

Olympia Oyster Restoration

Project Development, Siting and Evaluation Review

Brian Allen
Puget Sound Restoration Fund



Northwest Straits Commission
Annual Meeting 2016 Port Townsend
November 5, 2016

Where to start

- Lots of activity nationally
- West Coast coalition
- Resources

National Fish
NOAA Restora
Puget Sound I

The Nature
Conservancy

ICES APPROACH

of She

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OYSTER HABITAT RESTORATION *Monitoring and Assessment Handbook*



Olympia Oyster literature references

~DROPBOX~

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OLYMPIA OYSTER FIELD GUIDE

2013

IDENTIFYING WASHINGTON STATE'S NATIVE
OYSTER AND ITS HABITAT FEATURES



SEAL ROCK - LOWER FRINGE OF
PACIFIC OYSTER BED HABITAT



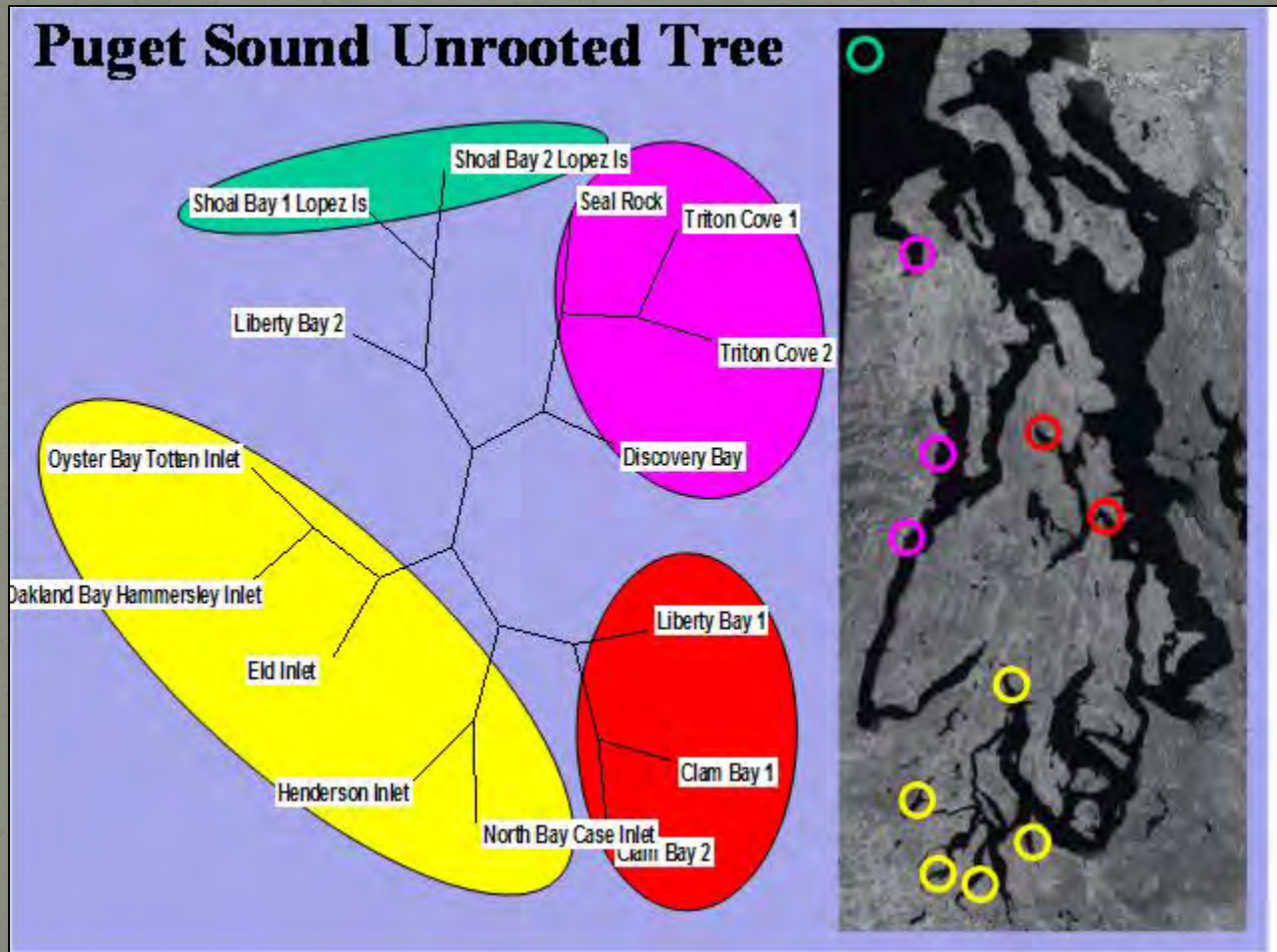
NORTH BAY - BROAD FLAT INTERTIDAL
SEEPAGE AREA NEAR THE HEAD OF AN INLET
WITH FURROWS AND SEEPS.

