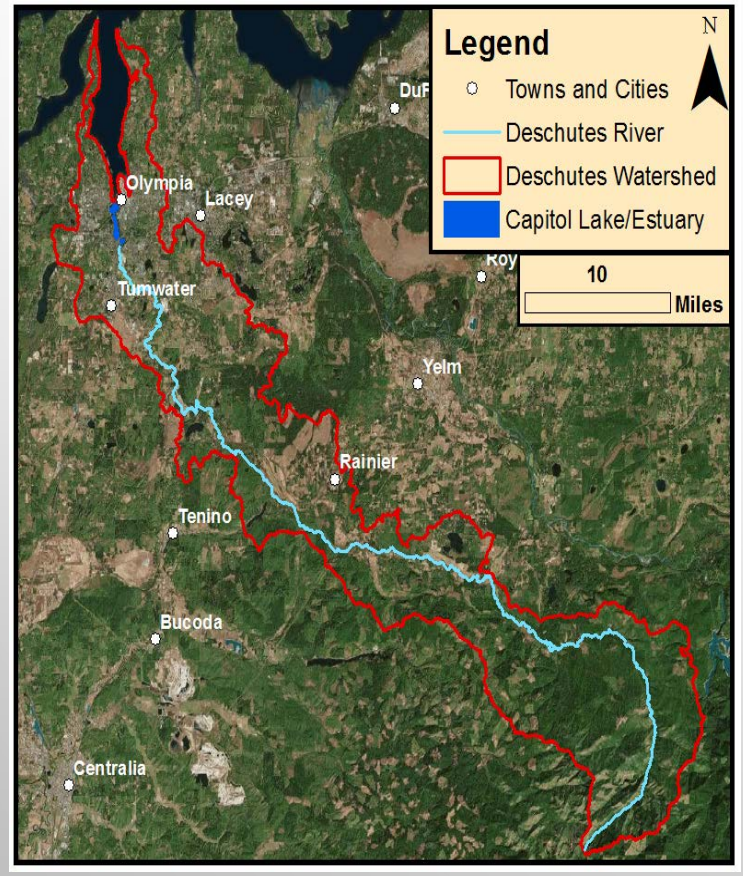
DESCHUTES ESTUARY RESTORATION TEAM UPDATE MARCH 2016

WORKING TO RESTORE THE DESCHUTES WATERSHED ECOSYSTEM

DERT'S WORK

- ✓ **Focus on the Whole Deschutes Watershed Ecosystem: *The Deschutes Estuary is Vital to the Health of Puget Sound and the Salish Sea***
- ✓ **Deschutes Watershed Guide and Watershed Health and Youth Project (WHY)**
- ✓ **Creation of Sediment Management Alternatives and a Vision for Estuary Restoration**
- ✓ **Alliance for a Healthy South Sound, Deschutes TMDL, DES Process and other efforts**
- ✓ **Community Relations: Events, Tours, Work in Schools, Partnerships with other Environmental Organizations**

Deschutes Watershed Ecosystem



- The **Deschutes Watershed** is a basin holding all the land whose streams, wetlands, lakes and ground water drain into the Deschutes River.
- It covers an area of approximately 170 square miles mostly within Thurston County, but with a small portion in Lewis County – both in the State of Washington.

