PORTLAND DISTRICT
NAVIGATION PROGRAM

Dan Howard
Chief of Navigation Division

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PORTLAND DISTRICT KEY LEADERSHIP

Colonel Brendan John "Mac" McEvoy
Commander

Liza Wells
Deputy District Engineer for Program and Project Management

Kym Anderson
Chief, Operations Division

Pat Duyck
Chief, Engineering and Construction Division

Dan Howard
Chief, Navigation Division

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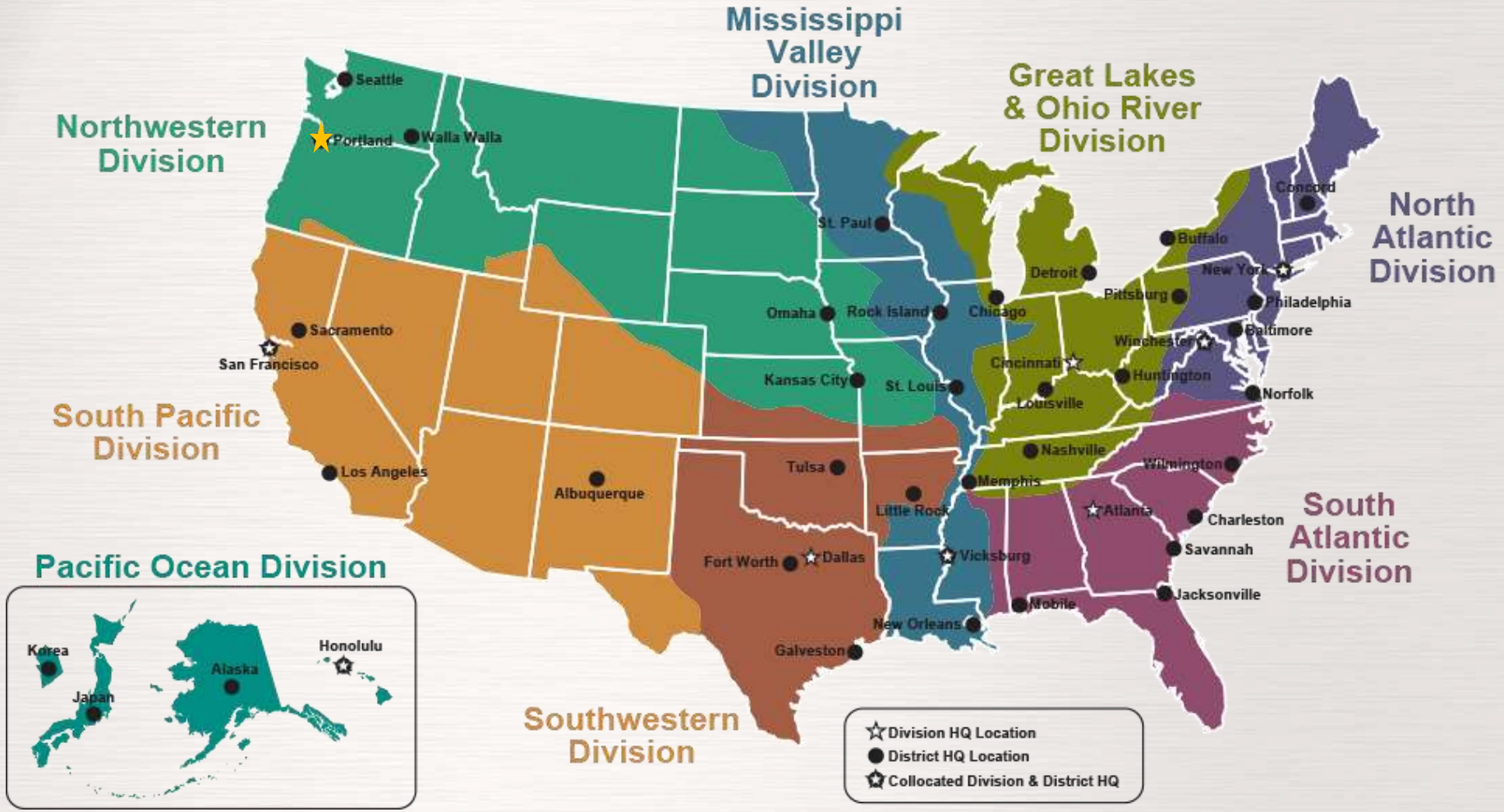

9 Divisions (supports over 100 countries)

43 Districts

(U.S/Europe/Asia)

NWD

- Portland
- Seattle
- Omaha
- Kansas City
- Walla Walla

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MISSION

Mission: Provide vital public engineering services in peace and war to strengthen our Nation's security, energize the economy, and reduce risks from disasters.

- Civil Works (boundaries based on watershed)
- Military

USACE was established Mar. 6, 1802 as permanent branch of the Army.

Navigation was the first mission.

PORTLAND DISTRICT MISSIONS & RESPONSIBILITIES

Balance the region's competing needs for navigation, flood risk management, hydropower, fish and wildlife habitat, disaster recovery, irrigation and recreation.

Civil Works District

- 1,487 Civilian employees
- 8 Military Officers
- 2 States, 4 Senators, 6 Representatives, 15 Tribal Nations

NAVIGATION

Purpose

Provide safe, reliable, efficient, and environmentally sustainable waterborne transportation systems (channels, harbors, and waterways) for movement of commerce, national security needs, and recreation.

