

# Dredging Year 2020

(June 16, 2019 – June 15, 2020)

## Year in Review

September 30, 2020

- User Manual
- Disposal Site Monitoring
- DMMP Project Statistics
- Disposal Volumes
- DNR Updates
- Clarification Papers
- Puget Sound SRM



# Presenters



Heather Fourie  
U.S. Army Corps of Engineers



Shannon Soto  
Washington State Department of Natural Resources



Monthly in-person



Weekly conference call

The New Normal?

# Disposal Site Monitoring

## Port Gardner pilot monitoring study



**June 2020: Sediment Profile Imaging (SPI)**  
**July 2020: Sediment sample collection**

Stay tuned for later presentation on disposal site monitoring framework updates

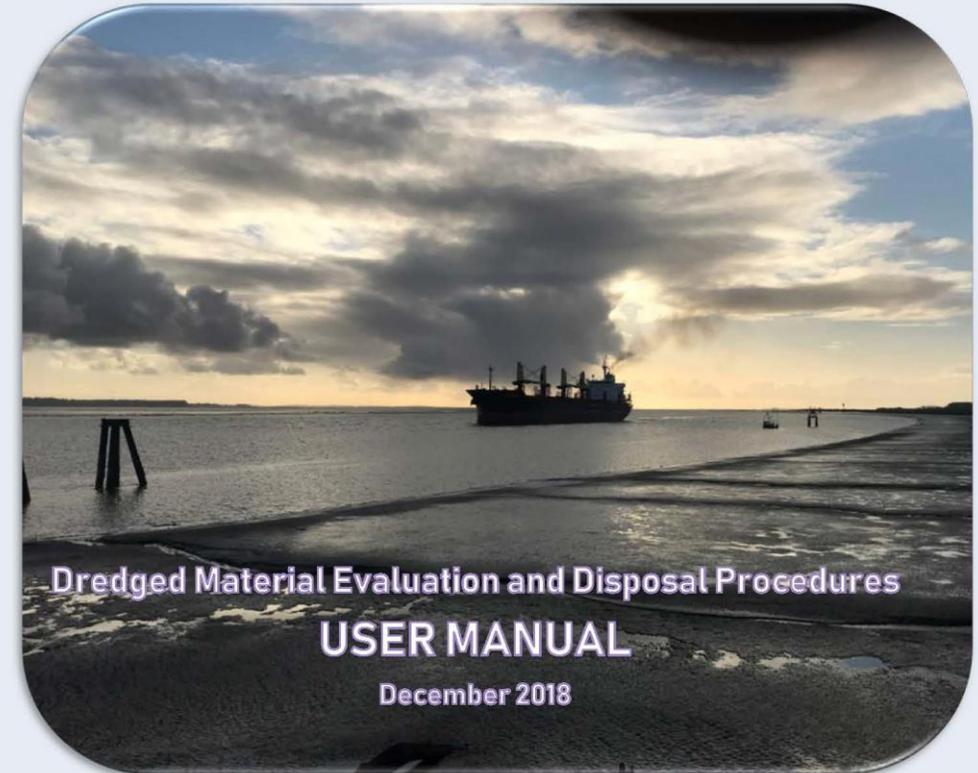
# DMMP User Manual

**Current Version: December 2018**

**Next Version: late 2020?**

Available on the DMMO website:

<https://www.nws.usace.army.mil/Missions/Civil-Works/Dredging/>



## **Dredged Material Management Program**

U.S. Army Corps of Engineers, Seattle District  
Environmental Protection Agency, Region 10  
Washington State Department of Natural Resources  
Washington State Department of Ecology

Prepared by:

Dredged Material Management Office, U.S. Army Corps of Engineers, Seattle District

# Common sampling issues/concerns

## Low core recovery

- Many possible reasons:
  - Refusal due to substrate (gravelly material, debris, etc.)
  - Material loss
  - Sample shortening (material compresses)
  - Stratigraphic bypass (core vibrates through the material)
- Do not assume that a compaction correction should be applied. Consult the DMMP.

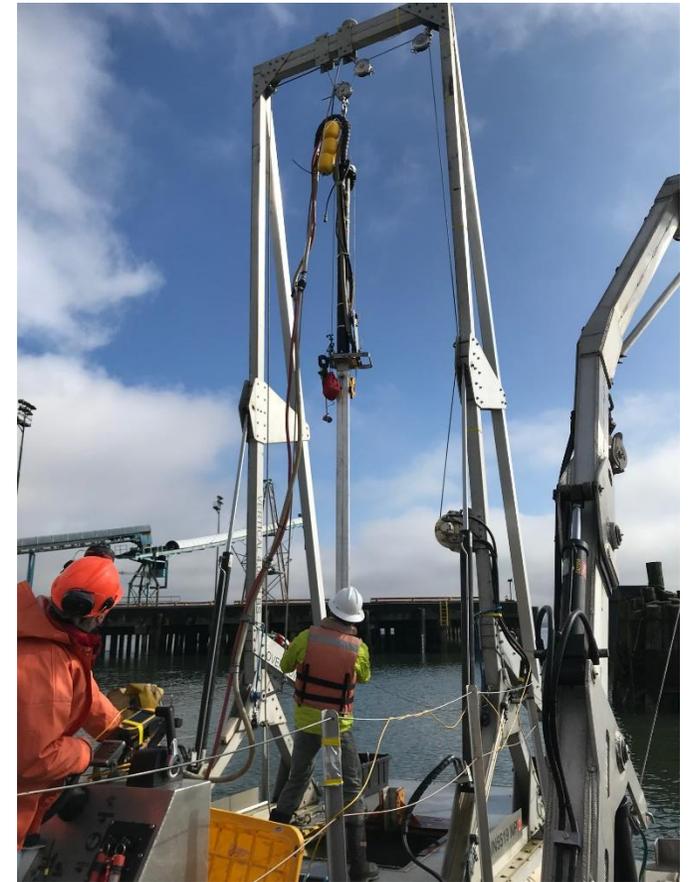
### References:

DMMP User Manual Section 7.4.4

McMillan, James (2014). *Sediment Characterization: Core Sampling Issues*. SMARM Presentation. (available in 2014 SMARM minutes at <https://www.nws.usace.army.mil/Missions/Civil-Works/Dredging/SMARMS/>).

