



DEPARTMENT OF
ECOLOGY
State of Washington

Concise Explanatory Statement
Chapter 173-228 WAC
Vessel Sewage No Discharge Zones

Summary of rulemaking and response to comments

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Publication and Contact Information

This report is available on the Department of Ecology's website at <https://fortress.wa.gov/ecy/publications/SummaryPages/1810010.html>

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Concise Explanatory Statement

*Chapter 173-228 WAC
Vessel Sewage No Discharge Zones*

Water Quality Program
Washington State Department of Ecology
Olympia, Washington

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Introduction

The purpose of a Concise Explanatory Statement is to:

- Meet the Administrative Procedure Act (APA) requirements for agencies to prepare a Concise Explanatory Statement (RCW 34.05.325).
- Provide reasons for adopting the rule.
- Describe any differences between the proposed rule and the adopted rule.
- Provide Ecology's response to public comments.

This Concise Explanatory Statement provides information on The Washington State Department of Ecology's (Ecology) rule adoption for:

Title: Vessel Sewage No Discharge Zones

WAC Chapter(s): 173-228

Adopted date: April 9, 2018

Effective date: May 10, 2018

The Concise Explanatory Statement Appendices B, C, and D, which provide the names of individuals who submitted comments on the proposed rule, either individually or as part of a bulk comment submission, are available on Ecology's website at <https://fortress.wa.gov/ecy/publications/SummaryPages/1810011.html>.

To see more information related to this rulemaking or other Ecology rulemakings please visit our website: <https://ecology.wa.gov/About-us/How-we-operate/Laws-rules-rulemaking>.

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Reasons for Adopting the Rule

The Washington State Department of Ecology (Ecology) is adopting a new rule, “Vessel Sewage No Discharge Zones” (Chapter 173-228 WAC), to establish a Puget Sound No Discharge Zone. Ecology adopted this rule under the statutory authorities of RCW 90.48.030, 90.48.035, 90.48.260, 33 USC § 1322.

The Puget Sound No Discharge Zone for Vessel Sewage covers approximately 2,300 square miles of marine waters in Washington State inward from the line between New Dungeness Lighthouse and the Discovery Island Lighthouse to the Canadian border, and fresh waters of Lake Washington, Lake Union, and connecting waters between and to Puget Sound.

The No Discharge Zone prohibits the release of sewage (black water) from vessels, whether treated or not. This follows the 5-year stakeholder process, the petition submittal to the Environmental Protection Agency (EPA), and the EPA’s final affirmative determination that adequate pumpout facilities for the safe and sanitary removal and treatment of sewage from vessels are reasonably available for the waters of Puget Sound.

Puget Sound is a unique, sensitive water body. Its limited tidal flushing makes it prone to poor water quality conditions. Federal law currently allows vessels to discharge treated sewage within three miles of shore.

Vessel sewage discharges have a high potential impact due to proximity, often directly over or near shellfish and other protected resources, such as swimming beaches. Shellfish beds are vulnerable to pathogen pollution (which comes from sewage), which threatens an important shellfish food supply in Washington State. Due to this risk, we have closed approximately 3,000 acres of shellfish harvesting areas that are in close proximity to marinas, we anticipate that under these rules the status of these shellfish harvesting restrictions would be reevaluated.

Our state has made large investments in sewage treatment, stormwater management, and in the prevention of industrial pollution and agricultural runoff. Making Puget Sound a No Discharge Zone for vessel sewage addresses a missing piece in our strategy to clean up and restore Puget Sound. It is a near-term action in the Puget Sound Action Agenda, and is a recommendation of the Washington Shellfish Initiative.

On February 21, 2017, the EPA made a final affirmative determination that the Puget Sound region, as described above, has adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels reasonably available. The EPA said the State may finalize its proposed designation.

Most of Puget Sound’s estimated 156,600 recreational and commercial vessels with on-board toilets have sewage holding tanks and use pump-out stations, or wait to discharge more than three miles from shore or at sea. Roughly 2,200, or 2 percent, have limited treatment systems and would need to add holding tanks. The rule clarifies requirements necessary to implement the No Discharge Zone determination by the EPA, which applies to all recreational and commercial vessels.

Previous work in preparation for the petition to the EPA led to including a delayed implementation of five years for some commercial vessels such as tugs, fishing, research, and small overnight passenger cruise vessels to add sewage holding tanks.

Differences between the Proposed Rule and Adopted Rule

RCW 34.05.325(6)(a)(ii) requires Ecology to describe the differences between the text of the proposed rule as published in the Washington State Register and the text of the rule as adopted, other than editing changes, stating the reasons for the differences.

There are some differences between the proposed rule filed on October 4, 2017 and the adopted rule filed on April 9, 2018. Ecology made these changes for all, or some, of the following reasons:

- In response to comments we received.
- To ensure clarity and consistency.
- To meet the intent of the authorizing statute.

The following content describes the changes and Ecology's reasons for making them. If no changes were made to a section, that section is not included below.

WAC 173-228-040 Vessel sewage management in no discharge zones.

- Clarified Code of Federal Regulations (C.F.R.) reference for vessels with installed and operable toilets.
- Specified which subsection of 33 C.F.R. that pertains to this rule.

Below are the edits to the rule language. The strikethrough text was removed from the language, and the underlined text was added to the language.

WAC 173-228-040 Vessel sewage management in no discharge zones.

Vessel sewage must be managed in no discharge zones.

(1) Vessels with installed and operable toilets must ~~have a Type III marine sanitation device to allow for complete and adequate sewage holding capacity~~ be in compliance with 40 C.F.R Part 140 with the ability to hold or stop discharges of sewage while in a no discharge zone.

(2) Vessels with marine sanitation devices must secure the devices to prohibit the discharge of sewage per 33 C.F.R. 159.7 (b) while in no discharge zone waters.

Comments on Proposed Rule

Ecology accepted comments between October 4 and November 30, 2017. This section provides excerpts of comments that we received during the public comment period and our responses. (RCW 34.05.325(6)(a)(iii))

Ecology has summarized and edited some of the comments in this section for clarity. You can see the original content of the comments we received here:

<http://ws.ecology.commentinput.com/?id=EQHJt>.

Comment Topics

With the exception of the form letter comments, detailed in Table 5, the comments were divided into topic categories. Comments and responses were grouped together and organized by topic.

Topic List

- Address all sources of pollution including vessel sewage
- Address fish farm waste
- Adequate pumpouts
- Already illegal
- Certificate of need not valid
- Concerns not heard
- Delayed implementation is too long
- Draft Implementation Plan comments
- Ecology's process was thorough
- Economic Analysis biased high commercial costs
- Effect on shipping and commerce concerns
- Enforce the No Discharge Zone
- Exempt public vessels
- Financially prohibitive retrofits and costs
- Five-year delay for recreational boats
- Geographical scope broader than territorial seas
- Grandfather certain vessels
- Inadequate pumpouts
- Include Strait of Juan de Fuca and other waters
- Industry committed safety/environment
- Industry vital
- Liability of delayed implementation
- Misinformation from industry
- Modeling refuted

- MSDs insufficient
- MSDs performance verified
- MSDs sufficient
- No Discharge Zone only for vessels with holding
- Need “vessel” and “vessels of the armed forces” definitions
- Negative economic effect
- Number of vessels not correct
- Opposes proposed rule
- Other
- Other pollutants in sewage concern
- Other pollution sources the concern
- Overbroad regulations
- Pathogen risk – shellfish/beach protection
- Protect whales, fish and habitat
- Puget Sound – not a waterway
- Puget Sound a treasure – ecological economically culturally
- Pumpout locations inadequate
- Pumpout logistical challenges
- Requires greater protection – Puget Sound
- Retrofit requirement not allowed
- Rule unconstitutional
- Science not shown/proven
- Shellfish beds need upgrade
- Small amounts pollution no harm
- Stakeholder work for consistency
- Study infrastructure
- Study treated sewage
- Supports proposed rule
- Targeted No Discharge Zone instead
- Vessel discharges directly to sensitive resources
- Vessels equipped to comply
- Vessels not equipped for holding
- Victoria sewage a problem
- Whole Puget Sound not targeted
- Wastewater Treatment Plant impact not addressed

Commenter Index

Table 1, below, lists the names of organizations or individuals who submitted comments on the rule proposal, and where you can find Ecology’s response to the comment(s) by associated comment numbers.

A large number of comments were submitted by three different form letters. The commenter indices for those form letters are included in Chapter 173-228 WAC Concise Explanatory Statement Appendices B, C, and D (Publication no. 18-10-011).

Individual Commenter Index

Table 1: Individual Commenter Index

Commenter Name	Comment Topic	Associated Comment Numbers
Adams, Craig	Other pollution sources the concern	I-9-1
Anderson, Carrie	Supports proposed rule	I-177-1
Anderson, Scott	Other	I-667-5
	Inadequate pumpouts	I-667-3
	Negative economic effect	I-667-4
	MSDs sufficient	I-667-2
Antrim, Heidi	Supports proposed rule	I-1392-1
Attemann, Rein	Supports proposed rule	I-2551-2
	Puget Sound a treasure – ecologically, economically, culturally	I-2551-3
	Adequate pumpouts	I-2551-8
	Vessels equipped to comply	I-2551-6
	Pathogen risk – shellfish/beach protection	I-2551-4
	Address all sources of pollution including vessel sewage	I-2551-5
	Delayed implementation is too long	I-2551-7
	MSDs insufficient	I-2551-9
Attemann, Rein	Adequate pumpouts	I-2561-5
	Ecology’s process was thorough	I-2561-2

Commenter Name	Comment Topic	Associated Comment Numbers
	Address all sources of pollution including vessel sewage	I-2561-3
	Requires greater protection – Puget Sound	I-2561-4
Bailey, Stephen	Supports proposed rule	I-2454-2
Blitzer, Mark	Puget Sound a treasure – ecologically, economically, culturally	I-864-2
	Adequate pumpouts	I-864-4
	Pathogen risk – shellfish/beach protection	I-864-5
	Address all sources of pollution including vessel sewage	I-864-3
	Protect whales, fish and habitat	I-864-6
Blome, Michael	Supports proposed rule	I-1230-1
Brown, Richard	MSDs sufficient	I-2420-2
	Targeted No Discharge Zone instead	I-2420-3
Byrnes, Coleman	Supports proposed rule	I-4-1
Chang, Terrill	Protect whales, fish and habitat	I-2351-3
	Industry vital	I-2351-2
Clampitt, Brian	Opposes proposed rule	I-18-2
	Other pollution sources the concern	I-18-3
Clark, Rufus W.	Small amounts pollution no harm	I-3-1
Clausen, Robert	Inadequate pumpouts	I-2563-2
	Five-year delay for recreational boats	I-2563-3
Crampton, Susan	Supports proposed rule	I-2157-1
Dal Porto, Danna	Address fish farm waste	I-16-2
DeFord-Eden, Carolyn	Other	I-1356-2
Dobson, Paul	Protect whales, fish and habitat	I-1700-1
Draper, Charles	Opposes proposed rule	I-2110-6
	Small amounts pollution no harm	I-2110-4
	Negative economic effect	I-2110-5
	Already illegal	I-2110-2
	Other pollution sources the concern	I-2110-3

Commenter Name	Comment Topic	Associated Comment Numbers
Eide, Greg	Supports proposed rule	I-20-1
Ellsworth, Margaret	Delayed implementation is too long	I-2559-2
Faccia, Maureen	Supports proposed rule	I-5-2
Flaten, Captain Mark D.	Other pollution sources the concern	I-2-1
Floumer, Kate	Supports proposed rule	I-2558-1
Frank, Joanne	Supports proposed rule	I-1465-1
Gundersen, Ken	Already illegal	I-10-1
Haimes, William	Vessels not equipped for holding	I-669-4
	Inadequate pumpouts	I-669-3
	Other pollution sources the concern	I-669-6
	Targeted No Discharge Zone instead	I-669-5
	Overbroad regulations	I-669-2
Hampton, James	Supports proposed rule	I-22-1
Harris, Mark	Supports proposed rule	I-1955-3
	Address all sources of pollution including vessel sewage	I-1955-2
Heaton, Jessica	Supports proposed rule	I-23-1
Hiatt, Kathleen	Requires greater protection – Puget Sound	I-2553-1
Hillis, Jerry	Inadequate pumpouts	I-2249-4
	Inadequate pumpouts	I-2249-3
	Small amounts pollution no harm	I-2249-2
Hulsizer, Elsie	Inadequate pumpouts	I-1819-2
	Pumpout locations inadequate	I-1819-3
	Supports proposed rule	I-1819-5
	Study pumpout infrastructure	I-1819-6
	Five-year delay for recreational boats	I-1819-7
	Draft Implementation Plan comments	I-1819-4
Jenson, Robert	Puget Sound a treasure – ecologically, economically, culturally	I-2564-2
Johnson, Nancy	Supports proposed rule	I-6-1

Commenter Name	Comment Topic	Associated Comment Numbers
Joyce, Jerry	Vessels equipped to comply	I-2552-3
	Address all sources of pollution including vessel sewage	I-2552-4
	Requires greater protection – Puget Sound	I-2552-2
Ketcheson, Gary	Address all sources of pollution including vessel sewage	I-2495-2
Kirchner, Esther	Pathogen risk – shellfish/beach protection	I-19-1
Lanti, Laura	Supports proposed rule	I-670-1
Leviten, Alisha	Supports proposed rule	I-2028-2
Lewis, Joyce	Supports proposed rule	I-184-1
Long, Charles	Opposes proposed rule	I-11-2
	Financially prohibitive retrofits and costs	I-11-3
	Pumpout locations inadequate	I-11-4
	Other pollution sources the concern	I-11-5
Lutz, Jennifer	Puget Sound a treasure – ecologically, economically, culturally	I-21-2
	Protect whales, fish and habitat	I-21-3
Lytle, Luci	Other	I-728-2
Mager, Melissa	Other	I-2554-1
Majsterek, Benjamin	Supports proposed rule	I-24-1
Mak, Hans	Stakeholder work for consistency	I-13-2
Mason, Donna	Supports proposed rule	I-7-1
McCallum, Jon Martin	Supports proposed rule	I-666-1
McCaughey, David	Supports proposed rule	I-2556-1
McLaughlin, Kate	Supports proposed rule	I-311-1
Metcalf, James	MSDs sufficient	I-2183-2
	Targeted No Discharge Zone instead	I-2183-3
Morgan, Dawn	Other	I-2352-2
Morris, Arvia	Supports proposed rule	I-1804-2
Murphy, Judy	Supports proposed rule	I-1406-2
Paauw, Elric	Supports proposed rule	I-1608-1

Commenter Name	Comment Topic	Associated Comment Numbers
Patenaude, Jill	Supports proposed rule	I-2557-2
	Adequate pumpouts	I-2557-4
	Delayed implementation is too long	I-2557-3
Pickett, Paul	Supports proposed rule	I-662-2
	Grandfather certain vessels	I-662-5
	Small amounts pollution no harm	I-662-4
	Targeted No Discharge Zone instead	I-662-6
	Need “vessel” and “vessels of the armed forces” definitions	I-662-3
Porter, Richard	Supports proposed rule	I-12-2
	Delayed implementation is too long	I-12-3
	Industry vital	I-12-5
	Enforce the No Discharge Zone	I-12-4
Ray, Elizabeth	Inadequate pumpouts	I-8-5
	Small amounts pollution no harm	I-8-3
	Negative economic effect	I-8-2
	Other pollution sources the concern	I-8-4
	Five-year delay for recreational boats	I-8-6
Richards, Christian	Supports proposed rule	I-167-1
Roper, Mathew	Supports proposed rule	I-15-1
Roussel, Lee	Grandfather certain vessels	I-2282-6
	Inadequate pumpouts	I-2282-2
	Pumpout logistical challenges	I-2282-4
	MSDs sufficient	I-2282-5
	Wastewater Treatment Plant impact not addressed	I-2282-3
Salerno, Karen	Supports proposed rule	I-1595-2
Schroeder, Dr. J. Pete	Protect whales, fish and habitat	I-2510-1
Sennett, Mike	Include the Strait of Juan de Fuca and other waters	I-1970-3
	Other	I-1970-2

