

Vessel Sewage Management Strategies



Webcast sponsored by EPA's Watershed Academy in partnership with the Coastal States Organization (CSO)



Monday, November 2, 2020, 2:30pm – 4:30pm Eastern

Speakers:

- **Kelsey Watts-FitzGerald**, Biologist, Vessels, Marinas, and Ports, Office of Wetlands, Oceans and Watersheds, EPA
- **Kate Hughes Brown**, BIG/CVA Program Coordinator, Connecticut Department of Energy and Environmental Protection, Boating Division
- **Jenny East**, Outreach Coordinator, Oregon State University, Oregon Sea Grant

Watershed Academy Webcast

www.epa.gov/watershedacademy

- The slides for today's presentations are posted.
- A recording will be posted within the next month.

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Audience Polling

Speakers

- **Kelsey Watts-FitzGerald**, Vessels, Marinas, and Ports, Office of Wetlands, Oceans, and Watersheds, EPA
- **Kate Hughes Brown**, BIG/CVA Program Coordinator, Connecticut Department of Energy and Environmental Protection, Boating Division
- **Jenny East**, Oregon State University, Outreach Coordinator, Oregon Sea Grant



EPA Vessels Program Clean Water Act Section 312

Office of Wetlands, Oceans, and Watersheds



Vessels and the Environment



Discharges from vessels have the potential to negatively impact water quality through the release of nutrients, metals, aquatic nuisance species, and bacteria, among other pollutants.

The **Clean Water Act** provides the statutory framework under which EPA protects human health and aquatic ecosystems.

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How EPA Regulates Vessel Discharges

Military Vessels



Uniform National Discharge Standards
CWA Section 312(n)

Recreational Vessels



Clean Boating Act
CWA Section 312(o)

Commercial Vessels



Vessel Incidental Discharge Act
CWA Section 312(p)

Vessel Sewage

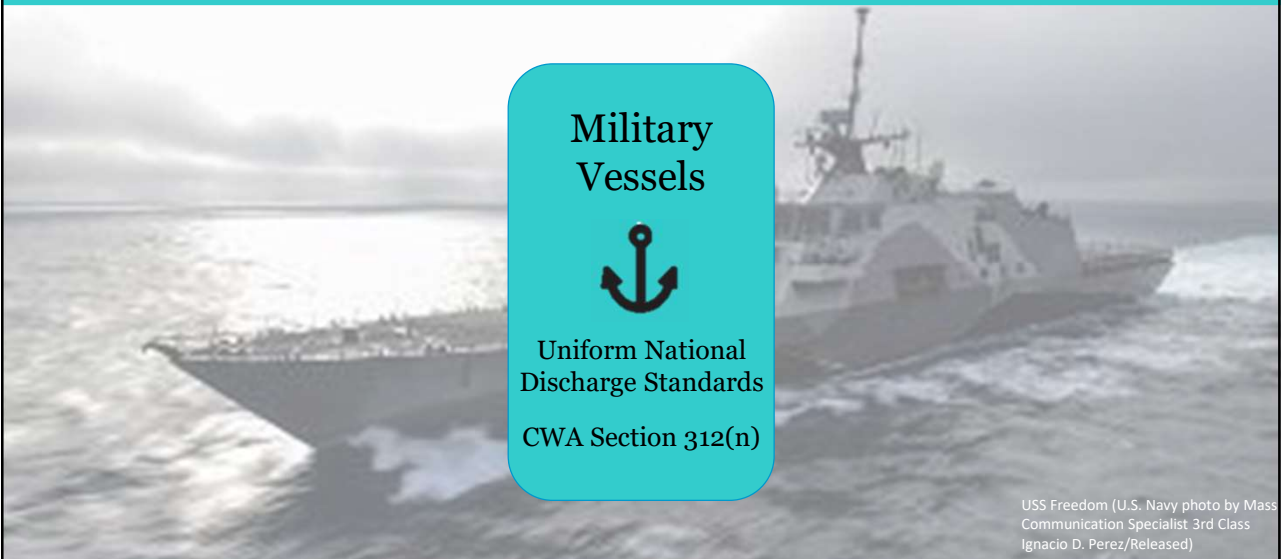


CWA Section 312(a-m)

