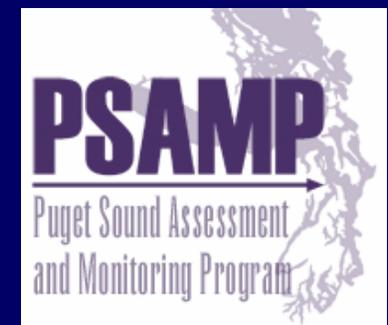
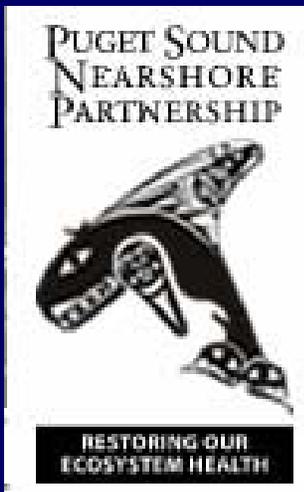


# Scientific considerations for Action Area Delineation

Jan Newton, Ph.D.  
University of Washington

Representing  
PSNERP and PSAMP



# Delineation Considerations

- Watersheds
- Oceanographic basins
- Nearshore structure and processes
- Biota
  
- Humans



Miles  
0 3.5 7 14 21 28

Washington State Plane South  
NAD 1983 HARN

### PSNERP Recommended delineations

This map is an adaptation of nine oceanographic basins originally identified by the Puget Sound Ambient Monitoring Program. The adaptations include the combination of the East and West Straits of Juan de Fuca subbasins into a single Strait of Juan de Fuca subbasin; the combination of the Georgia Strait and San Juan Archipelago subbasins into a single San Juan Islands subbasin; the extension of the southeast boundary of the San Juan basin following the sill that extends from near the southwest portion of Lopez Island to near Point Partridge on Whidbey Island to better represent the influence of the Fraser River; the extension of the southern boundary of Admiralty Inlet (North Central Puget Sound) to a line from Point No Point on the Kitsap Peninsula to near Possession Point on the southern end of Whidbey Island to better address the Triple Junction, and; the extension of the Hood Canal subbasin to include all waters south of Tala point and Foulweather Bluff per RCW90.88.005(4) that identifies this as the Hood Canal Rehabilitation Zone and serves as the framework for programs directed at the recovery of Hood Canal. Upland regions of each area were delineated based on freshwater drainages with slight adjustments to boundaries between marine basins to match littoral drift processes.