# DMMP Project Testing

(June 16, 2019 – June 15, 2020)



USACE Duwamish Over-Dredge  
USACE Tacoma Harbor Navigation Improvement Study

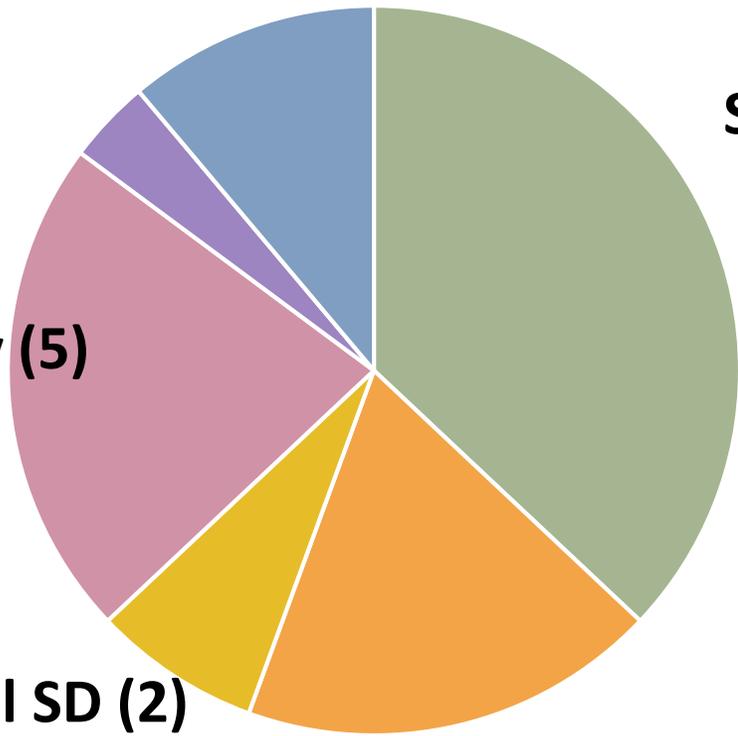
## Special Studies (2)

**Volume Revision (1)**  
Barbee Mill/Cugini Boathouse

Bellingham Cold Storage  
Cape George Marina  
Westport Marina (2x)  
Vigor Industries  
Westrock Longview

**Recency (5)**

**Supplemental SD (2)**  
Dunlap Towing  
Westport Marina



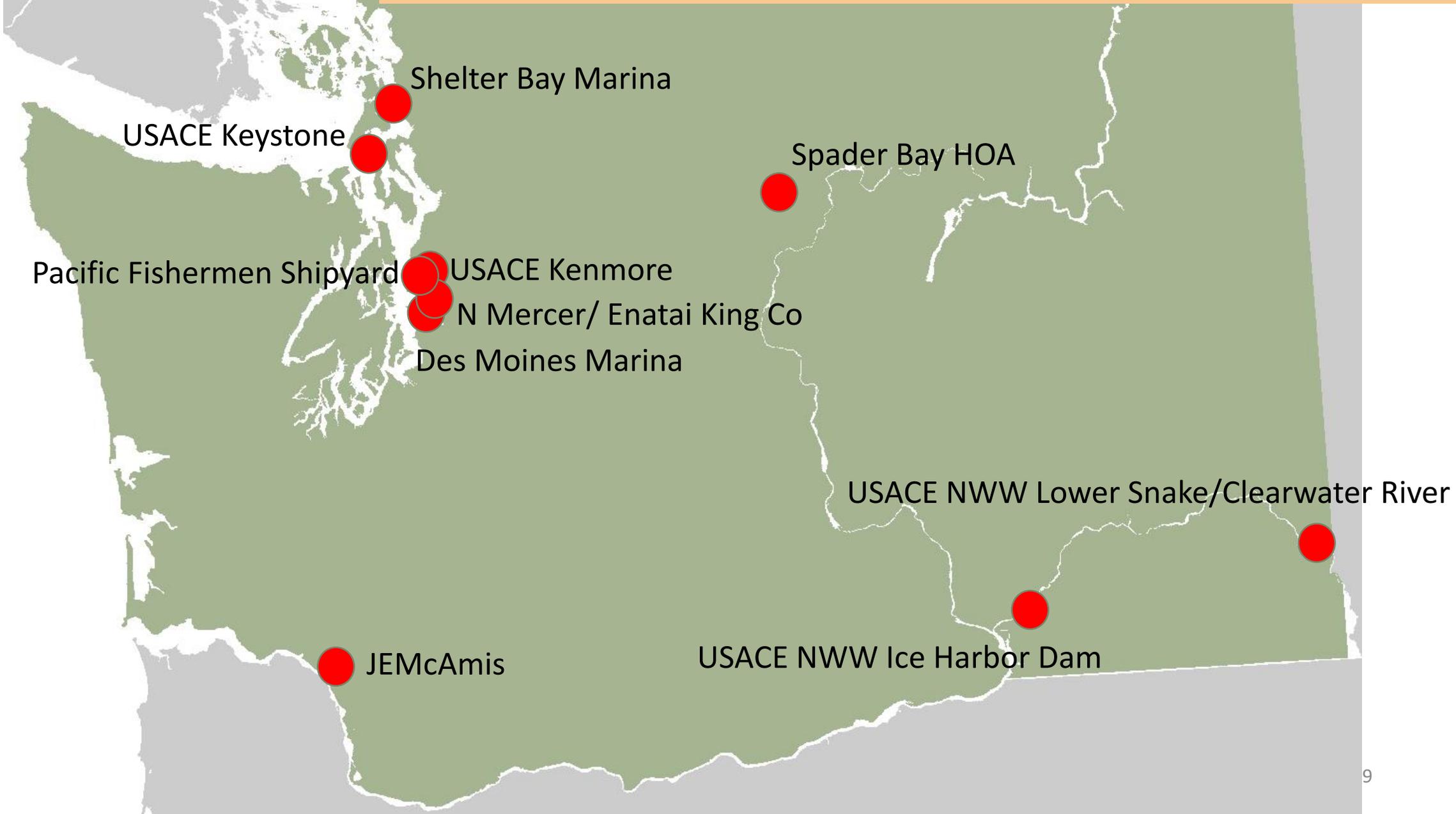
**Suitability (10)**

Des Moines Marina  
J.E.McAmis Columbia River  
North Mercer / Enatai Interceptor Upgrade  
Pacific Fishermen Shipyard  
Shelter Bay Marina  
Spader Bay HOA  
USACE Kenmore  
USACE Keystone  
USACE NWW Ice Harbor Dam  
USACE NWW Lower Snake/Clearwater River