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Military Vessels



Military Vessels



Uniform National Discharge Standards

CWA Section 312(n)

USS Freedom (U.S. Navy photo by Mass Communication Specialist 3rd Class Ignacio D. Perez/Released)

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Military Vessels



USS Carney (U.S. Navy photo by Mass Communication Specialist 1st Class John S. Smolinski/Released)

There are **over 6,000** vessels of the Armed Forces distributed among the U.S. Navy, Military Sealift Command, U.S. Coast Guard, U.S. Army, U.S. Marine Corps, and U.S. Air Force.

EPA regulates these vessels under Clean Water Act section 312(n) – the Uniform National Discharge Standards (UNDS).

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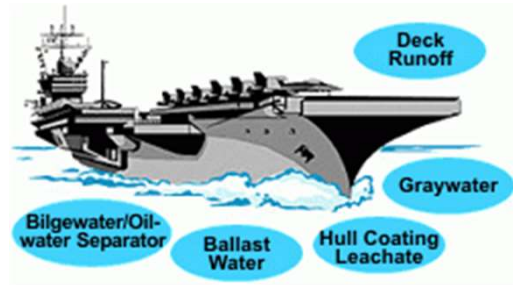
Conclusion



Military Vessels

EPA and the Department of Defense (DoD) have identified 25 incidental discharges from vessels of the Armed Forces that require control and are establishing standards through a series of rulemakings.

The performance standards being developed will reduce environmental impacts, stimulate the development of improved pollution control devices, and provide national consistency.



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Military Vessels

Of the 25 regulated discharges, 11 standards are already in effect, with 11 more expected to enter into force in the summer of 2021.

The three remaining discharges are clean ballast, compensated fuel ballast, and dirty ballast.



USS Henry M. Jackson (U.S. Navy photo by Mass Communication Specialist 2nd Class Amanda R. Gray/Released)

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Recreational Vessels

Recreational Vessels



Clean Boating Act

CWA Section 312(o)

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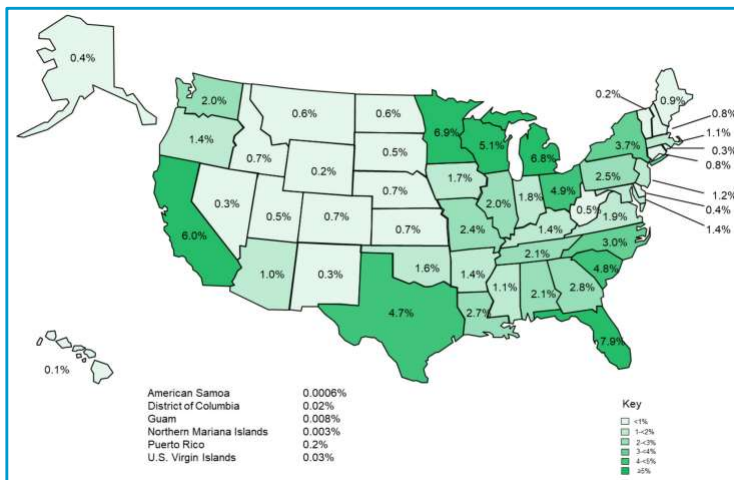
Conclusion



Recreational Vessels

There are nearly **12 million** recreational vessels registered in the United States.

Currently, discharges from recreational vessels are largely regulated at the state and local level.



Recreational vessel registration by state, from U.S. Coast Guard's "2019 Recreational Boating Statistics" Report.

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Recreational Vessels

The Clean Boating Act (2008) directs EPA to develop nationally-applicable management practices for discharges from recreational vessels.