Strait of Juan de Fuca

Clallam County

San Juan

Whatcom County

Skagit County

Island County

Whidbey Basin

Snohomish County

North  
Central  
Puget  
Sound

Jefferson County

Hood Canal

Kitsap County

South  
Central  
Puget  
Sound

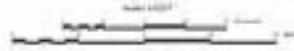
King County

Mason County

South Puget Sound

Pierce County

Thurston County



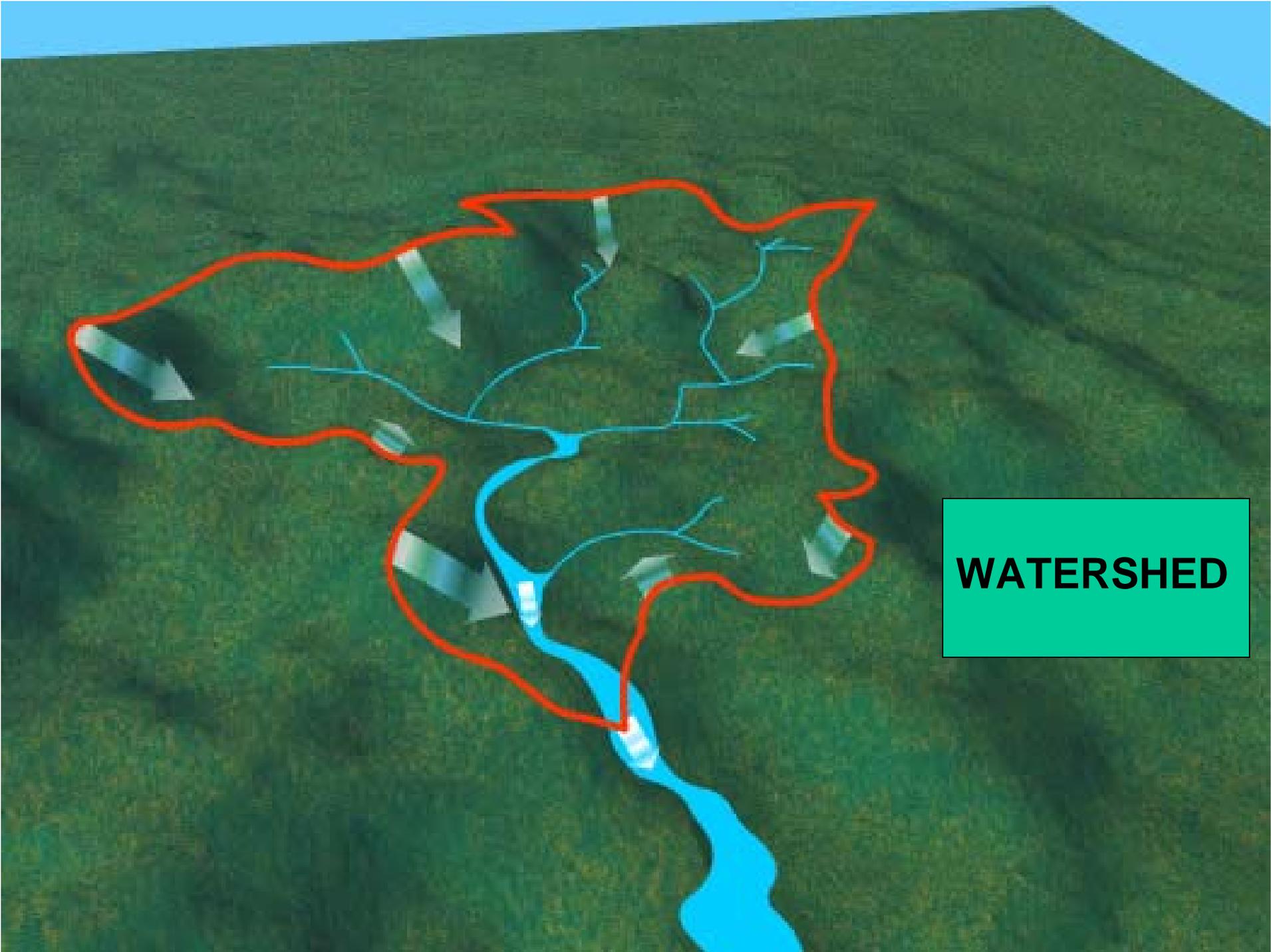
### Puget Sound

Washington State Department of Ecology  
Puget Sound Program

Map of Puget Sound  
Washington State Department of Ecology  
Puget Sound Program  
Map Date: 10/2000



Washington State Department of Ecology  
1600 North Ring Road  
Olympia, WA 98501  
360-337-3300