Commenter Name	Comment Topic	Associated Comment Numbers
Sinclair, Leslie	Puget Sound a treasure – ecologically, economically, culturally	I-853-3
Smith, Peter	Supports proposed rule	I-25-1
Soren, Joanna	Supports proposed rule	I-1063-1
Spearman, Jay	Opposes proposed rule	I-1020-5
	Ecology’s process was thorough	I-1020-2
	Other pollution sources the concern	I-1020-4
	Overbroad regulations	I-1020-3
Swain, Mary Ann	Supports proposed rule	I-14-1
Teubner, Patty	Supports proposed rule	I-349-1
Uyenishi, Steve	Supports proposed rule	I-466-1
Valdez, Lisa	Address all sources of pollution including vessel sewage	I-17-2
Vandenberg, Nancy	Supports proposed rule	I-581-1
Vogler, Marilyn	Supports proposed rule	I-2333-2
Wade, Bruce	Pathogen risk – shellfish/beach protection	I-668-1
Weber, Ileen	Other	I-1259-2
Webster, Frederic	Supports proposed rule	I-75-1
Wilke, Chris	Supports proposed rule	I-2555-9
	Adequate pumpouts	I-2555-4
	Vessels equipped to comply	I-2555-6
	Pathogen risk – shellfish/beach protection	I-2555-5
	Address all sources of pollution including vessel sewage	I-2555-2
	Protect whales, fish and habitat	I-2555-3
	MSDs insufficient	I-2555-8
	Economic Analysis biased high commercial costs	I-2555-7
Wille, Stephen	Include the Strait of Juan de Fuca and other waters	I-1183-2
Willis, Peggy	Supports proposed rule	I-2560-2
	Puget Sound a treasure – ecologically, economically, culturally	I-2560-5

Commenter Name	Comment Topic	Associated Comment Numbers
	Adequate pumpouts	I-2560-4
	Vessels equipped to comply	I-2560-3
Wilson, Verner	Supports proposed rule	I-2565-2
	Protect whales, fish and habitat	I-2565-3
Young, Alex	Include the Strait of Juan de Fuca and other waters	I-1-2

Agency Commenter Index

Table 2: Agency Commenter Index

Agency Affiliation	Commenter Name	Comment Topic	Associated Comment Numbers
Kitsap Public Health District	Zimny, James	Supports proposed rule	A-1-2
		Pathogen risk – shellfish/beach protection	A-1-3
United States Coast Guard	Throop, David RDML	Supports proposed rule	A-4-2
		Liability of delayed implementation	A-4-7
		Exempt public vessels	A-4-3
		Geographical scope broader than territorial seas	A-4-4
		Retrofit requirement not allowed	A-4-5
		Overbroad regulations	A-4-6
WA State Board of Health	Grellner, Keith	Supports proposed rule	A-3-2
		Pathogen risk – shellfish/beach protection	A-3-3
		Stakeholder work for consistency	A-3-4
Washington Dept. of Natural Resources	Palazzi, David	Supports proposed rule	A-2-3
		Include the Strait of Juan de Fuca and other waters	A-2-7
		Vessels equipped to comply	A-2-5
		Requires greater protection – Puget Sound	A-2-4
		Draft Implementation Plan comments	A-2-6

Agency Affiliation	Commenter Name	Comment Topic	Associated Comment Numbers
Department of the Navy	Lazo, Terilynn	Vessels not equipped for holding	O-38-2
		Need “vessel” and “vessels of the armed forces” definitions	O-38-3
Ecosystem Coordination Board	Peter-Contesse, Tristan	Supports proposed rule	O-9-2
		Adequate pumpouts	O-9-4
		Pathogen risk – shellfish/beach protection	O-9-3
Kitsap County Board of Commissioners	Girrado, Charlotte	Supports proposed rule	O-39-2
		Puget Sound a treasure – ecologically, economically, culturally	O-39-3
		Requires greater protection – Puget Sound	O-39-4
Washington State Department of Health	Wiesman, John	Supports proposed rule	O-5-2
		Ecology’s process was thorough	O-5-6
		Pathogen risk – shellfish/beach protection	O-5-3
		Industry vital	O-5-4
		Shellfish beds need upgrade	O-5-5

Organization/Business Commenter Index

Table 3: Organization/Business Commenter Index

Organization/Business Affiliation	Commenter Name	Comment Topic	Associated Comment Numbers
Alki Kayak Tours	Whittaker, Kara	Vessels equipped to comply	O-13-4
		Ecology’s process was thorough	O-13-5
		Requires greater protection – Puget Sound	O-13-3
		Industry vital	O-13-2
Alliance for a Healthy South Sound	McManus, Elizabeth	Supports proposed rule	O-21-2
		Puget Sound a treasure – ecologically, economically, culturally	O-21-3

Organization/Business Affiliation	Commenter Name	Comment Topic	Associated Comment Numbers
		Inadequate pumpouts	O-21-4
		Pumpout locations inadequate	O-21-5
		Study pumpout infrastructure	O-21-6
American Cruise Lines, Inc.	Sarrafian, Roy	Science not shown/proven	O-23-14
		Grandfather certain vessels	O-23-16
		Vessels not equipped for holding	O-23-7
		Financially prohibitive retrofits and costs	O-23-10
		Inadequate pumpouts	O-23-6
		Pumpout locations inadequate	O-23-5
		Pumpout logistical challenges	O-23-8
		Industry vital	O-23-2
		Industry committed safety/environment	O-23-3
		Inadequate pumpouts	O-23-15
		Financially prohibitive retrofits and costs	O-23-13
		Already illegal	O-23-12
		MSDs sufficient	O-23-4
		Financially prohibitive retrofits and costs	O-23-9
Wastewater Treatment Plant impact not addressed	O-23-11		
Boyer Towing, Inc.	Halvorsen, M. C.	Opposes proposed rule	OTH-1-4
		Science not shown/proven	OTH-1-8
		Rule Unconstitutional	OTH-1-5
		Victoria sewage a problem	OTH-1-3
		Effect on shipping and commerce concerns	OTH-1-6
Center for Biological Diversity	Kilduff, Catherine	Supports proposed rule	O-36-3
		Adequate pumpouts	O-36-4
		Protect whales, fish and habitat	O-36-2

Organization/Business Affiliation	Commenter Name	Comment Topic	Associated Comment Numbers
Cherry Point Aquatic Reserve Citizens Stewardship Committee	Clarkin, Kim	Supports proposed rule	O-22-2
		Study pumpout infrastructure	O-22-4
		Other pollutants in sewage concern	O-22-5
Citizens for a Healthy Bay	Gogin, Karen	Supports proposed rule	O-18-2
		Puget Sound a treasure – ecologically, economically, culturally	O-18-4
		Vessels equipped to comply	O-18-5
		Pathogen risk – shellfish/beach protection	O-18-7
		Address all sources of pollution including vessel sewage	O-18-6
		Delayed implementation is too long	O-18-8
		Requires greater protection – Puget Sound	O-18-3
		Enforce the No Discharge Zone	O-18-9
		Study pumpout infrastructure	O-18-10
Defenders of Wildlife	Krehbiel, Robb	Supports proposed rule	O-10-2
		Puget Sound a treasure – ecologically, economically, culturally	O-10-3
		Vessels equipped to comply	O-10-5
		Protect whales, fish and habitat	O-10-4
Defenders of Wildlife	Krehbiel, Robb	Puget Sound a treasure – ecologically, economically, culturally	I-2562-3
		Adequate pumpouts	I-2562-4
		Protect whales, fish and habitat	I-2562-2
Draper Machine Works Inc.	Draper Jr., Charles	Negative economic effect	O-15-2
		Already illegal	O-15-5
		MSDs sufficient	O-15-3

Organization/Business Affiliation	Commenter Name	Comment Topic	Associated Comment Numbers
		Other pollution sources the concern	O-15-6
		Puget Sound – not a waterway	O-15-4
Drayton Harbor Oyster Company	Seymour, Stephen	Pathogen risk – shellfish/beach protection	O-19-3
		Industry vital	O-19-2
Fidalgo Bay Aquatic Reserve Citizen Stewardship Committee	Haase, Peter	Supports proposed rule	O-7-2
		Vessel discharges directly to sensitive resources	O-7-3
Foss Maritime Company	Hayman, Susan	Science not shown/proven	O-12-6
		Financially prohibitive retrofits and costs	O-12-4
		Inadequate pumpouts	O-12-5
		Industry vital	O-12-2
		Concerns not heard	O-12-7
		MSDs sufficient	O-12-3
		Liability of delayed implementation	O-12-8
Friends of the Earth	Keever, Marcie	Form Letter	O-31, O-32, O-33, O-34
		Other	O-31-2, O-31-4, O-31-6, O-31-14, O-31-16
		Supports proposed rule	O-31-3, O-31-7, O-31-8, O-31-11, O-31-12
		Vessel discharges directly to sensitive resources	O-31-5
		Protect whales, fish and habitat	O-31-15
		Requires greater protection – Puget Sound	O-31-13
		Enforce the No Discharge Zone	O-31-9, O-31-10
Friends of the Earth	Keever, Marcie	Other	O-32-2

Organization/Business Affiliation	Commenter Name	Comment Topic	Associated Comment Numbers
		Supports proposed rule	O-32-3, O-32-4, O-32-5, O-32-6
Friends of the Earth	Keever, Marcie	Supports proposed rule	O-33-2, O-33-3, O-33-4, O-33-8
		Include the Strait of Juan de Fuca and other waters	O-33-6
		Protect whales, fish and habitat	O-33-7
		Requires greater protection – Puget Sound	O-33-5
Friends of the Earth	Keever, Marcie	Supports proposed rule	O-34-3, O-34-4, O-34-7, O-34-8
		Protect whales, fish and habitat	O-34-5, O-34-6, O-34-9
		Requires greater protection – Puget Sound	O-34-2
Friends of the Earth	Keever, Marcie	Supports proposed rule	O-35-2
		Adequate pumpouts	O-35-8
		Vessels equipped to comply	O-35-9
		Ecology’s process was thorough	O-35-3
		Pathogen risk - shellfish/beach protection	O-35-4
		Address all sources of pollution including vessel sewage	O-35-6
		Delayed implementation is too long	O-35-10
		MSDs insufficient	O-35-5
		Other pollutants in sewage concern	O-35-7
Friends of the Earth	Keever, Marcie	Supports proposed rule	O-44-2
		MSDs insufficient	O-44-3
Futurewise	Trim, Heather	Vessels equipped to comply	O-43-3
		Protect whales, fish and habitat	O-43-2
Futurewise	Trim, Heather	Supports proposed rule	O-17-2

Organization/Business Affiliation	Commenter Name	Comment Topic	Associated Comment Numbers
		Adequate pumpouts	O-17-5
		Ecology's process was thorough	O-17-3
		MSDs insufficient	O-17-6
		Requires greater protection - Puget Sound	O-17-4
		Other pollutants in sewage concern	O-17-7
Holland America Line	Peschel, Jim	Other	O-41-7
		Science not shown/proven	O-41-2
		Grandfather certain vessels	O-41-5
		Inadequate pumpouts	O-41-6
		Already illegal	O-41-4
		MSDs sufficient	O-41-3
Loki Fish Company	Knutson, Peter	Supports proposed rule	O-25-2
		Address fish farm waste	O-25-3
Outcomes by Levy	Levy, Doug	Industry vital	O-6-7
		Concerns not heard	O-6-2
		Already illegal	O-6-3
		MSDs sufficient	O-6-6
		Modeling refuted	O-6-5
		Targeted No Discharge Zone instead	O-6-4
		Five-year delay for recreational boats	O-6-8
Pacific Coast Shellfish Growers Association	Barrette, Margaret	Supports proposed rule	O-11-2
		Adequate pumpouts	O-11-5
		Pathogen risk - shellfish/beach protection	O-11-4
		Stakeholder work for consistency	O-11-6
		Industry vital	O-11-3
	Hudson, Bobbi	Supports proposed rule	O-1-1

Organization/Business Affiliation	Commenter Name	Comment Topic	Associated Comment Numbers
Pacific Shellfish Institute		Puget Sound a treasure – ecologically, economically, culturally	O-1-2
		Vessels equipped to comply	O-1-3
		Address all sources of pollution including vessel sewage	O-1-4
Passenger Vessel Association	Welch, Edmund	Vessels equipped to comply	O-28-3
		Grandfather certain vessels	O-28-2
		Vessels not equipped for holding	O-28-4
		Financially prohibitive retrofits and costs	O-28-5
		Inadequate pumpouts	O-28-6
		Pumpout locations inadequate	O-28-7
		Pumpout logistical challenges	O-28-8
		Small amounts pollution no harm	O-28-9
Puget Soundkeeper Alliance	Apfel, Amelia	Supports proposed rule	O-20-2
		Puget Sound a treasure – ecologically, economically, culturally	O-20-5
		Vessels equipped to comply	O-20-4
		Ecology’s process was thorough	O-20-3
Puget Soundkeeper Alliance	Barton, Alyssa	Supports proposed rule	O-42-2
		Adequate pumpouts	O-42-6
		Vessels equipped to comply	O-42-5
		MSDs insufficient	O-42-3
		Requires greater protection - Puget Sound	O-42-4
Puget Soundkeeper Alliance	Wilke, Chris	Supports proposed rule	O-16-2
		Adequate pumpouts	O-16-9
		Vessels equipped to comply	O-16-8
		Ecology’s process was thorough	O-16-3
		Vessel discharges directly to sensitive resources	O-16-6

Organization/Business Affiliation	Commenter Name	Comment Topic	Associated Comment Numbers
		Pathogen risk - shellfish/beach protection	O-16-4
		Address all sources of pollution including vessel sewage	O-16-7
		Delayed implementation is too long	O-16-11
		MSDs insufficient	O-16-5
		Economic Analysis biased high commercial costs	O-16-10
Recreational Boaters Association of Washington	Finney, Steve	Financially prohibitive retrofits and costs	O-40-5
		Inadequate pumpouts	O-40-6
		Already illegal	O-40-3
		MSDs sufficient	O-40-4
		Targeted No Discharge Zone instead	O-40-2
		Five-year delay for recreational boats	O-40-7
Recreational Boating Association of Washington	Thorpe, Paul	Already illegal	O-46-3
		MSDs sufficient	O-46-2
		Five-year delay for recreational boats	O-46-4
Seattle Aquarium	Davidson, Robert	Supports proposed rule	O-26-4
		Adequate pumpouts	O-26-2
		Stakeholder work for consistency	O-26-5
		Study treated sewage	O-26-6
		Requires greater protection - Puget Sound	O-26-3
Seattle Audubon Society	Sidles, Constance	Supports proposed rule	O-27-2
		Puget Sound a treasure – ecologically, economically, culturally	O-27-5
		Pathogen risk - shellfish/beach protection	O-27-4

Organization/Business Affiliation	Commenter Name	Comment Topic	Associated Comment Numbers
		Protect whales, fish and habitat	O-27-3
Sierra Club	Hillman, Stephanie	Supports proposed rule	O-37-9
		Puget Sound a treasure – ecologically, economically, culturally	O-37-2
		Adequate pumpouts	O-37-5
		Vessels equipped to comply	O-37-6
		Ecology’s process was thorough	O-37-7
		Vessel discharges directly to sensitive resources	O-37-3
		Pathogen risk - shellfish/beach protection	O-37-4
Sierra Club	Hillman, Stephanie	Form Letter	O-30-1, O-30-2
		Other	O-30-5, O-30-15, O-30-27, O-30-40, O-30-41
		Supports proposed rule	O-30-9, O-30-10, O-30-11, O-30-12, O-30-16, O-30-17, O-30-18, O-30-19, O-30-21, O-30-22, O-30-23, O-30-24, O-30-28, O-30-29, O-30-30, O-30-31, O-30-32, O-30-33, O-30-36, O-30-37, O-30-38, O-30-39, O-30-42
		Adequate pumpouts	O-30-25, O-30-34
		Protect whales, fish and habitat	O-30-3, O-30-6, O-30-13, O-30-45
		Victoria sewage a problem	O-30-35, O-30-43
		Delayed implementation is too long	O-30-7
		Requires greater protection - Puget Sound	O-30-4, O-30-14, O-30-20, O-30-44
		Enforce the No Discharge Zone	O-30-8, O-30-26

