

Environmental Solutions - Standards and Assessment

Revisions to Water Quality Standards for Bacteria

Presentation to the EQC
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Boardman, Oregon

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DEQ Recommendation to EQC

- Revise Oregon's water quality standards for bacteria
- Clarify where coastal contact recreation and shellfish harvesting are designated uses of state waters

Topics

- Revisions to water quality criteria for bacteria
- Designated use clarifications
- Implementation provision clarifications
- Impacts of revisions
- Public outreach, hearings and comments

Objective of revisions

- Revise standards to protect people recreating in coastal waters.
- Clarify where bacteria criteria apply.

Protecting beachgoers

- Complementary responsibilities of DEQ & Oregon Health Authority.
- BEACH Act Funding
 - DEQ water quality standards revisions
 - OHA process to adopt Beach Action Value.



Bacterial indicators used for water quality standards:

- Fecal coliform – consuming shellfish
- Enterococcus – coastal waters
- E. coli – freshwater

Summary of Criteria Revisions

Criterion	Current	Revisions
Enterococcus	2004 Federal rule Geometric mean & single sample value 30 day duration	State rule Geometric mean & 90th percentile value 90 day duration
<i>E. coli</i>	Log mean 30 day duration	Geometric mean 90 day duration

Where do the criteria apply?

Criterion	Current: type of water, shellfish presence	Proposed: designated use
Enterococcus	Marine waters and coastal estuaries	Coastal water contact recreation use
<i>E. coli</i>	Freshwaters and non-shellfish estuarine waters	Freshwater contact recreation use
Fecal coliform	Marine waters and estuarine shellfish growing waters	Shellfish harvesting use

Designated use maps

- Shellfish harvesting use
- Boundary between freshwater and coastal contact recreation.

Shellfish harvesting clarification

- Upstream extent of shellfish habitat and downstream and marine waters.
 - Historical reports and recent surveys
 - Reviewed by ODFW and EPA staff
 - Salinity data - secondary line of evidence.