**WATERSHED**

# PUGET SOUND PARTNERSHIP



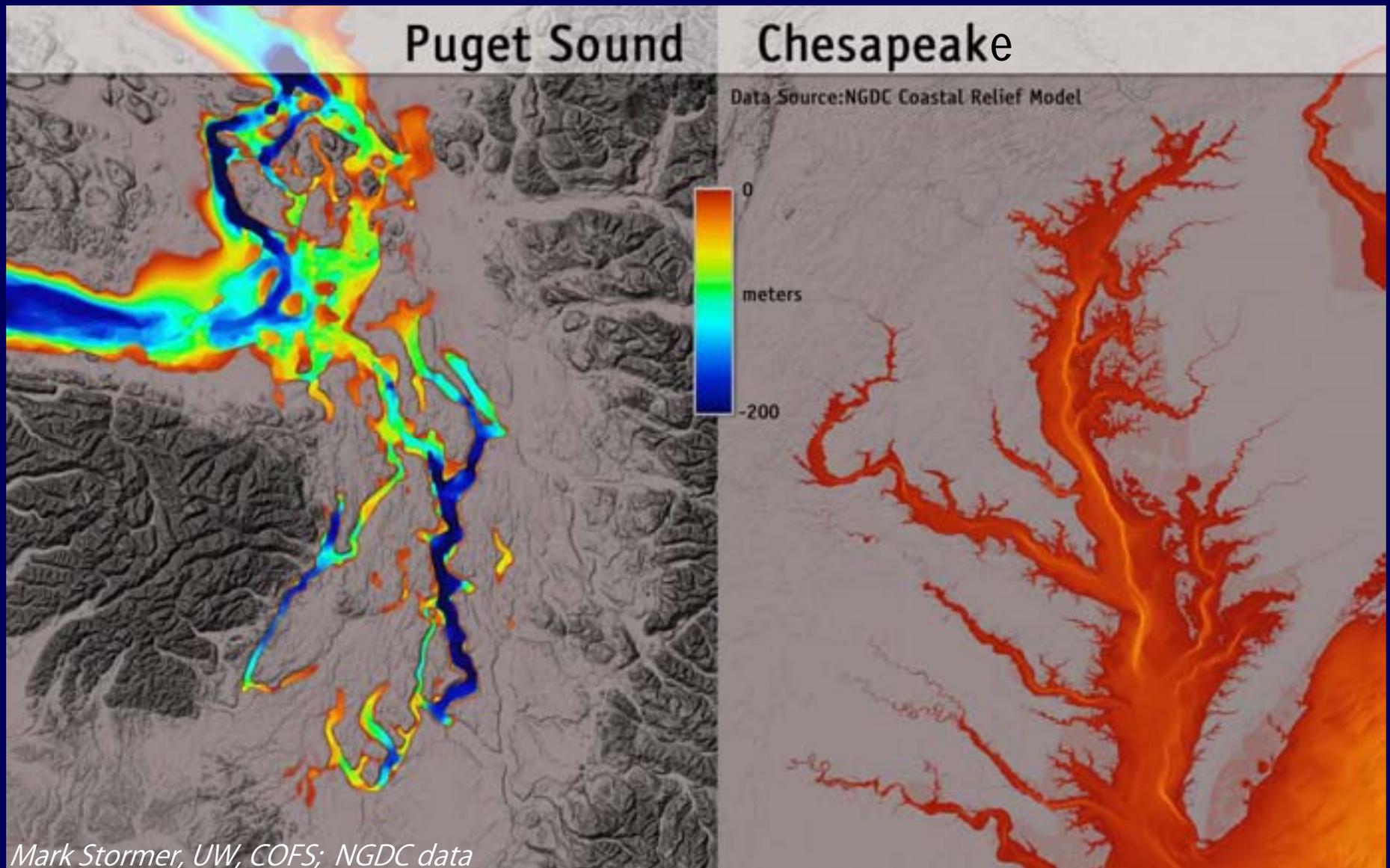
**Puget Sound**



**Chesapeake Bay**

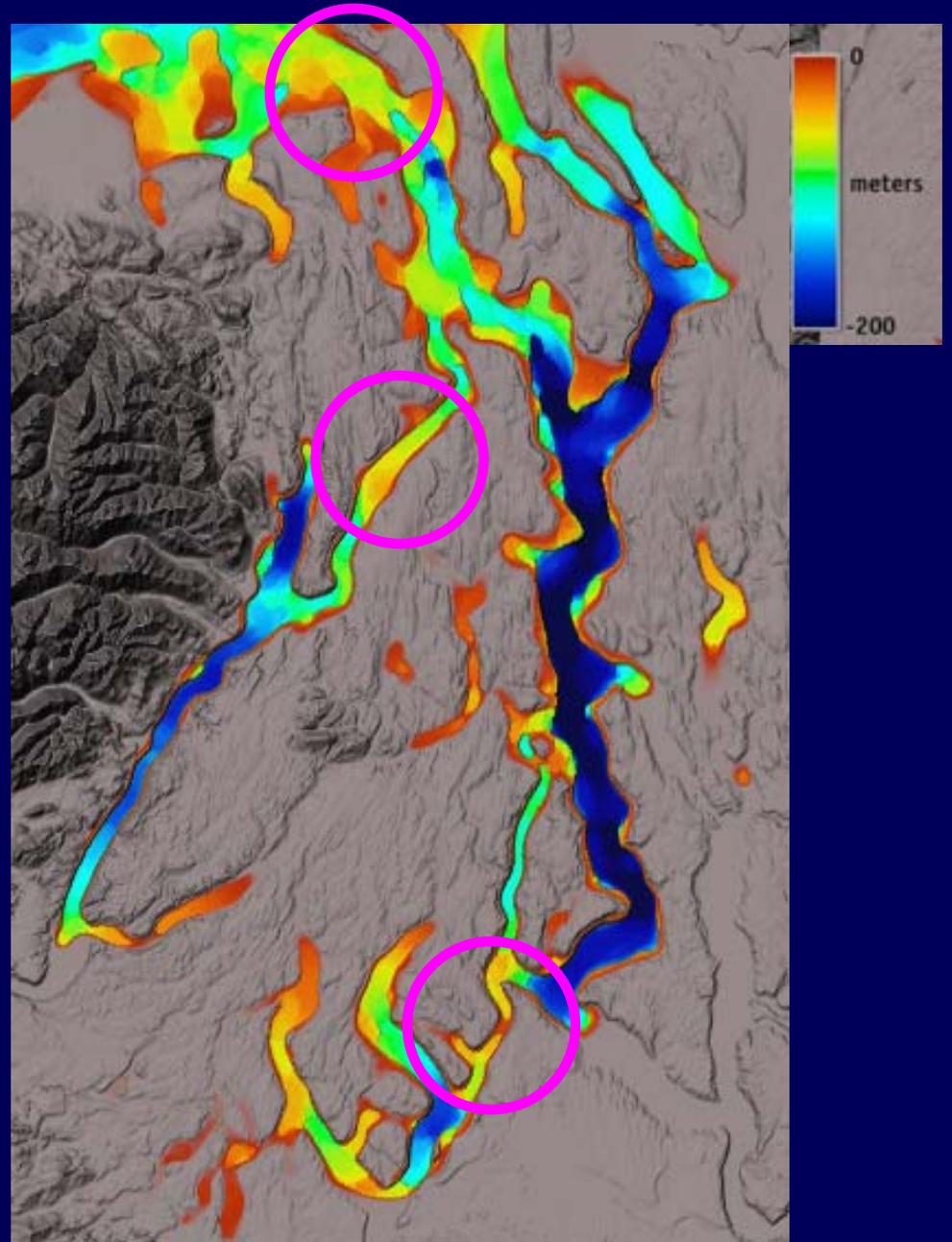