PORTLAND DISTRICT NAVIGATION PROJECTS

Navigation Projects

- 10 deep draft harbors
- 12 shallow draft harbors
- 12 coastal jetty structures
- 224 mi.-maintained waterways
- 3 high-lift navigation locks
- 2 dredges
- 5 survey vessels
- 162 employees, 3 office sites

NAVIGATION RELATIONSHIPS

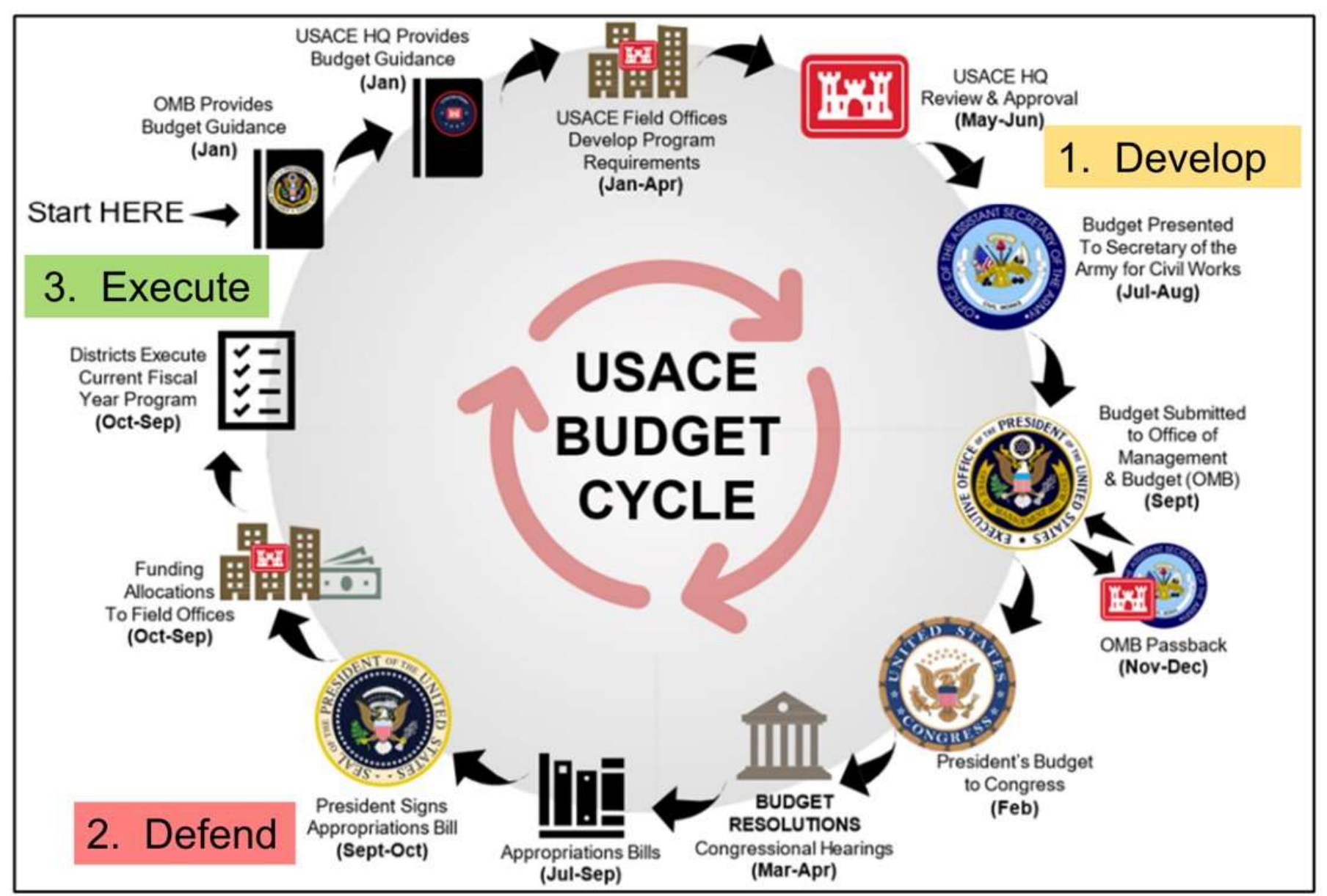
- Ports: Commissions, Executive Directors, Staff
- USCG: Station, Sector and District Level
- Federal Delegation: D.C. and State Staffs
- Federal: EPA, NMFS, USFWS
- State of Oregon and Washington
- Governor's Office; Economic and Community Development
- Bar and River Pilots
- Pacific Northwest Waterways Association (PNWA)
- Columbia River Steamship Operators Association (CRSOA)
- USACE: Seattle, San Francisco, Los Angeles, Honolulu, and Alaska Districts

CORPS' CIVIL WORKS APPROPRIATIONS (ENERGY & WATER DEVELOPMENT)

- Annual Appropriations
  - Usually Congress adds to PBUD
  - Competition for funds
- Funded by Account and Project
- Inland Waterways
  - Supports cost-shared construction
  - Proceeds from fuel tax on barge fuel
- Harbor Maintenance
  - Ports, Harbors, Deep Draft Channels
  - Proceeds from taxes
    - Waterborne commercial cargo imports
    - Domestic cargo
    - Cruise ship passengers at federally maintained ports
- Additional Funding
  - Supplemental Appropriations
  - Earmarks
  - "Funding Pots" / "Workplan"

FY19	**$ 10.26 B**
FY19 Appropriations (PL 115-244)	$ 7.00 B
Disaster Relief Act of 2019 (PL 116-20)	$ 3.26 B
FY20	**$ 7.72 B**
FY20 Appropriations (PL 116-94)	$ 7.65 B
CARES Act (PL 116-136)	$ 0.07 B
FY21 Appropriations (PL 116-260)	**$ 7.80 B**
FY22	**$ 31.15 B**
Disaster Relief Supplemental Appropriations (PL 117-43)	$ 5.71 B
Infrastructure Investment & Jobs Act (PL 117-58)	$ 17.10 B
FY22 Appropriations (PL 117-103)	$ 8.34 B
FY23	**$ 11.07 B**
FY23 Appropriations (PL 117-328)	$ 8.31 B
Diaster Relief Supplemental Appropriations (Div N, PL 117-328)	$ 1.48 B
Environmental Infrastructure Assistance (PL 117-180)	$ 0.20 B
Infrastructure Investment & Jobs Act (PL 117-58)	$ 1.08 B
FY24	**$ 10.17 B**
FY24 Appropriations (PL 118-42)	$ 8.68 B
Infrastructure Investment & Jobs Act (PL 117-58)	$ 1.49 B