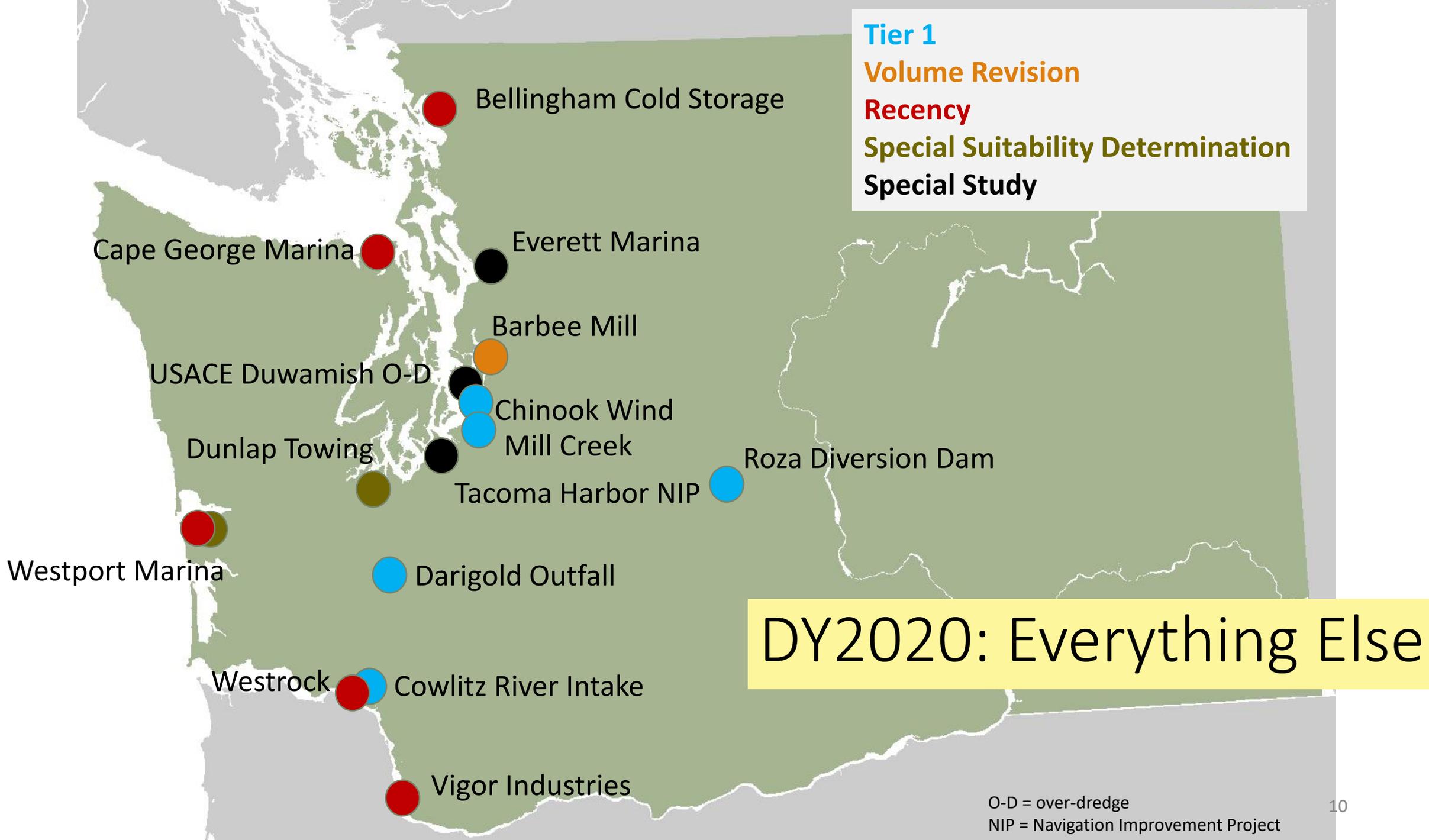
**Tier 1 (5)**

Roza Diversion Dam  
City of Longview, Cowlitz River Intake  
Darigold Chehalis Facility Outfall  
Chinook Wind Mitigation Project  
Mill Creek Rehabilitation Project