# PUGET SOUND PARTNERSHIP

*Same depth scale used*



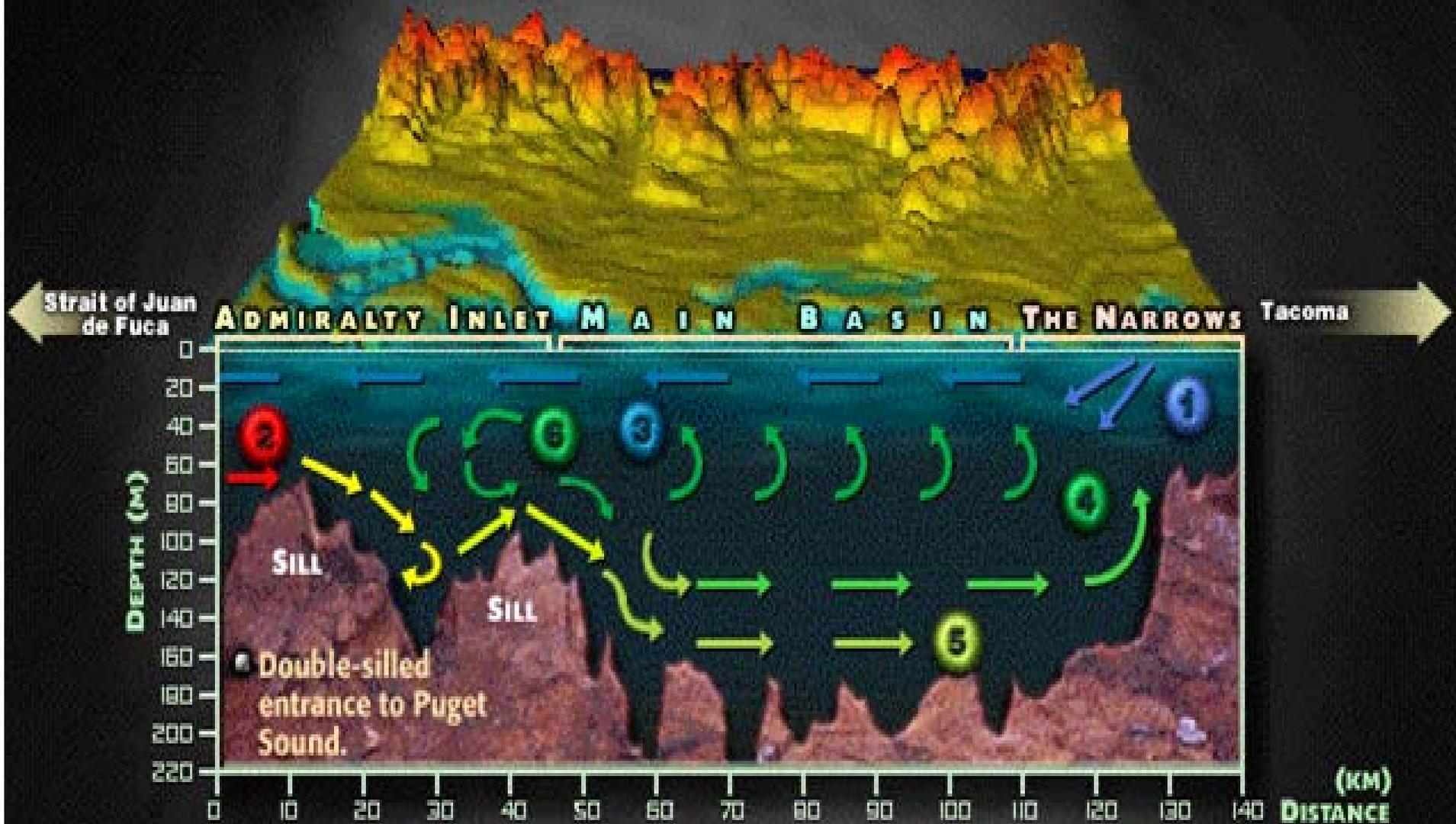
# PUGET SOUND PARTNERSHIP

Puget Sound  
is deep, with  
strong tides,  
but **sills** too

