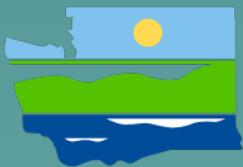


# Sinclair & Dyes Inlets Fecal Coliform TMDL

ENVVEST Community Advisory Committee

*October 16, 2008*

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Water Quality Program  
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DEPARTMENT OF  
**ECOLOGY**  
State of Washington

# Objectives for today

- ◆ Explain TMDL goals & status
  - ◆ Review role of municipal stormwater permit, other NPDES permits to reduce fecal coliform bacteria
  - ◆ Citizen role in public outreach
- 

# Sinclair Inlet Clean-Up

Part of Coastweeks International Clean-up Event.

sites include:

on Waterfront  
Shoreline, SR166  
organized by  
High School  
or Society  
(874-5600)  
Yard Hwy.  
and SR 304



11:00 AM - 2:00 PM



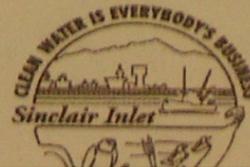
September 20, 2008

Two Meeting

◆ Annapolis Doc  
near Port Orchard, WA,  
Scuba diving & Shoreline

◆ Downtown Bre  
Harborside Boardwalk Par  
(Short walk from WA State F

provided by Blue Sky Printing of Poulsbo.  
posal provided by Brem-Air Disposal, Inc.  
(A). Materials and refreshments provided  
free parking for volunteers in Bremerton  
provided by Diamond D.



This event is coordinated by the Kitsap Diving A  
& Kitsap Trees & Shoreline Association (KITSA).  
provided by PADI Project A.W.A.R.E., Kitsap Co  
and Storm Water Management Program, Wash