# DY2020: Suitability Determinations



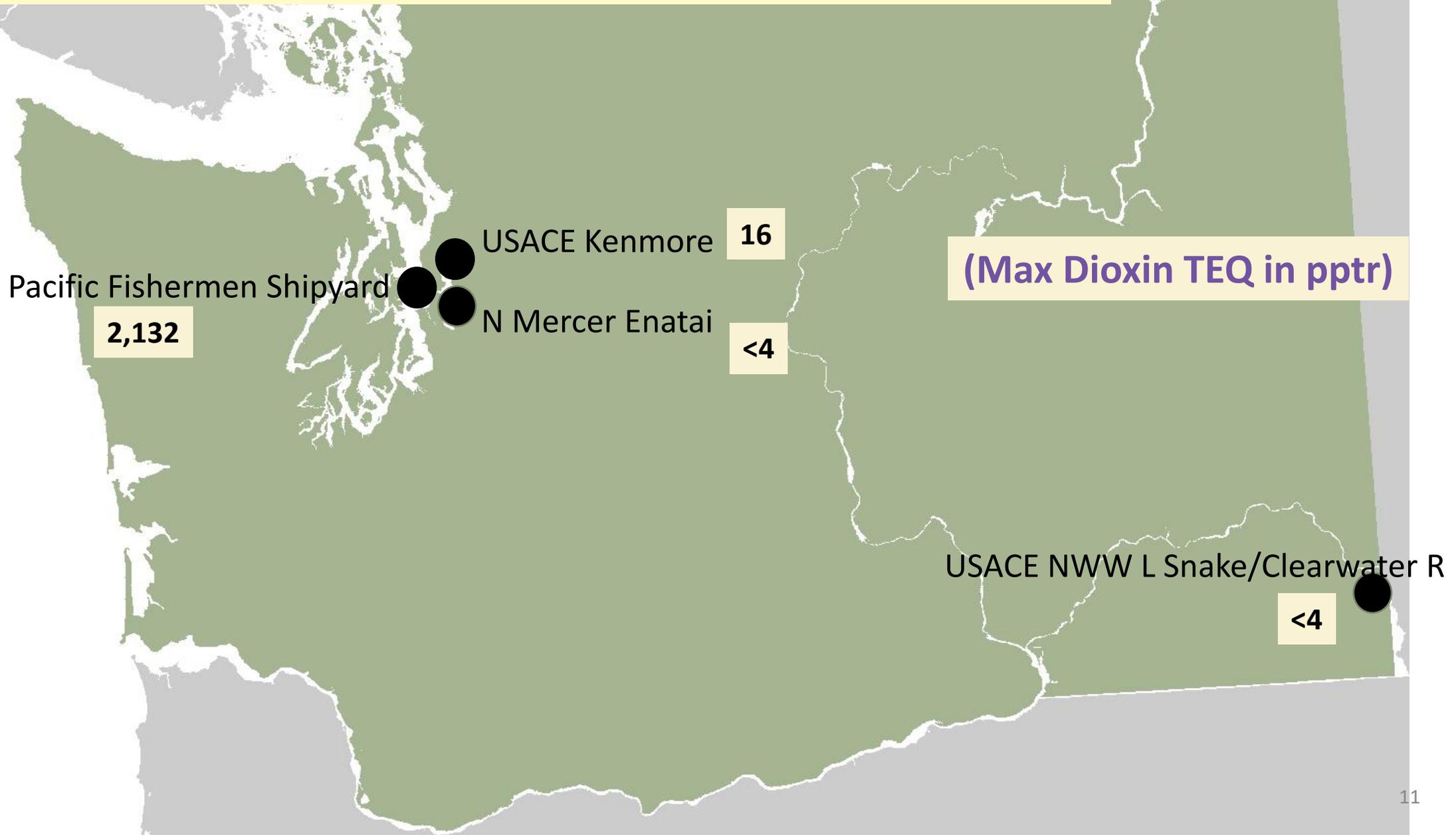
**Tier 1**  
**Volume Revision**  
**Recency**  
**Special Suitability Determination**  
**Special Study**



