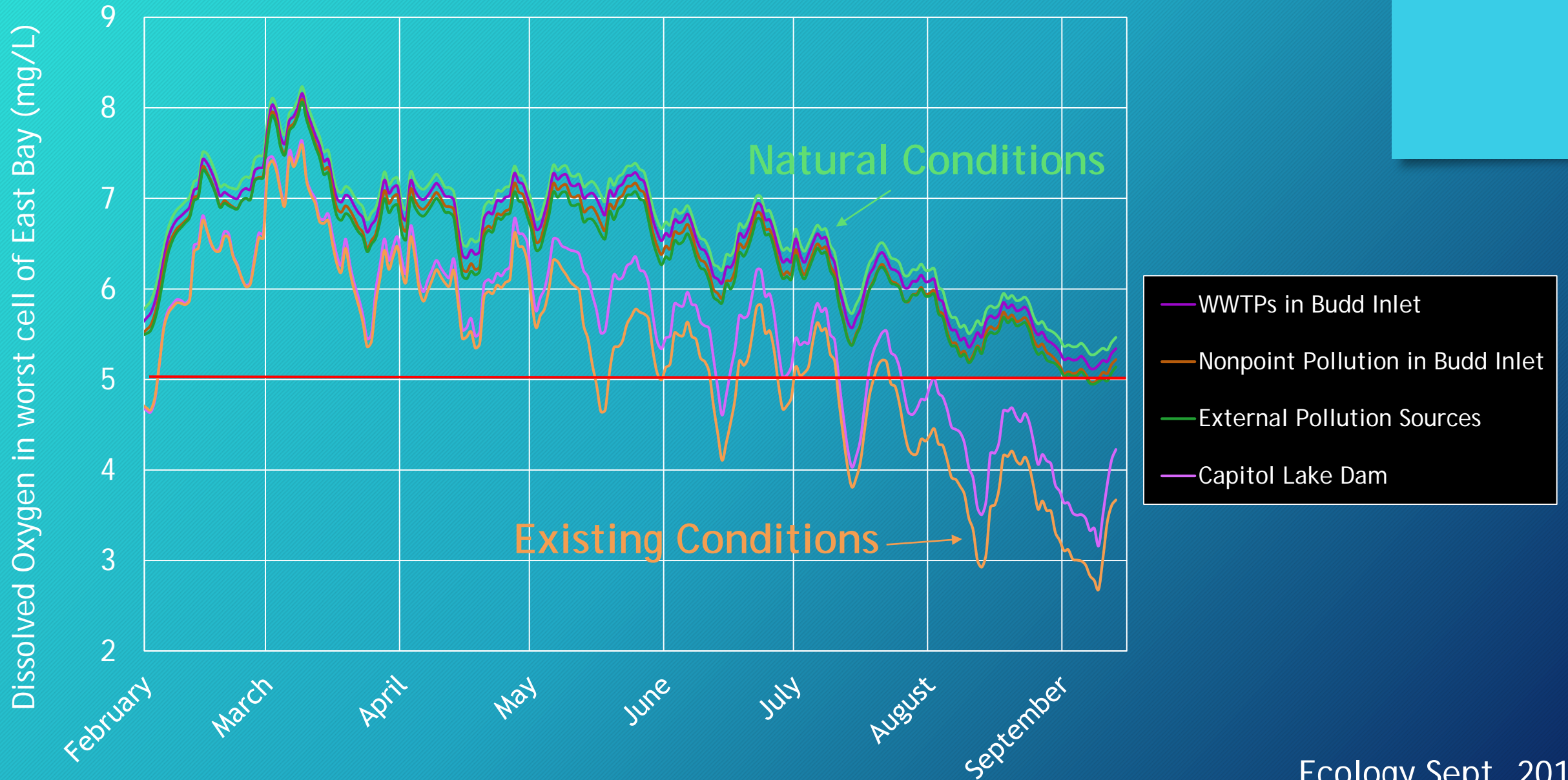


Image USDA Farm Service Agency

Predicted Dissolved Oxygen Concentrations under Different Scenarios

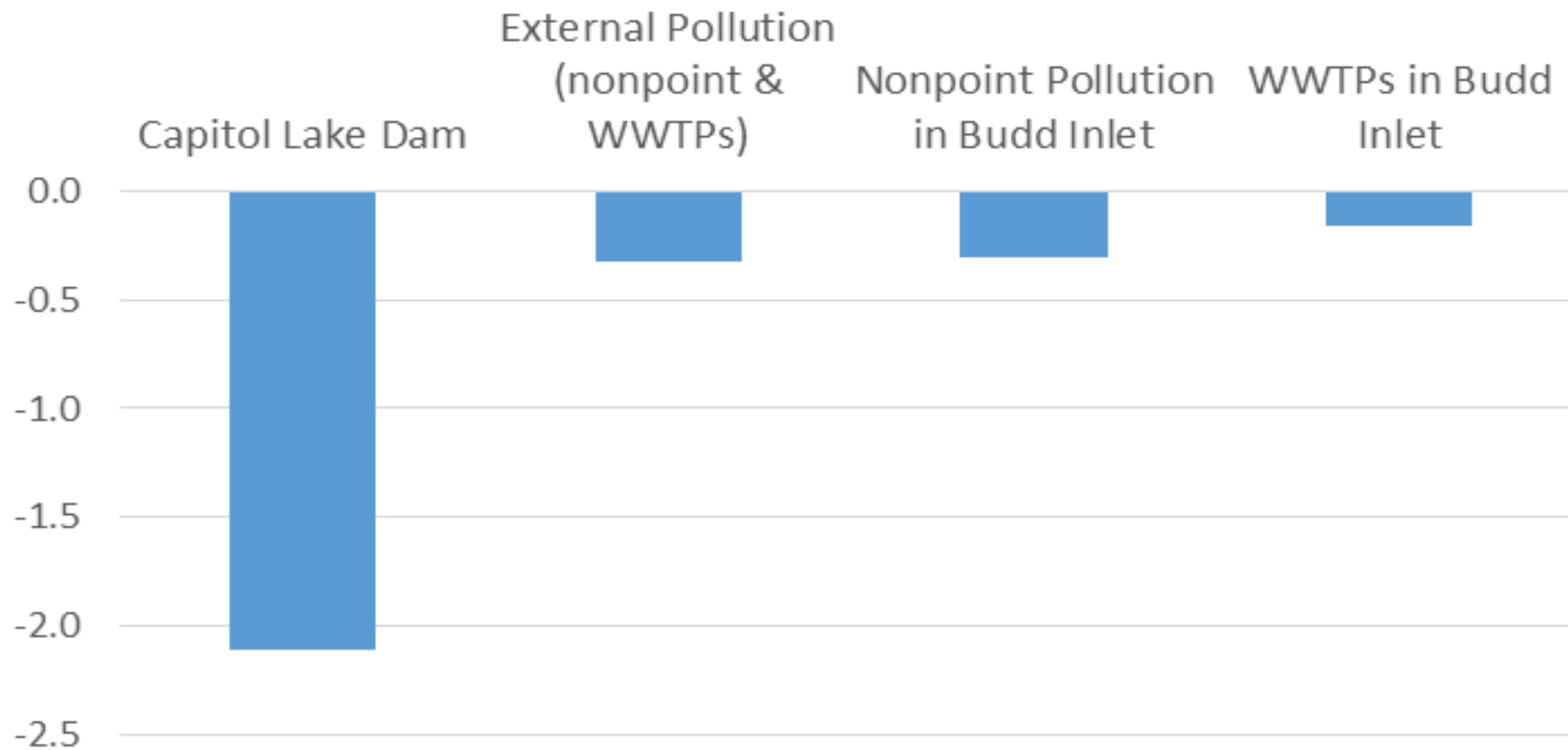


Predicted Dissolved Oxygen Concentrations under Different Scenarios



Total Depletion in Dissolved Oxygen (in mg/L in East Bay on day with lowest DO)

Ecology
2016



Politics - Past, Present and Future

Capitol Lake Adaptive Management Program (CLAMP)

- After dredging proposal in late 1990s put on hold, CLAMP created to review issues, collect new information and make recommendations to Legislature
- CLAMP reviewed 4 alternatives: lake, estuary, “hybrid” and no action
- CLAMP reports and final recommendation in 2009: Most cost effective to remove dam and restore the estuary. No action has been taken.
- Restoration opposed by the Port of Olympia, OYC, private marinas and “city beautiful” supporters - they formed CLIPA
- DERT formed to advocate for restoration

Politics – Past, Present and Future

WA Dept. of Enterprise Services Process (DES)

- 2015 -- DES hired consultant to review dredging permit process and timelines
- Floyd:Snider listed approvals and permits needed along with a flow chart
- Projected timing about 18-24 months to obtain approvals if no EIS required
- Likelihood of receiving permits low to nil without an actual project plan
- Dredge spoils disposal very expensive due to invasive species -- New Zealand Mud Snail, purple loosestrife, etc. -- must dispose at upland site away from water.

Politics – Past, Present and Future

WA Dept. of Enterprise Services Process