# Clean Water Act & TMDLs



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# The Two TMDL Tasks

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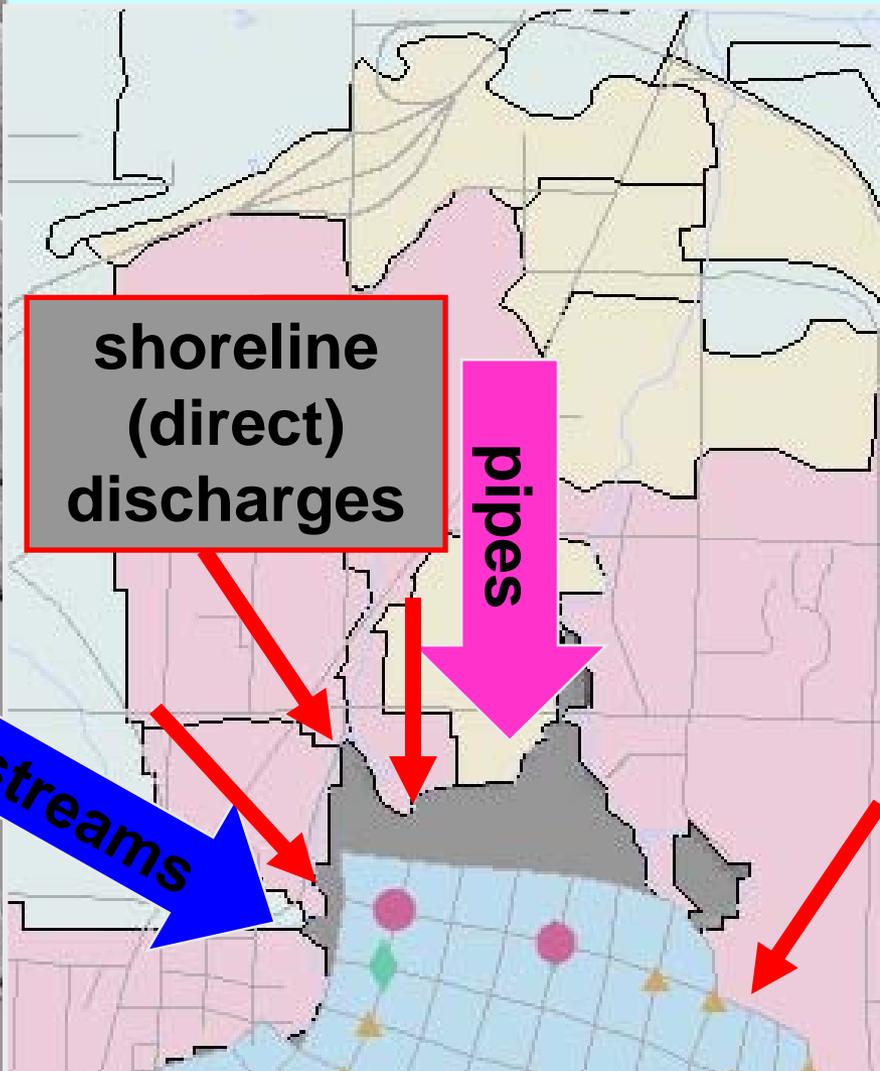
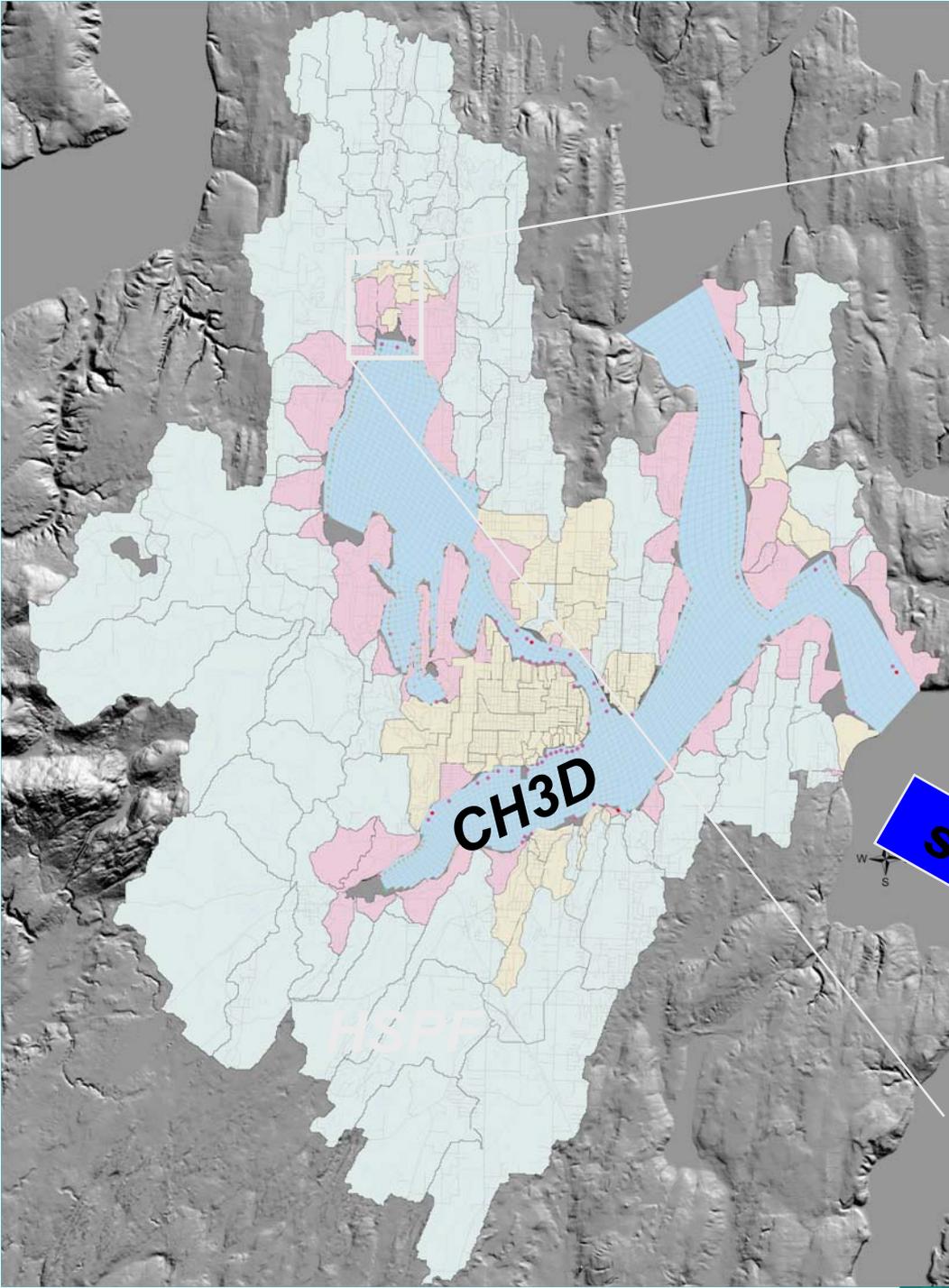
**Quantify -- How much bacteria can these two marine inlets accept and still meet state standards?**