DESCHUTES RIVER WATERSHED

52 RIVER MILES

143 TRIBUTARIES

AN ELEVATION OF 3,870’ AT ITS HIGHEST POINT

SEA LEVEL AT ITS LOWEST POINT

BUDD INLET’S AVERAGE WIDTH IS 1.15 MILES

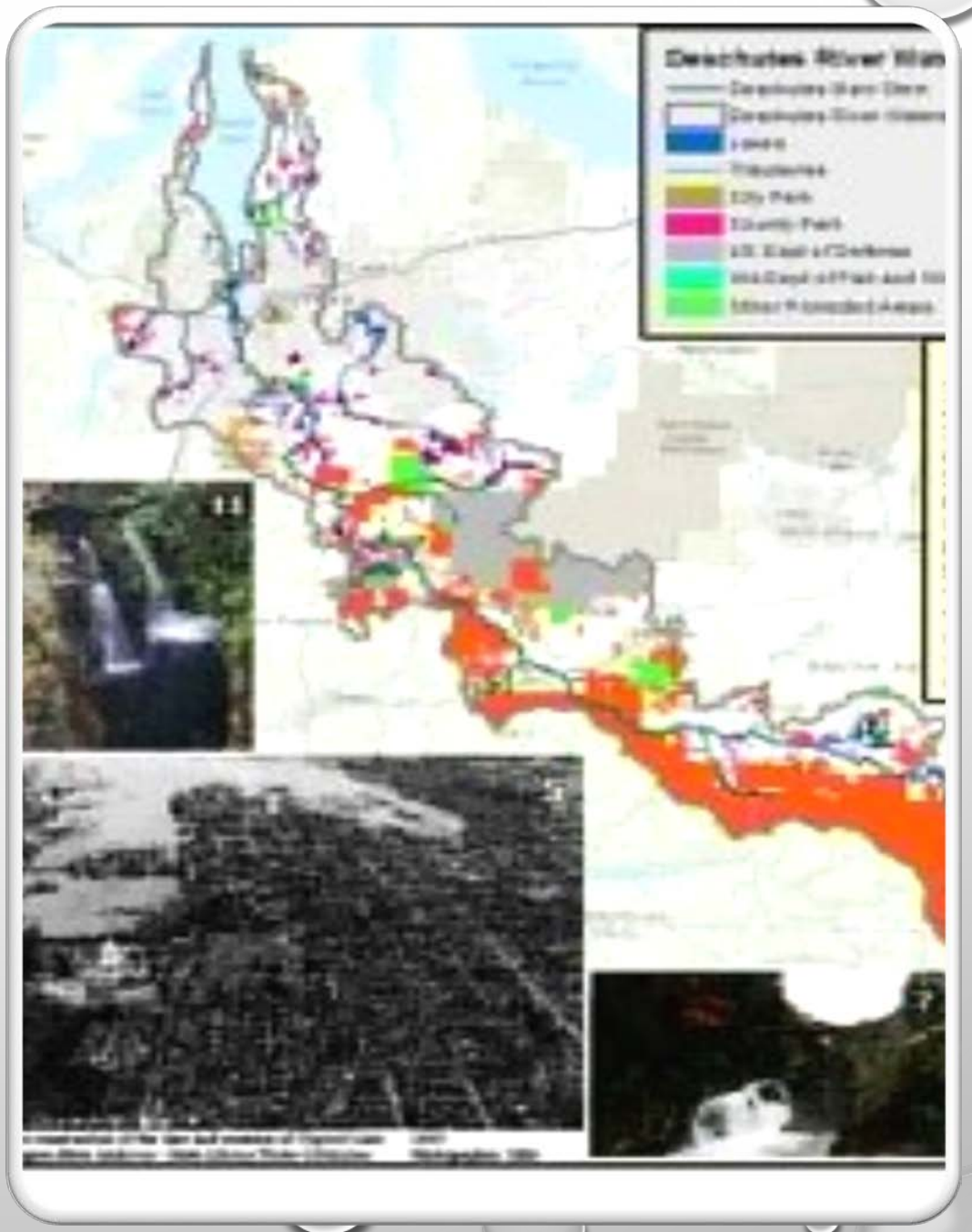
BUDD INLET’S AVERAGE DEPTH IS 27 FEET

NATURAL GEOLOGICAL FEATURES INCLUDE:

RIVERS, STREAMS, FOREST, LAKES, WETLANDS, PRAIRIE, MARINE BAYS AND OPEN SEA.