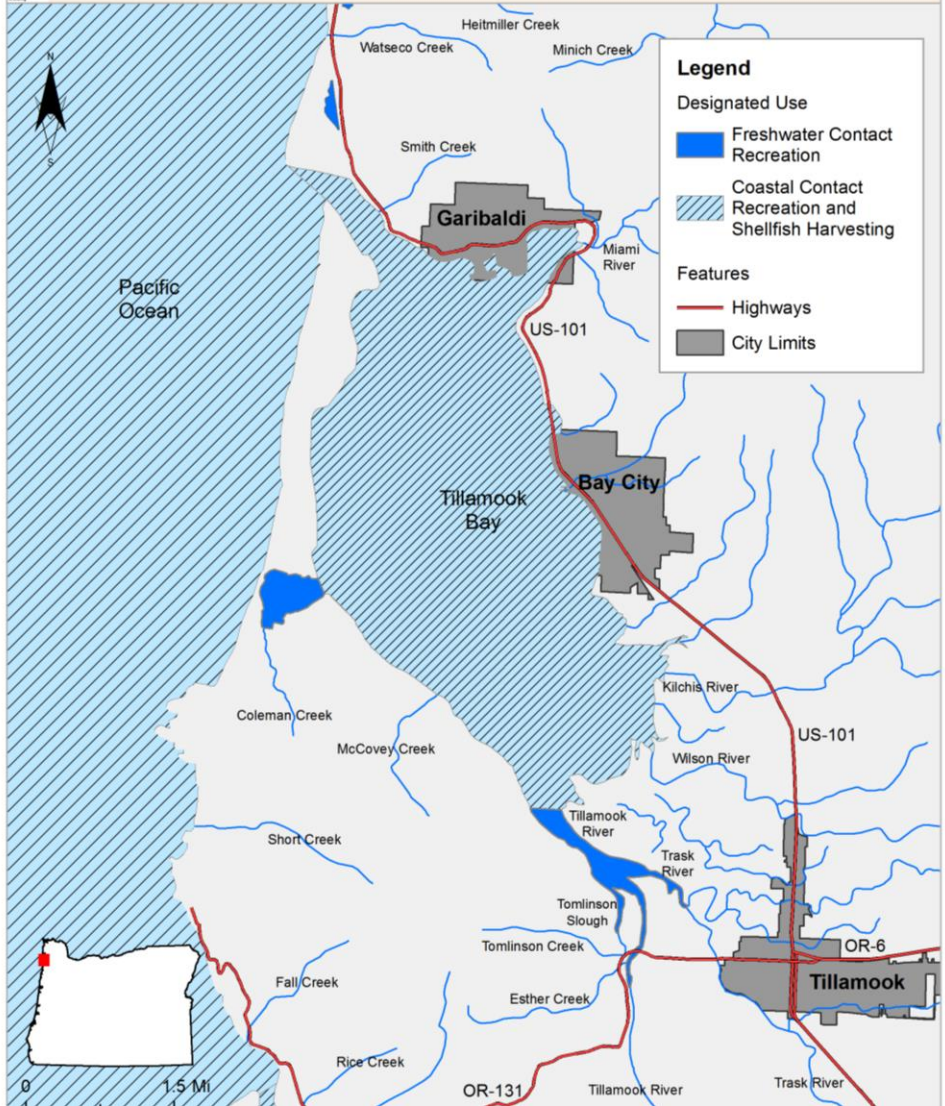
Contact recreation boundary

- Upstream extent of:
 - shellfish harvesting designation or
 - 10 ppt salinity.
- E. coli die-off in saline waters
- Enterococcus protective in both fresh and saline waters



OAR 340-041-0230

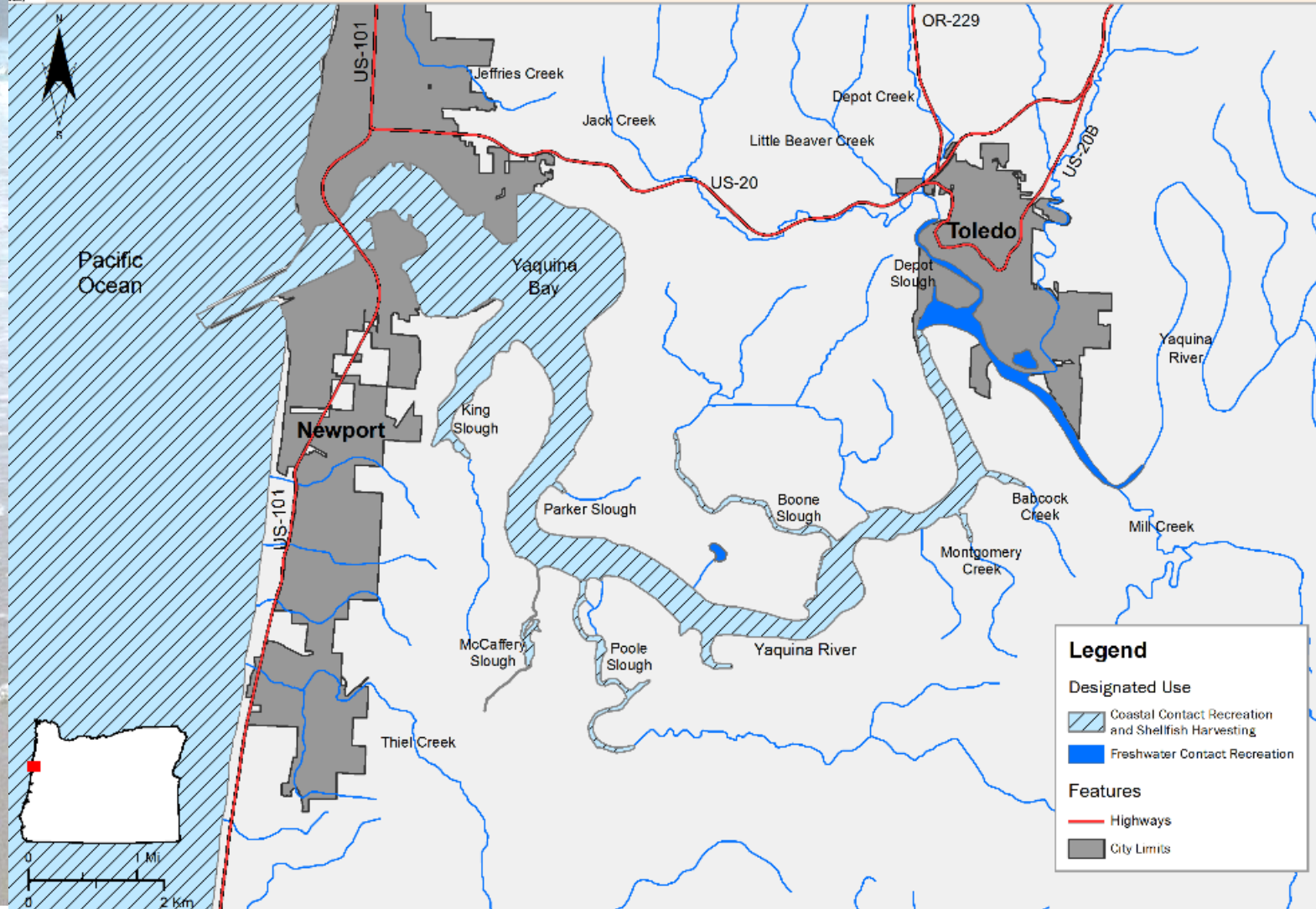
Figure 230E: Water Contact Recreation and Shellfish Harvesting Designated Uses
Tillamook Bay, North Coast Basin, Oregon (Draft February, 2016)