**Implement – What approaches will be successful in achieving bacteria reductions?**

# Suquamish Tribe harvest of Manila clams from Dyes Inlet, April 2005

*(Photo P. Williams, Suquamish Tribe)*



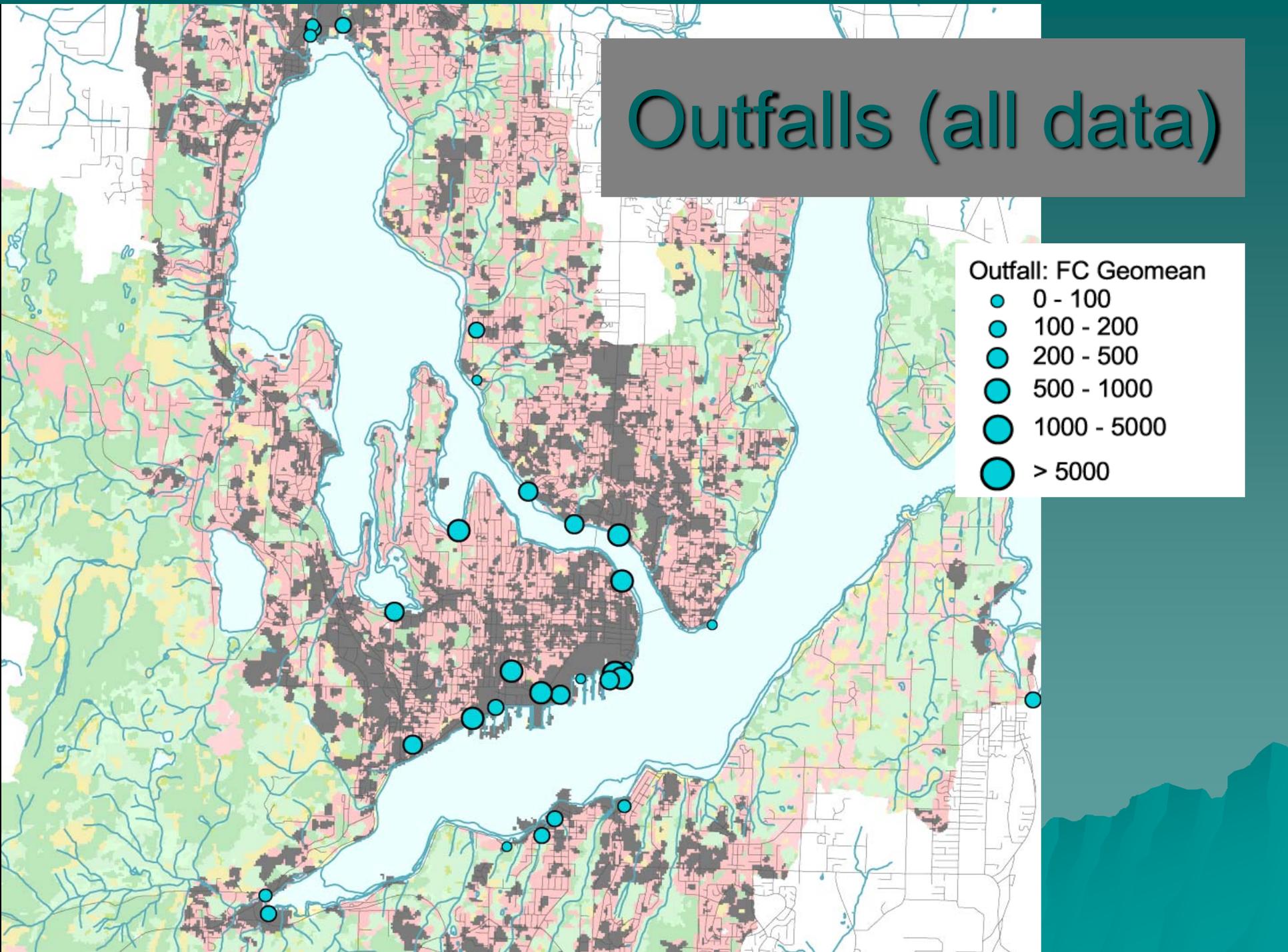


Source: B. Johnston, ENVVEST

# Outfalls (all data)

Outfall: FC Geomean

- 0 - 100
- 100 - 200
- 200 - 500
- 500 - 1000
- 1000 - 5000
- > 5000