Once established, state and local governments will be able to maintain or establish requirements that are more stringent, and vessel owners will need to comply with the most stringent requirement.



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Commercial Vessels

Commercial Vessels



Vessel Incidental Discharge Act

CWA Section 312(p)

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Commercial Vessels

EPA regulates a domestic and international commercial vessel population of approximately **82,000 vessels**.

Historically, many of these vessels were permitted to discharge under EPA's Vessel General Permit (VGP) established under Clean Water Act section 402.



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Commercial Vessels

The Vessel Incidental Discharge Act (VIDA), signed in December 2018, restructures how EPA and the U.S. Coast Guard (USCG) regulate incidental discharges, primarily from commercial vessels, into waters of the U.S. and the contiguous zone.

EPA is developing new national standards of performance for commercial vessel discharges, after which the USCG will develop corresponding implementing regulations.



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Commercial Vessels

Once the VIDA regulations are final, the new requirements will replace the current 2013 Vessel General Permit requirements¹ and the USCG ballast water requirements.²



¹ Clean Water Act section 402

² Nonindigenous Aquatic Nuisance Prevention and Control Act

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Commercial Vessels

ENGAGEMENT OPPORTUNITY

EPA is currently soliciting public comment on the Agency's proposed national standards of performance for VIDA.

For more information, visit EPA's website at <https://www.epa.gov/vessels-marinas-and-ports>, then click on "Commercial Vessels."



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Vessel Sewage



Vessel Sewage



CWA Section
312(a)-(m)

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Environmental Impacts of Vessel Sewage

Sewage introduces pathogens, nutrients, and other pollutants.

Impairs Water Quality

Sewage increases nutrient levels, decreases water clarity and oxygen levels, and alters pH.

This can impact the health and survival of many species.

Spreads Disease

Sewage introduces viruses and bacteria to waterbodies. Swimmers exposed to contaminated water can become ill.

People can also become sick from eating shellfish contaminated by sewage.

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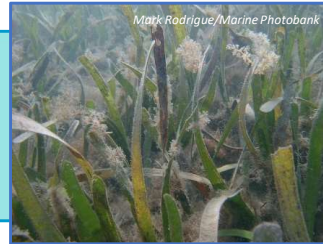
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Environmental Impacts of Vessel Sewage

Increased nutrients can lead to proliferation of macroalgae and epiphytes, which can shade out seagrass meadows (Duarte, 1995).



Connection between coral disease and sewage contamination on reefs (Sutherland et al., 2010).

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Clean Water Act Section 312

Untreated sewage discharges from vessels are prohibited in U.S. navigable waters.

All vessels with installed toilets must operate a USCG-certified **marine sanitation device (MSD)**, a device that treats or stores sewage.

EPA sets treatment standards for MSDs; USCG approves and certifies MSDs.



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MSD Performance Standards

Flow-through treatment systems

Type I

For vessels \leq 65 feet

Fecal coliform count
 \leq 1000/100 mL

No visible floating
solids

Type II

For any vessel

Fecal coliform count
 \leq 200/100 mL

Total suspended solids
 \leq 150 mg/L

Holding tank

Type III

For any vessel

Designed to prevent
overboard discharge of
any sewage

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No-Discharge Zones (NDZs)

NDZs are areas where the discharge of any sewage, treated or untreated, is prohibited. The discharge of any sewage is already prohibited in many freshwater bodies.

Any sewage generated in an NDZ must be retained in a holding tank to be discharged beyond three miles from shore or at a sewage pumpout facility.



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Types of NDZs

CWA section 312 allows states to apply for three types of NDZs

CWA §312(f)(3)

The state can prohibit all sewage discharges if the state determines the waterbody requires greater environmental protection and EPA determines that pumpout facilities are reasonably available.

CWA §312(f)(4)(A)

EPA prohibits all sewage discharges if it determines, upon application from a state, that the prohibition is necessary for the protection and enhancement of the waterbody.