CIVIL WORKS PROGRAM / BUDGET TIMELINE



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MOUTH OF THE COLUMBIA RIVER (MCR) JETTIES

South Jetty Built 1885-1913; 6 miles long

North Jetty Built 1914-1917; 2 miles long

Jetty A Built 1938-1939; 1.6 miles long

Ensures reliable entrance for the $25 billion Columbia-Snake System “Highway”

Columbia navigation system:

- #1 U.S. wheat exports
- #2 U.S. corn and soy exports
- More than 40,000 jobs are dependent on these trades
- Over $900M in new infrastructure investment along the river since main channel deepened in 2010

Source: FACT SHEETS - PNWA

MOUTH OF THE COLUMBIA RIVER JETTIES
MAJOR REHABILITATION PROJECT

Three components

- Jetty A Rehab: completed (2016–2017)
  Erosion Repair at Root of Jetty A completed DEC 2023
- North Jetty Rehab: completed (2019)
  Additional repair estimated in FY27
- South Jetty Rehab: **completed (2025),** contract awarded in FY19, repair 2020–2025
  - Last stone placed October 2025
  - 462K tons of stone
  - Largest stones are 40 tons

$240.5 million rehabilitation project

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EAST SAND ISLAND (ESI)

Risks of ESI Breach

- Adverse effects on MCR and LCR FNC at RM 4-5
- MCR Sand Island PD repair jeopardized
- 1-acre Corps managed CATE Colony

Pump-ashore Dredge Placement Event

- **USCG Air Station Astoria monitored conditions during 2025 king tides – THANK YOU**
- 130,000 cy planned placement via KTR Hopper in Fall 2026

USCG photos –
Air Station Astoria
4 DEC 11:40 local
King Tide = 9.3 ft NAVD
= 9.7 ft MLLW

No wave action

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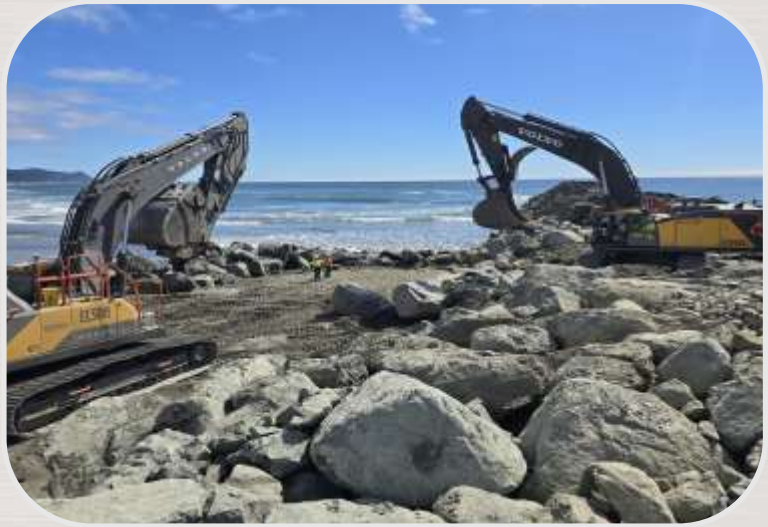
OREGON COAST JETTY REPAIRS

Coos Bay

- North Jetty repair completed July 2025
  - Approx. 193k tons armor stone placed
- South Jetty evaluation underway

Tillamook Bay

- North Jetty construction completed 2022
- South Jetty repair underway (Oct 2026)
  - Approx. 111k tons of armor stone procured



Rogue River

- South Jetty expedited repair nearly complete (Sept 2026)
  - Approx. 4k tons of stone procured

COLUMBIA-SNAKE RIVER INLAND WATERWAY

- Serves 36 ports
- 60% of U.S. wheat exports
- 485+ miles of navigable water
- Export/import traffic exceed $22 billion annually
- Columbia-Snake River system supports 51 million tons of international trade and 40,000 local jobs