# Streams (Dry Season)

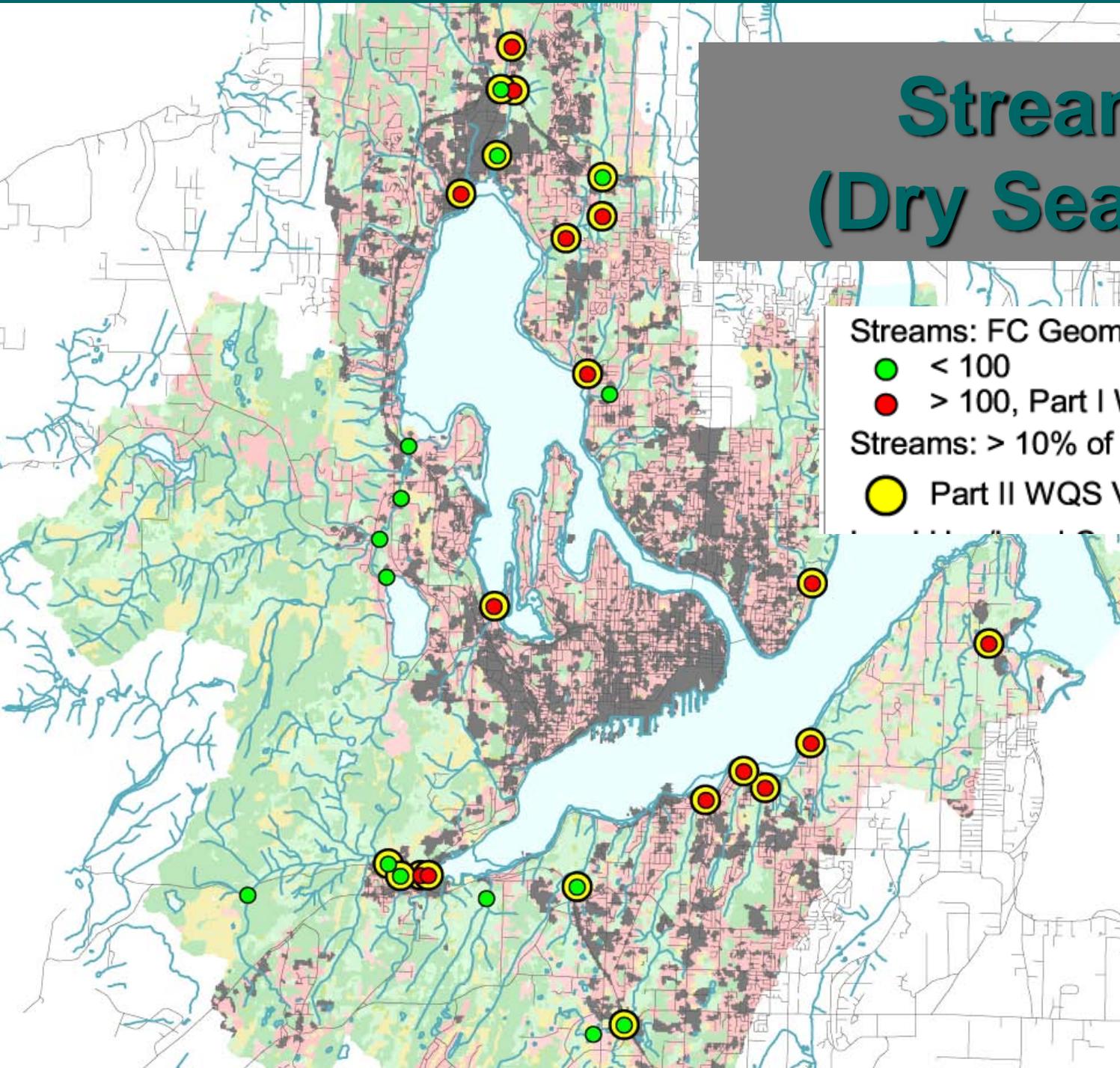
Streams: FC Geomean

● < 100

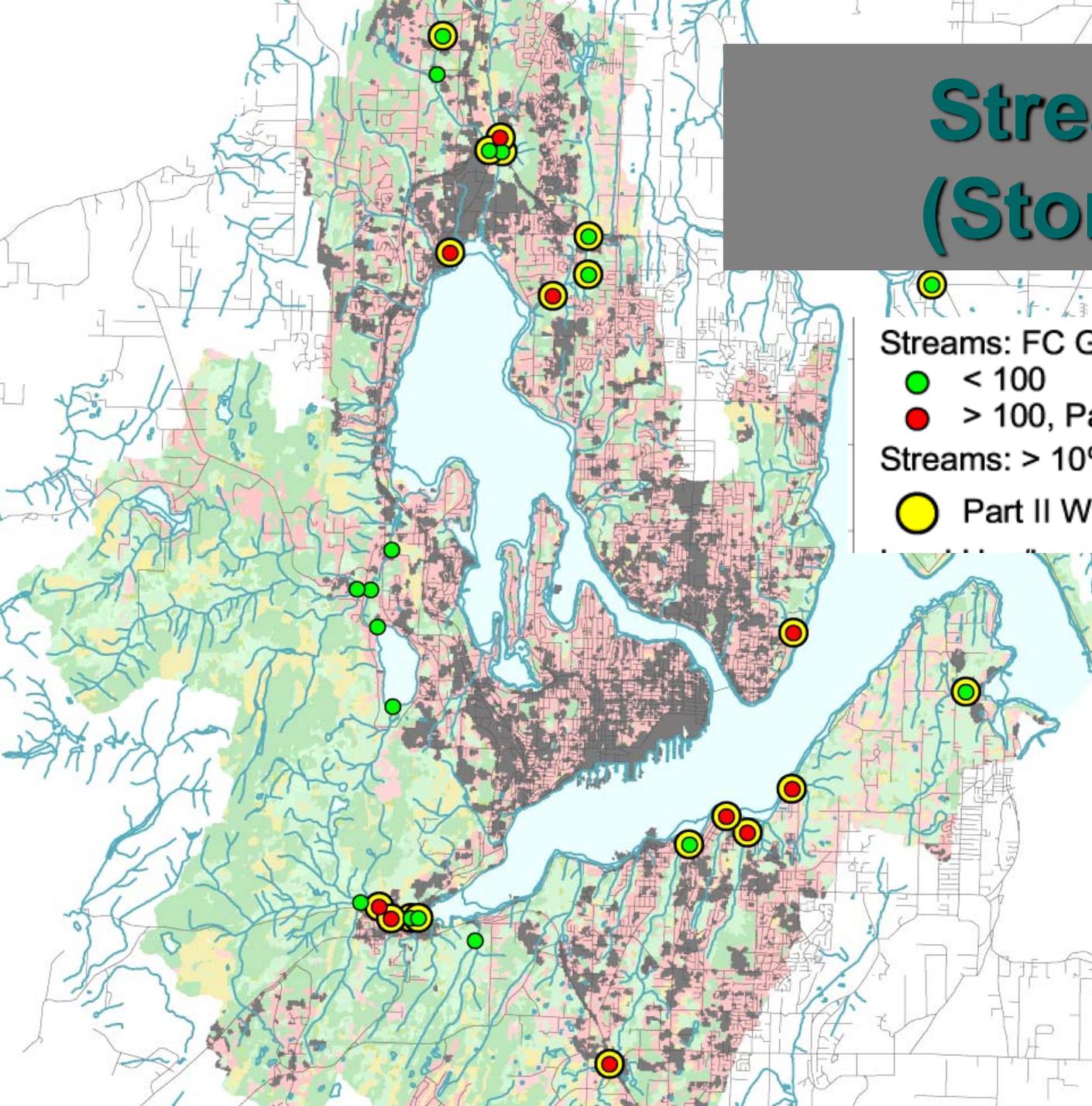
● > 100, Part I WQS Violation

Streams: > 10% of samples over 200

● Part II WQS Violation



# Streams (Storms)



Streams: FC Geomean

● < 100

● > 100, Part I WQS Violation

Streams: > 10% of samples over 200

● Part II WQS Violation