CWA §312(f)(4)(B)

EPA prohibits all sewage discharges in a drinking water intake zone, upon application from a state.

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Funding – The Clean Vessel Act

The **Clean Vessel Act** grant program provides funds for the construction, renovation, operation, and maintenance of pumpout and waste reception facilities for recreational boaters, as well as for educational programs related to proper disposal of sewage.

- Administered by the U.S. Fish and Wildlife Service
- Nationally-competitive process
- States, the District of Columbia and the U.S. Insular Areas designated agencies may apply for grants
- Funds are provided annually from the Sport Fish Restoration and Boating Trust Fund
- In FY20, over \$19 million was allocated from the program

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For More Information

Visit our website at <https://www.epa.gov/vessels-marinas-and-ports>

<h3>Vessels, Marinas and Ports</h3>		
<h4>Vessel Discharges</h4>  <ul style="list-style-type: none"> • Seaways and no-discharge zones • Commercial Vessels • Recreational Vessels • Vessels of the Armed Forces 	<h4>Marine Engines</h4>  <ul style="list-style-type: none"> • Overview of emissions regulations • Certification and compliance • Certification data 	<h4>News and Updates</h4> <p>On December 4, 2020, the "Vessel Incident Discharge Act" or "VIDA" was signed into law, restructuring the way the EPA and U.S. Coast Guard (USCG) regulate incident discharges from commercial vessels. VIDA requires EPA and USCG to develop processes of performance and implementing regulations, respectively, for these discharges. EPA expects these new regulations to be effective in late 2022. In the interim, the existing EPA and USCG best available water regulation remain in full force and effect. Visit the commercial vessels page to learn more.</p>
<h4>Marinas</h4>  <ul style="list-style-type: none"> • Nonpoint source pollution resources • Ball waterborne and control 	<h4>Ports</h4>  <ul style="list-style-type: none"> • Ports Initiative • State fund • Grant-funded port projects • Disposal material 	
<h4>International</h4>  <ul style="list-style-type: none"> • International collaboration and Emission Control Areas • Air pollution limits under MARPOL Annex VI 	<h4>Cross-Cutting Issues</h4>  <ul style="list-style-type: none"> • Aquatic nuisance species • Coastal ship discharges and studies • Grants for nonpoint source pollution • Biomonitoring • Vessel disposal 	

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Thank you!



Connecticut Department of
Energy and Environmental Protection

Connecticut Clean Vessel Act Program and Long Island Sound No Discharge Area

October 2020
Kate Hughes Brown
BIG/CVA Program Coordinator
DEEP Boating Division



Connecticut Department of Energy and Environmental Protection

Connecticut's No Discharge Area



Connecticut Department of Energy and Environmental Protection




HOW?

- Creating Cultural Change is Key to Success
- Outreach and Education early-on in Process
- Boaters Demand Clean Water/Pumpout Availability
- Becomes Self-Policing (by Boaters and Marina/Yacht Club Mangers and Owners)

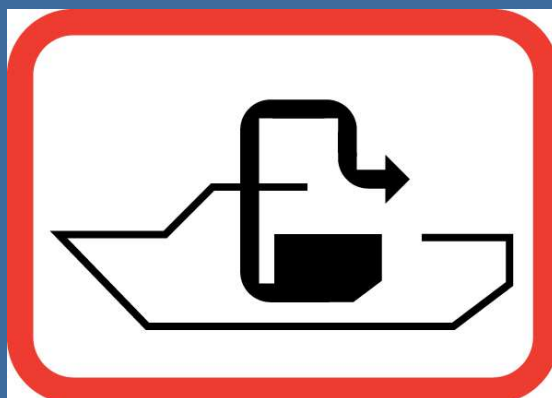


Connecticut Department of Energy and Environmental Protection

- 
- CVA Grants Started in 1993
 - Installed more than 100 pumpout stations
 - 24 Pumpout Vessels
 - 23 Dump Stations
 - Pumpout Vessel on Candlewood Lake



