

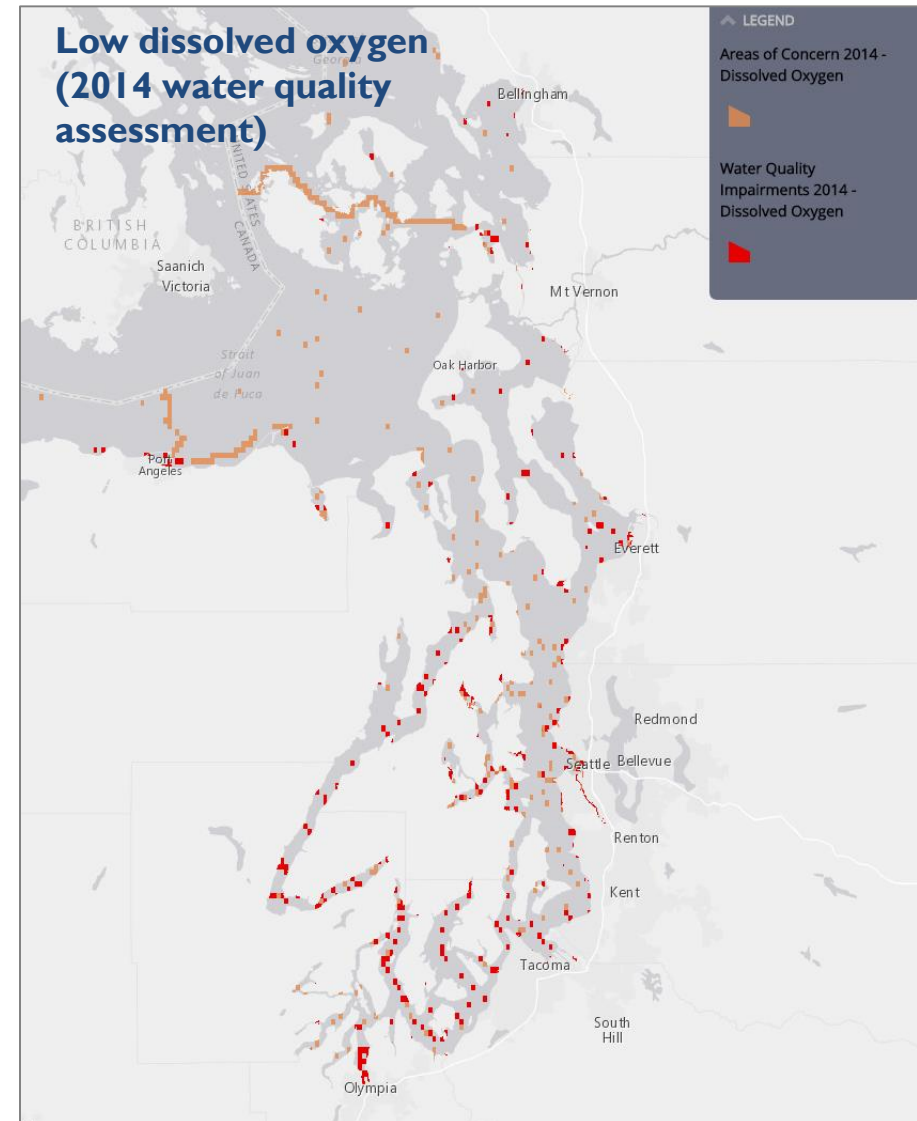
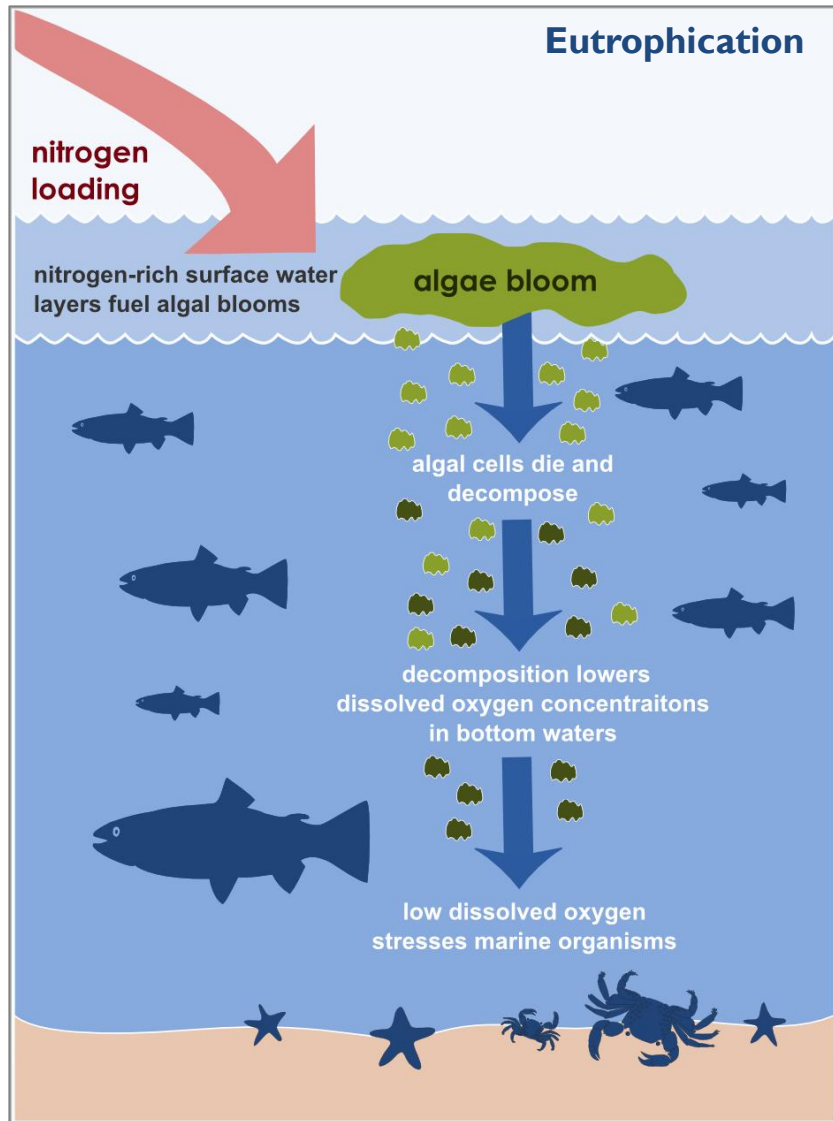
# Puget Sound Nutrient Source Reduction Project