Organization/Business Affiliation	Commenter Name	Comment Topic	Associated Comment Numbers
Skagit Audubon Society	Mann, Tim	Supports proposed rule	O-47-2
		Protect whales, fish and habitat	O-47-3
Taylor Shellfish Farms	Dewey, Bill	Supports proposed rule	O-8-3
		Pathogen risk - shellfish/beach protection	O-8-4
		MSDs insufficient	O-8-5
		Stakeholder work for consistency	O-8-6
The American Waterways Operators	Costanzo, Charles	Opposes proposed rule	O-24-15
		Science not shown/proven	O-24-5
		Financially prohibitive retrofits and costs	O-24-16
		Inadequate pumpouts	O-24-8
		Industry vital	O-24-2
		Industry committed safety/environment	O-24-3
		Concerns not heard	O-24-4
		Certificate of need not valid	O-24-7
		Number of vessels not correct	O-24-12
		Negative economic effect	O-24-9
		Already illegal	O-24-13
		MSDs sufficient	O-24-6
		MSDs performance verified	O-24-10
		Modeling refuted	O-24-14
		Other pollution sources the concern	O-24-17
The SeaDoc Society	Gaydos, Joseph	Supports proposed rule	O-3-2
		Adequate pumpouts	O-3-4

Organization/Business Affiliation	Commenter Name	Comment Topic	Associated Comment Numbers
		Pathogen risk - shellfish/beach protection	O-3-3
Washington Environmental Council	Roberts, Mindy	Supports proposed rule	O-29-3
		Adequate pumpouts	O-29-10
		Vessels equipped to comply	O-29-11
		Ecology's process was thorough	O-29-5
		Pathogen risk - shellfish/beach protection	O-29-7
		Address all sources of pollution including vessel sewage	O-29-9
		Delayed implementation is too long	O-29-4
		MSDs insufficient	O-29-2
		Economic Analysis biased high commercial costs	O-29-12
		Misinformation from industry	O-29-13
Washington Environmental Council	Roberts, Mindy	Supports proposed rule	O-45-2
		Vessels equipped to comply	O-45-3
		Pathogen risk - shellfish/beach protection	O-45-5
		Address all sources of pollution including vessel sewage	O-45-4
		MSDs insufficient	O-45-6
Washington Scuba Alliance	Trask, James	Supports proposed rule	O-2-4
		Puget Sound a treasure – ecologically, economically, culturally	O-2-5
		Adequate pumpouts	O-2-6
		Vessels equipped to comply	O-2-7
		Vessel discharges directly to sensitive resources	O-2-8
		Industry vital	O-2-3
		Whole Puget Sound not targeted	O-2-9

Tribal Government Commenter Index

Table 4: Tribal Government Commenter Index

Tribal Government/Agency	Commenter Name	Comment Topic	Associated Comment Numbers
Samish Indian Nation	Woodard, Todd	Supports proposed rule	T-1-2
		Puget Sound a treasure – ecologically, economically, culturally	T-1-3

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Comments and Responses

Under each topic heading you can see all the comments Ecology received for that topic. Comments are included verbatim from the e-comments system which does include some spelling and grammatical errors. In some instances you will see a direct response following the comment, in other instances you will find a summary response to all the comments on that topic.

Form Letters and Responses

Table 5: Form Letters and Responses

Form Letter	Language from form letter	Number of form letters submitted/ Associated comment numbers
<p>Form Letter A Language</p>	<p>“Thank you for your thorough and careful evaluation of the need to designate Puget Sound as a No Discharge Zone. Puget Sound should join 90 other iconic waterways across the United States as a No Discharge Zone.</p> <p>To date, our region is the only one in the nation that has not designated No Discharge Zones for any waters. Puget Sound, a national treasure, needs this type of protection. I fully support Department of Ecology’s determination and proposal to establish the Puget Sound No Discharge Zone.</p> <p>This simple and common sense approach will protect public health, keep our waters clean, protect sensitive marine waters, and support important shellfish harvesting areas.</p> <p>Fortunately, over 97% of boaters already do the right thing they have holding tanks onboard to store sewage (also called blackwater), then pump it out using any one of the 100 designated pumpout facilities that are available throughout the Puget Sound.</p> <p>I, along with many residents and users of Puget Sound, strongly support establishing a No Discharge Zone for Puget Sound. The maritime community values Puget Sound and I am confident that the remaining vessels that don’t have proper</p>	<p>2,420 submittals received (ID numbers as listed in Appendix B)</p> <p>I-2454-1 I-2351-1 I-1356-1 I-2495-1 I-2028-1 I-728-1 I-2352-1 I-1804-1 I-1406-1 I-1595-1 I-853-1 I-2333-1 I-1259-1 I-1183-1</p> <p>62 of the 2,420 included a variation on the form language.</p>

	<p>holding tanks onboard will step up to do their part to keep our waters clean.</p> <p>Again, thank you for your hard work. Please establish the Puget Sound No Discharge Zone.”</p>	<p>14 of the 62 with variations were included in the detailed topics/responses below.</p>
<p>Form Letter B Language</p>	<p>“Thank you for your hard and diligent work to evaluate the criteria to designate Puget Sound as a No Discharge Zone. Based on your study, I believe that Puget Sound is poised to join other iconic waterways across the United States as a No Discharge Zone.</p> <p>To date, the Pacific Northwest is the only region in the nation that has not designated No Discharge Zones for any waters. Puget Sound, a national treasure, NEEDS this type of protection. I fully SUPPORT Department of Ecology’s determination and proposal to establish the Puget Sound No Discharge Zone.</p> <p>This simple and common sense approach will protect public health, keep our waters CLEAN, protect sensitive marine waters, and important shellfish harvesting areas. Fortunately, over 97% of boaters already do the right thing -- they have holding tanks onboard to store sewage (also called blackwater), then pump it out using any one of the 100 designated pumpout facilities that are available throughout the Puget Sound.</p> <p>I support establishing a No Discharge Zone because of the critical protection it will provide to the people, marine creatures, and water quality of Puget Sound. Puget Sound and its tributaries are threatened by many sources of pollution and while no one source is solely responsible for the Sound’s water quality problems, all of the sources add up. It is time to address ship pollution in order to help Puget Sound recover the health of its ecosystem.</p> <p>Again, thank you for your hard work and I strongly support the establishment of a Puget Sound No Discharge Zone.”</p>	<p>33,909 submittals received O-31, O-32, O-33, O-34</p> <p>577 of the 33,909 included a variation on the form language.</p> <p>33 of the 577 with variations were included in the detailed topics/responses below.</p> <p>O-31-3 through O-31-16; O-32-2 through O-32-6; O-33-2 through O-33-8; and O-34-2 through O-34-9.</p>
<p>Form Letter C Language</p>	<p>“As a resident of Washington State and someone who cares about clean water and the health of our ecosystem, I am writing to express support for a No Discharge Zone for Puget Sound, Lake Washington and the associated waters.</p>	<p>2,300 submittals received O-30-1, O-30-2</p>

	<p>Puget Sound is a treasure, and one that is crucial to the region’s economic, cultural and ecological well-being and should be given the respect it deserves, not the poop it currently receives.</p> <p>This has been a long time coming! Through years of study and careful analysis, it has been determined that Puget Sound has sufficient vessel sewage pump-out facilities and capacity to support the Puget Sound No Discharge Zone.</p> <p>Boats with a permanently installed toilet should be required to contain sewage in a holding tank for pump out at a designated facility. The rule does not apply to grey water, i.e. dish or bath water. Fortunately, at least 97% of boaters already operate this way, and Puget Sound residents and users strongly support the No Discharge Zone designation.</p> <p>We need to address all sources of pollution to Puget Sound so that we can restore its health. Support the practical step of designating Puget Sound as a No Discharge Zone now!”</p>	<p>126 of the 2,300 included a variation on the form language.</p> <p>43 of the 126 with variations were included in the detailed topics/responses below. O-30-3 through O-30-45.</p>
<p>Response to Form Letters</p>	<p>Ecology thanks you for your comments and support for the No Discharge Zone rulemaking. It is the result of countless combined efforts over many years.</p>	

Variations to Form Letters: Slight Word Change Language

Some of the form letters included additional or different comments. Some of the additional language is specific to a topic and are reflected in the section below organized by topic. Some of the comments included the same points as the form letter language with only slight rewording, additional redundant language, or a statement of occupation of the commenter. These comments were all reviewed and are in general support of the No Discharge Zone.

Response to Variations of Form Letters:

Ecology appreciates the time taken to provide additional detail and thanks you for your comments and support for the No Discharge Zone.

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Response to Comment Topics

Comments on: Address all sources of pollution including vessel sewage

Commenter: Rein Attemann - Comment I-2551-5

We have protections in place to manage land base sewage, and we need this step to manage sewage discharged directly to sensitive waters of Puget Sound. We would not put up with RVs trailing sewage even partially treated along our highways, so why are we treating Puget Sound as a sewage dumping ground.

Commenter: Rein Attemann - Comment I-2561-3

And it kind of blends into one of many actions that our community here can do to protect our iconic Puget Sound and join 90 other bodies of water throughout the country as a No Discharge Zone. And it's one piece of the puzzle that is outlined in the Puget Sound Partnership's action agenda. This pollution control is common sense approach to address one of many pollution problems facing Puget Sound.

Commenter: Mark Blitzer - Comment I-864-3

Currently, partially treated sewage enters the sound when strong rains create a outfall overflow and not all of the sewage can enter local sewage treatment plants. Bad stuff also enters the Sound directly from boats plying its waters. We must do all in our power to see to it that Puget Sound is not allowed to degrade further than it already has. A NDZ should be a sine qua non!

Commenter: Mark Harris - Comment I-1955-2

Puget Sound -- and its tributaries -- are threatened by several sources of pollution. Addressing ship discharged sewage will help to restore Puget Sound's ecosystem.

Commenter: Jerry Joyce - Comment I-2552-4

To protect and recover Puget Sound we can and should find the greatest solvable threats and take measures to reduce that harm. After all, we are spending tens of millions of dollars every year in trying to restore Puget Sound. We need to eliminate the damaging cuts one at a time, and the no discharge zone is one way to stop one of the deepest cuts.

Commenter: Lisa Valdez - Comment I-17-2

No brainer. Of course, no body should be dumping treated or untreated sewage into Puget Sound. We have a lot of boats in Puget Sound, and waste adds up, and effects the water quality for all kinds of users. As it is everything runs downhill to the Sewage Treatment Plant, which should also be outlawed, We should minimize contamination of ALL of our waterways, by reducing runoff, industrial and residential chemical uses (fertilizers, pesticides, herbicides),

mandate permeable surfacing for all new and repaired surfaces (sidewalks, parking lots, etc), disconnect sewage and storm water drains from each other, direct sewage treatment in other directions away from the water, and support ecological non-water using toilet systems.

Commenter: Chris Wilke - Comment I-2555-2

As a lifelong Puget Sound resident, as a boater, fisherman, kayaker, wildlife enthusiast, scuba diver, saltwater swimmer, this is really an important issue. Puget Sound is suffering from many pollution sources. We have solids, bacteria, toxins, nutrients, all entering the Puget Sound at unsustainable levels, and all of those sources of pollution can be, at least partially, addressed through a No Discharge Zone.

Commenter: Citizens for a Healthy Bay - Comment O-18-6

All sources of water pollution should be controlled, and this is a common-sense action that reflects the value of Puget Sound.

Commenter: Friends of the Earth - Comment O-35-6

Other pollution sources, including stormwater runoff from urban and rural land, failing septic systems, combined sewer overflows, and municipal wastewater, each have controls in place to reduce and eliminate contamination. A No Discharge Zone would complement other pollution controls in the Puget Sound region.

Commenter: Pacific Shellfish Institute - Comment O-1-4

All sources of pollution should be controlled, and this is a common-sense action that reflects the value of Puget Sound.

Commenter: Puget Soundkeeper Alliance - Comment O-16-7

Yet other pollution sources – including stormwater runoff from urban and rural land, failing septic systems, combined sewer overflows, and municipal wastewater discharges - each have controls in place to reduce and/or eliminate contamination. A No Discharge Zone will complement other pollution controls in the Puget Sound region. Moreover, the NDZ will level the playing field by requiring the reduction of pollution across the board: it goes against common sense to regulate some polluters while giving others a free pass. To continue to do so fosters a system that imposes unequal burdens on some polluters while letting others pollute with impunity.

Commenter: Washington Environmental Council - Comment O-29-9

Other pollution sources, including stormwater runoff from urban and rural land, failing septic systems, combined sewer overflows, and municipal wastewater, each have controls in place to reduce and eliminate contamination. A No Discharge Zone would complement other pollution controls in the Puget Sound region.

Commenter: Gary Ketcheson - Comment I-2495-2

This decision has bearing on an entire ecosystem where we call home, Puget Sound, and on the larger Salish Sea. Our marine environments are ravaged by so many pollutant inputs that they are on the verge of collapsing.

Granted, there are many other stressors on the Puget Sound ecosystem, but why would we knowingly subject these important creatures to the effluent from boats? when we have a choice! We deserve better!

Commenter: Washington Environmental Council - Comment O-45-4

Commercial and recreational vessels represent the final pollution source to Puget Sound that lacks regulatory approach, so other sources, like stormwater runoff from urban and rural land, failing septic systems, combined sewer overflows, and municipal wastewater, each of these already has in place a plan to control, to control these sources to reduce and eliminate contamination.

Summary Response to: Address all sources of pollution including vessel sewage

Ecology agrees with the commenters that Puget Sound is threatened by a number of sources of pollution and that vessel sewage should be addressed along with other sources such as stormwater, municipal, and industrial pollution.

Comments on: Address fish farm waste

Commenter: Danna Dal Porto - Comment I-16-2

I am recommending that fish farms be banned from Puget Sound along the same lines being proposed by the Ecology recommendations. Fish sludge could just as harmful to the environment as untreated waste from boats. In fact, the fish pens are close to the shore and present a more toxic hazard because of the number and density of the fish in the pens. Those pens concentrate the waste and that waste collects year round.

Commenter: Loki Fish Company - Comment O-25-3

However, any such rule which does not require floating salmon farming operations to also eliminate their sewage discharge waste is grossly deficient. It is the major floating threat to the marine environment of Puget Sound. As Professor emeritus Arthur Whitely documented, untreated fish farm waste exceeds in volume the secondary discharge of large municipal sewage plants in Puget Sound. Their output dwarfs sewage discharge from the remaining small vessels lacking holding tanks. Yet why continue to exempt discharge from floating fish farm operations?

Summary Response to: Address fish farm waste

Salmon net pen aquaculture is not addressed in this rulemaking. Floating salmon operations are not vessels. In addition, net pen waste – uneaten fish food, and fish feces – from cold-blooded animals is distinctly different from the waste generated from warm-blooded animals and humans. This rule bans the discharge of vessel sewage and defines sewage as “human body wastes and the wastes from toilets or other receptacles intended to receive or retain body wastes.”

Comments on: Adequate pumpouts

Commenter: Rein Attemann - Comment I-2551-8

There are enough pump-out stations and capacity for both recreational and commercial vessels throughout the Sound. In fact, we have more than 173 stationary pump-out units in 102 locations and 23 pump-out boats available for recreational vessels. This is far more than is needed under Ecology's criteria and to get Puget Sound designated as a no discharge zone.

Commenter: Rein Attemann - Comment I-2561-5

This pollution control is common sense approach to address one of many pollution problems facing Puget Sound. Given that there's 173 pumpout stations in 102 locations, it seems very adequate, according to the Department of Ecology, to meet the criteria for designating this No Discharge Zone for Puget Sound. And by doing that, we will increase the shellfish beds, we will protect human health, and we will eliminate another pollution source to many of the animals like the magnificent iconic resident orca whales.

Commenter: Mark Blitzer - Comment I-864-4

There are enough pump out stations so that there is no need whatsoever to discharge raw sewage into Puget Sound.

Commenter: Jill Patenaude - Comment I-2557-4

As a recreational boater, it truly is possible for me to get to a pumpout station wherever I need to get a pumpout station.

Commenter: Chris Wilke - Comment I-2555-4

I use the waters of Puget Sound dozens of times a year for the above activities that I've mentioned. As a boater, I use hook-ups, and this is something that is – they are readily available. So, there's quite a few pump-outs available. As I mentioned, there's over a hundred locations, and over twenty mobile pump-outs that come around in a boat. As a boater that pumps out, I know it's an easy thing to do. There's a pump-out right there on Blake Island. There's no reason why anyone should be pumping overboard in that location.