Connecticut Department of Energy and Environmental Protection



Installation of Infrastructure



Connecticut Department of Energy and Environmental Protection



Outreach and Education



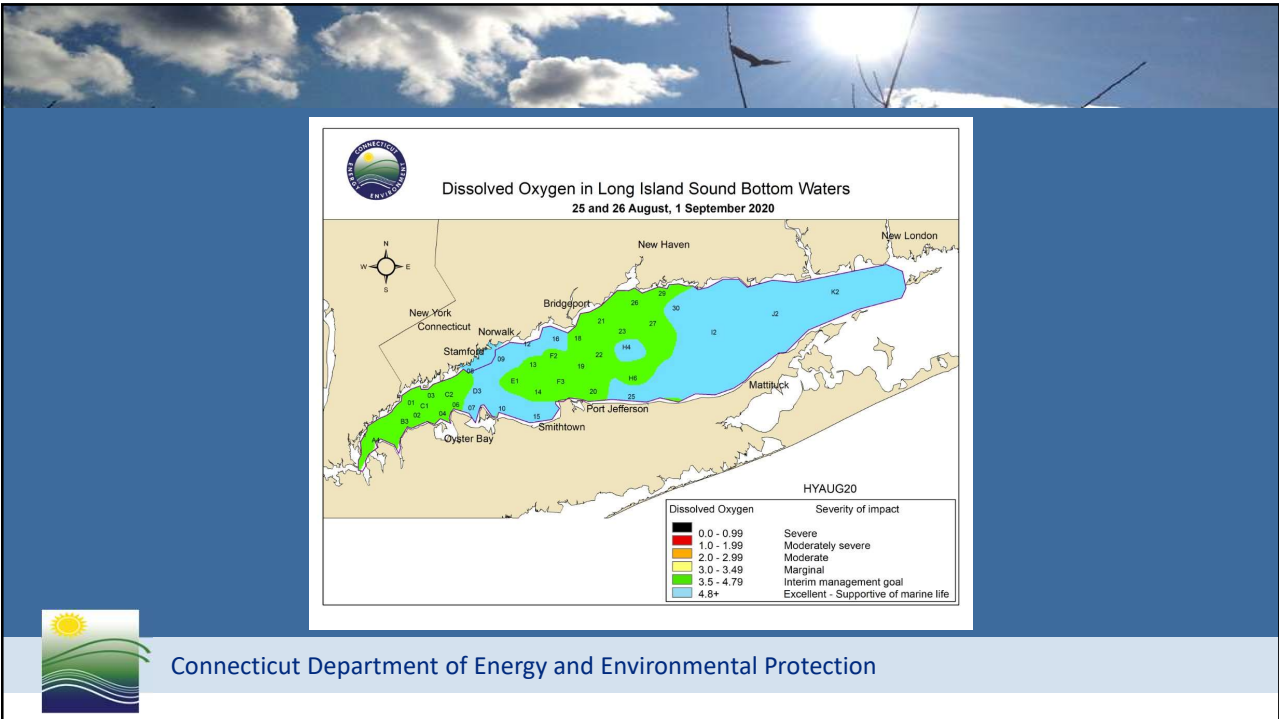
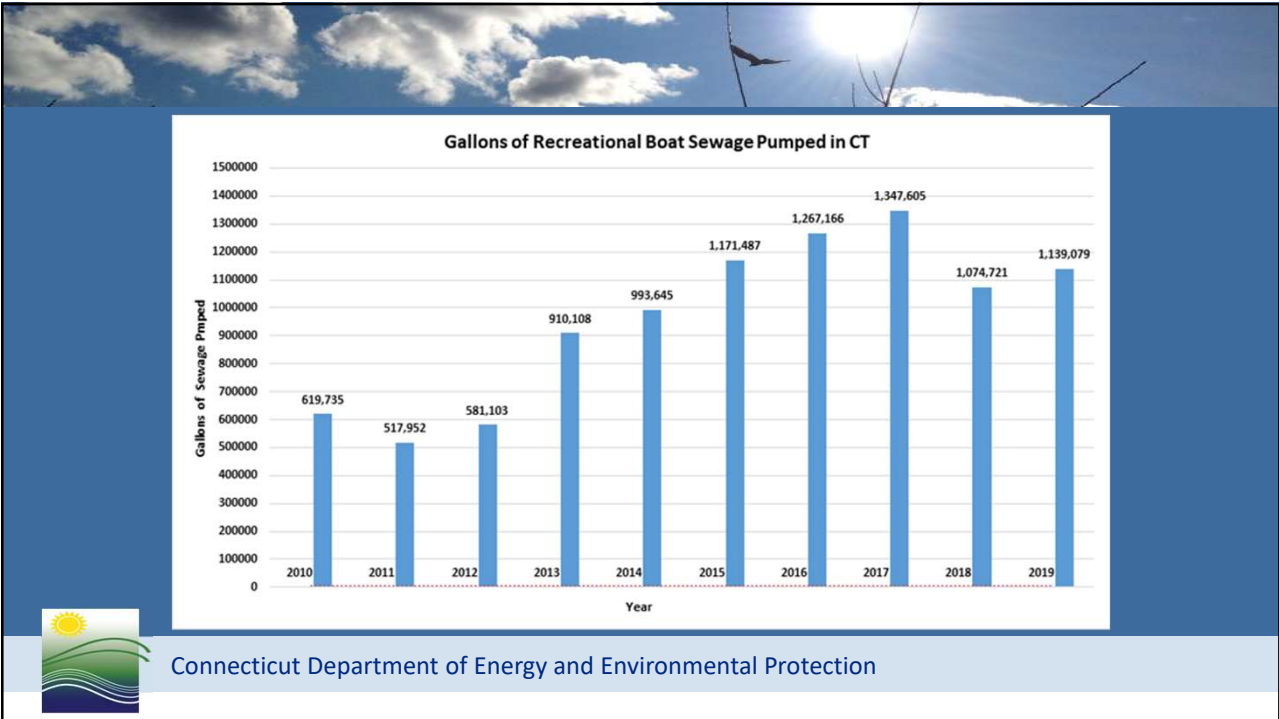
Connecticut Department of Energy and Environmental Protection