Restoration Goals

- Stock Rebuilding
 - Persistence
 - Food/Fisheries
- Biogenic Habitat
 - Oyster Population
 - Shell Budget
- Ecosystem Service
 - Filtration
 - Food Web Enhancement
 - Habitat Utilization
 - Nutrient Cycling



Population Structure



Siting Projects

- Historical locations in Puget Sound

Washington Department of Fish and Wildlife
Plan for Rebuilding Olympia Oyster (*Ostrea lurida*) Populations in
Puget Sound with a Historical and Contemporary Overview



Brady Blake and Alex Bradbury
Washington Department Fish & Wildlife
Point Whitney Shellfish Laboratory
1000 Point Whitney Road
Brinnon, WA 98320

Restoring the Olympia Oyster

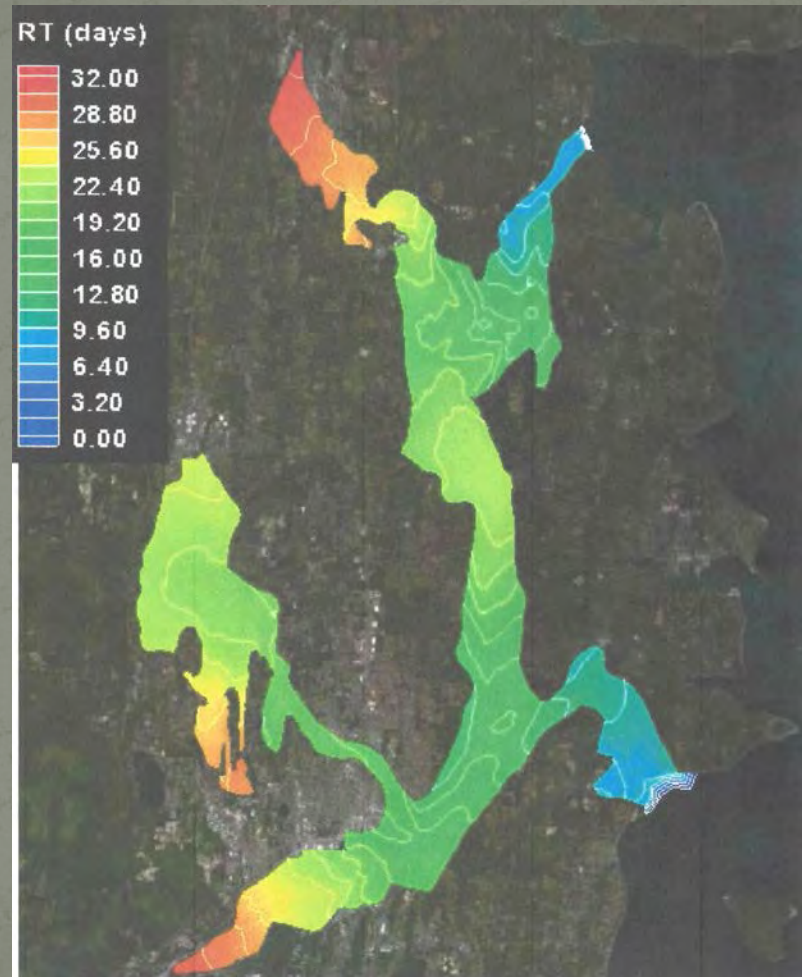


The Olympia oyster is the only oyster native to the west coast of North America. Well-developed populations provided a food source to tribes, and biogenic structure and complexity within coastal and inland estuaries. This native oyster habitat was abundant and supported a commercial fishery and farming industry in the region. Historic overharvest, pollution and other factors nearly removed this habitat form. While native oysters persist today, structured oyster beds exist at less than 5% of historic abundance (WDFW, 2013). Puget Sound Restoration Fund works with tribes, industry, government, researchers, and community groups to rebuild "Oly" populations and restore native oyster habitat at priority locations in Puget Sound.