Commenter: Peggy Willis - Comment I-2560-4

[I] think that some, the pumpout stations are, from what I see, pretty available at least around here. Around the central Puget Sound maybe there's more work to do, but it's long overdue and we need to start and the time is now.

Commenter: Center for Biological Diversity - Comment O-36-4

This rule is feasible because over 100 pumpout facilities in Puget Sound serve marine vessel sewage needs. Mobile trucks, pumpout boats, and barges even meet ships and large vessels on the water, and these companies serve the entire Puget Sound. In 2016, over 10 million gallons were pumped out and diverted from Puget Sound.

Commenter: Defenders of Wildlife - Comment I-2562-4

With the number of pumpout stations that are readily available to boaters within the Puget Sound region, we think that is a reasonable action on the Department of Ecology to declare the Puget Sound as a No Discharge Zone.

Commenter: Ecosystem Coordination Board - Comment O-9-4

Additionally, studies completed during previous phases of this rulemaking process demonstrate that stationary and mobile pump-outs available to recreational vessels in Puget Sound far exceed the criteria for designation of an NDZ.

Commenter: Friends of the Earth - Comment O-35-8

Pumpout stations and mobile facilities serve all of Puget Sound. There are currently more than 173 stationary pumpout units in 102 locations, and 23 pumpout boats available for recreational vessels, far more than the criteria for NDZ designation (Figure 1) and publicized through www.pumpoutwashington.org. Our coalition partner, WEC, personally verified that at least 7 of the 8 facilities in South Puget Sound, inland of the Tacoma Narrows, were operational even during the offseason – December 20, 2016. Six pumpouts are free and one charges \$5. Adjacent to South Puget Sound, another 13 pumpout facilities serve Commencement Bay, three serve Gig Harbor, and one serves Quartermaster Harbor. Other basins of Puget Sound are equally well served: Hood Canal has 7 pumpouts; 13 serve Sinclair and Dyes Inlet, Liberty Bay, and Bainbridge Island; 13 serve Lake Washington, Lake Union, and the connecting waters; 4 serve Everett and southern Whidbey Island; 9 serve La Conner, Anacortes, and northern Whidbey Island; 6 serve the San Juan Islands; and many more serve Blaine, Bellingham, Sequim, and Port Townsend. This is not an exhaustive list of pumpout facilities within the proposed NDZ but confirms the geographic coverage of the existing network, particularly in places with substantial numbers of recreational boaters. In addition, we along with our colleague organization Futurewise confirmed that at least five large marine services companies serve the Puget Sound region, as of December 14-19, 2016 (Table 1). The number of pumpouts available is far more plentiful than the recommended one per 300 to 600 boats (Clean Vessel Act: Pumpout Station and Dump Station Technical Guidelines). Recreational boats have at least one pumpout facility per 171 vessels, and commercial vessels have at least one pumpout per 11 vessels. Commercial pumper trucks and mobile commercial pumpout barges already serve numerous commercial vessels and represent a range of capacities to serve a variety of dock sizes and vessel drafts.

Commenter: Futurewise - Comment O-17-5

In 2017, the EPA, Region 10, determined that adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels are reasonably available for those waters so that the State may completely prohibit the discharge from all vessels of any sewage, whether treated or not, into such waters.

Commenter: Pacific Coast Shellfish Growers Association - Comment O-11-5

Our members would like there to be a practical solution, which includes an adequate number of commercial vessel pump-out facilities, which Ecology seems to have demonstrated through their work.

Commenter: Puget Soundkeeper Alliance - Comment O-42-6

I think this is really needed. And, I think there are enough pump stations, for the most part, throughout Puget Sound to have the capacity to handle the recreational and commercial vessel blackwater. I think we have more than 173 stationary pumpouts at the 102 locations at were mentioned in the slideshow. I know Puget Soundkeeper Alliance has published a guide with pumpout locations around the Sound. We've been doing that for 20 years, I think.

Commenter: Puget Soundkeeper Alliance - Comment O-16-9

Over 100 pumpout facilities are available all over Puget Sound and publicized through www.pumpoutwashington.org. At least 7 of the 8 facilities in South Puget Sound, inland of the Tacoma Narrows, were operational even during the off season – December 20, 2016. Six pumpouts are free and one charges \$5. Adjacent to South Puget Sound, another 13 pumpout facilities serve Commencement Bay, three serve Gig Harbor, and one serves Quartermaster Harbor. Other basins of Puget Sound are equally well served: Hood Canal has 7 pumpouts; 13 serve Sinclair and Dyes Inlet, Liberty Bay, and Bainbridge Island; 13 serve Lake Washington, Lake Union, and the connecting waters; 4 serve Everett and southern Whidbey Island; 9 serve La Conner, Anacortes, and northern Whidbey Island; 6 serve the San Juan Islands; and many more serve Blaine, Bellingham, Sequim, and Port Townsend. This is not an exhaustive list of pumpout facilities within the proposed NDZ but confirms the geographic coverage of the existing network, particularly in places with substantial numbers of recreational boaters. In addition, our partner organizations Friends of the Earth and Futurewise confirmed that at least five large marine services companies serve the Puget Sound region, as of December 14-19, 2016. The number of pumpouts available is far more plentiful than the recommended one per 300 to 600 boats (Clean Vessel Act: Pumpout Station and Dump Station Technical Guidelines). Recreational boats have at least one pumpout facility per 171 vessels, and commercial vessels have at least one pumpout per 11 vessels. Commercial pumper trucks and mobile commercial pumpout barges already serve numerous commercial vessels and represent a range of capacities to serve a variety of dock sizes and vessel drafts.

Commenter: Seattle Aquarium - Comment O-26-2

The Seattle Aquarium understands that the U.S. Environmental Protection Agency has reviewed the Washington State Department of Ecology's petition on the discharges of vessel sewage and has determined that a no discharge zone (NDZ) can be established for Puget Sound. EPA found that there are adequate facilities in the Puget sound for vessels to pump out their sewage and Washington state may move forward with such a designation.

Commenter: Sierra Club - Comment O-37-5

Studies have established, and our allies have confirmed that there are adequate pump-out stations to serve all of Puget Sound, leaving no reason why a No Discharge Zone would produce a hardship for boaters.

Commenter: Sierra Club Commenter - Comment O-30-25

We have the sewage pump-out facilities, and if we need more, we should provide more. just like i pay for sewer at my home, boaters should have to pay for that service to support the employees and possible addition of more facilities.

Commenter: Sierra Club Commenter - Comment O-30-34

Through years of study and careful analysis, Puget Sound has been determined to have sufficient vessel sewage pump-out facilities and capacity to support the Puget Sound No Discharge Zone.

Commenter: The SeaDoc Society - Comment O-3-4

There is no debating that human feces are something we have been and should be working very hard to get out of the marine ecosystem, for many reasons. It seems that with adequate facilities forth proper disposal and treatment of sewage from boats, we should be doing everything we can do to prohibit the discharge of feces from recreational and commercial boats. It will help protect human health and human wellbeing, our economy as it is associated with shellfish aquaculture and harvest, and the marine wildlife we all enjoy.

Commenter: Washington Environmental Council - Comment O-29-10

Over 100 pumpout facilities are available all over Puget Sound (Figure 3) and locations are publicized through www.pumpoutwashington.org. Our partners at Friends of the Earth and Futurewise verified that at least five private companies currently serve the Puget Sound region's larger pumpout needs (Table 1). As summarized in Table 2, WEC personally verified that at least 7 of the 8 facilities in South Puget Sound (Figure 4), inland of the Tacoma Narrows, were operational even during the winter season –December 20, 2016. Six pumpouts are free and one charges \$5. Adjacent to South Puget Sound, another 13 pumpout facilities serve Commencement Bay, three serve Gig Harbor, and one serves Quartermaster Harbor. Other basins of Puget Sound are equally well served: Hood Canal has 7 pumpouts; 13 serve Sinclair and Dyes Inlet, Liberty Bay, and Bainbridge Island; 13 serve Lake Washington, Lake Union, and the connecting waters; 4 serve Everett and southern Whidbey Island; 9 serve La Conner, Anacortes, and northern Whidbey Island; 6 serve the San Juan Islands; and many more serve Blaine, Bellingham, Sequim, and Port Townsend. This is not an exhaustive list of pumpout facilities within the proposed NDZ but confirms the geographic coverage of the existing network, particularly in places with substantial numbers of recreational boaters. The number of pumpouts available is far more plentiful than the recommended one per 300 to 600 boats (Department of the Interior, 1994; Clean Vessel Act: Pumpout Station and Dump Station Technical Guidelines). Recreational boats have at least one pumpout facility per 171 vessels, and commercial vessels have at least one pumpout per 11 vessels. Commercial pumper trucks and mobile commercial pumpout barges already serve numerous commercial vessels and represent a range of capacities to serve a variety of dock sizes and vessel drafts.

[Ecology note: the commenter's submittal includes a number of figures, tables and attachments that are not included here. The commenter's original submittal, and supporting information, is in the official rule file.]

Commenter: Washington Scuba Alliance - Comment O-2-6

There are enough pump out stations and capacity for both recreational and commercial vessels;

Summary Response to: Adequate pumpouts

On February 13, 2017, the EPA issued its final affirmative determination that adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels are reasonably

available for waters of the Puget Sound, allowing the State of Washington to finalize the designation. The determination occurred after reviewing Ecology's final petition and supplemental information to establish a No Discharge Zone for Puget Sound. The EPA's final determination also considered over 40,000 comments received from individuals, environmental organizations, vessel associations, boating and yacht clubs, industrial representatives, port authorities, federal, county, local and tribal governmental entities, and other interested groups.

Comments on: Already illegal

Commenter: Charles Draper - Comment I-2110-2

Thank you for your evaluation of the Puget Sound as a No Discharge Zone. While there is a big push to create a no discharge zone within Puget Sound basin I believe this is over regulation in that discharge of Non- treated sewage is already regulated. Some people are trying to indicate that To date, our region is the only one in the nation that has not designated No Discharge Zones for any waters. There is already federal guidelines for no discharge of oils or untreated sewage into the receiving waters. Puget Sound, a national treasure, already has implemented restrictions for sewage disposal and additional restrictions are redundant. Fortunately, over 97% of boaters already do the right thing they have holding tanks onboard to store sewage (also called blackwater), then pump it out using any one of the 100 designated pumpout facilities that are available throughout the Puget Sound. To pass a bill for only 3% of the voters who are illegally dumping will not solve the problem .

Commenter: Ken Gundersen - Comment I-10-1

No on new laws. Existing laws are adequate. This would be cost prohibitive and current laws of 1 mile to shore no pump zones suffice.

Commenter: American Cruise Lines, Inc. - Comment O-23-12

Discharges incidental to the normal operation of vessels, including both graywater and blackwater, are currently regulated by the EPA pursuant to the federal Clean Water Act under the Vessel General Permit regulations ("VGP"). In implementing these regulations, EPA set national standards that determine specific levels of the elements of effluent that can be discharged from vessels. Under those regulations, untreated blackwater cannot be discharged within three nautical miles of the U.S. coast and only blackwater treated by a Coast Guard approved MSD may be discharged within that three mile limit. In order to comply with these requirements, ACL installed an MSD-II on American Spirit at a cost of approximately \$200,000. The proposed NDZ threatens to make that expense essentially useless.

Commenter: Draper Machine Works Inc. - Comment O-15-5

Some people are trying to lie to the public about Washington being "the only one in the nation that has not designated No Discharge Zones for any waters". For example the Lake Washington Federal Ship Canal already has no Discharge requirements. Puget Sound is a national treasure and over 97 % of the boaters already control their sewage waste. Creating over regulation to try and catch the 3% that already disregard the current discharge law will not change anything except to add more costs to the residents in Washington State for more oversight. I DO NOT support the Department of Ecology's determination and proposal to establish the Puget Sound No Discharge Zone beyond the current already implemented laws.

Commenter: Holland America Line - Comment O-41-4

The Environmental Coalition letter that was sent to you on May 26, stated that, when enacted, this would prevent and prohibit the discharge of raw and partially treated sewage from vessels in Puget Sound. Well, Holland America Group certainly supports the intent of clean water, and we have invested millions of dollars into advanced wastewater treatment systems so that we can discharge clean and treated water. The assumption that these discharges are untreated is both erroneous and inaccurate.

Commenter: Outcomes by Levy - Comment O-6-3

It is in fact already illegal for boaters – be they recreational or commercial – to dispose of untreated sewage within three (3) miles of the Puget Sound shoreline, which covers nearly all areas of the Sound south of Admiralty Inlet

Commenter: Recreational Boating Association of Washington - Comment O-40-3

The no discharge zone effort has been messaging that the NDZ is necessary to stop the treated and untreated pumping of raw sewage in the Puget Sound. Untreated sewage is already prohibited by the Coast Guard under the Clean Water Act, stating there is to be no, no raw sewage discharge within three miles of shore. Puget Sound, there is literally no place within south of Admiralty Inlet that would fall outside of this three-mile restriction. Compliance is really the target. Increased compliance would be far more effective than moving to this no discharge zone. If we can get more people using the right systems and not pumping the raw sewage out, that would be an advantage to everybody.

Commenter: Recreational Boating Association of Washington - Comment O-46-3

We appreciate having been able to have a dialog with Ecology on the NDZ evaluation, but we have been frustrated that this issue has been messaged as an exercise in removing untreated sewage from Puget Sound. It's illegal to dump untreated sewage within three miles of shoreline, which means there's no discharge of blackwater allowed south of Admiralty Inlet – that's the only place you can get three miles away from a shore.

Commenter: The American Waterways Operators - Comment O-24-13

Facts have been countered by a campaign of misinformation. Ecology has claimed throughout the rule development process that this rule making would ban the discharge of raw sewage in Puget Sound. Discharging raw sewage in Washington waters is already illegal and has been for many years. This regulation would instead ban the use in Puget Sound of federally approved onboard sewage treatment systems that working vessels typically employ to maintain operational integrity and responsibly manage sewage effluent.

Summary Response to: Already illegal

Under current federal law, vessels are prohibited from discharging raw sewage within three miles from shore, but can discharge treated sewage anywhere in Puget Sound. There are four areas in the Puget Sound No Discharge Zone that are greater than three miles from shore, including a large area west of Whidbey Island.

The federal standard for treatment from Type I and Type II MSD treatment systems does not meet Washington State water quality standards for fecal coliform bacteria and other pollutants that can pose a risk as vessels are over or near sensitive water bodies.

Sewage from vessels is regulated under Section 312 of the Clean Water Act, 40 CFR Part 140 and 33 CFR Part 159. The current Vessel General Permit only relates to the discharges of blackwater for vessels of the Great Lakes and when combined with graywater, however when there is a no discharge zone, the no discharge zone takes precedence. Ecology understands that roughly 200 commercial vessels in the Puget Sound have Type II MSDs and that there is an economic impact. A delayed implementation of five years is included in WAC 173-228-050 for small commercial passenger vessels along with tug boats, commercial fishing vessels, and NOAA research and survey vessels.

In regards to the comment referring to the Lake Washington Federal Ship Canal already having no Discharge requirements, it is not already a designated no discharge zone.

Comments on: Certificate of need not valid

Commenter: The American Waterways Operators - Comment O-24-7

Ecology has not presented a valid Certificate of Need as required by statute;

Ecology's Certificate of Need is still the subject of litigation and has been remanded to the Pollution Control Hearings Board for further proceedings (remand pending on Ecology's appeal of the October 27, 2017 Thurston County Superior Court Order);

Summary Response to: Certificate of need not valid

The Clean Water Act allows a state to proceed with a no discharge zone if the state determines that the protection and enhancement of some or all of its waters require greater environmental protection and the EPA determines that adequate facilities are reasonably available for the safe and sanitary removal and treatment of sewage from vessels. Ecology and the EPA have made the requisite determinations, which allow Ecology to proceed with this regulation.

Comments on: Concerns not heard

Commenter: Foss Maritime Company - Comment O-12-7

While Foss appreciates Ecology's outreach on this issue, we feel that stakeholder involvement from the beginning of the process to adequately define the problem and then develop workable solutions in a collaborative manner would have been a more effective approach. Environmental stewardship is a core value at Foss and we are fundamentally committed to the health of Puget Sound. We would be very pleased to participate in any cooperative process with Ecology to address this issue. However, Foss is very concerned and disappointed by the proposed Puget Sound NDZ and feels the draft petition should be withdrawn.