FREE PUMPOUTS!!!



Connecticut Department of Energy and Environmental Protection





April 1, 2019 – After 35 years, the State of Connecticut reopens recreational shellfish beds in Clinton.



Connecticut Department of Energy and Environmental Protection



Solar-Electric Pumpout Vessels



Connecticut Department of Energy and Environmental Protection

Questions?

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860-549-2253
<https://portal.ct.gov/DEEP/Boating>



Connecticut Department of Energy and Environmental Protection

Partnering with Oregon's Recreational Boating Community on Waste Management

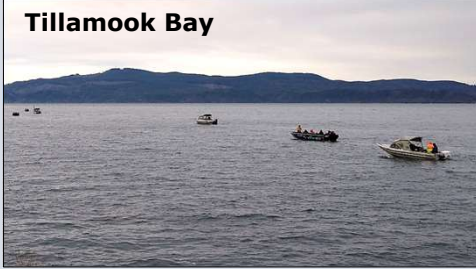
Jenny East
Outreach Coordinator
Oregon Sea Grant

November 2020



Oregon's Coastal and Inland Waterways

Tillamook Bay



Lake Billy Chinook



Willamette River



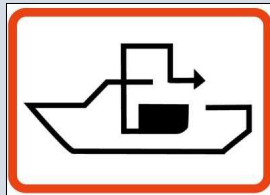
Columbia River



Clean Vessel Act Grant Program Partnerships

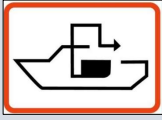


USFWS
Division of Wildlife and
Sport Fish Restoration



State Agency

- Ports
- State, county, and city parks and recreation
- Federal agencies (for example: Forest Service)
- Tribal nations
- Private marinas



Waste Disposal Facilities

Pumpout Station



Boat holding tanks



Dump Station



Portable toilets

48 pumpouts are free for boater use

60 portable toilet dump stations (Free and \$)

No endorsement of products shown is granted or implied by USFWS, OSMB, or OSU.