Source: FACT SHEETS - PNWA

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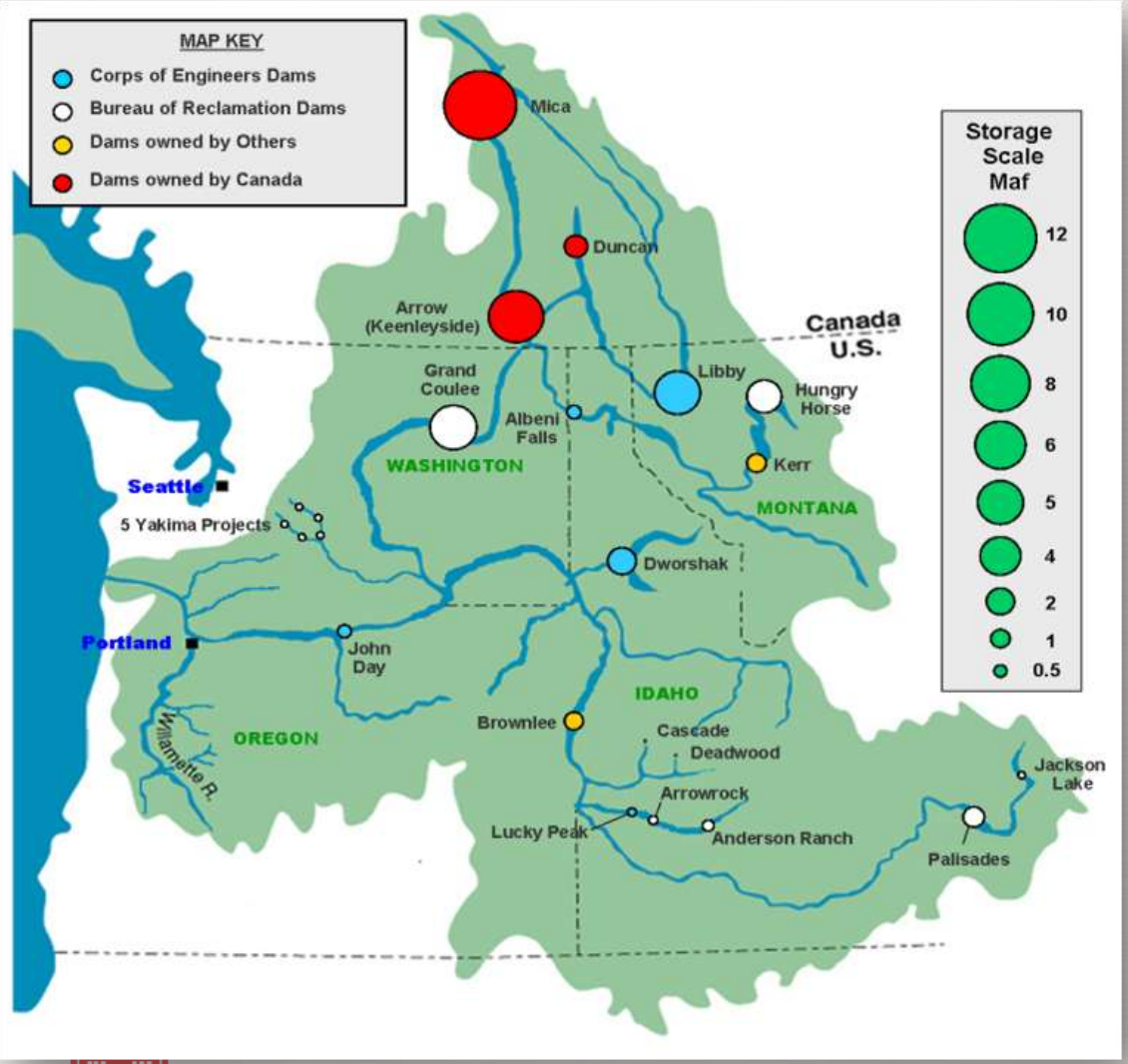
COLUMBIA RIVER TREATY



- **Agreement-in-principle** reached on modernizing the Columbia River Treaty (July 2024).
- **Preplanned storage in Canada** included, ensuring operational certainty in the Columbia River Basin.
- Both countries committed to **finalizing details** and entering the modernized treaty into force quickly.
- Expect more **updates and details** in the coming months as negotiations continue.

COLUMBIA RIVER NAVIGATION CHANNELS

- Mouth of the Columbia River (MCR) entrance:
  - 55’ deep; 2,640’ wide; 6 miles long
  - POC: Julia Keiter
- Baker Bay channel (Cape Disappointment)
  - Maintenance depth 16’
- Lower Columbia River shipping channel Vancouver, WA to Pacific Ocean
  - 43’ deep; 600’ wide; 103 miles long
  - POC: Jessica Stokke
- Portland Harbor in the Lower Willamette River
  - Maintenance depth 40’; 12 miles long
- Barge channel upstream of Vancouver, WA
  - Maintenance depth 17’

BAKER BAY – USACE/USCG

Goal: Improve Station Cape Disappointment for 24/7/365 heavy-weather SAR and Motor Lifeboat School operations.

Project Scope (3 Focus Areas)

- Sediment Mitigation & Wave Attenuation ($50M): Implement permanent coastal structures to shield station docks from extreme swells and prevent sediment infill
- Waterfront Structure Repairs ($45M): Replace floating docks (retaining Float A), upgrade guide piles and wave screens, and fully rebuild the currently inoperable boat haul-out.
- Cliff Rockfall Mitigation ($20M): Rock scaling, anchored wire mesh, and heavy-duty barrier fencing above maintenance shops, keeping the cliff-top ATON tower intact.

USCG: Retains ultimate statutory authority as Lead Federal Agency for all regulatory and operational decisions.

USACE: Serves as servicing agency under the Economy Act, executing technical investigations, design packages, solicitation, and field supervision.

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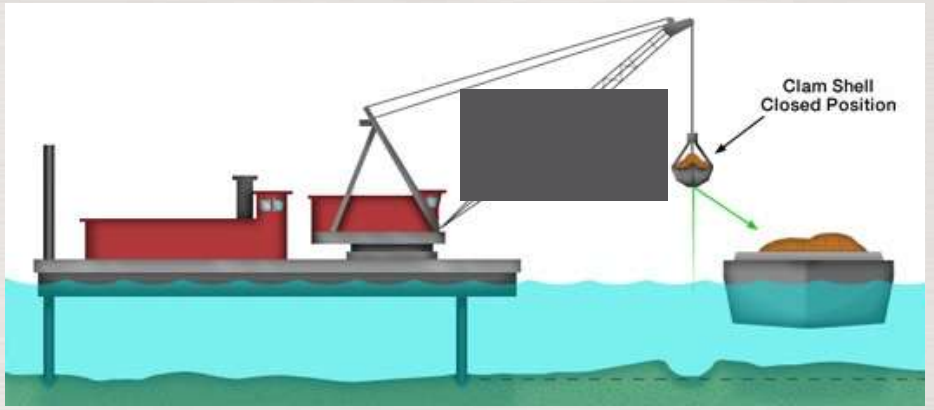
USACE OWNED DREDGES AND CONTRACT DREDGES

4 dredges working together to maintain the 43-ft deep Columbia River navigation channel every year.