Commenter: Outcomes by Levy - Comment O-6-2

While we have appreciated being able to maintain a continued dialogue with Ecology as the NDZ evaluation and review has occurred, we have been frustrated that this issue has tended to be messaged as an exercise in removing untreated sewage from Puget Sound and by a guiding philosophy that an 'all or nothing' approach on NDZ must be followed. For these reasons and others, we have felt as if the NDZ discussions have grown unnecessarily confrontational when they in fact could have been focused on mutual goals and problem-solving.

Commenter: The American Waterways Operators - Comment O-24-4

AWO and our members who operate in Puget Sound are deeply concerned with this rule making. These concerns have been consistently raised by AWO throughout the preliminary stakeholder outreach period that began in early 2013, at advisory committee meetings in June and July of 2013, in numerous comments to Ecology, in numerous meetings with Ecology, in ongoing legal proceedings, and in comments and meetings with the federal EPA. It is AWO's contention that, throughout the five-year process that Ecology has undertaken to develop this rule, legitimate concerns from the vessel operating community have been ignored. Ecology misrepresented the stakeholder engagement process as collaborative and driven by consensus when concerns of vessel operators were never meaningfully addressed; There are more effective and less costly ways to mitigate vessel sewage pollution in Puget Sound that have not been adequately considered. Each of these enumerated reasons are troubling on their own. Taken together, they are indicative of a broken regulatory process that has ignored the collective concerns of towing vessel operators, fishing vessel operators, recreational boaters, passenger vessel operators, ports, the U.S. Coast Guard, the U.S. Navy, deep draft vessel operators, shoreside and on-water labor groups, marine architects, shipyards, and marine equipment manufacturers.

Summary Response to: Concerns not heard

Outreach for the Puget Sound No Discharge Zone began in 2011 by contacting recreational and commercial boating organizations, environmental groups, shellfish growers, and ports, in addition to other state agencies, and tribal entities. Ecology launched an informational website outlining the No Discharge Zone development process which includes technical reports developed during the process and links to pertinent information.

Ecology also identified more than 300 stakeholder groups and individuals and requested input from them throughout the No Discharge Zone evaluation process and conducted more than 50 in-person meetings with stakeholders. An advisory committee of stakeholders guided decision making for the No Discharge Zone. The committee was comprised of representatives from state agencies, recreational boating and liveaboard advocacy groups, environmental interest groups, commercial vessel owners associations, tribal representatives, and ports.

Two advisory committee meetings were held in June and July of 2013. Most of the first meeting was devoted to providing an overview of the information collected to support the No Discharge Zone decision making process. At the second meeting, the advisory committee provided direct input to defining the geographic boundaries of the No Discharge Zone, infrastructure capacity and needs, and implementation needs (e.g., outreach, enforcement, and evaluation measures).

In 2014, Ecology held a 60-day public comment period on a Draft Petition to Designate the Waters of the Puget Sound as a No Discharge Zone.

Ecology received more than 26,000 public comment e-mails or letters on the Draft Petition and published a response to comments. Based on the information gathered over the past four years, Ecology has concluded that there is sufficient need to establish a No Discharge Zone in Puget Sound to protect water quality.

Ecology conducted extensive stakeholder outreach beginning in 2012 and direct meetings with the tug groups in 2013. This is not the draft petition.

Comments on: Delayed implementation is too long

Commenter: Rein Attemann - Comment I-2551-7

The 200 commercial vessels that must retrofit have five years to comply, which is the longest time for any no discharge zone ever established. In the Great Lakes, tugs and other boats have successfully retrofitted vessels to protect water quality. It's a matter of time that that will happen here in Puget Sound.

Commenter: Margaret Ellsworth - Comment I-2559-2

I think your work on this issue of vessel No Discharge Zone is excellent, and I want to express my support for what you've done, and I hope that it does get implemented and if there is an implementation window that it is a short one. People have known that this is in the works, and have had a lot of time to prepare for it.

Commenter: Jill Patenaude - Comment I-2557-3

I am curious as to if it really truly is going to take five years for these cruise ships that are now inundating our harbor, or the Puget Sound, and all the other ships to get into compliance with this. I'd hope that they could do that a little bit sooner.

Commenter: Richard Porter - Comment I-12-3

A 5-year compliance period seems like an awfully long time.

Commenter: Citizens for a Healthy Bay - Comment O-18-8

CHB does not support the five-year phase-in period for certain vessels, including tug boats, commercial fishing vessels, small commercial passenger vessels, and National Oceanic and Atmospheric Administration (NOAA) research and survey vessels. The 200 commercial vessels affected are the entities that can most easily comply and their implementation should not be delayed for five years, the longest delay time for any NDZ ever established. We recommend shortening or dropping the extended phase-in period from the final rule.

Commenter: Friends of the Earth - Comment O-35-10

Reduce implementation period to 2 years for nearly all commercial vessels We urge the Department of Ecology to reduce the implementation period from 5 years in the proposed rule. While the 5-year compliance period was cited as mitigation of disproportionate impact per RCW19.85.040, a 2-year compliance period would also mitigate disproportionate impact. No other No Discharge Zone has included a compliance period, and even two years would mitigate impacts.

Commenter: Puget Soundkeeper Alliance - Comment O-16-11

We urge the Department of Ecology to reduce the implementation period from 5 years to 2 years in the proposed rule. While the 5-year compliance period was cited as mitigation of disproportionate impact per RCW 19.85.040, a 2-year compliance period would also mitigate disproportionate impact. No other No Discharge Zone has included a compliance period, and even two years would mitigate impacts.

Commenter: Sierra Club Commenter - Comment O-30-7

The grandfathered boat toilet operators have had enough time to deal with their polluting devices. There is no step too small that needs to be taken to improve the health of the Sound!

Commenter: Washington Environmental Council - Comment O-29-4

However, we urge the Department of Ecology to modify 173-228-050(1) to reduce the implementation period from five years to two years for tugboats, commercial fishing vessels, and National Oceanic and Atmospheric Administration research vessels. We support the five-year implementation period for small commercial passenger vessels. We urge the Department of Ecology to reduce the implementation period from 5 years in the proposed rule. While the 5-year compliance period was cited as mitigation of disproportionate impacts to small businesses per RCW 19.85.040, a 2-year compliance period would also mitigate disproportionate impact. No other No Discharge Zone has included a compliance period, and even two years would mitigate impacts. The tugboat tank volumes and costs to retrofit, which were provided by industry and adopted by Ecology, are biased high. Given that most commercial vessels already comply with the proposed rule, we urge you to accelerate implementation for tugs, commercial fishing vessels, and NOAA vessels.

Summary Response to: Delayed implementation is too long

Ecology proposed the five-year delayed implementation based on stakeholder input and the economic evaluation for certain commercial vessels. The delay allows vessels that have more significant costs and unique challenges, such as engineering designs that require extra safety considerations, more time to make the retrofits. Five years generally coincides with two dry-docking opportunities and allows vessels to spread the costs of the investment out over a longer period of time.

Comments on: Draft Implementation Plan comments

Commenter: Elsie Hulsizer - Comment I-1819-4

Draft Rule Implementation Plan needs technical assistance for boaters and education for marina operators. The Draft Rule Implementation Plan is missing key elements for success: 1. Education of marina owners and operators on pumpout system requirements and best management practices. Education aimed at boaters won't accomplish anything if pumpouts are not adequate or not designed, installed and maintained properly. This is such an obvious gap it appears you have not done your homework on the obstacles to boater cooperation. 2. Review of adequacy of enforcement by local governments of pumpout requirements at marinas.

Boaters need to know where to report nonfunctioning pumpouts and be assured they will be fixed promptly. 3. Review of the Shoreline Act guidelines and individual Shoreline Master Programs. Is it time for "grandfathered" marinas to add pumpouts? Details such as requirements for wash-down hoses, float length, float height, orientation with respect to prevailing winds, and square bull rails instead of round can improve the pumpout experience (never a pleasant one) and encourage cooperation. 4. Inclusion of boaters in the design of educational material. They are the best positioned to understand how to approach other boaters. 5. Education for boaters on installing and maintaining holding tanks including techniques to minimize odors. These things would need to be done with or without an NDZ. As Ecology's own data show, very few boats have Type I or II systems. If the NDZ increases compliance significantly, it will be from improved compliance among boats already equipped with holding tanks as well as boats with Type I and II systems switching to holding tanks.

Commenter: Washington Dept. of Natural Resources - Comment A-2-6

Please consider the following comments to the Draft Rule Implementation Plan:

Page 1: Implementation and Enforcement

- *consider including WDNR Enforcement in this section
- *Consider establishing a hotline to report illegal discharges
- *Have larger commercial vessels of a determined size and crew capacity keep records of the pump out facility where they dispose of their wastewater in order to assess the successful compliance of the program.

Page 3: Promoting and Assisting Voluntary Compliance

- *Provide technical information as needed for the design of acceptable wastewater holding systems.
- *Verify that there is an adequate distribution of pump out facilities established throughout the NDZ for commercial sized vessels (See page 15 of "Preliminary Regulatory Analyses"). Complete an assessment to determine if there are an adequate number of facilities necessary to support the program prior to the five-year delay for these vessels to meet the NDZ requirements.

Summary Response to: Draft Implementation Plan comments

Ecology's work with the NDZ Education and Outreach Committee includes coordinating and developing key messages and educational tools with partner organizations, along with strategies for reaching out to boaters and vessel operators. Ecology's work with the NDZ Enforcement Committee includes developing and implementing enforcement strategies. In addition to the Rule Implementation Plan, there is a detailed No Discharge Zone Implementation Strategy, A Framework for Action (Framework for Action) document that provides more information on the implementation. It clearly stipulates that the final education and outreach strategy will be informed by stakeholder input and a social marketing research effort conducted in partnership with individuals and groups directly affected by the No Discharge Zone law. It is a living document to be updated and expanded as implementation progresses. Some of the comments regarding the Rule Implementation Plan are best suited to be included in the Framework for Action document. Ecology concurs with adding additional language to the Rule Implementation

Plan or Framework for Action document including; 1) reaching out to marina operators and owners with educational resources related to pumpout requirements, best management practices and working to assure that pumpouts are fixed promptly; 2) with the NDZ Enforcement Committee, reviewing local enforcement mechanisms and efforts with marinas; 3) recommending that the process for Shoreline Master Programs considers the requirement for pumpouts at marinas and that upgrades to marina pumpouts consider the logistics of vessels; 4) including boaters and vessel operators in the development of educational resources; and 5) providing technical assistance or educational resources to boaters on installing and maintaining holding tanks. In addition, part of the Framework for Action document includes reviewing strategies to better notify those responsible of non-working pumpouts and ways to most quickly assure that they are fixed.

Ecology has already included WDNR in the NDZ Enforcement Committee. The NDZ Enforcement Committee is evaluating the current reporting hotlines available, as well as coordinating with various agencies on the response to hotline reports. This evaluation will be included in the No Discharge Zone Implementation Strategy, A Framework for Action (Framework for Action) document, which provides more detail as a living document to be updated and expanded as implementation progresses. Larger commercial vessels already are required to log the location and volume of sewage and graywater discharges by the USCG as well as international convention and law. With its final determination, the EPA agreed that adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels are reasonably available for waters of the Puget Sound, allowing the State of Washington to finalize the designation. As part of No Discharge Zone implementation, Ecology will evaluate effectiveness of the rule as well as the education and outreach efforts and enforcement strategies. Additionally, the Framework for Action document will be updated to include the plan to continue to ensure that pumpouts are readily available and distributed. State Parks continues to offer grants for new pumpout installations and pumpout operations and maintenance, and Ecology continues to work for grant funds for additional pumpouts.

Comments on: Ecology's process was thorough

Commenter: Rein Attemann - Comment I-2561-2

Thank you, Department of Ecology, for undertaking this long process. It's been four some odd years to get to this point, and we hope that by March, that Puget Sound will be designated as a No Discharge Zone.

Commenter: Jay Spearman - Comment I-1020-2

Thank you for your thorough and careful evaluation of the need to designate Puget Sound as a No Discharge Zone. Again, thank you for your hard work.

Commenter: Alki Kayak Tours - Comment O-13-5

Thank you for your thorough and careful evaluation of the need to designate Puget Sound as a No Discharge Zone and recommendation to do so.

Commenter: Friends of the Earth - Comment O-35-3

Puget Sound deserves to be a No Discharge Zone. The Department of Ecology has spent over 6 years considering a No Discharge Zone, with a carefully considered process that included state agencies, cruise lines, recreational boaters, marinas, yacht clubs, commercial vessels including tugboats and fishing vessels, trade associations, shellfish growers, environmental organizations, scientists, EPA, the Coast Guard, legislators, and members of Congress.

Commenter: Futurewise - Comment O-17-3

Thank you for the opportunity to comment on Chapter 173-228 WAC, Vessel Sewage No Discharge Zones. We appreciate the tremendous amount of effort, time, and thoughtfulness that has gone into the petition and review by staff both at the Washington State Department of Ecology (Ecology) and also at the US Environmental Protection Agency (EPA).

Commenter: Puget Soundkeeper Alliance - Comment O-20-3

Thank you for your thorough and careful evaluation of the need to designate Puget Sound as a No Discharge Zone.

Commenter: Puget Soundkeeper Alliance - Comment O-16-3

The Department of Ecology has spent over 6 years considering a No Discharge Zone("NDZ"), with a carefully considered process that included state agencies, cruise lines, recreational boaters, marinas, yacht clubs, commercial vessels including tugboats and fishing vessels, trade associations, shellfish growers, environmental organizations, scientists, EPA, the Coast Guard, legislators, and members of Congress. As we explain in detail below, the facts show that the many positive benefits of an NDZ vastly outweigh any potential burdens of an NDZ. Enough deliberation has taken place on this topic, and all interested stakeholders have weighed in: it is time to stop dumping Blackwater into our Sound.

Commenter: Sierra Club - Comment O-37-7

We understand and appreciate that Department of Ecology has done it's due diligence on considering and studying this issue, having spent more than 6 years on the deliberation process which included input from state and federal agencies, recreational boaters, marinas, marine industries, shellfish growers, scientists, environmental organizations, and political leaders. We believe it is time to join the other 26 states containing more than 90 No Discharge Zones, and designate our crown jewel, Puget Sound, as a No Discharge Zone and give it the protection it deserves and desperately needs.

Commenter: Washington Environmental Council - Comment O-29-5

The Department of Ecology has spent over 6 years considering a No Discharge Zone for Puget Sound, with a carefully considered process that included state agencies, cruise lines, recreational boaters, marinas, yacht clubs, commercial vessels including tugboats and fishing vessels, trade associations, shellfish growers, environmental organizations, scientists, EPA, the Coast Guard, legislators, and members of Congress.

The Department of Ecology met at least three times with the Coast Guard since 2012 on the Puget Sound No Discharge Zone.

Commenter: Washington State Department of Health - Comment O-5-6

We believe Ecology has led a thorough research and stakeholder process to support this rulemaking.

Summary Response to: Ecology's process was thorough

Ecology appreciates the acknowledgement of the countless combined efforts over many years.

Comments on: Economic Analysis biased high commercial costs

Commenter: Chris Wilke - Comment I-2555-7

The costs to comply are minimal. I do think that some of the figures that have been tossed around by the maritime industry regarding retrofits of tug boats – I think those can be grossly inflated, and are sort of a worst case scenario. I can also point out that many of those visits for retrofitting can be scheduled with regular maintenance or dry docking, so as to not incur those costs.

Commenter: Puget Soundkeeper Alliance - Comment O-16-10

The Small Business Economic Impact Statement (SBEIS) included within the proposed rule considers costs to "businesses in an industry" in Washington State for businesses with 50 or fewer employees. While the SBEIS includes costs for commercial vessels to comply, the SBEIS does not consider the benefits to other small businesses. These include shellfish companies, companies serving scuba diving, and other recreational businesses that rely on clean water.

In the Pacific Northwest, the shellfish industry injects an estimated \$270 million a year into the region's economy, bringing jobs to over 3,200 people, primarily in coastal communities. 1 According to the Pacific Shellfish Growers Association, Washington State sees the most in shellfish sales of the 4 Pacific Coast States, netting approximately \$77 million in sales annually as of 2000. 2 According to WDFW, commercial and recreational fishing conducted in Washington fisheries directly and indirectly supported an estimated 16,374 jobs and \$540 million in personal income in 2006. 3

A study by the Seadoc Society found that in 2014, divers in Washington State spent approximately \$5 million in state on diving and related expenditures. 4

In comparison, the economic costs of compliance are biased high, particularly for tugboats. The 20-year present value of retrofit costs (\$91,233,047) and 20-year present value pumpout costs (\$148,190,365) are both apparently based on industry-supplied estimates of tank volumes and costs to retrofit.