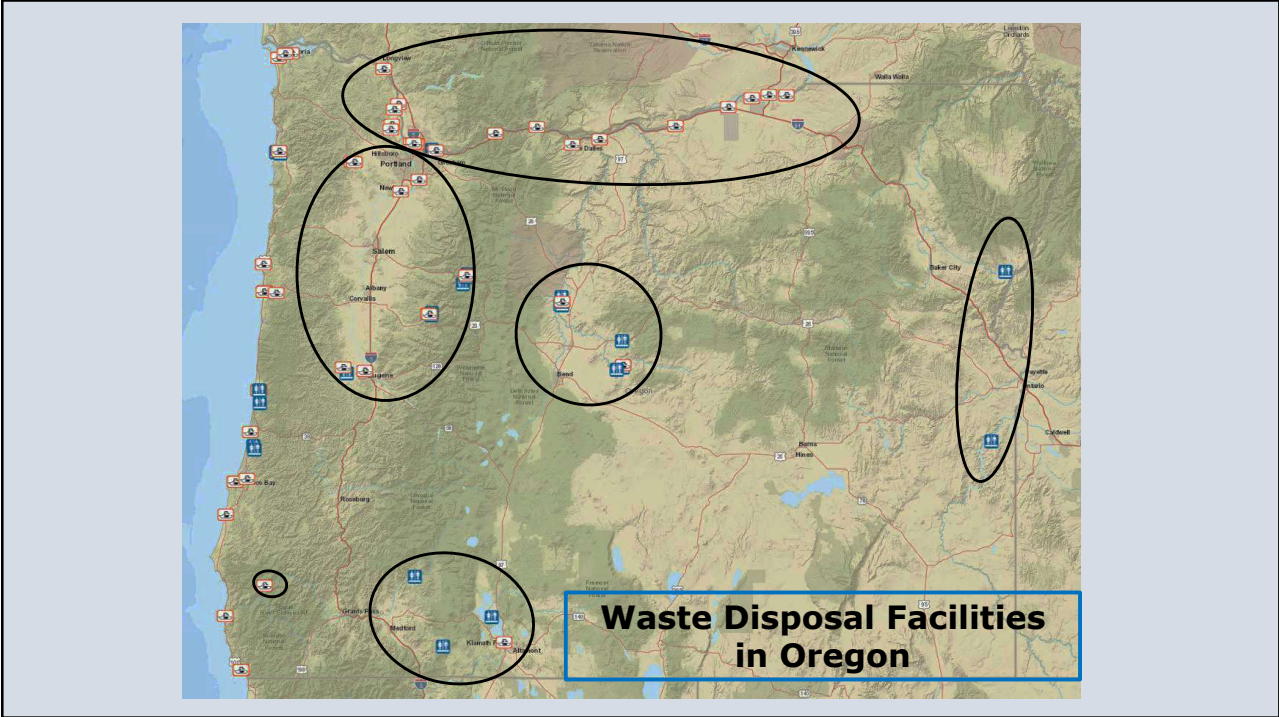
Oregon's Floating Restrooms



24 floating restrooms

Each unit holds up to 1000 gallons of sewage

Anchored in coastal bays, lakes, rivers

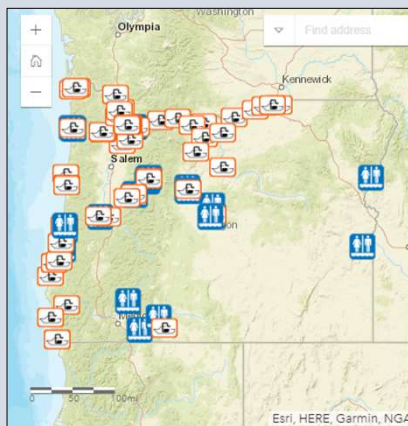


Talking with boaters about human waste disposal

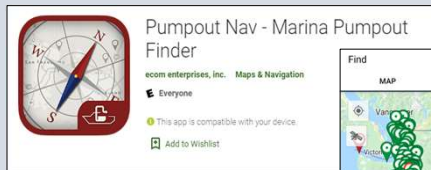


Positive, proactive, and focused on the desired behavior

Tools to find facilities



BoatOregon.com
State Agency Website



Signage at
launch sites



Pumpout NAV
Mobile App

Pollution Prevention is a Team Effort



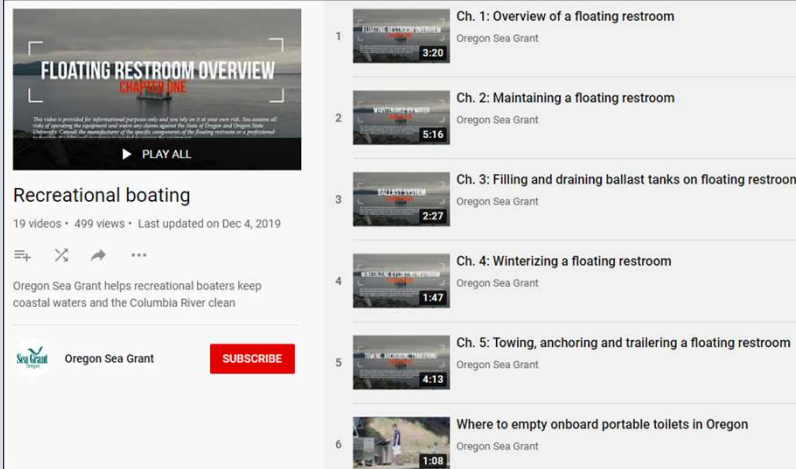
Working with Staff at Marinas



Purpose of the site visits:

- **Hear feedback about boater use**
- **Learn about issues with equipment performance**
- **Assist staff with maintenance training**

Maintenance Training Videos Available Online



FLOATING RESTROOM OVERVIEW
This video is provided for informational purposes only and we help you at your own risk. See owners of boat of operating the equipment and make any decisions against the laws of Oregon and Oregon State University. Aerial and reproduction of this video is prohibited. For floating restrooms and equipment.

PLAY ALL

Recreational boating
19 videos • 499 views • Last updated on Dec 4, 2019

Oregon Sea Grant helps recreational boaters keep coastal waters and the Columbia River clean

Subscribe

- 1 **Ch. 1: Overview of a floating restroom**
Oregon Sea Grant 3:20
- 2 **Ch. 2: Maintaining a floating restroom**
Oregon Sea Grant 5:16
- 3 **Ch. 3: Filling and draining ballast tanks on floating restroom**
Oregon Sea Grant 2:27
- 4 **Ch. 4: Winterizing a floating restroom**
Oregon Sea Grant 1:47
- 5 **Ch. 5: Towing, anchoring and trailering a floating restroom**
Oregon Sea Grant 4:13
- 6 **Where to empty onboard portable toilets in Oregon**
Oregon Sea Grant 1:08

**Oregon Sea Grant
YouTube Channel**

**Recreational Boating
Playlist**

Clean Vessel Act (CVA) Efforts in Your State?





Learn more at: BoatOregon.com

Seagrant.oregonstate.edu

Questions?

Speaker Contact Information

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Participation Certificate

- If you would like to obtain a participation certificate you can access the PDF in the **Handouts** section of your control panel.
- You can type each of the attendees names into the PDF and print the certificates.

Watershed Academy Webcasts

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Thank You!