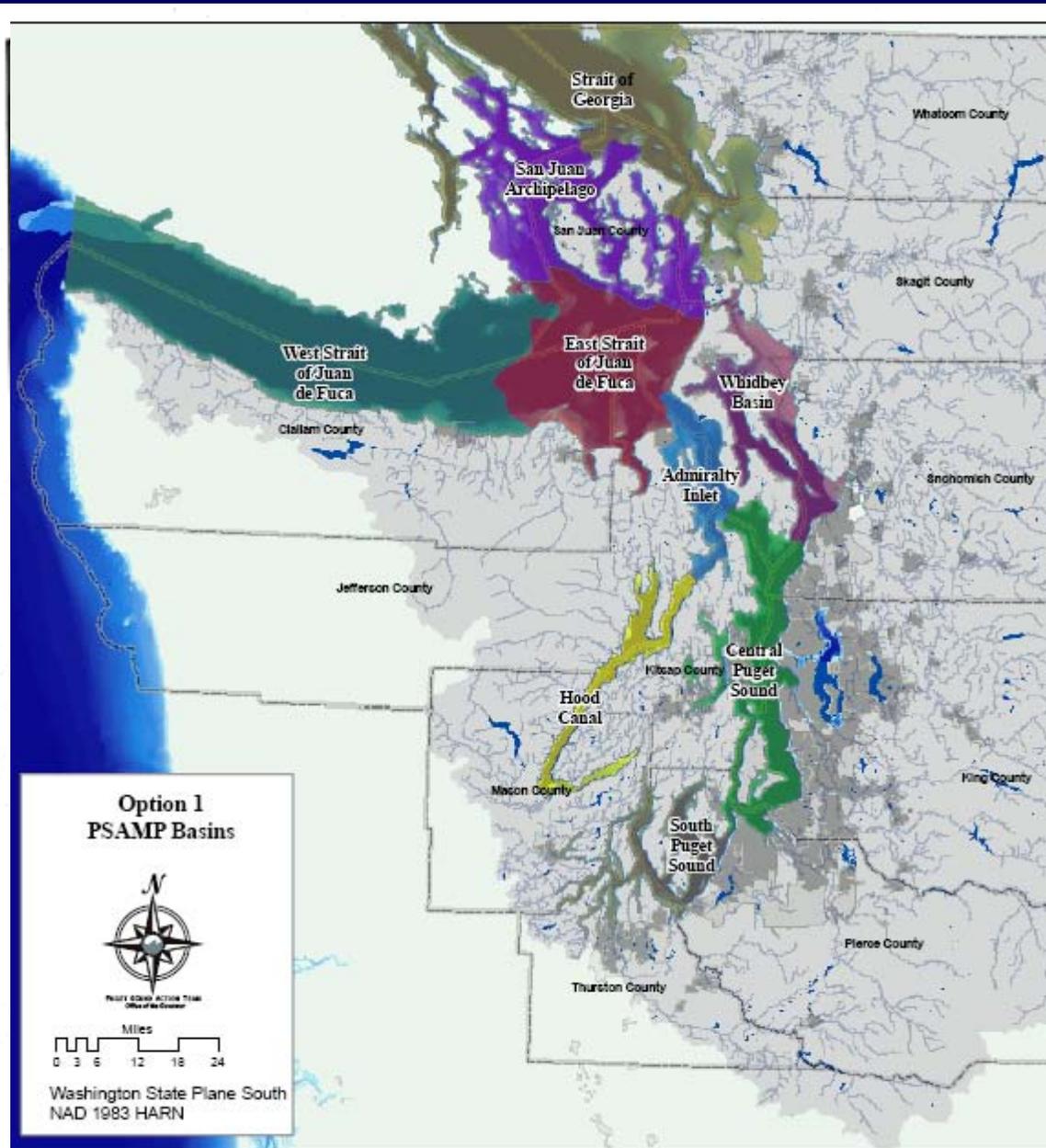


*Mark Stomer, UW, COFS; NGDC data*

# Puget Sound circulation is retentive



# BASINS AND SILLS



*PSAMP, 2002*

*Ebbesmeyer  
et al., 1984*