# Streams (Wet Season)

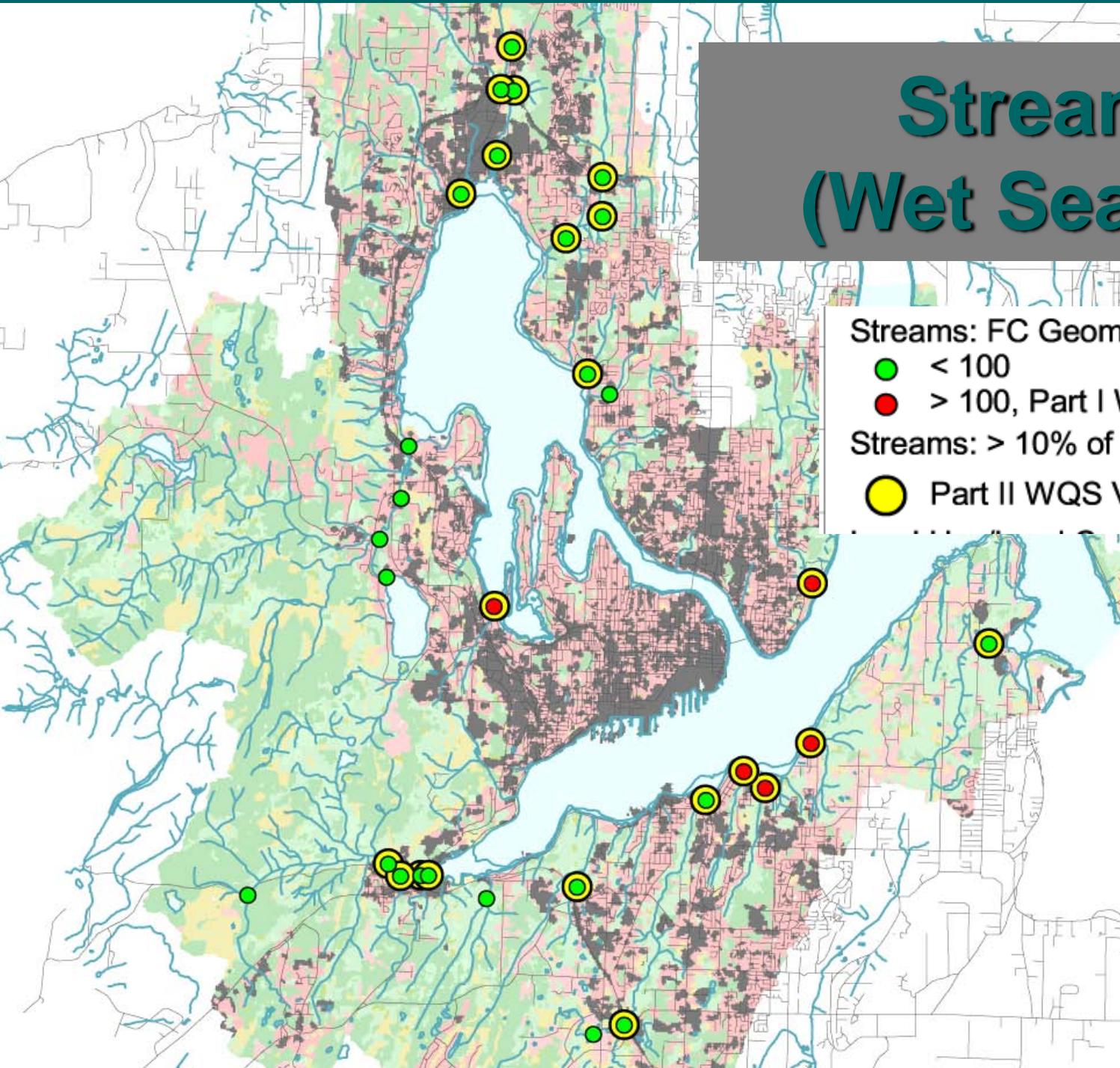
Streams: FC Geomean

● < 100

● > 100, Part I WQS Violation

Streams: > 10% of samples over 200

● Part II WQS Violation



# Marine Model Results

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- **Dyes Inlet results similar to state DOH Shellfish Classifications**
- **Less accurate in some low-flushing bays – help source ID**
- **Reductions needed – Blackjack, Clear, Gorst, others**

# Streams that exceed freshwater FC standards

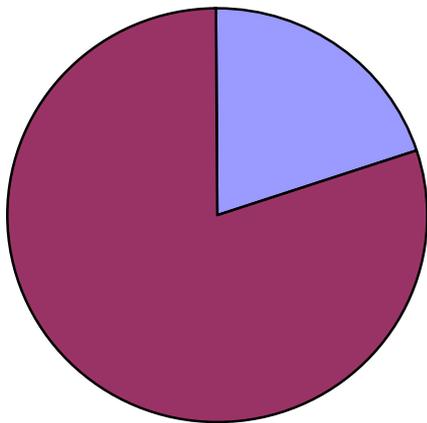
- ◆ Beaver
  - ◆ Sacco
  - ◆ Olney
  - ◆ Annapolis Creek
  - ◆ Blackjack @ Hwy 16
  - ◆ Ross
  - ◆ Upper Gorst & Gorst
  - ◆ Ostrich Bay
  - ◆ Strawberry
  - ◆ Clear (several)
  - ◆ Barker (several)
  - ◆ Pahrman
  - ◆ Dee
- 