MAN-MADE FEATURES INCLUDE:

FARMS AND PASTURES, URBAN DEVELOPMENT, RAILROADS, PARKS, PUBLIC ACCESS SITES, ROADS AND HIGHWAYS, BRIDGES AND MORE



DESCHUTES WATERSHED GUIDE

- 16 page publication introducing the Deschutes Watershed to people of all ages and backgrounds
- Past, Present and Future Glance at the Deschutes Watershed
- History, environmental and economic culture, geological attributes, public access points and more
- Website links to other watershed projects, programs, ideas and information

To the Puget Lowlands: Retreat of the Vashon glacier at the end of the Ice Age left behind a prairie providing rich harvest grounds of camas root and wild game Tribal people depended on. Transformed to pasture and farm land, the prairies of the Deschutes now face growing pressure from residential development. Native prairies still partially intact include the Tenalquot, Ruth, Weir and Smith Prairies. Sheltered there are native species such as the threatened Streaked Horned Lark, Taylor's Checkerspot Butterfly, the Mazama Pocket Gopher and Garry Oak.

To the Estuary and the Sea: The estuary is where the river meets the sea. The historic Deschutes River was dammed in 1951. When the dam is open, the river runs into an extended Budd Inlet watershed meeting South Puget Sound at Boston Harbor and draining into the Salish Sea. Historically, this long finger-shaped inlet encouraged the formation of tide flats and very productive shellfish beds. It created an ideal environment for forage fish including sand lance, surf smelt and herring, all ideal food sources for predators from bear and eagles to salmon and Orca whales. Scientists have even shown that proteins derived from salmon can be found in trees as the returning fish are taken to land where they are devoured by bear, eagles and other critters! Migrating birds of the Pacific Flyway still find shelter in the tidelands and wetland of the estuary, despite the dam at the mouth of the Deschutes River. The historic Deschutes estuary once formed the heart of the Coast Salish culture of the Squaxin Island Tribe.

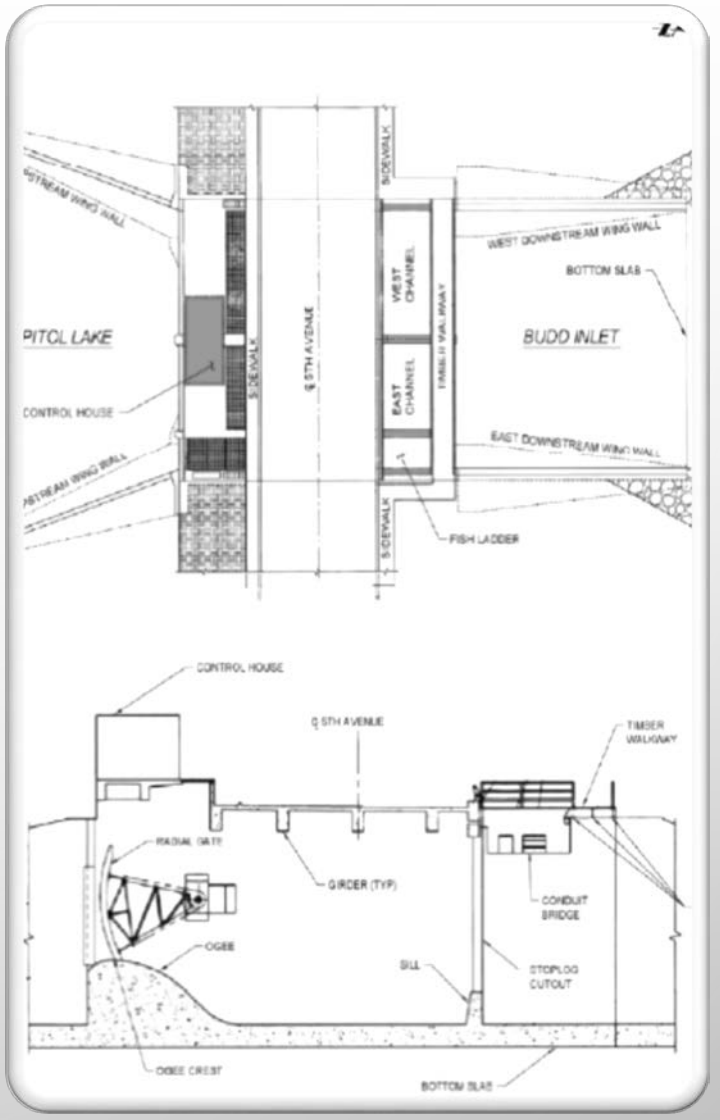
WATERSHED HEALTH AND YOUTH
THE "WHY" PROJECT