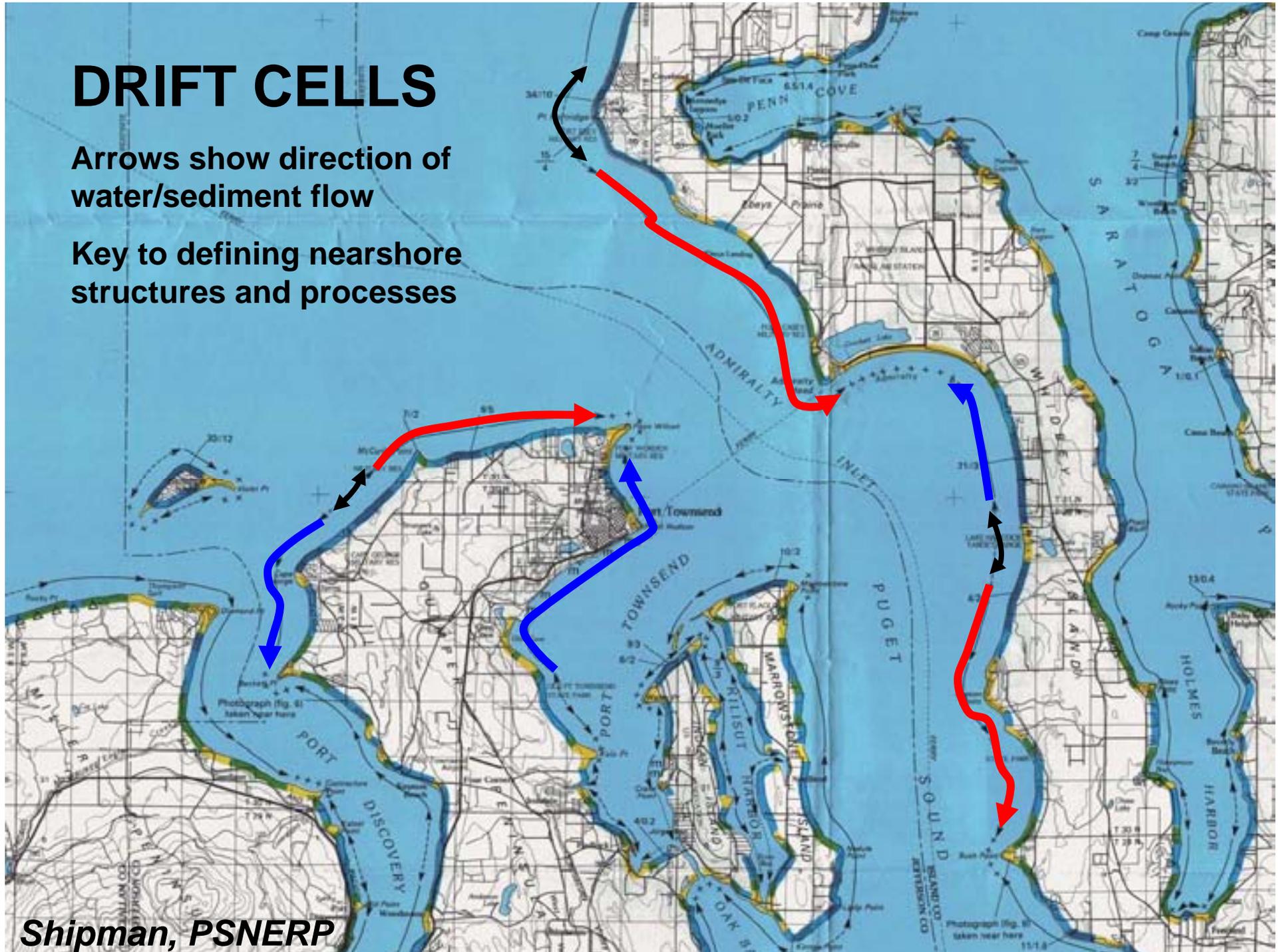
# Oceanographic Basin Criteria

- Bathymetry and geology
- Basin water residence time, turnover and mixing
- Freshwater inflow and watersheds