10 million cubic yards of sand dredged annually Entrance channel + River channel

Contract clamshell dredge



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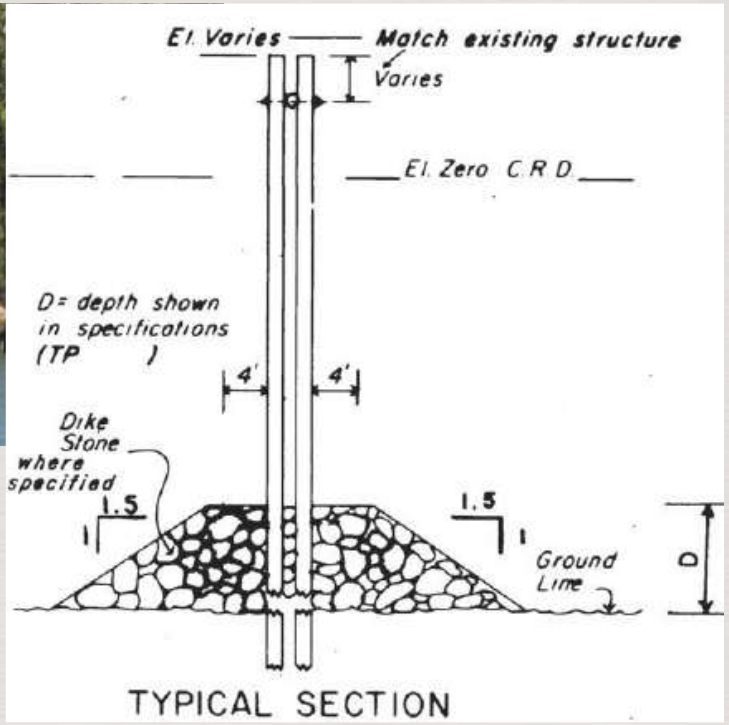
USACE PORTLAND SURVEY VESSELS

- Elton
- Redlinger
- Hopman
- Graham
- Beeman (Coos Bay)

www.nwp.usace.army.mil/Missions/Navigation/Vessels/

NAVIGATION FEATURE: PILE DIKES

- Over 200 pile dikes in the Columbia River
- Stone at base of pile dikes to protect against scour
- Damaged pile dikes may be missing tall king “marker” piles
- May not be visible at high water



Pile dikes are sometimes referred to as “wing dams”

SHIP STERN BUOYS (PATON)

USACE owns and maintains (8) ship stern mooring buoys in designated USCG anchorages

- 2: Rainier near Longview, WA
- 1: Prescott, just upstream of Rainier
- 1: Sandy Island near Kalama, WA
- 4: near Vancouver, WA

USACE DREDGING IN USCG ANCHORAGES

WRDA 2020 provided that USACE may perform dredging at Federal expense within and adjacent to anchorages established by the USCG.

USACE coordinates with Columbia River Pilots to move ships as needed for dredging.

Dredging will improve utilization of the anchorages for ships to more efficiently move commerce in the Columbia River.