# Wasteload allocation (2 or more permittees)

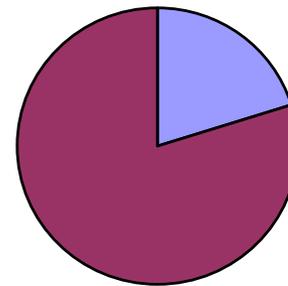
Percent reduction in FC applies to both (or all) permittees

example: Mucky Creek FC concentrations need to be reduced by 50% (current GM = 121, 90<sup>th</sup> %ile = 400)

$$500 = 100 + 400$$



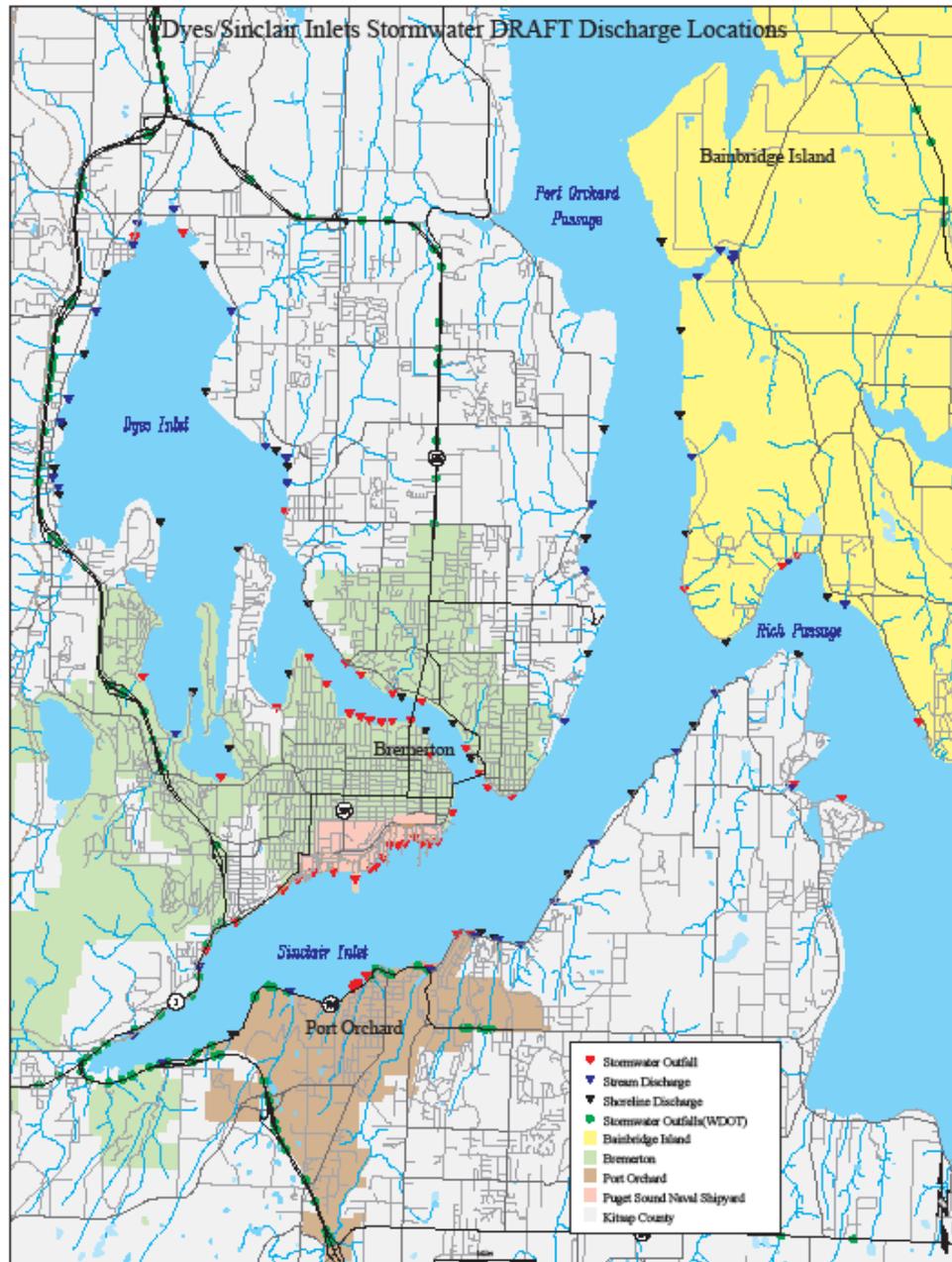
$$250 = 50 + 200$$



# NPDES Permittees – Sinclair Dyes TMDL

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- WWTPs
- U.S. Navy (EPA manages permit)
- Municipal stormwater permittees
  - Kitsap County
  - City of Bremerton
  - City of Bainbridge Island
  - City of Port Orchard
- WSDOT (Highways 3 and 16)
- NPDES boatyard permittees