# DRIFT CELLS

Arrows show direction of water/sediment flow

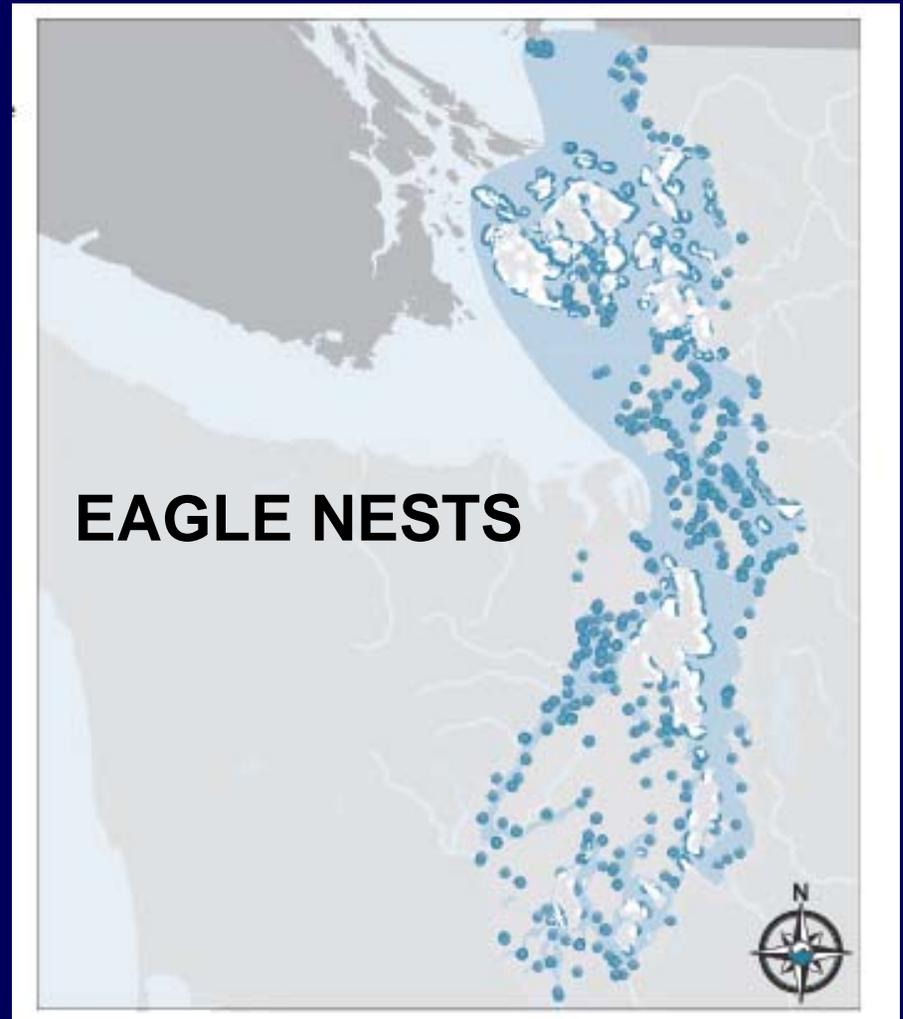
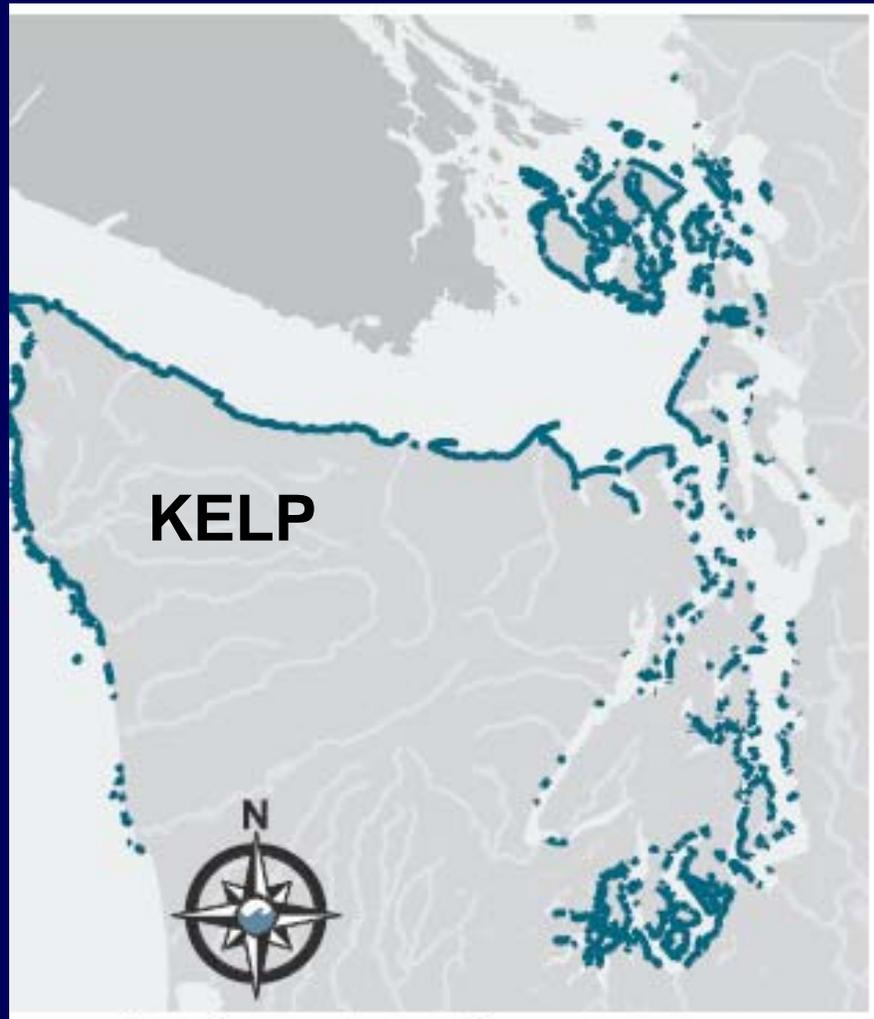
Key to defining nearshore structures and processes



## Nearshore Criteria

- Shoreline structure
- Wind-wave regime divisions
- Nearshore bathymetry/geology

# BIOTA DISTRIBUTIONS



## Biota Criteria

- Organism population distributions
- Biotic indicators, assemblages, and communities that are resident, long-lived, etc.