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Siting Projects

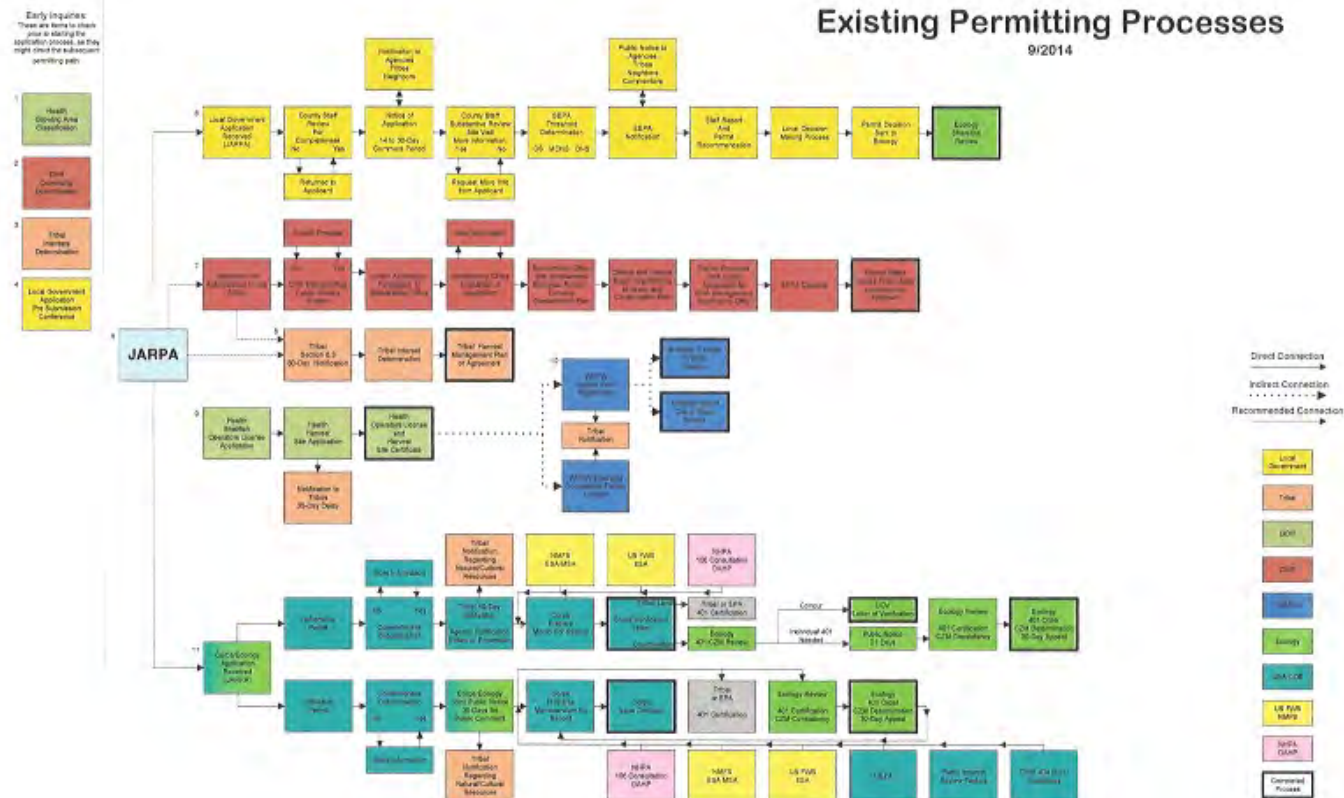
- Waterbody scale
 - Hydrodynamics
 - Sediment/substrate
 - Biological evaluation
- Stressors
 - Mortality
 - Substrate limited
 - Recruitment limited



- **P**
- **R**

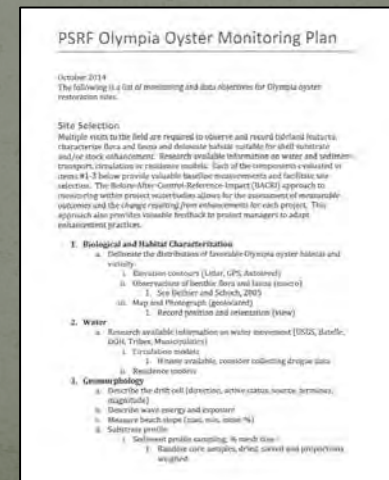
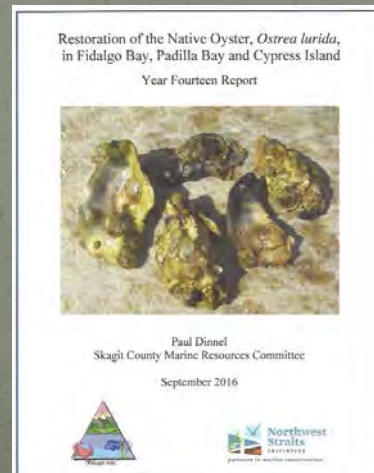
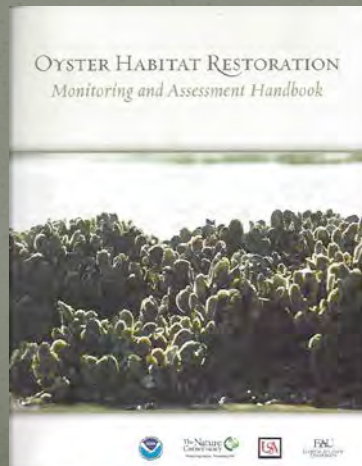
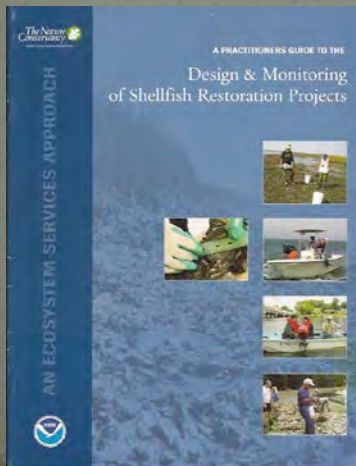
Existing Permitting Processes

Direct Connection
 Indirect Connection
 Recommended Connection



Monitoring

- Standard Practice
 - Universal metrics
 - Goals
 - Strategy
 - Objectives
 - Methods





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