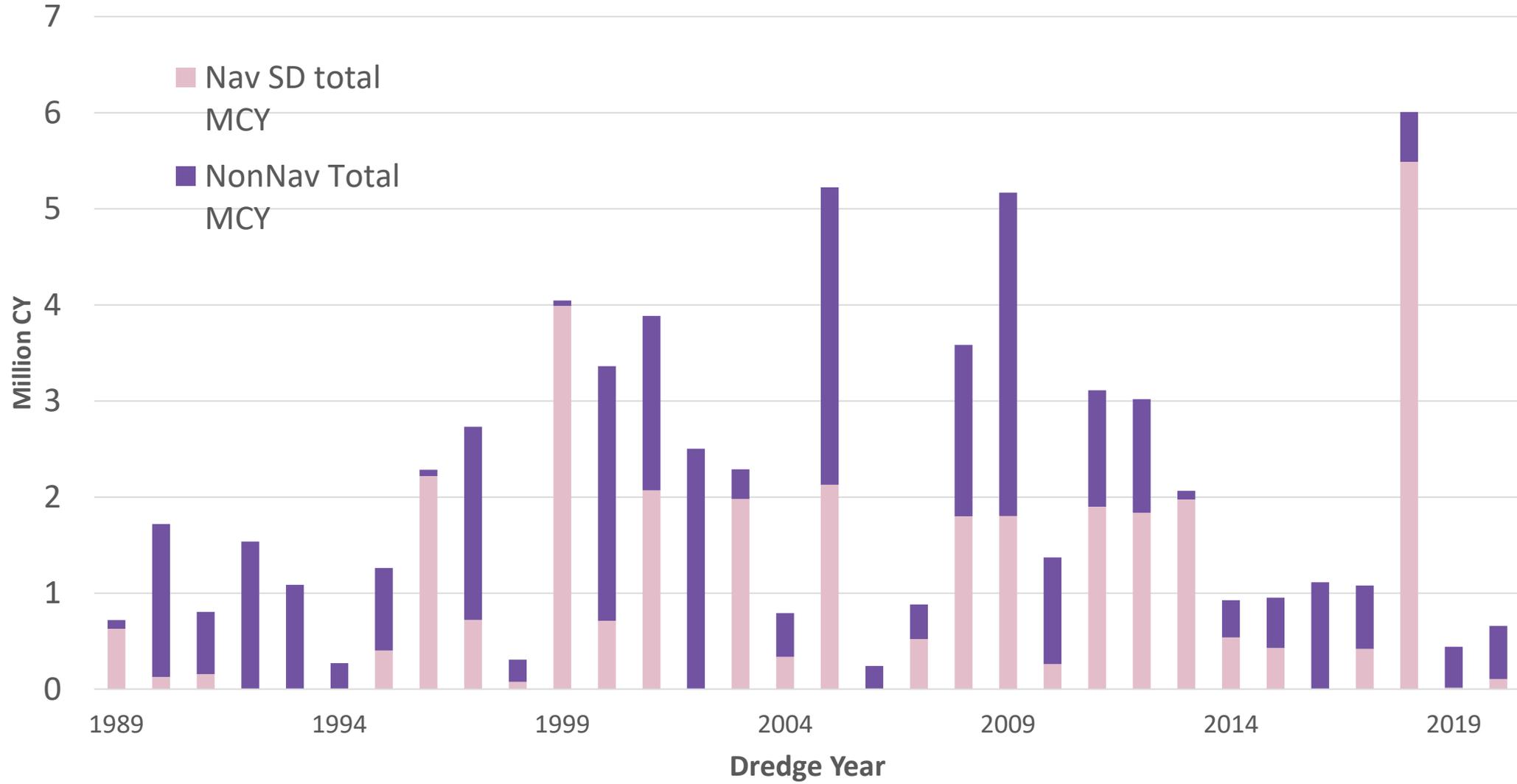
DY2020: Everything Else

O-D = over-dredge  
NIP = Navigation Improvement Project

# DY2020 Projects with Dioxin Testing



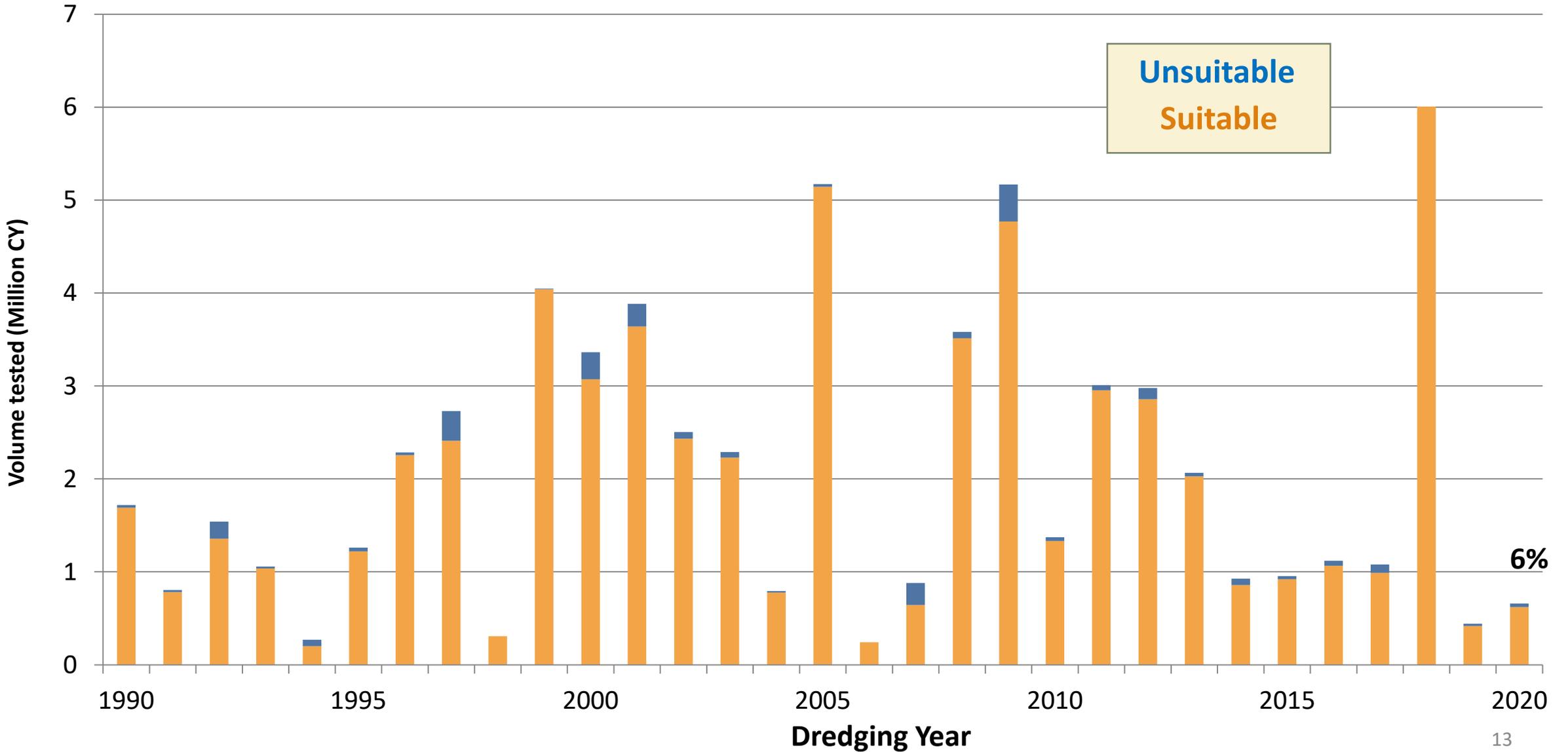
# 1989 – 2020 Tested Volumes



**2020**  
**658,000**  
**CY**

\*Note: Annual volumes shown are those reported as being tested in a DMMP Memo signed during that dredge year