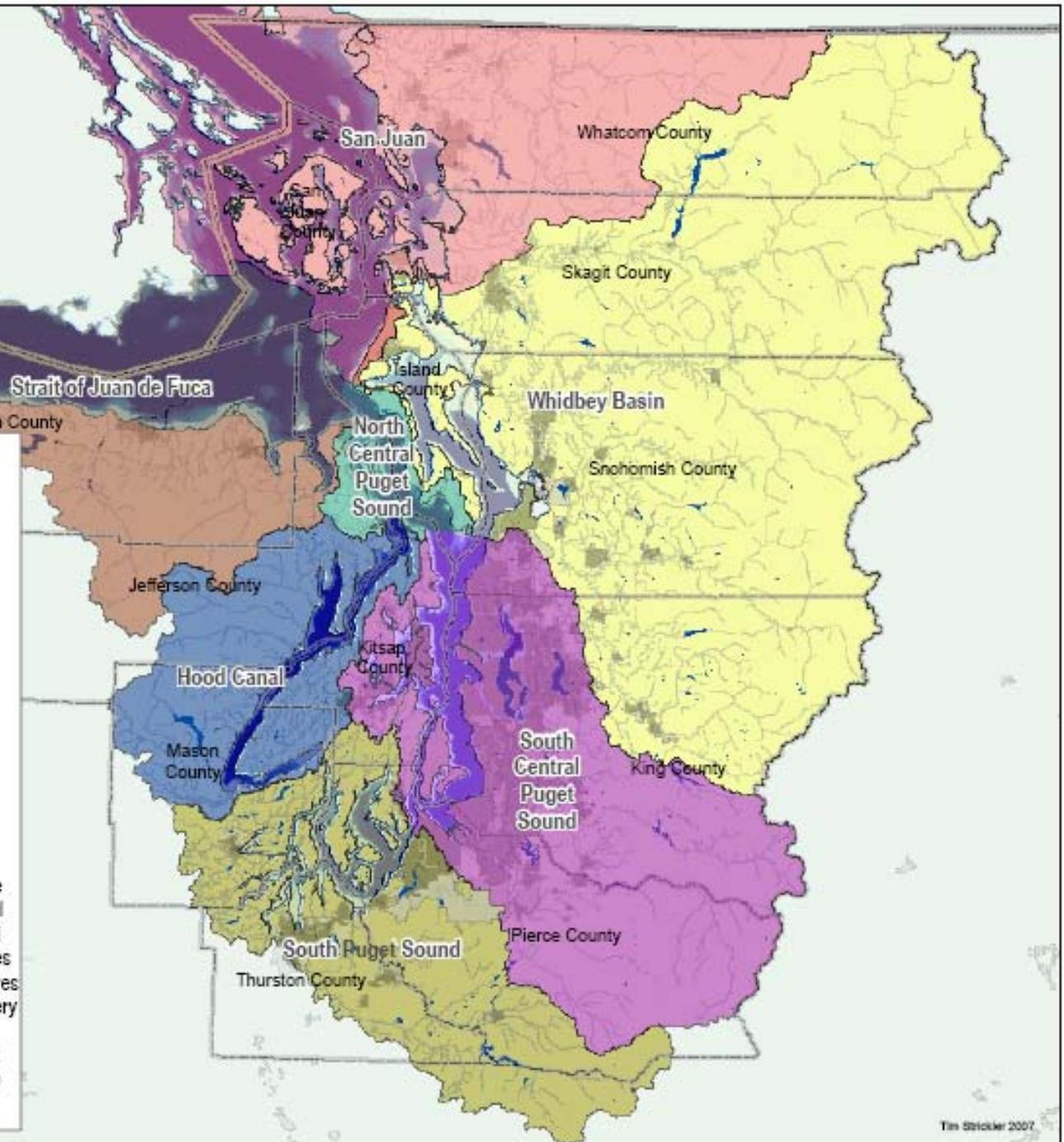


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# Recommendations

- Do not split marine basins in half
- Do not bisect drift cells
- Anticipate sub-divisions for evaluation
  - Strait of Juan de Fuca: East vs. West
  - Strait of Georgia vs. San Juan Island
  - Sinclair-Dyes Inlet vs. S. Central Puget Sound
- Change names to North Puget Sound and Central Puget Sound