The Puget Sound NDZ Commercial Vessels Economic Evaluation (Herrera, 2015) cited an analysis provided by Charlie Costanzo (2015)⁵ that indicates an upper range of 2,900 gallons for tanks needed on the tugs. This is based on a per capita sewage generation rate of 16 gallons/day, a crew of 7 people, 21 days without access to pumpouts, and 25% overage to prevent spills.

Herrera researched a number of low-flush heads suitable for onboard toilet facilities. Table 2 of Herrera (2015) provides waste generation rates for live-aboard crews, based on US Coast Guard Guidelines:

Table 1. Waste generation rate for live-aboard crew based on US Coast Guard Guidelines (adapted from Herrera, 2015)

Head Type	Gallons per person per day	Tank volume for 4 crew, 14 days, 25% overage	Tank volume for 7 crew, 21 days, 25% overage
Recirculating	0.5	35	92
Vacuum	1.9	133	349
Hand pump	2.9	203	533
Electric	5.4	378	992

In response to the above options, Mr. Costanzo noted that high efficiency heads are more costly to install and maintain, and may not be durable enough for daily use on tugboats. Herrera then contacted head manufacturers who identified that "[w]hile some of the more efficient heads may be less reliable due to delicate moving parts, mechanical macerators, and complex plumbing systems, it appears that reasonable options suitable for use in a commercial environment are available. For example, one of the heads researched has no moving parts, costs about \$2,000 to install, connects to a holding tank or treatment device with standard piping, and comes with a 5-year warranty. This particular system uses about 1 gallon per flush, which would result in about a 6-gallon ppd waste generation rates, so it is not among the most efficient systems available, but is still many times more efficient than conventional systems (Scott Mulligan, Senior Sales Engineer, Headhunter Inc., personal communication, June 2015). Another head researched is an air-assisted toilet that uses about 0.5 gallons per flush, which would correspond to about a 2-gallon ppd waste generation rate. This head is available for about \$1,500, and comes with a 2-year warranty."

Using per capita rates of 0.5 to 5.4 gallons/day, based on US Coast Guard regulations, a crew of 7 people, 21 days without access to pumpouts, and 25% overage to prevent spills, the tank volume would be 100 to 1,000 gallons, significantly less than 2,900 gallons. Presumably these smaller tanks would cost significantly less than the \$161,500 estimated by Costanzo. In addition, oceangoing tugs could use a combination of holding tanks within Puget Sound, with shorter duration between pumpouts.

While we have no information as to the crew sizes of tugboats that operate in the Puget Sound region, we question whether any vessel would require 21 consecutive days at sea without access to pumpouts. In addition to the shore-based facilities, private companies serve mobile pumpout needs through trucks and barges. In calls conducted in December 2016, these companies indicate that they serve the entire Puget Sound.

Herrera (2015) cites Costanzo (2013) that "about 95 of the approximately 150 Puget Sound tugboat fleet would need to be retrofitted." The analysis then assumed the most conservative costs, "that all 95 tugboats would require installation of a 3,000-gallon holding tank at an estimated cost of \$161,500, would represent a 15.3 million expenditure in this sector," noting that smaller tanks or more efficient heads could be installed.

Finally, Herrera (2015) cites the Massachusetts Office of Coastal Zone Management (T.Callaghan, personal communication, April 2015) that despite substantial retrofit costs, tug operators in other recently established NDZs, such as Boston Harbor, have successfully retrofitted tugboats without serious disruption to operations.

In summary, while the SBEIS indicates a highly conservative cost for tugboats to comply with the NDZ, which biases high the costs. Even given this highly inflated cost, the 20-year present-value cost per employee is \$8 (small business, average of 7.5 people per small business) and \$0.04 (large, average of 140.5 people for largest businesses affected). For pumpouts, the 20-year present-value cost per employee is \$12.97 if applied to small businesses and \$0.51 if applied to largest businesses. These results were used to establish a disproportionate cost on small businesses, and therefore Ecology included elements to mitigate this disproportion. However, they indicate that the per-employee costs to comply with this rule are reasonable expenditures for companies whose business relies on and benefits Puget Sound.

1 NOAA publication, "From the Tides of Puget Sound to Your Plate: Northwest Shellfish Industry Provides Important Ecological & Economic Value." January 2012. Last Accessed November 28th, 2017. Available online at http://www.westcoast.fisheries.noaa.gov/publications/aquaculture/noaa_shellfish_initiative_f_she_et_011312.pdf. 2 Shellfish Economy, Treasures of the Tidelands. July 2003. Last Accessed November 28th, 2017. Available online at: http://www.akleg.gov/basis/get_documents.asp?session=27&docid=31613 3 WDFW, "Economic Analysis of the Non-Treaty Commercial and Recreational Fisheries in Washington State." December 2008, Revised March 13, 2012. Last Accessed November 28th, 2017. Available online at: <http://wdfw.wa.gov/publications/00464/> 4 Northern Economics. "Economic Impacts of Washington State Resident Scuba Divers." March 2016. Last Accessed November 28th, 2017. Available online at: <http://www.seadocsociety.org/wpcontent/uploads/SCUBA-Economic-Valuation-Final-report.pdf> 5 Costanzo (2015) refers to a letter responding to the draft NDZ petition in April 2015 that estimates tugs would need to be retrofitted with minimal tank sizes ranging from approximately 1,100 to 2,900 gallons to accommodate waste generated during longer trips. The upper end was based on a crew size of 7 people for 21 days with a per capita generation rate of 16 gallons per person and 25% added capacity to minimize spill risk. Information provided in Herrera (2015), page 3 and Table 1. While that table lists 2,911 gallons, these values total 2,940 gallons. 6 Costanzo, Charlie. 2013. American Waterways Operators Vice President-Pacific Region, November, personal communication to the Washington State Department of Ecology.

Commenter: Washington Environmental Council - Comment O-29-12

Economic analyses likely biased high regarding the costs to commercial boaters. The Small Business Economic Impact Statement (SBEIS) included within the proposed rule considers costs to "businesses in an industry" in Washington State for businesses with 50 or fewer employees. While the SBEIS includes costs for commercial vessels to comply, the SBEIS does not consider the benefits of implementing the rule to other small businesses. These include shellfish companies, companies serving scuba diving, and other recreational businesses that rely on clean water. The recreational shellfish industry alone is valued at \$400 million in Puget Sound, and the commercial shellfish industry another \$71 million in 2013 dollars (Washington Sea Grant, 2015).

While we do not dispute the overall economic analyses, we point out that estimated costs of compliance are likely biased high, particularly for tugboats. The 20-year present value of retrofit costs (\$91,233,047) and 20-year present value pumpout costs (\$148,190,365) are both apparently based on industry-supplied estimates of tank volumes and costs to retrofit, which we believe are unusually high and not realistic.

The Puget Sound NDZ Commercial Vessels Economic Evaluation (Herrera, 2015) cited an analysis provided by Charlie Costanzo (2015) that indicates an upper range of 2,900 gallons for

tanks needed on the tugs. This is based on a per capita sewage generation rate of 16 gallons/day, a crew of 7 people, 21 days without access to pumpouts, and 25% overage to prevent spills.

Herrera (2015) researched a number of low-flush heads suitable for onboard toilet facilities, which would produce less than 16 gallons/day. Table 3, adapted from Herrera (2015), provides waste (blackwater, sewage) generation rates for live-aboard crews, based on US Coast Guard Guidelines. In response to the options Herrera (2015) identified with lower sewage generation rates, Mr. Costanzo(2015) commented that high efficiency heads are costlier to install and maintain, and may not be durable enough for daily use on tugboats though did not specify why. Herrera (2015) then contacted head manufacturers who identified that "[w]hile some of the more efficient heads may be less reliable due to delicate moving parts, mechanical macerators, and complex plumbing systems, it appears that reasonable options suitable for use in a commercial environment are available. For example, one of the heads researched has no moving parts, costs about \$2,000 to install, connects to a holding tank or treatment device with standard piping, and comes with a 5-year warranty. This particular system uses about 1 gallon per flush, which would result in about a 6-gallonppd [per person per day] waste generation rates, so it is not among the most efficient systems available, but is still many times more efficient than conventional systems (Scott Mulligan, Senior Sales Engineer, Headhunter Inc., personal communication, June 2015). Another head researched is an air-assisted toilet that uses about 0.5 gallons per flush, which would correspond to about a 2-gallon ppd waste generation rate. This head is available for about \$1,500, and comes with a 2-year warranty."

Using per capita rates of 0.5 to 5.4 gallons/day, a crew of 7 people, 21 days without access to pumpouts, and 25% overage to prevent spills, the tank volume would be 100 to 1,000 gallons, significantly less than 2,900 gallons. Presumably these smaller tanks would cost significantly less than the \$161,500 provided by Costanzo (2015). Therefore, the per capita sewage generation and the resulting tank costs are likely high.

While we have no information as to the crew sizes of tugboats that operate in the Puget Sound region, we question whether any vessel would require 21 consecutive days at sea without access to pumpouts or other utilities such as water or fuel. In addition to the shore-based pumpout facilities, private companies serve mobile pumpout needs using trucks and barges throughout the Puget Sound region (Table 1). Therefore, the tank volume and subsequent tank costs are likely high.

Herrera (2015) cites a 2013 personal communication from Costanzo in stating that "about 95 of the approximately 150 Puget Sound tugboat fleet would need to be retrofitted". Herrera (2015) then assumed the most conservative costs, "... that all 95 tugboats would require installation of a 3,000-gallon holding tank at an estimated cost of \$161,500, would represent a \$15.3 million expenditure in this sector," noting that smaller tanks or more efficient heads could be installed. Therefore, applying the largest volume and highest costs to every tugboat in the costs estimate produces a high estimate of actual costs to industry.

Finally, Herrera (2015) cites the Massachusetts Office of Coastal Zone Management (T. Callaghan, personal communication, April 2015) that despite substantial retrofit costs, "tug operators in other recently established NDZs, such as Boston Harbor, have successfully retrofitted tugboats without serious disruption to operations". We are not aware of any company that has gone out of business as a result of implementing any of the 90 existing NDZs. We are confident that the industry will find reasonable cost alternatives to comply with this rule.

In summary, while we do not dispute the economic analyses, costs for tugboats to comply with the NDZ are likely biased high due to very large tank volumes artificially elevated by the per capita sewage generation assumptions and assumption of 21 consecutive days at sea.

Summary Response to: Economic Analysis biased high commercial costs

The cost-benefit component of the Regulatory Analyses (performed in compliance with chapter 34.05 RCW) considers only direct costs and benefits, including protection of shellfisheries and the shellfish industry. The SBEIS, while it does consider indirect impacts in its jobs estimate, is limited by the governing statute (chapter 19.85 RCW) to include only costs of compliance. We intend the economic analyses to be read as a whole – including the direct impacts of the cost-benefit analysis, and the compliance cost-based indirect impacts of the jobs estimate. The indirect value of shellfisheries illustrated by the examples you list is not within the scope of the SBEIS. The text of the SBEIS has been updated to reflect what is within versus outside the scope of the analysis.

The Regulatory Analyses does, however, discuss direct impacts to shellfisheries qualitatively.

“While we cannot confidently estimate the quantitative relationship between the proposed rule and avoided increases in shellfishery closures, we can provide an illustrative estimate that this benefit alone could offset the entire estimated cost of retrofitting tugs (\$91 million in 20-year present value) if it caused between 350 and 700 acres of commercial shellfishery to avoid future closure beginning in year 6” (*p. 26 Preliminary Regulatory Analyses*).

The assumed 21 consecutive days at sea is consistent with 3,000 gallons of discharge used in Ecology Environmental Assessment Program modeling, based on input from tug operators. While concerns existed regarding the necessity of 21 days, based on variance in the number of days out, but used the 21 day assumption to better represent the broad overall range of vessels, from smaller rec vessels and larger cruise ships.

We agree, and have reflected in the text of the Regulatory Analyses, that there are ways retrofit costs could be reduced (e.g., as part of regular maintenance) or avoided. The economic analyses attempt to capture, however, worst-case scenario costs reflecting a case where this is not possible. In our analyses, Ecology attempts to overestimate costs when there is uncertainty about whether and to what degree further cost-minimization is available. The Final Regulatory Analyses have been updated to better reflect this.

Thank you for your comments regarding the financial viability of tugs complying with No Discharge Zones. Ecology worked extensively with potential impacted parties to address their ability to comply with necessary equipment and discharge behaviors.

Comments on: Effect on shipping and commerce concerns

Commenter: Boyer Towing, Inc. - Comment OTH-1-6

Where is the scientific study showing what effect this will have on interstate shipping?

How can you justify the extreme burden this will place on interstate commerce, which is prohibited by several U. S. Supreme Court cases? Where is the scientific study showing the effect this will have on international shipping?

Summary Response to: Effect on shipping and commerce concerns

Ecology does not agree that a Puget Sound No Discharge Zone will place extreme burdens on interstate commerce, and notes that Congress has specifically authorized states to implement no discharge zones.

Ecology complies with the Administrative Procedure Act (chapter 34.05 RCW) by examining direct costs and benefits of proposed and adopted rules. Indirect impacts due to ongoing market behaviors and business decisions are not within the scope of this analysis and its determination. The Final Regulatory Analyses document has been updated to reflect this.

However, for illustrative comparative purposes, consider the case of Boston Harbor's 2014 No Discharge Zone. The Massachusetts Office of Coastal Management indicates that since the No Discharge Zone's implementation, the value of waterfront properties is rising, based in part by reductions in odor and improved public perception. International businesses, including Converse and GE, are moving their headquarters to the redeveloped Boston Harbor waterfront. However, growth in the area is not limited to the real estate sector. Jobs in the local transportation and material moving industry are projected to grow (Boston Redevelopment Authority, 2016). Conley Container Terminal has experienced record growth of five percent in 2015-16. Exports grew by 11.7 percent, increasing over 32 percent since 2012. Boston Harbor has gained seven new major shipping lines since 2012 (Massport, 2017). There was also preemptive preparedness and economic opportunity. Following the No Discharge Zone, some tug companies were prepared due to upgrades in preparation for other No Discharge Zones in multi-state operations, and a local tugboat company converted to pumpout services for larger vessels.

Ecology considered numerous scientific studies and reports including, but not limited to: *Assessment of Potential Health Impacts of Virus Discharge from Cruise Ships to Shellfish Growing Areas in Puget Sound* (Washington State Department of Health/University of Washington, November 2007), the *Cruise Ship Discharge Assessment Report*, (Environmental Protection Agency, 2008), *Tracer simulations to investigate how waters move in Puget Sound and the Salish Sea to address questions related to the draft proposed No Discharge Zone petition* (Ecology 2016), *Evaluation of Improved Type I Marine Sanitation Devices, Performance Evaluation Report* (EPA 2010), Alaska Department of Environmental Conservation small cruise ship sample reports, and the *Liberty Bay Marina Study* (Kitsap Public Health, 2010).

In addition, Ecology considered economic information including, but not limited to direct input from various vessel stakeholders, advisory group input, various report on vessel sewage management and pumpouts and costs and benefits, the final petition, the *Preliminary Regulatory Analyses, Including the Preliminary Cost-Benefit Analysis, Least Burdensome Alternative Analysis, Administrative Procedure Act Determinations, and the Regulatory Fairness Act Compliance and the Puget Sound NDZ Commercial Vessel Economic Evaluation* memorandum.

Comments on: Enforce the NDZ

Commenter: Richard Porter - Comment I-12-4

I'm also concerned about how you'd check if the live-aboard boats meet the requirements. And would the penalties be sufficient to force changes?

Commenter: Citizens for a Healthy Bay - Comment O-18-9

CHB is concerned about the ability to effectively enforce the NDZ. Notably, the State of New York, which has 18 separately designated NDZ's with the oldest created in 1976, has no record of enforcement citations. We suggest adding a provision for citizen enforcement to the rule structured like the citizen lawsuit provision for the federal Clean Water Act, making it possible for the public, and organizations like CHB, to ensure boaters pump out their sewage as required by law.