# DY1990-2020: Material Suitability



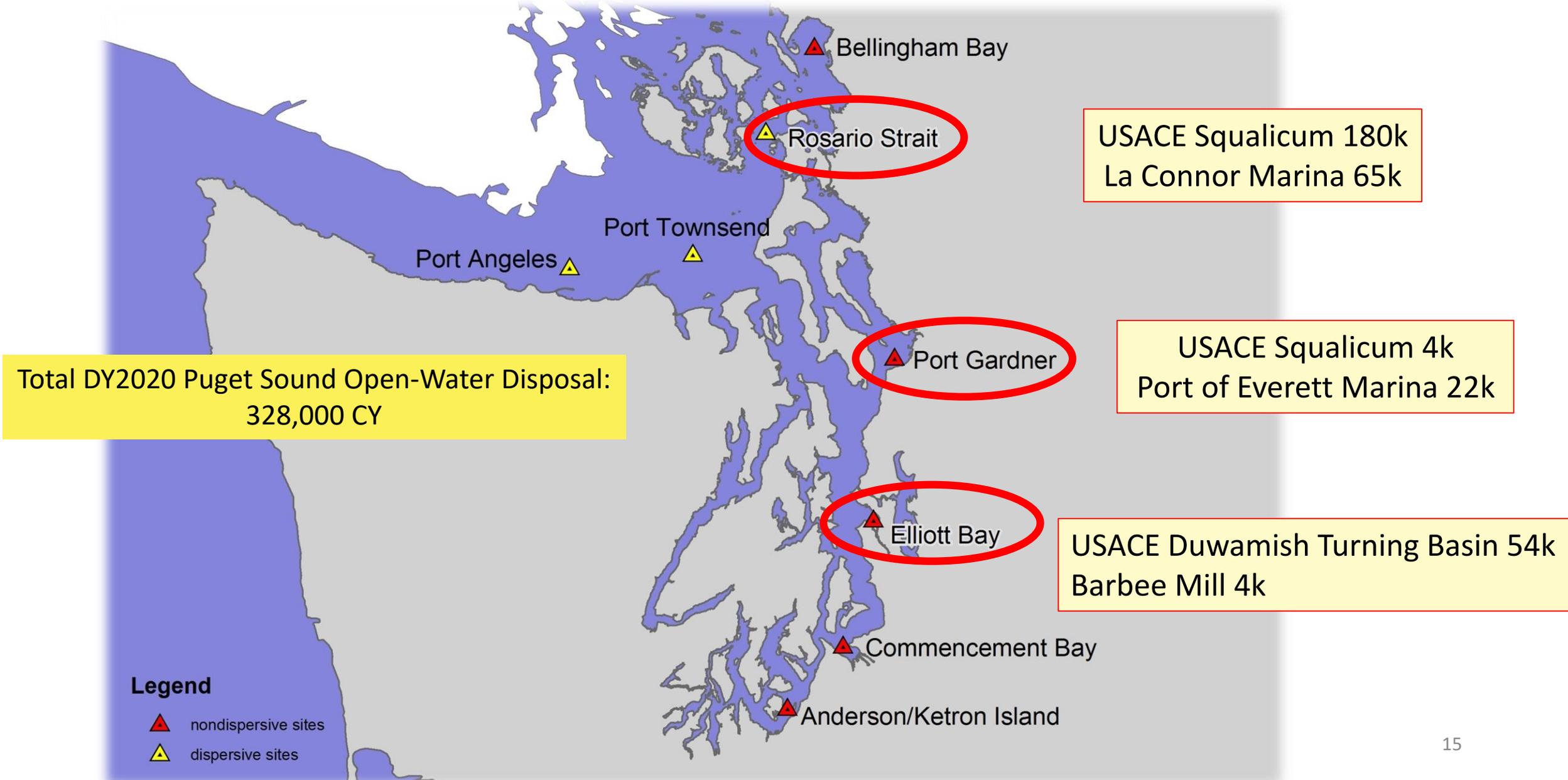


# Open-Water Disposal

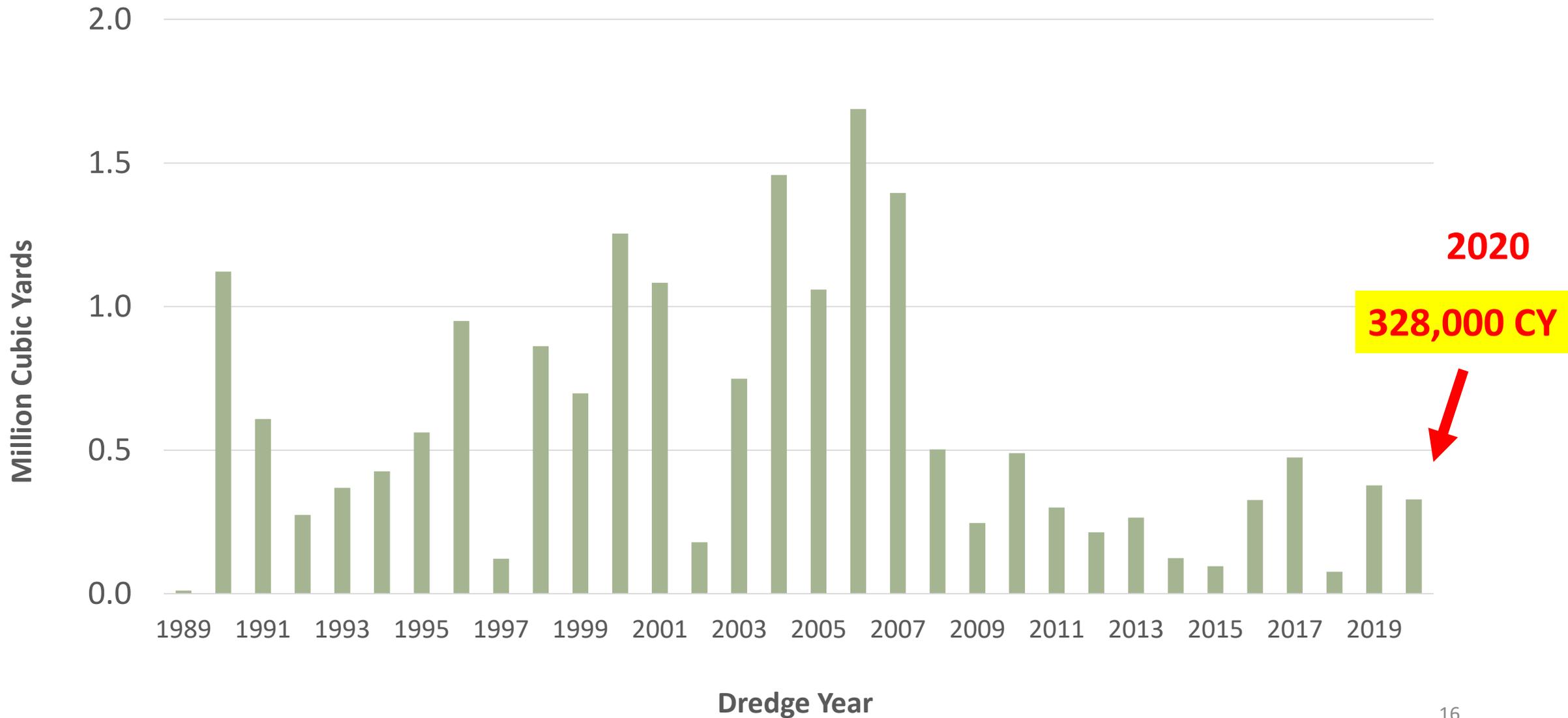