- DES hired same consultant to help with process for initial scoping of hybrid, other options and governance & funding ideas
- Executive Work Group of local gov'ts, tribe and DES:
 - meetings open to public, no comments taken at the meetings
 - separate open houses for public comment
- Technical Committee included tribe, local and state agencies -- open to public
- Governance & Funding Committee included local gov'ts, tribe and DES only -- closed to public

Politics – Past, Present and Future

WA Dept. of Enterprise Services Process

- DERT and CLIPA both made presentations to the Exec Work Group
- DES and consultant presented Report to Legislature in Dec. 2016
- Cost estimates show estuary restoration still least costly option in long term
- DES requested \$5.5M to conduct an EIS and some technical studies to fill gaps
- 2018 -- State Capital Budget appropriated \$4M for EIS and related work

Capitol Lake/Deschutes Estuary Interests

- **Cultural** - Squaxin Island Tribe ancestral land; fishing & shellfish area
- **Fisheries** - large fishery for tribe and sport fishing in past
- **Navigation** - port, marinas, yacht club, related maritime interests
- **Transportation** - railroad, local roads, bridges
- **Historical and aesthetic** - Capital Campus, reflecting pool
- **Fish and wildlife** - salmon, trout, upstream hatchery, recreational fishing
- **Environmental** -- water quality poor in summer, large effect on Budd Inlet
- **Recreation** - joggers, walkers, bikers, wildlife viewing; potential boating and fishing
- **Financial** - costs of restoring estuary or maintaining lake are high; who pays?
- **Economic** - impacts associated with each option: Who benefits? Who loses?