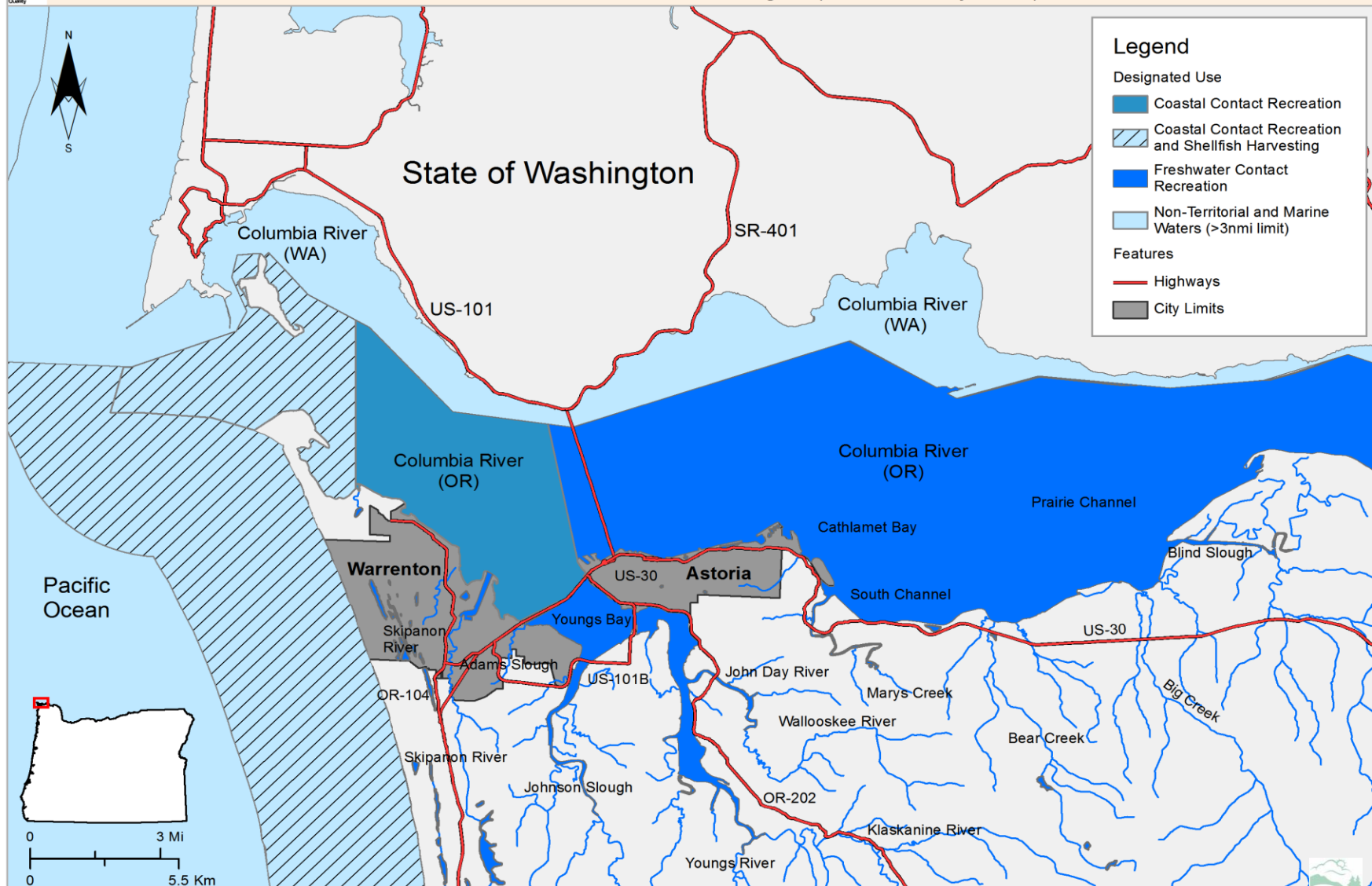


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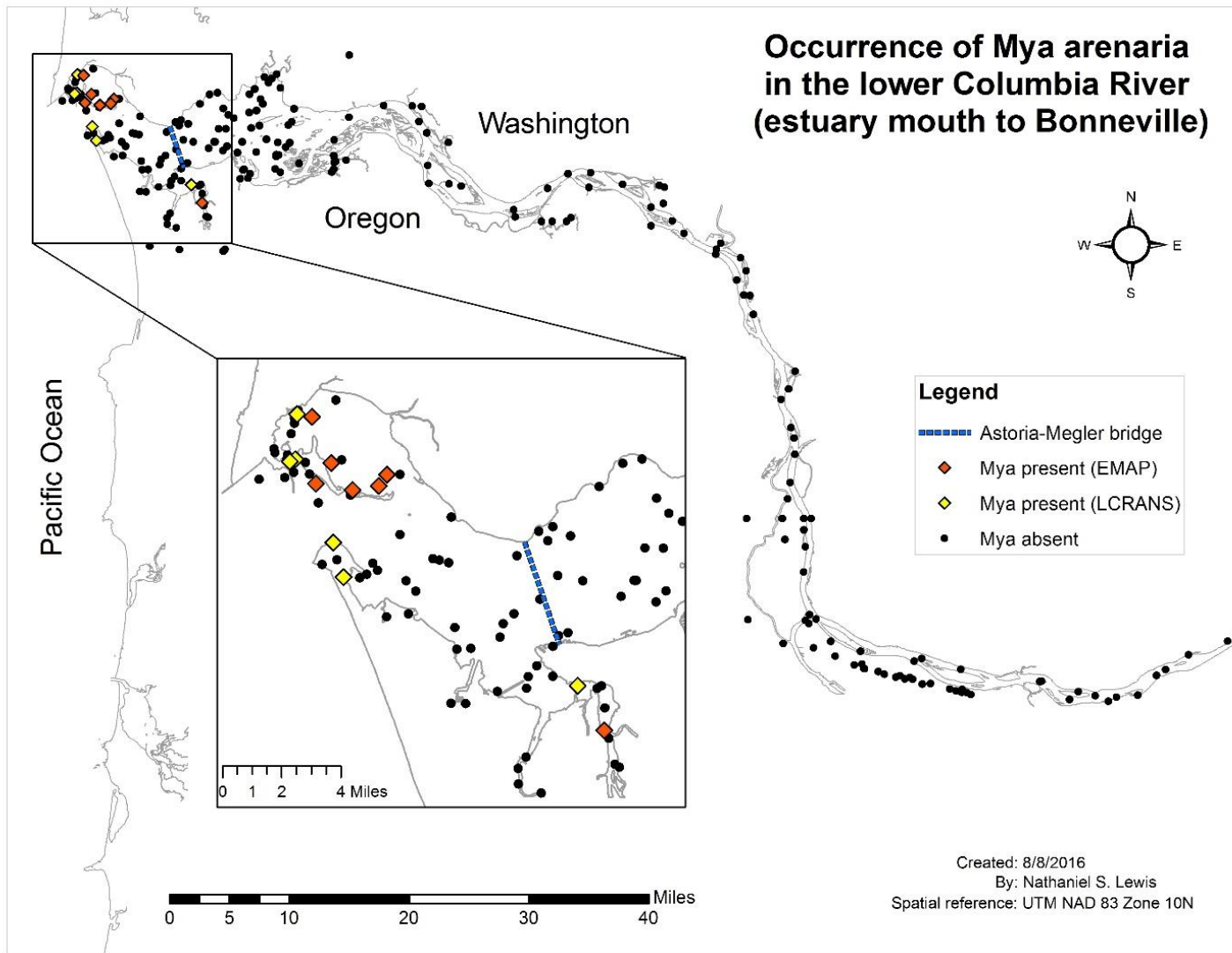
Figure 220E: Water Contact Recreation and Shellfish Harvesting Designated Uses
Yaquina Bay, Mid Coast Basin, Oregon (Draft February, 2016)



**Figure 101A: Water Contact Recreation and Shellfish Harvesting Designated Uses
Columbia River, Columbia River Basin, Oregon (Draft February, 2016)**



Occurrence of *Mya arenaria* in the lower Columbia River (estuary mouth to Bonneville)



New or amended implementation provisions

- Minimum sample size (5) for *E. coli* and enterococcus.
- Discharge associated with fecal sources must meet criteria on monthly basis.
- Flexibility for effluent from non-fecal source.

Impact of rule revisions

- Little to no impact on permitted facilities.
- Fewer applicable criteria for two facilities.
- Additional impairment listings?

Public outreach

- No advisory committee.
- Joint public meetings with OHA in October 2015.
- Individual meetings as requested by stakeholders.

Public hearings

- April 20 in Portland and Newport.
- Two attendees in person, eight via phone for DEQ presentation.
- No oral comments.

Written comments

- EPA
- Oregon Farm Bureau, Oregon Cattlemens Association, Oregon Dairy Farmers Association
- Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians

Major written comments

- Don't include minimum sample size in criteria.
- Provide additional data to support use mapping.
- Clarify enforcement in agricultural lands and role of ODA.



DEQ Recommendation to EQC

Adopt the rule amendments as shown in Attachment A of the staff report to:

- revise Oregon's water quality standards for bacteria and related implementation provisions, and
- specify where coastal contact recreation and shellfish harvesting are designated uses.

Questions?