- ✓ **DERT is partnering with South Sound Green and the Squaxin Island Tribe to connect youth to the Deschutes Watershed through hands-on science.**
- ✓ **Develop a "sense of place" based in the Deschutes Watershed.**
- ✓ **Build a scientific understanding of how a watershed works.**
- ✓ **Become critical thinkers, with the capacity to use scientific understanding to make personal and policy decisions.**

SEDIMENT MANAGEMENT IDEAS

5TH AVENUE DAM

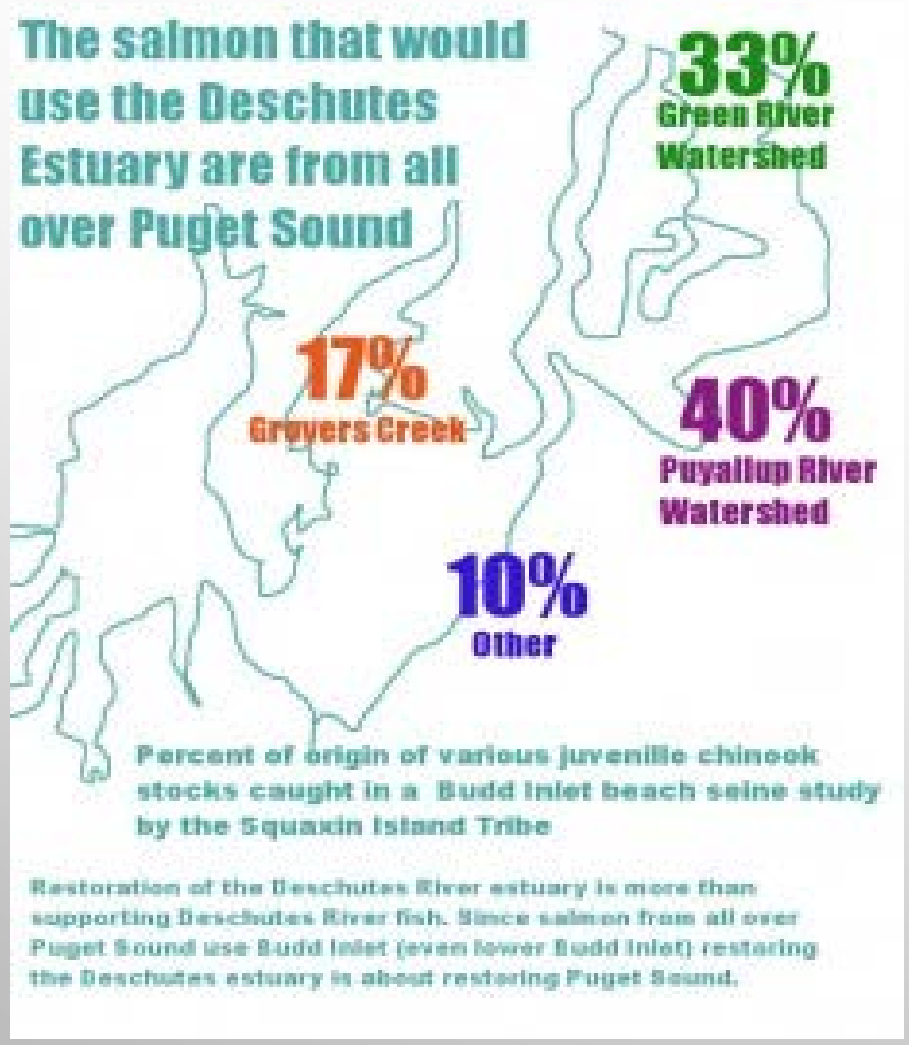
- CONSTRUCTED IN 1951
- CREATED CAPITOL LAKE BY DAMMING THE MOUTH OF THE DESCHUTES RIVER
- MANAGED BY THE WASHINGTON DEPARTMENT OF ENTERPRISE SERVICES
- DIMENSIONS: 45 FEET TALL, 82 FOOT-WIDE RECTANGULAR SPILLWAY, A BASE WIDTH OF 200 FEET
- OPERATED TO MAINTAIN A SET-ELEVATION POINT FOR THE LAKE
- LAKE LEVELS ARE AFFECTED BY THE FLOW RATE OF THE DESCHUTES RIVER