# Possible BMPs, programs needed to reduce FC

- ◆ Recommendations in Chris May et al, 2005
- ◆ Opportunities for infiltration, LID
- ◆ Review, coordinate with infrastructure improvements (including roads)



# Possible BMPs, programs needed to reduce FC

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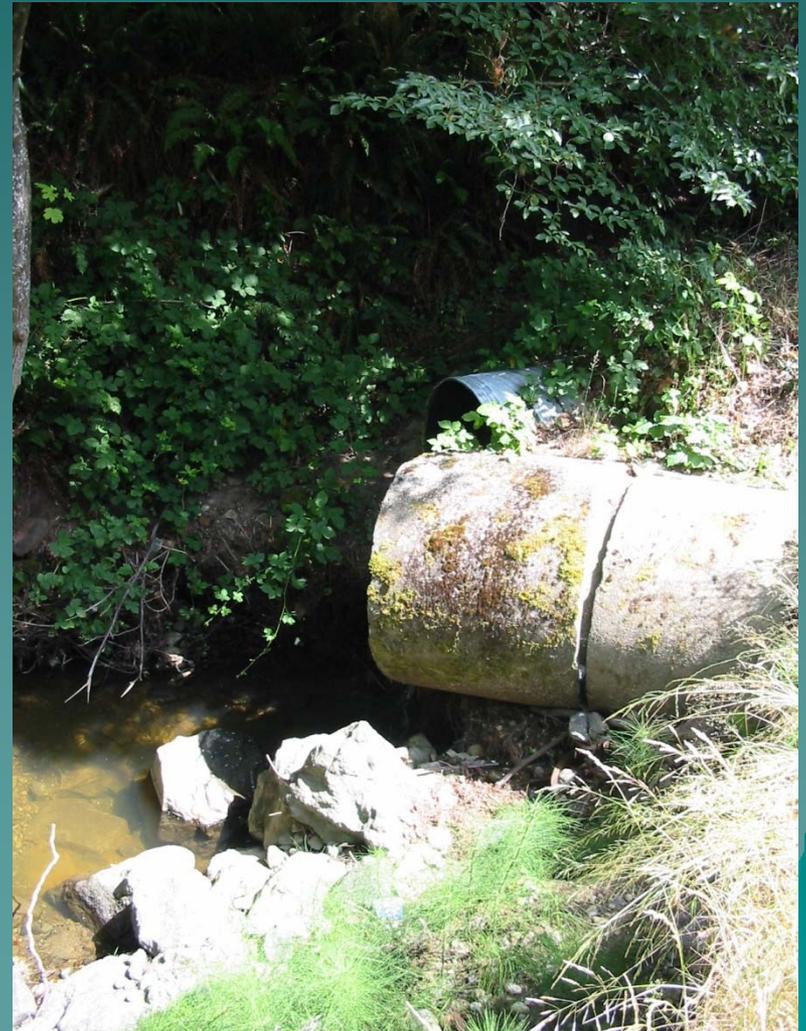
## Stormwater Implementation Grant to Kitsap County SSWM for Ridgetop Boulevard project

- Expanded sediment detention pond with constructed wetland
- Goal – reduce FC and sediment to Clear Creek
- Pervious pavement trail with educational signage
- Trail connects Navy employer, Silverdale commercial area, and large residential neighborhood

# Incentive for quick implementation

Phase 2 stormwater permit to be reissued 2012

- Sinclair Dyes TMDL to EPA fall 2009
- Implement BMPs 2009-2011
- Monitor critical locations 2011
- Avoid new permit requirements



# Current tasks & next steps

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## Phase 2 municipalities – info to Ecology

- ✓ Confirm MS4 boundaries
- ✓ Review MS4 overlap with stream drainages
- ✓ Comments on WLA proposal
- ✓ Offer to meet in October (6<sup>th</sup> or 16<sup>th</sup>)
- ✓ Draft TMDL report January 2009

[http://www.ecy.wa.gov/programs/wq/tmdl/sinclair-dyes\\_inlets/index.html](http://www.ecy.wa.gov/programs/wq/tmdl/sinclair-dyes_inlets/index.html)