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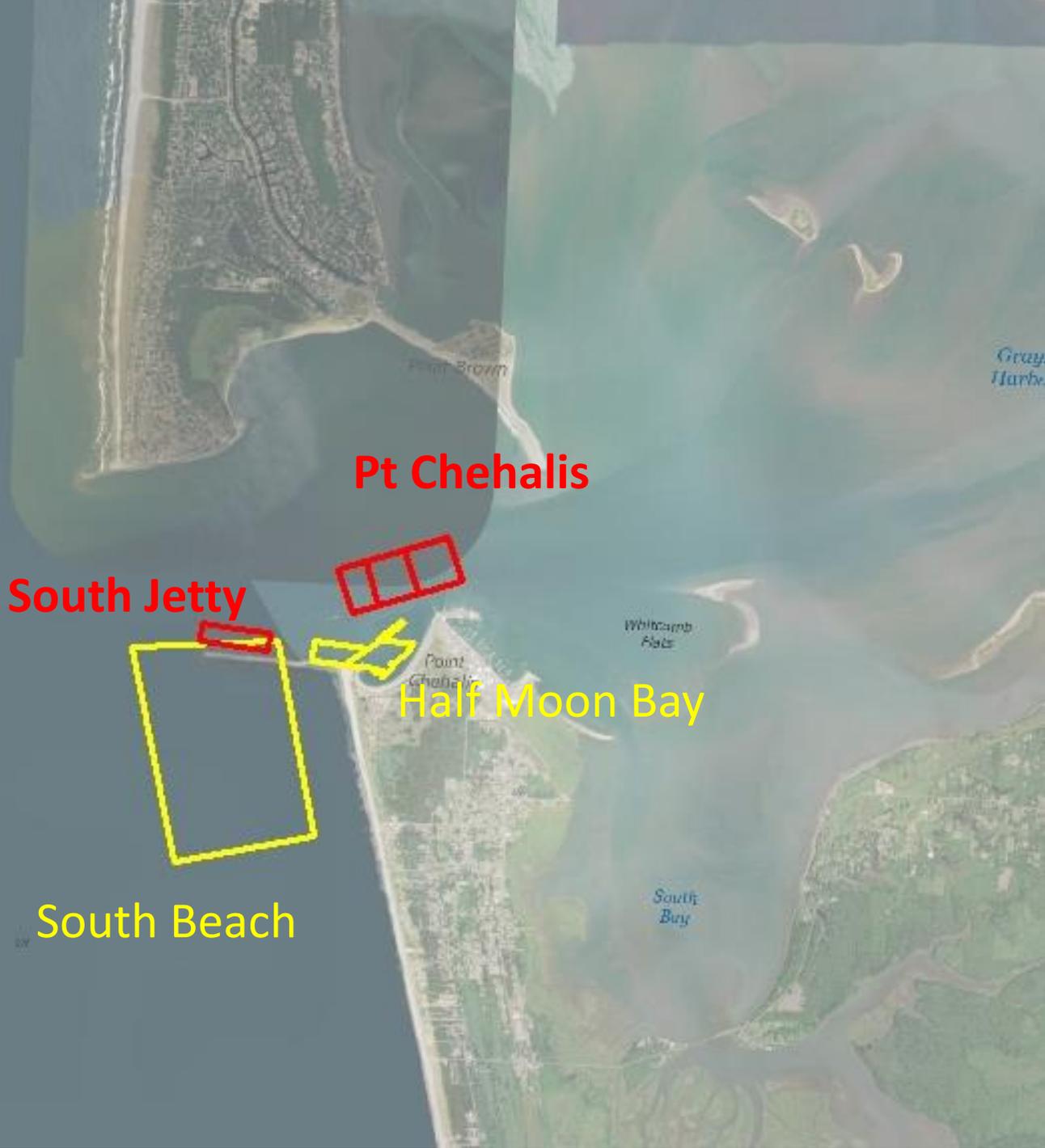
# DY2020: Open-Water Disposal in Puget Sound