*Develop and implement a Puget Sound nutrient source reduction plan to guide regional investments in point and nonpoint source nutrient controls so that Puget Sound will meet DO water quality criteria and protect aquatic life.*

# Why are we focusing on nutrients now

- Seeing environmental impacts associated with too much nitrogen.
- EPA identified nutrient reduction as a national priority
- Ten-year investment in science to answer questions about the impacts of human nutrient sources and if we need to do anything about it – Salish Sea Model
- Public comments received on WWTP permit renewals without nutrient reduction requirements
- Petition sent to EPA to revoke Ecology's NPDES Program Delegation

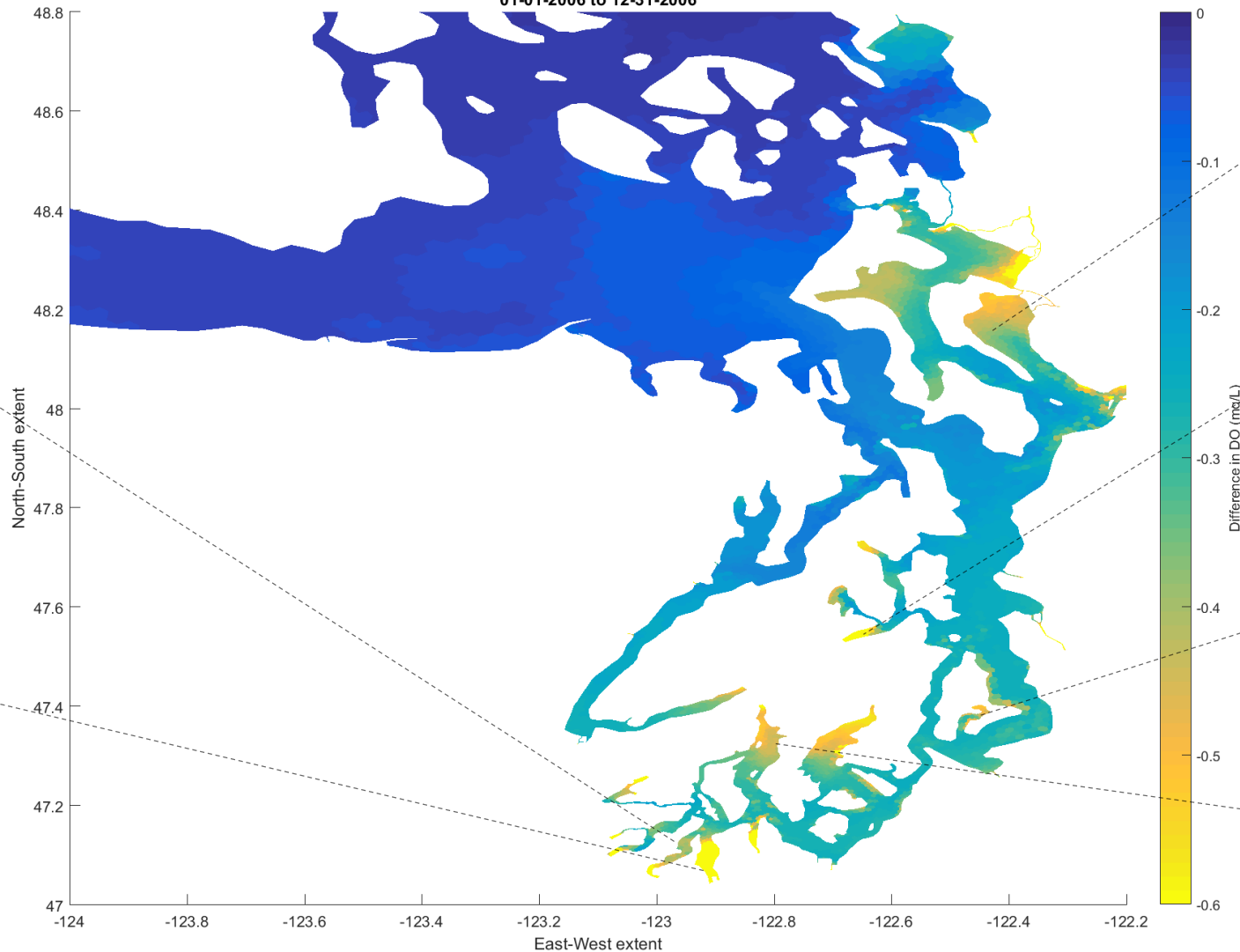
# Excess nutrients are a problem



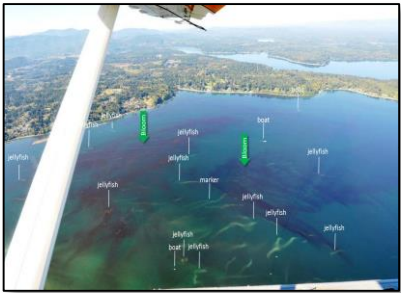
# Model and monitoring results agree

## Human sources of nutrients are having an impact on Puget Sound

Maximum depletion of DO by regional anthropogenic sources  
01-01-2006 to 12-31-2006



### Eutrophication Indicators



# What we know about nitrogen in Puget Sound

- Wastewater effluent is the largest local source of nitrogen to the Sound.
- Upstream watershed activities that generate nitrogen are the second largest local source of nitrogen and get delivered to the Sound via rivers and streams.
- Nitrogen (and other nutrient) levels in marine waters are changing.