Restoration Vision

- Capitol Lake is really a dammed estuary, not a lake
- Much of the estuary has been filled in: port peninsula, downtown Olympia, Heritage Park, the “isthmus”, rail and freeway crossings, Deschutes Parkway, etc.
- More than 260 acres could still be restored to an estuary
- Removal of the dam and adjacent fill would result in a 500 foot wide opening for tidal flows
- Result = filling critical need for estuarine habitat for both juvenile and adult salmon and meeting water quality standards in Budd Inlet and in the Estuary
- Opportunities identified to limit impacts of sediments downstream
- Restore public access to the water, reduce invasive species

Restoration - the only sustainable option

- ✓ Federal matching funds available for restoration - up to 75%
- ✓ Once restored there will be limited future dredging - more natural system
- ✓ Fiscally conservative answer to an expensive problem
- ✓ Restore healthy environment in Budd Inlet and support fish from new hatchery upstream
- ✓ Increase salmon, recreational opportunities and tourism
- ✓ Address Clean Water Act violations
- ✓ Adapt to Climate Change -- sea level rise and flooding



Budd Inlet as
reflecting pool at
Percival Landing

Vision for the Future - Fix the Mistakes of the Past

- Capital Campus “reflecting pool” vision was created by architects and landscapers, not by hydrologists or ecosystem experts
- Since the 1970s we have recognized the excesses of the past and are seeking to remedy the most egregious errors
- Creation of a lake at the mouth of the Deschutes River began an ecological disaster that was not envisioned
- Let’s adopt better solutions in the future, not repeat the mistakes of the past



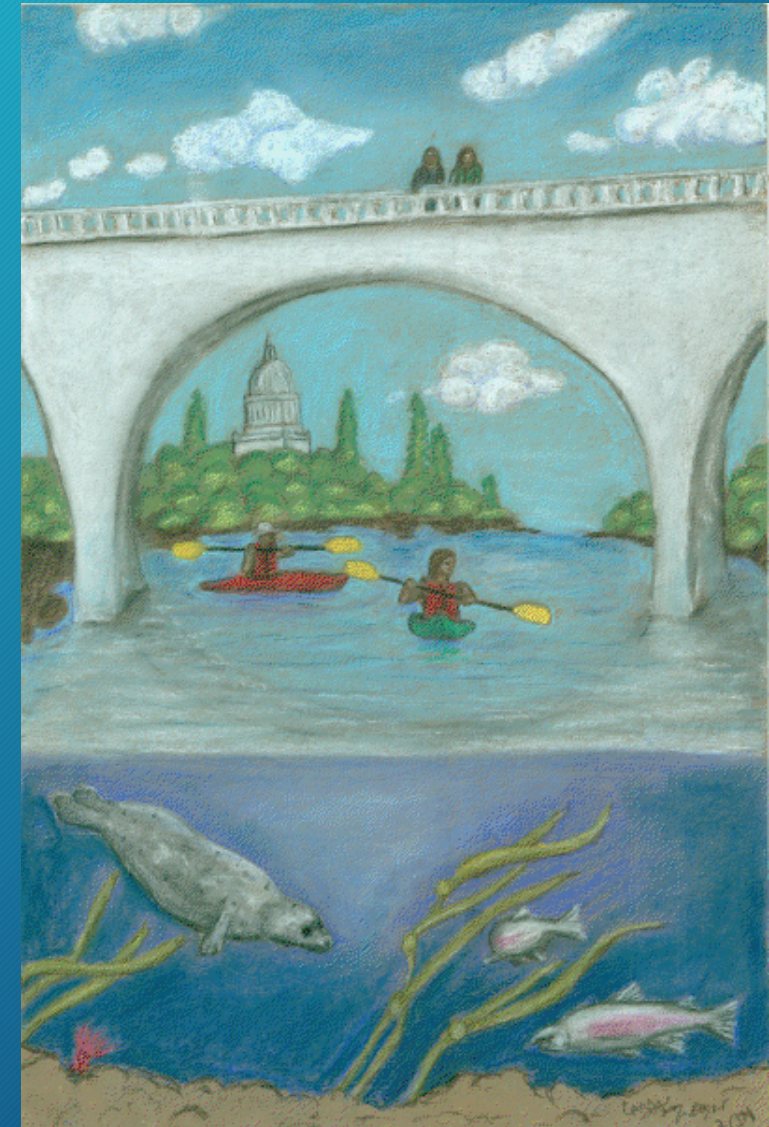
Salmon Defense/Steh-Chass Festival



<http://www.deschutesestuary.org/>

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Olympia, WA 98508



DERT vision