SEDIMENT MANAGEMENT IDEAS

- ✓ Dredging before dam is removed – this has to happen to manage the 650,000+ CYs of silt build-up in the current sediment reservoir
- ✓ Use of dredge materials for habitat and shoreline restoration
  - Examples: Habitat islands along the river; stabilizing the Parkway and creating a more natural shoreline/beach on all estuary shores increasing public access and recreation opportunities
- ✓ Removing railroad berm north of 4th Avenue bridge and adding sediment deflection structure in boat harbor to direct sediment over to the west Budd Inlet shoreline to build beaches and redirect sediment from boating areas

ESTUARY USE BY JUVENILE SALMON



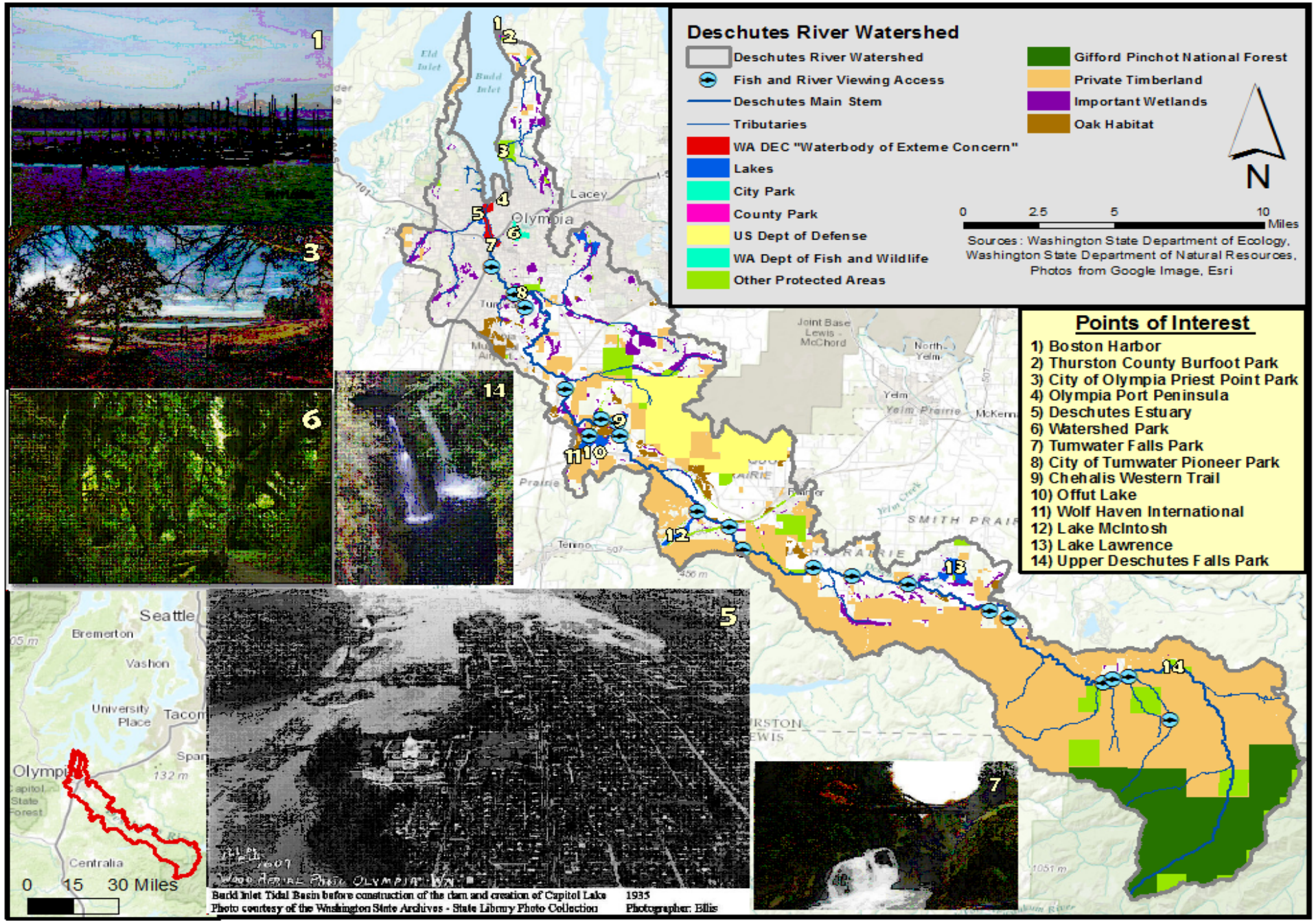
- Salmon are in decline in Puget Sound.
- Fishery Managers are considering closing fishery.
- Juvenile Salmon from all over Puget Sound use Budd Inlet to grow before they head out to sea.
- Budd Inlet is depleted in oxygen – how much longer can it sustain juvenile salmon and other important ecosystem wildlife?