Commenter: Friends of the Earth Commenter - Comment O-31-9

There needs to be some tupe of inspections done to keep these ships accountable.

Commenter: Friends of the Earth Commenter - Comment O-31-10

This is an egregious crime and should be punished to fullest extent of the law.

Commenter: Sierra Club Commenter - Comment O-30-8

I understand that before people knew better, discharging effluent anywhere didn't seem to be a concern. We know better now, and have for years. Please regulate that there be a no discharge zone in the Puget Sound.

Commenter: Sierra Club Commenter - Comment O-30-26

I understand that the vast majority of local boaters already support a no discharge zone, and it is long overdue that we designate our state waters as no discharge zones, and the penalties for discharging should be high.

Summary Response to: Enforce the NDZ

Ecology's approach to enforcement includes an initial focus on outreach and education, followed by enforcement to deter and address violations. A cross-agency NDZ Enforcement Committee is part of the implementation plan which includes evaluating enforcement authority strategies and mechanisms with the various enforcement authorities, inspection and training guidance, fines, and other relevant elements. Liveaboard vessels will also be inspected as other vessels per authorized authority. While the Clean Water Act authorizes citizen suits, there is no citizen suit provision in Washington's Water Pollution Control Act, chapter 90.48 RCW. Authorizing citizen suit enforcement of a Puget Sound No Discharge Zone is beyond the scope of this rulemaking.

Comments on: Exempt public vessels

Commenter: United States Coast Guard - Comment A-4-3

I sincerely appreciate the state's consideration of Coast Guard emergency, safety, security, and related contingency operations in the proposed regulation. Not all Coast Guard vessels will have the ability to comply with the proposed requirements during extended search and rescue, and safety, security, and environmental missions without endangering the health, safety, or welfare of the public, the crew, or other personnel aboard.

As such, the Coast Guard strongly recommends an exemption be given for public vessels and vessels of the Armed Forces, defined in accordance with the Clean Water Act (CWA) Section 312 (a)(14), which are carrying out missions vital to national security and safety. Additionally, as we specifically noted in our comment to the EPA in December 2016, we commented that more flexibility for exemptions are available under 33 U.S.C. §(f)(4).

Summary Response to: Exempt public vessels

The rule language includes an exemption for public vessels that are actively involved in emergency, safety, security, or related contingency operations where it would not be possible to comply with the Puget Sound No Discharge Zone. The definition for public vessels is consistent with the definition in 33 U.S.C. §1322 which includes “a vessel owned or bareboat chartered or operated by the United States, by a state or political subdivision thereof, or by a foreign nation, except when such vessel is engaged in commerce.” Vessels of the armed forces are public vessels and it is not necessary to repeat CWA Section 312 (a)(14). The petition to the EPA which was affirmatively moved forward was done so under 33 U.S.C. §1322 (f)(3).

Comments on: Financially prohibitive retrofits and costs

Commenter: American Cruise Lines, Inc. - Comment O-23-9

Notably, in its Preliminary Regulatory Analysis, Ecology estimates pumpout costs for small passenger vessels are non-existent (\$0). (Ecology Prelim. Reg. Analysis §§ 3.2.3 and 3.3.). The lack of any estimate of this cost is a glaring omission, especially considering that - because of the significantly greater number of persons generating blackwater and/or graywater – small passenger vessels will incur far greater pumpout costs in comparison to tugboats, commercial fishing vessels, and other vessels for which Ecology does estimate pumpout costs.

In addition to direct costs, the June 2015 technical memorandum prepared for Ecology by Herrera Environmental Consultants, Inc. acknowledges that it does not estimate the increased indirect costs of retrofitting to small passenger vessel cruise operators including due to lost passenger revenue, reclassification, and marketability of cruises. Ecology's Preliminary Regulatory Analysis apparently also fails to account for any indirect costs. Even if retrofitting could be achieved, the only way American Spirit and American Constellation could meet the required safety thresholds for stability and sufficiently increase holding tank capacity would be to reduce passenger capacity to the point that commercial operation of the vessel would no longer be economically viable. This is the case before the costs associated with reclassification and reduced marketability of cruises are considered.

Additionally, the June 2015 technical memorandum prepared for Ecology by Herrera states that the majority of small passenger vessel operators spend most of their time in Alaska. This is not true for ACL. Historically ACL has operated American Spirit for about 21 weeks per season in Puget Sound and 8-10 weeks per season in Alaska. In the future, ACL plans to run American Spirit exclusively in Puget Sound and to take over American Spirit's historic schedule using the American Constellation. It would be unreasonable for ACL to be forced to incur these substantial additional costs and reductions in revenue even if there were pumpout facilities reasonably available for commercial vessels like American Spirit and American Constellation.

It would be especially unreasonable for ACL to be forced to incur these costs and loss of revenue, even over the five year phase in period proposed by Ecology, in the present circumstances when, as Ecology concedes, there is no guarantee there will be pumpout facilities reasonably available for vessels like American Spirit and American Constellation, even after that phase in period. Thus, due to the current lack of adequate discharge facilities reasonably available for all commercial vessels that operate in the proposed NDZ, Ecology should consider less stringent alternatives.

Commenter: Charles Long - Comment I-11-3

My wife and I are not "wealthy fat cats" who are running around in our mega-yacht indiscriminately dumping sewage and garbage all over our aquatic ecosystem. On the contrary, we are retired educators who have given up other luxuries in order to afford an older, more modest, pleasure boat with which to enjoy our retirement. We have equipped our boat with a Lectra-Scan Type I Marine Sanitation Device which treats effluent before discharging it overboard AND the largest holding tank we could retro-fit into our 1978-vintage trawler. Installation of this equipment cost us in excess of \$3000.

Commenter: American Cruise Lines, Inc. - Comment O-23-10

Even if adequate pumpout facilities were reasonably available in Puget Sound for commercial vessels, which they are not, it is not feasible from an engineering or cost standpoint to retrofit American Spirit and American Constellation. Ecology estimates the costs to retrofit small passenger vessels to comply with the proposed NDZ will be approximately \$680,000 per vessel. (Ecology Prelim. Reg. Analysis § 3.2.3; see also, Herrera Enviro. Consultants, Inc. June 25, 2015 Tech. Memo., Pub. No. 16-10-015 at p. 7 (estimating \$650,000).) ACL estimates that the costs would be significantly higher for its vessels.

For ACL's vessels, the ability to increase holding tank capacity is constrained by structural, stability, and operational limitations. To increase holding tank capacity, other capacity either for fuel, potable water, or passengers, would have to be reduced. The costs required to make these structural changes would be in the range of approximately \$750,000. If these types of structural changes were made, American Spirit and American Constellation would not be able to maintain the minimum U.S. Coast Guard safety thresholds for stability.

Based on its experience operating American Spirit, ACL estimates that the vessel generates a minimum of approximately 56,000 gallons of combined graywater and blackwater during each week-long cruise. Installing entirely separate AWWTS systems to treat graywater and blackwater would be prohibitive, both as a matter of marine engineering and from a cost perspective.

Based on its experience operating American Spirit, ACL estimates that the vessel generates a minimum of approximately 56,000 gallons of combined graywater and blackwater during each week-long cruise. Installing entirely separate AWWTS systems to treat graywater and blackwater would be prohibitive, both as a matter of marine engineering and from a cost perspective prevent it from meeting required minimum U.S. Coast Guard safety thresholds for stability. Alternatively, to obtain the required holding tank capacity and meet stability requirements, passenger capacity would have to be reduced to a point that would make operating it not economically viable.

Such modifications would cost in excess of approximately \$600,000 and render useless the investment by ACL, in reliance on the current VGP requirements, of over \$500,000 to install state of the art AWWTS equipment that produces effluent of quality similar to that of Washington's land based municipal waste water treatment plants.

Commenter: American Cruise Lines, Inc. - Comment O-23-13

ACL currently has plans to send more new vessels to trade in Puget Sound. Without adequate pumpout facilities, however, and because of increased operating costs and logistical hurdles, the proposed NDZ will delay ACL's Puget Sound expansion plans, if not halt them entirely. This is because, to comply with the VGP and NDZ by using pumpout facilities, any new vessel will need both a minimum of 56,000 gallons holding tank capacity and adequate pumpout facilities to which to discharge the graywater and blackwater. As set forth above, adequate facilities would have to be located on the docks in at least two of the ports at which ACL calls. Absent the reasonable availability of adequate pumpout facilities capable of accepting some 56,000 gallons of effluent, availability not now either found or proposed in Puget Sound, ACL's new vessels designed at great expense to comply with the VGP would, as a practical matter, simply not be able to discharge to pumpout facilities in order to comply with the NDZ.

Commenter: Foss Maritime Company - Comment O-12-4

As outlined in our previous comments of April 21, 2014, under the conditions of the proposed NDZ, Foss would be forced to retrofit all of its vessels with holding tanks at a cost of at least \$125,000 per vessel. It would also entail on going operational costs of approximately \$25,000 per vessel annually to utilize pump out trucks which is currently the only option available for our size of vessels. This does not include the costs of transit and additional crew costs.

Commenter: Passenger Vessel Association - Comment O-28-5

For the three existing "small ship" overnight cruise vessels, it will be financially prohibitive for their owners to attempt to retrofit them to install sufficient tank capacity to hold sewage effluent generated on a voyage of a week or more induration. Based on very cursory collected information, Ecology has estimated that the average cost of such a retrofit of a "small ship" overnight cruise vessel is \$680,000, but PVA believes that this assumption is grossly underestimated. PVA urges the Department of Ecology to consult in more detail with the two operators (American Cruise Lines and Un-Cruise Adventures) and their naval architects to obtain more realistic cost estimates. In any event, the operations of these three existing "small ship" overnight cruise vessels simply do not generate revenues in amounts that can support or justify these costly retrofits. Faced with such mandated costs (even with an effective enforcement date delayed for five years), the most likely scenario will be that the vessel owners will simply choose

to stop operating these older vessels or perhaps redeploy them to other geographic locations if it can be determined that other areas might reasonably provide an attractive market. The result – unintended by the Department of Ecology and undesired by the operators – could be the elimination of "small ship" overnight cruising in Puget Sound. This would deprive Washington State of a maritime sector that is a valuable contributor to its maritime economy, reduce opportunities for vessel-related and shoreside jobs, and take away a desired vacation option for in-state residents and customers from out of state.

Commenter: Recreational Boating Association of Washington - Comment O-40-5

There would be tremendous hardship to both commercial and recreational boaters to refit their vessels to accommodate a Puget Sound wide NDZ.

Commenter: The American Waterways Operators - Comment O-24-16

The costs of Ecology's proposed rule making are well understood, uniformly agreed-upon, and too excessive to support this regulation. According to Ecology's Proposed Rule Making Form CR-102:

Total 20-year present value costs for retrofits are estimated to be between \$511 million and \$551 million, including all costs estimated...Total 20-year present value costs associated with pumpouts are estimated to be between \$190 million and \$211 million, including all costs estimated.

Towing vessel operators will bear a significant portion of the retrofit and pumpout costs associated with this rule making. To comply with the proposed NDZ, a typical towing vessel would need to undergo a retrofitting procedure to install and plumb a sewage system and holding tank that is compliant with all relevant Coast Guard and IMO regulations. Retrofitting vessels for tankage is time consuming and costly. Some vessels, due to age, configuration, or tonnage restrictions, cannot feasibly be retrofitted. Space is often severely restricted aboard towing vessels since much of the available room is consumed by propulsion units, fire-suppression and safety equipment, living space for crew, and tankage for fuel, potable water and ballast water.

Furthermore, modifications of tankage impacts vessel void spaces which are fundamental to seakeeping ability. Modifications of void space could lead to tragedy.

Beyond the retrofitting costs, towing vessel operators would also bear substantial operating costs to comply with the rule. Vessel operators would need to purchase and consume excess fuel to transit to pumpout facilities. Once at the facility, they would need to pay for the pumpout service. Since there are no commercially-available shoreside pumpout facilities where towing vessels regularly transit in Puget Sound, towing vessel operators would need to use a pumpout truck at substantial additional cost. This disruption in waste management practices would also incur costs associated with interrupting the schedule of the vessel, such as crew changes if the increased length of time of the voyage implicates Coast Guard work/rest rules.

Ecology's projected 20-year costs in exceedance of \$750 million would be a source of concern regardless of whether the regulation was supported by empirical data and a legitimate technical basis. Here, because there is no corroborating data or technical basis, the \$750 million price tag is simply unsupportable, and Ecology should withdraw the rule making.

Summary Response to: Financially prohibitive retrofits and costs

Thank you for your comments regarding availability and costs of using pumpouts for small commercial passenger vessels. We have revised the Final Regulatory Analyses to reflect pumpout and truck costs suggested in public comments. While the EPA has already determined that adequate facilities are reasonably available to support a Puget Sound No Discharge Zone, Ecology believes that the existence of the No Discharge Zone creates incentive for market entry to mobile and stationary commercial pumpout ventures, which would make these facilities more than reasonably available. Following the Boston Harbor No Discharge Zone (established 2014), pumpout infrastructure grew. Similar growth in Puget Sound would reduce costs of compliance over time, and potentially reduce initial compliance costs if infrastructure develops during the five-year delayed implementation period.

Costs of retrofitting small commercial passenger vessels used in the Regulatory Analyses were based on direct communication between Ecology staff and vessel operators. The difference of \$650,000 to \$680,000 is based on an inflation adjustment between 2014-dollars and 2017-dollars. The estimate of \$650,000 was received from the small passenger industry in meetings and in other communications (or similar values). Communication noted that this value could be higher, but provided no additional financial details. Revenues were considered in the Herrera report in the economic context section.

The Regulatory Analyses document combines various types of vessel under the “Tugs” heading, including: ocean tugs, harbor tugs, workboats, and escort and assist vessels. Tug costs reflect costs of retrofit, pumpout, and lost time/revenues for all of these types of vessel. The Final Regulatory Analyses have been revised to better reflect this information.

Ecology understands that investments have been made in current treatment technology on board a small portion of commercial and recreational vessels. The federal standard for treatment from Type I and Type II MSD treatment systems does not meet the State water quality standards for fecal coliform bacteria and other pollutants that can pose a risk to Puget Sound.

In addition to the costs, Ecology also based the five-year delayed implementation on stakeholder work and the economic evaluation for certain commercial vessels, allowing vessels that have more significant costs and unique challenges, such as requiring engineering designs with extra safety considerations more time to make the retrofits. The five years generally coincides with two dry-docking opportunities and allows vessels to spread the costs of the investment out over a longer period of time. The No Discharge Zone does not allow discharges of treated or untreated sewage even if there is an advanced wastewater treatment system (AWTTS) on a vessel.

In regards to recreational pumpout costs, unit cost estimates used in the Regulatory Analyses are average or typical costs, but we have revised the Final Regulatory Analyses to note that costs as high as \$3,000 have been reported. As these are sunk costs already incurred, however, they are not direct costs of the rule, and are not reflected in addition to compliance costs. While the Regulatory Analyses do not assume all vessels will need to retrofit (*Puget Sound Recreational Boater Survey Results* (Herrera 2013) – 91 percent of vessels have Type III), they do estimate costs of developing necessary recreational pumpout infrastructure to sufficiently serve boater needs in lieu of the more frequent pumpout needs of Type I and II versus Type III vessel operators.

Quantified costs discussed in these comments are generally consistent with the conservatively high cost of \$680,000 per commercial passenger vessel used in the Regulatory Analyses. We have revised the Final Regulatory Analyses to better reflect the context of small commercial passenger vessels, and potential for relocating or removing vessels from the No Discharge Zone area.

Ecology complies with the Administrative Procedure Act (chapter 34.05 RCW) by examining direct costs and benefits of proposed and adopted rules.

Indirect impacts due to ongoing market behaviors and business decisions are not within the scope of this analysis and its determination. The Final Regulatory Analyses document has been updated to reflect this.