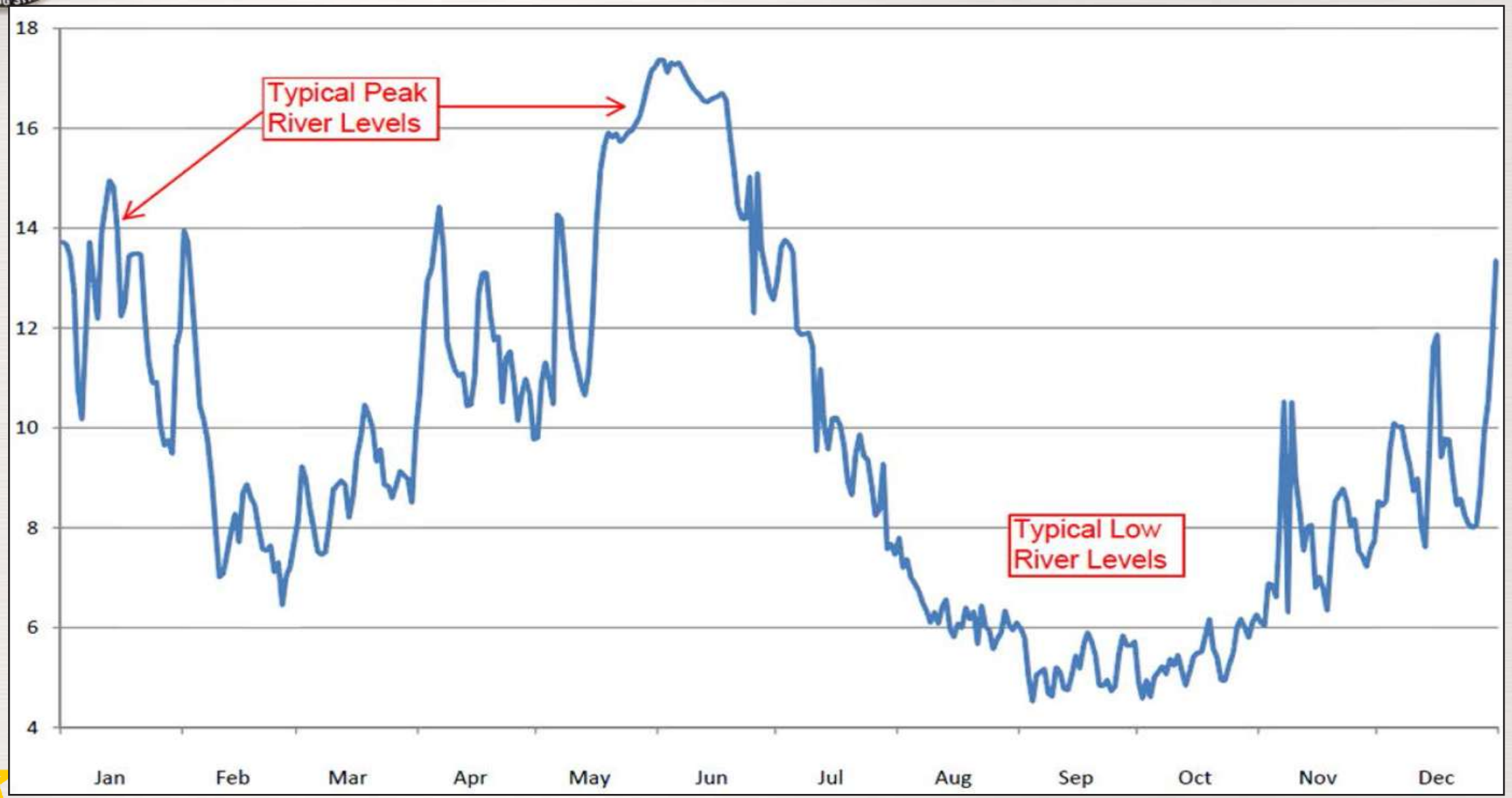
COORDINATION ON HAZARDS TO NAVIGATION

USACE and USCG consults on lead agency on sunken vessels/hazards

- Owner is contacted and responsible for removal of hazard
- If owner cannot be located, USACE evaluates factors supporting removal/other applicable authorities to determine feasibility
- USACE has discretionary authority to remove vessels from Federal navigation channels (per 33 CFR 245.20)
- USACE removal may occur, if warranted/approved thru HQ

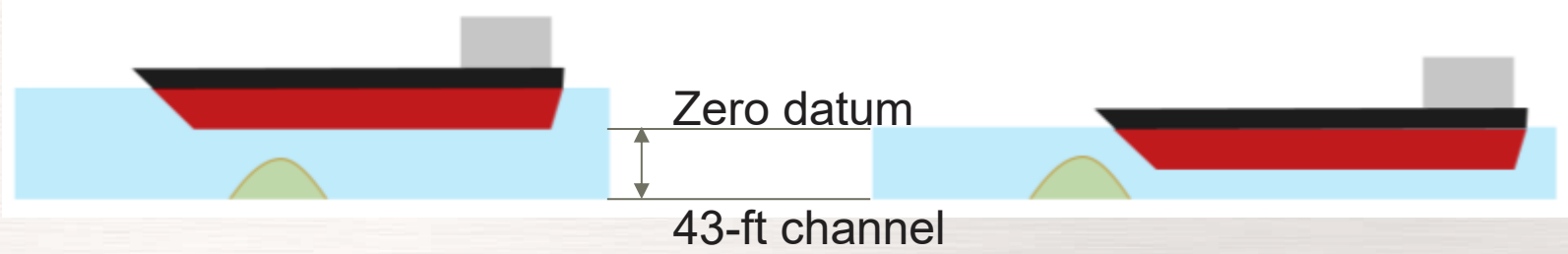
- USCG is lead for marking obstructions and may have authority to remove such obstructions not addressed by USACE
- USACE POC: Casey O'Donnell (503) 437-5824

TYPICAL COLUMBIA RIVER LEVELS



REMOVE SHOALS BEFORE LOW WATER

- Zero Columbia River datum = approx. minimum discharge from Bonneville Dam
- Authorized navigation channel depth is 43 feet below zero datum
- Tidal range = about 0 to 8 feet above zero datum near the river mouth
- Annual river flow range = about 0 to 12 feet above zero datum at Vancouver, WA



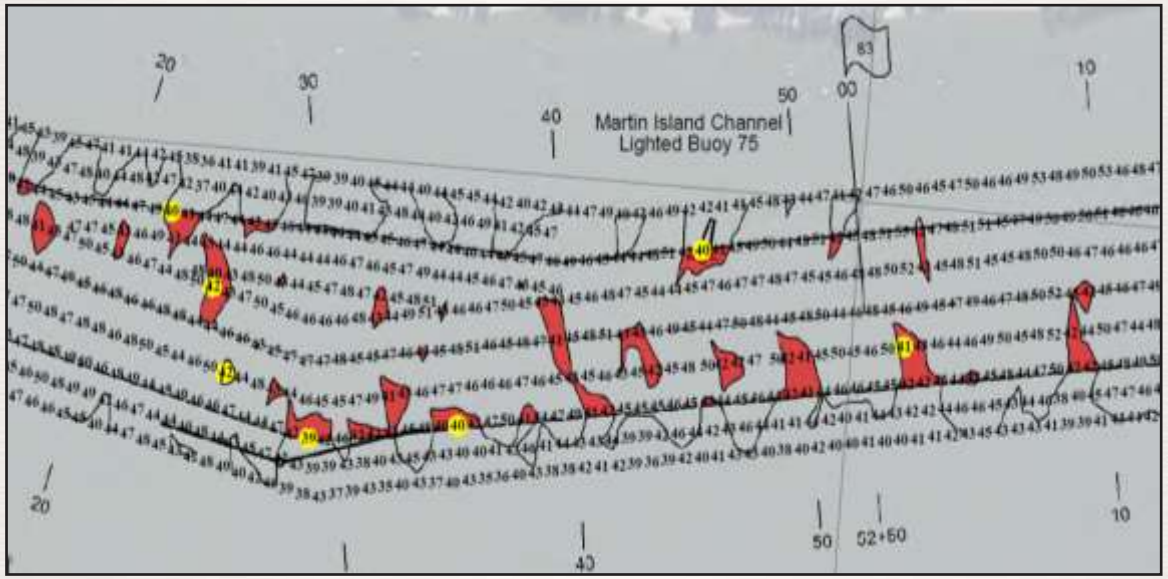
Higher river levels = ships pass over top of sand deposits in channel