- We are observing more frequent algae blooms.
- Levels of oxygen are low in many places, and human nitrogen inputs further deplete oxygen levels in bottom waters and contribute to acidification.
- Population growth and climate change will further stress the ecosystem.

# Two Processes to Address Nutrients in Puget Sound

## TMDL Alternative Project

Puget Sound Nutrient Reduction Plan

Stakeholder  
Nutrient Forum

## Puget Sound Action Agenda

Marine Water Quality Implementation Strategy

Marine WQ Interdisciplinary Team

Marine WQ Core Team

Water Quality  
Program  
Lead

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graph LR; subgraph TMDL [TMDL Alternative Project]; direction TB; TMDL_Text[Puget Sound Nutrient Reduction Plan]; TMDL_Forum[Stakeholder Nutrient Forum]; end; subgraph ActionAgenda [Puget Sound Action Agenda]; direction TB; ActionAgenda_Text[Marine Water Quality Implementation Strategy]; ActionAgenda_Team[Marine WQ Interdisciplinary Team]; ActionAgenda_Core[Marine WQ Core Team]; end; TMDL_Text --- TMDL_Forum; ActionAgenda_Text --- ActionAgenda_Team --- ActionAgenda_Core; TMDL_Forum --- ActionAgenda_Core; TMDL_Text --- ActionAgenda_Core; ActionAgenda_Text --- TMDL_Forum; ActionAgenda_Team --- TMDL_Forum; ActionAgenda_Core --- TMDL_Forum; WQL[Water Quality Program Lead] --- TMDL_Forum; WQL --- ActionAgenda_Core;
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# High-level Schedule