# Annual Open-Water Disposal Volumes: Puget Sound



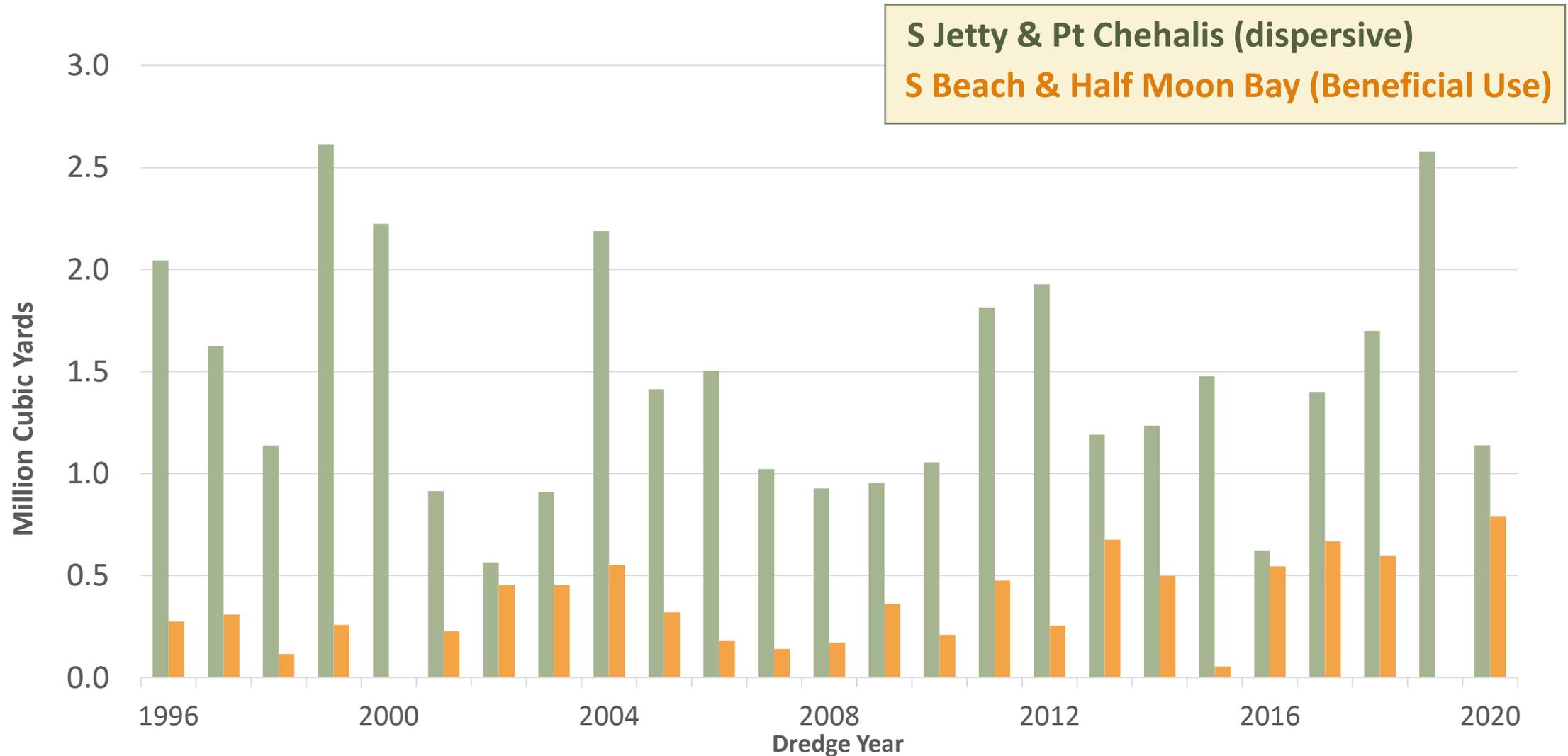
# Grays Harbor DY2020 disposal volumes



Pt Chehalis and South Jetty:  
1.13 Million CY

Beneficial Use  
(South Beach & Half Moon Bay):  
791,000 CY

# Annual Open-Water Disposal Volumes: Grays Harbor



# Dept of Natural Resources (DNR) Updates

- DNR issues the Site Use Authorization (SUA) for the use of DMMP open-water disposal sites
- Dredging Projects: Submit SUA applications at least 6 weeks prior to the desired dredging dates
- DNR's DMMP management account
  - This account funds DMMP sediment monitoring of the disposal sites
  - Future funding issues are projected, and we are looking into solutions



Shannon Soto, DNR

DNR Dredging website:

<https://www.dnr.wa.gov/programs-and-services/aquatics/aquatics-leasing-and-licensing/dredging>

# 2020 Issue/Clarification Papers

1. Follow-up to the 2011 DMMP Clarification paper  
“Marine Sediment Quality Screening Levels: Adopting  
RSET Marine SLs for Use in DMMP”
2. Sediment Acclimation and the Larval Bioassay Test



Presentation to follow!

Available on the DMMO website:

<https://www.nws.usace.army.mil/Missions/Civil-Works/Dredging/>

# Follow-up: DMMP adoption of RSET marine SLs

**2009 - Significant update to Sediment Evaluation Framework (SEF)**

**2011 - DMMP reconciled RSET SLs with DMMP SLs (marine):**

Group 1  
8 compounds  
Removed from DMMP SL

Group 2  
10 compounds  
DMMP SLs set equal to RSET SLs



Subset of pesticides:  
Hexachlorobutadiene  
Chlordane (total)  
Dieldrin  
Heptachlor



- New SLs < Lab PQLs
- Labs would need time to lower PQLs.
- DMMP to use BPJ when lab PQL > SL



DMMP conducted periodic follow-up review



# Follow-up Paper continued...

Purpose of the 2020 paper: Evaluate impacts of the new, lower SLs for HCB, chlordane, dieldrin, and heptachlor

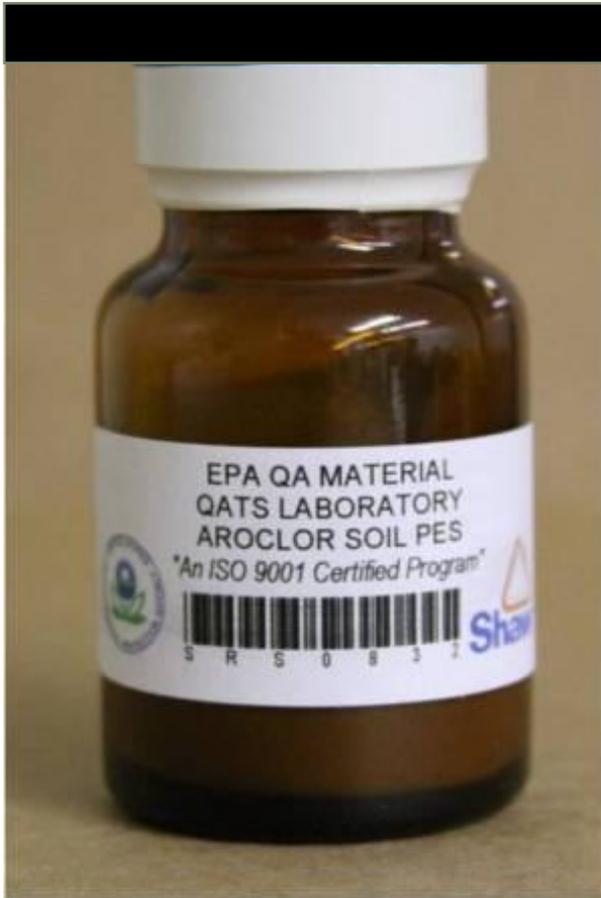
## Findings:

- Labs have generally increased their sensitivity
- Overall decrease observed in non-detect exceedances (NDE)
- Occurrences of NDEs still persist when matrix interferences are present

## Outcome:

- DMMP: Will continue to use the 2011 marine SLs and BPJ
- Labs: Please continue to strive to meet the pesticide SLs
- Project Proponents: Consider more sensitive methods for initial analysis if appropriate for your project

# Puget Sound Sediment Reference Material: Update as of April 30, 2020



155 bottles  
distributed

**YES! You can re-use leftover PS-SRM material!**  
(If material is stored properly and bottle # is reported)

2,695 bottles  
remaining

SRM Guidance Document:  
<http://www.nws.usace.army.mil/Missions/Civil-Works/Dredging/SRM/>

# Questions?



Type your question into the Chat box.

OR

Contact us: [CENWS-DMMOTeam@usace.army.mil](mailto:CENWS-DMMOTeam@usace.army.mil)

Website: <https://www.nws.usace.army.mil/Missions/Civil-Works/Dredging/>