Lower river levels = ships cannot pass over; if sand is not removed, ships are restricted

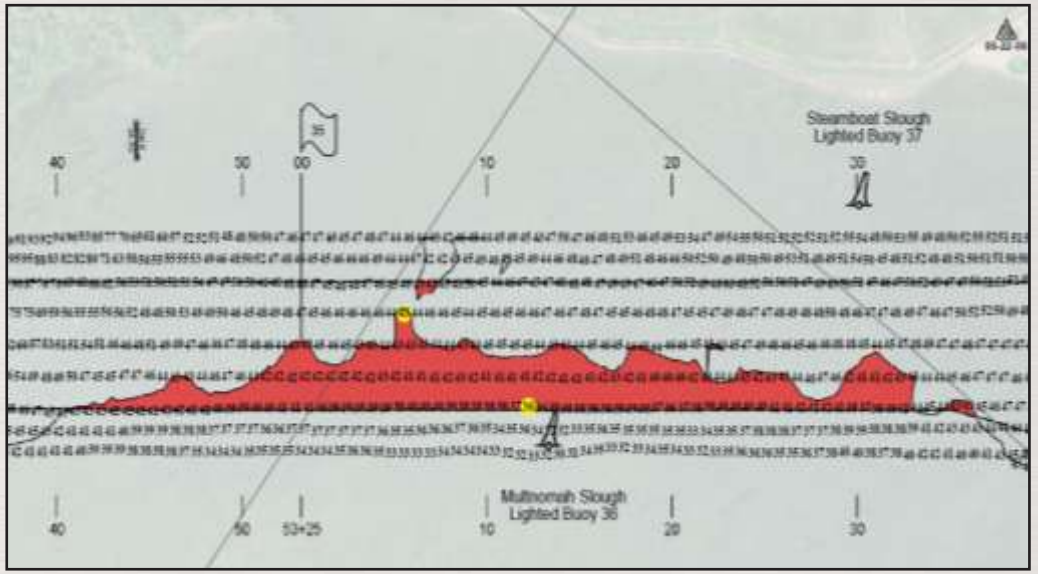
NOT TO SCALE

COLUMBIA RIVER SHOALING

- Shoaling in forms of sand waves or cutline – often intermittent
- Check in regularly with Pilots to review surveys and prioritize dredging
- Surveys conducted monthly



Sand wave shoaling

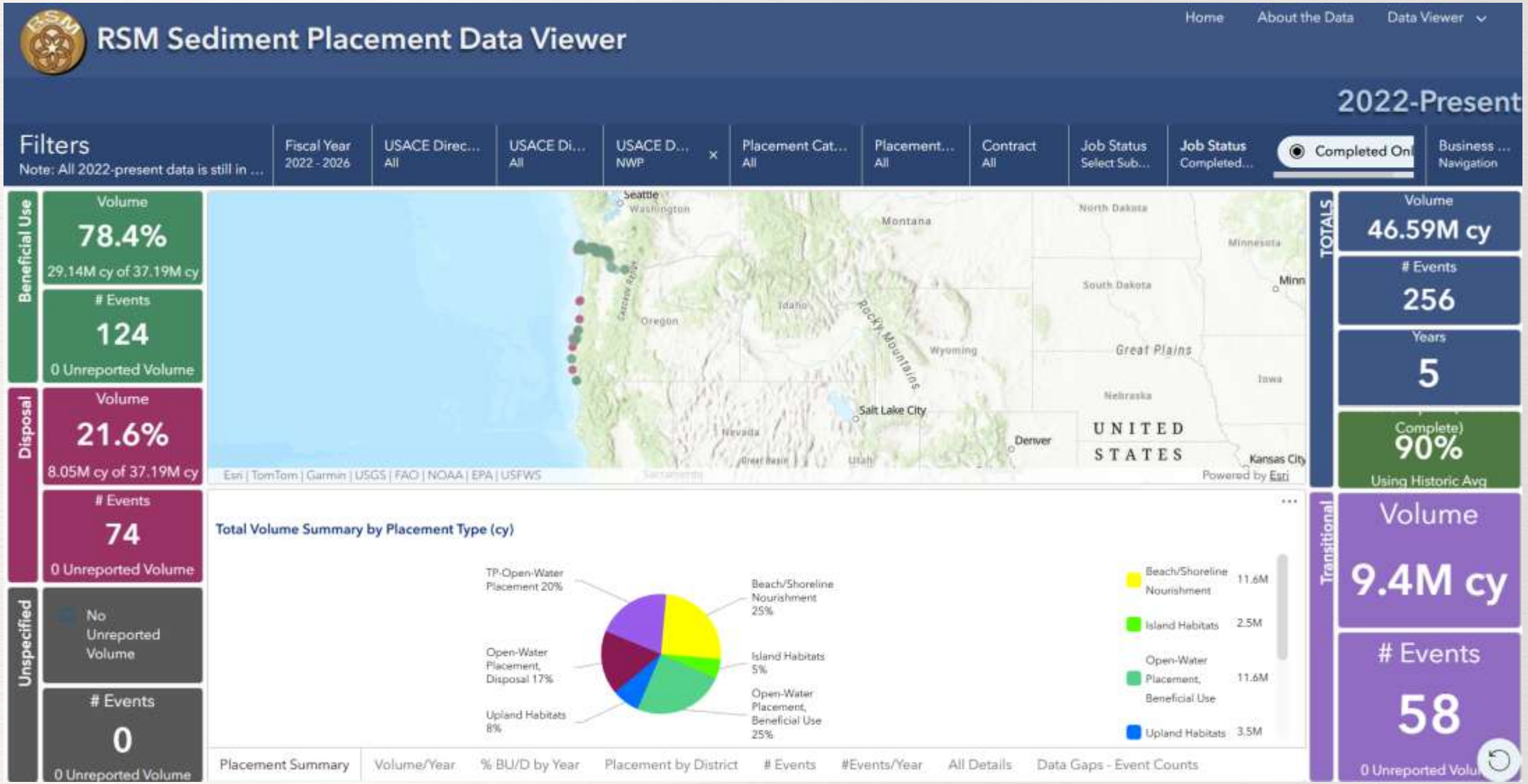


Cutline, continuous shoaling

https://navigation.usace.army.mil/Survey/Hydro

WHERE DOES THE DREDGED MATERIAL GO?