Benefits of Estuary Restoration

- The Deschutes Estuary is an Integral Part of the Deschutes Watershed Ecosystem.
- Removing the 5th Avenue Dam to Restore the Estuary Will Reconnect the Watershed
- The Only Environmentally and Economically Sustainable Option
- Improve Water Quality and Mitigate Clean Water Act Violations
- Improve Sediment Management to Enhance Shorelines and Beaches and Lessen Impact to Harbor
- Spread the Costs of Sediment Management Across ALL Stakeholders
- Eliminate the Obvious Policy Contradiction of a Dammed River on the Capitol Campus

WRAP UP!
SUPPORT ESTUARY RESTORATION OR SOME FEASIBLE HYBRID WITH COMPLETE 5TH AVENUE DAM REMOVAL

- **Science** clearly shows need to remove dam in order to restore water quality, habitat & fish and wildlife functions
- **Restoring habitat and estuaries** are high priorities for recovery of Puget Sound
- **The dam** contributes to poor water quality, poor salmon health and returns, lack of recreational opportunities, low economic returns and proliferating invasive species
- **Sediment** can be managed similar to programs in all other coastal estuaries
- **Recreation** can be restored and greatly improved
- The **State Capital** can be a model of habitat restoration rather than an example of a continuation of poor design and lack of environmental expertise


Deschutes River Watershed
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Fish and River Viewing Access
Deschutes Main Stem
Tributaries
WA DEC "Waterbody of Exteme Concern"
Lakes
City Park
County Park
US Dept of Defense
WA Dept of Fish and Wildlife
Other Protected Areas
Gifford Pinchot National Forest
Private Timberland
Important Wetlands
Oak Habitat
N
0 2.5 5 10 Miles
Sources : Washington State Department of Ecology, Washington State Department of Natural Resources, Photos from Google Image, Esri
Points of Interest
1) Boston Harbor
2) Thurston County Burfoot Park
3) City of Olympia Priest Point Park
4) Olympia Port Peninsula
5) Deschutes Estuary
6) Watershed Park
7) Tumwater Falls Park
8) City of Tumwater Pioneer Park
9) Chehalis Western Trail
10) Offut Lake
11) Wolf Haven International
12) Lake McIntosh
13) Lake Lawrence
14) Upper Deschutes Falls Park
Olympia
Lacey
Seattle
Bremerton
Vashon
University Place
Tacoma
Centralia
0 15 30 Miles
Budd Inlet Tidal Basin before construction of the dam and creation of Capitol Lake 1935
Photo courtesy of the Washington State Archives - State Library Photo Collection Photographer: Ellis