WHERE DOES THE DREDGED MATERIAL GO?



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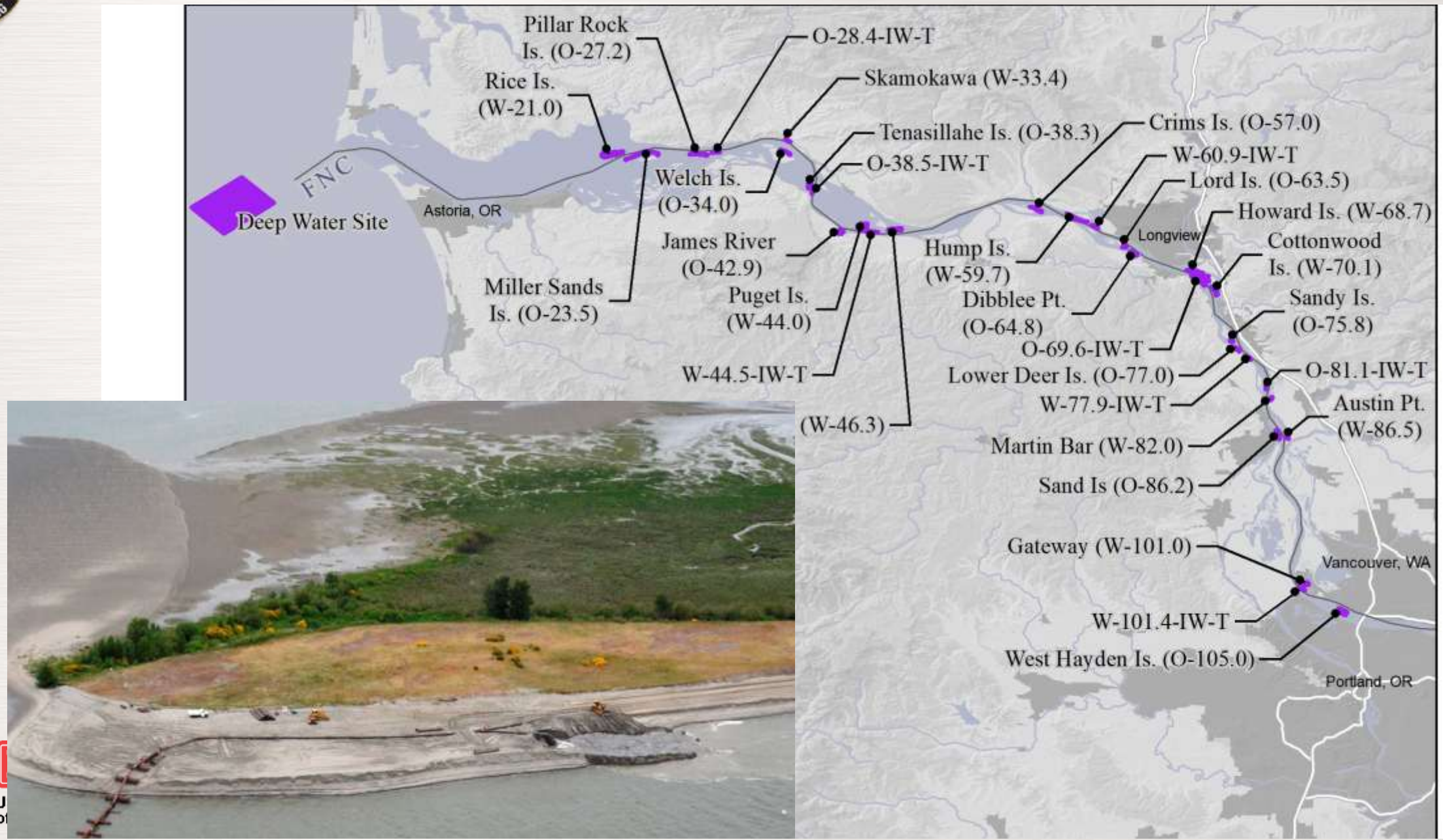
EXISTING DREDGED MATERIAL PLACEMENT SITES



COLUMBIA RIVER NAVIGATION CHANNEL CONDITION

Astoria

Longview

Kalama

Portland & Vancouver

Sep 2026

7 or more feet above project depth
5 or 6 feet above project depth
3 or 4 feet above project depth
1 or 2 feet above project depth
At or 1 foot below project depth
2 or 3 feet below project depth
4 feet or more below project depth

QUESTIONS?

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https://x.com/PortlandCorps

www.youtube.com/user/PortlandCorps

https://www.instagram.com/corpsofengineers_portland/

THANK YOU!

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HOW TO REACH US:

Deputy Chief, Navigation Division
Karla Ellis
Karla.G.Ellis@usace.army.mil
503-808-4345

Columbia & Lower Willamette Navigation Project Manager
Jessica Stokke
Jessica.B.Stokke@usace.army.mil
503-808-4352

Mouth of Columbia River, Baker Bay Navigation Project Manager
Julia Keiter
Julia.R.Keiter@usace.army.mil
503-407-3353

Oregon Coastal Projects Navigation Project Manager
Sam Lynch
Samantha.M.Lynch@usace.army.mil
503-828-6059