However, for illustrative comparative purposes, consider the case of Boston Harbor's 2014 No Discharge Zone. The Massachusetts Office of Coastal Management indicates that since the No Discharge Zone's implementation, the value of waterfront properties is rising, based in part by reductions in odor and improved public perception. International businesses, including Converse and GE, are moving their headquarters to the redeveloped Boston Harbor waterfront. However, growth in the area is not limited to the real estate sector. Jobs in the local transportation and material moving industry are projected to grow (Boston Redevelopment Authority, 2016). Conley Container Terminal has experienced record growth of five percent in 2015-16. Exports grew by 11.7 percent, increasing over 32 percent since 2012. Boston Harbor has gained seven new major shipping lines since 2012 (Massport, 2017). There was also preemptive preparedness and economic opportunity. Following the No Discharge Zone, some tug companies were prepared due to upgrades in preparation for other no discharge zones in multi-state operations, and a local tugboat company converted to pumpout services for larger vessels.

Comments on: Five-year delay for recreational boats

Commenter: Robert Clausen - Comment I-2563-3

I think that awareness is a great thing to have. I think that most boaters are, in fact, trying to be as compliant as possible with this. So that, you know, it's one thing to give a, you know, a grace period for commercial vessels. I think that in certain areas recreational vessels will need that as well.

Commenter: Elsie Hulsizer - Comment I-1819-7

Even boaters who want to comply with the March 2018 effective date will have difficulty doing so. Boaters need time to consult experts, plan new systems, choose equipment, buy it and install it. Many boaters don't have the skills and/or the time to install it themselves and will need to hire installers whose numbers are limited. Using our own experience of replacing a Type I with a holding tank as an example, we spent considerable time researching the best equipment and figuring out how to install it. Our total cost for new equipment was \$2,500 in 2012. Because of limited space for a holding tank in our older boat, we had to also install a new vacuum pump toilet (uses less water and therefore requires smaller holding tank volume). My husband, who worked in the marine industry, spent several weeks of his time installing the new system including changes to other systems to accommodate the tank and the new toilet. If we had had to pay an installer, the cost would have more than doubled. Because most boats with Type I MSDs chose them for space issues, few will get by with installing just a holding tank.

Ecology's own plan for educating persons affected by the rule implies time required for interagency coordination and development of educational tools. It is unrealistic to think that boaters could then just turn around and add a holding tank in a short period of time. You can expect laughter and scorn rather than cooperation. Please allow at least one year between effective date and full implementation.

Commenter: Elizabeth Ray - Comment I-8-6

The commercial fleets and state research boats get 5 years to comply where regular recreational boaters are required to comply in 5 months.(THIS is absurd!)

Commenter: Outcomes by Levy - Comment O-6-8

In providing our written comments, our two organizations want to advance a specific request to Ecology that the same NDZ five-year phase-in allowance that is being contemplated for many commercial vessels be provided for recreational vessels as well. While we will continue to voice these concerns, both through our own organizations and the continued efforts of the Marine Alliance, we also believe that if there indeed is going to be the establishment of a Puget Sound-wide NDZ, it should be done in a way that provides time for boaters to adapt to a new paradigm and to comply with a brand-new set of rules. If Ecology is going to promulgate a rule which requires a couple hundred recreational boaters to dispose of the MSDs they have been using, and replace those facilities with new holding tanks, that will take time. We think it is critical that Ecology employ a customer-service approach to working in good faith, equitably, with boaters who will have to make an extremely significant adjustment that by its very nature requires considerable time and money. That is the foundation of our request, which we outlined at the outset of this letter, that recreational boaters be given a five-year phase-in period. This adjustment grace period is vital to helping recreational boaters comply with the law and it would represent a genuine effort to help them get to the final outcome mandated by Ecology. We again urge that the five-year phase-in for recreational boaters be incorporated into a final NDZ designation, just as Ecology appears to be contemplating for commercial vessels who face substantial economic costs in making this change.

Commenter: Recreational Boating Association of Washington - Comment O-40-7

With all this as background, if the NDZ does move forward, RBAW is requesting that the same five-year phase-in period that is proposed for some of the commercial vessels be extended to all vessels. This is to allow reasonable time for boaters to meet the new, expensive, and technically challenging mandate.

Commenter: Recreational Boating Association of Washington - Comment O-46-4

As far as the comment, previous comment made about the implementation schedule, Ecology has not allowed an implementation period for recreational vessels. We face the same problems that the commercial users face in terms of getting designs done and implementing storage tanks for sewage. It's just - you're going to be making us illegal overnight, with no opportunity for compliance. That is wrong.

Summary Response to: Five-year delay for recreational boats

Ecology proposed the five-year delayed implementation for certain commercial vessels based on stakeholder work and the economic evaluation for certain commercial vessels. The delay allows the commercial vessels that have more significant costs and unique challenges, such as requiring engineering designs with extra safety considerations, more time to make the retrofits. It is estimated that less than 2,000 recreational vessels, and that estimate is likely high, would require a retrofit to comply with the No Discharge Zone. The retrofits for recreational vessels is much less extensive than for the commercial vessels provided the delayed implementation.

Of the 90 No Discharge Zones in the United States, only two have included any type of delayed implementation and that was only for commercial vessels for one year. Ecology considered a delay for recreational vessels and finds that it is not necessary.

Comments on: Geographical scope broader than territorial seas

Commenter: United States Coast Guard - Comment A-4-4

The text of the proposed regulation presents four additional areas of concern: (1) the geographic scope of the regulation..... First, the geographic scope of the proposed regulation appears broader than the definition of "territorial seas" under 33 U.S.C. S 1362. This could present challenges in consistent enforcement of violations. The NDZ in the chart depicted in the proposed regulation covers areas that extend beyond the waters over which the state has jurisdiction. We note that courts have held that insofar as the Clean Water Act delegates certain authorities to the states for the purpose of pollution control, that authority extends only to the waters within such states jurisdiction. That jurisdiction according to the Court in "Costle", extends only to the "territorial seas," which for the purposes of the Clean Water Act, is defined as "the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of three miles." Here it appears that the proposed No Discharge Zone extends beyond three nautical miles in multiple areas.

Summary Response to: Geographical scope broader than territorial seas

The geographic scope of the regulation includes state waters per the State Constitution and Chapter 90.48 Revised Code of Washington. 33 U.S.C. §1322 (f)(3) authorizes the State to prohibit the discharge from all vessels of any sewage in some or all of the waters within such State.

Comments on: Grandfather certain vessels

Commenter: Paul Pickett - Comment I-662-5

I recognize that enclosed marinas and bays are more sensitive than the open sound. Putting this all together, I would propose: Keep the rule as proposed for vessels above a certain size.

Commenter: Lee Roussel - Comment I-2282-6

To increase protection of Puget Sound in the interim, the fecal coliform limit for MSDs should be reduced to that achievable by the best available technology. To permit boats to replace 1000 FCU/100mL MSDs with the best available technology, those meeting that standard should be “grandfathered” if a NDZ is ultimately adopted.

Commenter: American Cruise Lines, Inc. - Comment O-23-16

Potential alternatives include: (1) delaying implementation of the NDZ for commercial vessels until there actually are adequate pumpout facilities reasonably available for all commercial vessels that operate in Puget Sound and Ecology can demonstrate that as a fact; (2) exempting from the NDZ requirements small overnight passenger cruise vessels, i.e., ships that are permitted to carry between 1 and 249 passengers; (3) with respect to small passenger cruise ships (1-249 passengers), exempting those ships constructed before December 19, 2013 from the NDZ requirements and requiring ships constructed after December 19, 2013 to treat blackwater to the same standards as graywater is required to be treated under the VGP before it can be discharged in Puget Sound, which would result in more stringent requirements than current EPA regulations impose for discharging treated blackwater.

Commenter: Holland America Line - Comment O-41-5

We recommend that Washington State grant some exemptions for vessels that utilize class approved advanced wastewater treatment system to encourage future investment and development of this technology. We suggest that Washington implement a preapproval system, similar that Alaska State uses, that requires verifiable testing data for those discharges.

If enacting a no discharge zone, we ask that you allow the discharge of treated sewage that has been through a certified treatment system and meets specified water quality standards.

Commenter: Passenger Vessel Association - Comment O-28-2

For the reasons explained later in this comment, PVA urges Ecology to amend the proposed rule to "grandfather" three "small ship" U.S.-flagged overnight cruise vessels currently operated in Puget Sound by two PVA members (American Cruise Lines and Un-Cruise Adventures).

Summary Response to: Grandfather certain vessels

33 U.S.C. §1322 (f)(3) authorizes the State to prohibit the discharge from all vessels of any sewage in some or all of the waters within such State. Ecology may prohibit the discharge, but it must be for all vessels. In order to best protect water quality and public health, the rule is established to apply to all vessels. The Clean Water Act which authorizes the designation of no discharge zones does not have conditions to allow for certain treatment technologies to be exempted as it applies to all vessels. The rule does allow for a five-year delayed implementation for certain commercial vessels including: tug boats, commercial fishing vessels, small commercial passenger vessels, and National Oceanic and Atmospheric Administration (NOAA) research and survey vessels.

Comments on: Inadequate pumpouts

Commenter: Scott Anderson - Comment I-667-3

One of the problems is the lack of pump out station. The pumpstations that are in existence are poorly maintained.

Commenter: Robert Clausen - Comment I-2563-2

While I fully support the, you know, the whole intent here, and I think that getting us to a point where we're a full No Discharge Zone, I have to point out that if one is to try to sail in the San Juan Islands for multiple day cruise with multiple people on board, most recreational vessels only have a holding capacity that will let you got for about two days. And the number of pumpout stations there is not really adequate for you to plan anything other than how to get between pumpout stations, if that's where you're sailing. So I think the enforcement should be lax until further pumpout stations are built.

Commenter: William Haines - Comment I-669-3

While there are many pumpouts for recreational vessels, only one exists for commercial vessels, in Bellingham.

Commenter: Jerry Hillis - Comment I-2249-3

So for some "feel good" emotions, we have this draconian no discharge zone and it is draconian because there is a huge lack of pumpout facilities. As a practical matter the number of pumpout stations is severely limited. I am lucky if I can dock and pumpout in less than 15 minutes. Do the math. At Shilshole we have 2 pumpouts. So at best 8 boats an hour. Really? A marina with 1500 boats. This exclusion zone puts boaters in the untentable position of not being able to comply. Holding tanks are limited in capacity and pump outs are often hard to reach for a craft that travels at 7 knots. The boater may also want to go to remote areas where pumpout stations simply do not exist.

Commenter: Elsie Hulsizer - Comment I-1819-2

I believe that for a Sound-wide NDZ to be successful, we must have more pumpouts than we currently do, do a better job designing and maintaining the pumpouts. In my 2013 comments on the Sound-wide NDZ, I did not comment on the adequacy of the number of pumpouts as my husband and I had only recently replaced our Type I system in our sailboat with a holding tank and had done almost all of our cruising with it in Canada and Alaska. But this past summer we spent over four weeks total in Puget Sound, including South Puget Sound, Central Puget Sound and the San Juan Islands, giving us an opportunity to experience personally the issues with pumpouts in Puget Sound. Number of Pumpouts: Not Yet Adequate. Although the number of pumpouts may look impressive, their location and conditions can leave large water areas without a usable pumpout, especially for sailboats and slow powerboats with limited tankage. Like many boaters which made the switch from Type I devices we have limited space for a holding tank. (Although 44 ft long, our boat was designed in 1938 when boats were narrower with less freeboard.) We hold only 13 gallons of sewage and even with a vacuum system, must pumpout every 3-4 days. A distance between pumpouts that looks short for newer and/or faster boats, looks farther to us.

Commenter: Elizabeth Ray - Comment I-8-5

Washington State currently does not have the infrastructure in place to support the legislation. (Too few pump out stations are in place throughout Puget Sound and the San Juan Waters to help boaters comply).

Commenter: Lee Roussel - Comment I-2282-2

I am a recreational boater with a 32 foot sail boat and experience sailing the South Sound areas discussed herein, especially the popular boating area bounded by the Tacoma Narrows, Nisqually Reach, and Devils Head. Currently, there are not adequate pumpouts in the South Sound. For example, there is no pumpout at all useable by boats over 30 feet, or not shoal draft, in the area between Tacoma and Nisqually Reach/Devils Head. Zero is simply not adequate. A no discharge zone should not be considered until adequate pumpouts are installed and operating reliably. A. Inadequate Pumpouts Puget Sound is a very large boating area, so what matters is not overall number of pumpouts, but access in specific geographic areas where boaters congregate. Many recreational boats congregate in the South Sound area between Tacoma, Devils Head and the Nisqually Reach, especially during summer... While some come for only a few days, others make a passage from one destination to another, such as Penrose to Filucy to Tolmie to Oro Bay, spending time at each... Other boaters will continue south to Boston Harbor or Olympia. In any case, their boats need to pump out. This area runs about 16 miles South/Southwest from the Narrows to Devil's Head via Nisqually Reach and about 12 miles from Tolvia Shoal North/Northwest up Carr Inlet. It includes the popular cruising destinations of Penrose Point, Cutts Island, Filucy Bay, Oro Bay, and Tolmie State Park, with populated and less popular anchorages in Horsehead Bay and Wollochet Bay. South Sound pumpouts are shown at <http://parks.state.wa.us/724/Central-Southern-Puget-Sound>. There is only one, Penrose Point, between Tacoma and Devils Head/Nisqually Reach and only three, Penrose, Zittels and Jarrell Cove, in the entire area between Tacoma and Olympia. The Penrose Point pumpout is on the state park float in Lakebay, Mayo Cove's inner harbor. <http://parks.state.wa.us/803/Penrose-Point-State-Park>. Use is limited to boats 30 ft or less. The park float is in shallow water. According to Scherer, A Cruising Guide to Puget Sound, page 54, "[t]he approach to Mayo Cove's inner harbor snakes between two sand spits and is advised only for shallow-draft boats." As a result, there is simply no pumpout at all in the popular cruising area between Tacoma and Devils Head/Nisqually Reach useable by boats that are not both shoal draft and under 30 feet. Other boats needing to pump out simply have no place to go. Of the three pumpouts between Tacoma and Olympia, two, Penrose Point and Zittels, are limited to shallow draft vessels. Penrose is discussed above. Zittel's, on the mainland below Case Inlet just east of Johnson Point reports low water depth of 8 feet, <http://parks.state.wa.us/821/Zittels-Marina>, in an area where minus tides are common. According to Scherer, A Cruising Guide to Puget Sound, page 64, "[t]he entrance is shallow and narrow..." Bailey and Nyberg, Gunkholing in South Puget Sound, page 243, report going aground 25 feet from its docks. Jarrell Cove, at the top of Hartstene Island on Pickering Passage (west of Case Inlet) appears to have two pumpouts, at least one of which may be in deep water. However, it is a long distance up Case Inlet and many sailboats cannot use Pickering Passage to continue on to Olympia due to a fixed bridge. For them, Case Inlet is a dead end, with Jarrell Cove at its end. Before declaring a no discharge zone, adequate pumpouts must be installed. For the South Sound, that would mean new pumpouts at Oro Bay (Anderson Island), Filucy Bay (Key Peninsular) and anew deep draft dock pumpout at either Penrose Point State Park or Kopachuck State Park. An additional deep draft pumpout is needed between Devils Head and Olympia.

Joemma State Park would be suitable if a year round float were installed and protected from strong winds. (Currently, the float at the end of Joemma's dock is removed each fall). The South Sound has seen an increase in the number of recreational boaters in recent years – a trend that will likely continue. Installing an adequate number of pumpouts distributed equitably around the region is imperative before declaring a NDZ.

A no discharge zone should not be declared until adequate and reliable pumpouts have been installed in the South Sound. Currently, adequate pumpouts do not exist. For example, the large and popular area between Tacoma and Nisqually Reach/Devils Head currently has no -- zero -- pumpouts useable by the numerous boats that are over 30 feet or not shoal draft. Zero is not adequate.

Commenter: Alliance for a Healthy South Sound - Comment O-21-4

Implementation concerns. We have practical concerns about implementation of the No Discharge Zone (NDZ) and whether it will have the effect on water quality that is desired. First, we believe that the number of pump-out stations in South Puget Sound, maintenance and distribution, are not adequate to the vessel traffic we see. Current information on pump-out capacity notes 10 vessel pump out locations in South Puget Sound; however, our experience is that these locations are not practically available to boaters because several sites have limitations, design flaws and are often out of service.

Commenter: American Cruise Lines, Inc. - Comment O-23-6

In considering the NDZ petition, Ecology should not speculate as to whether future, potential discharge facilities might be adequate, it should be required to demonstrate that adequate discharge facilities are reasonably available for all vessels as of the time the NDZ is established, at least as to commercial vessels. Ecology has acknowledged there is no guarantee that will happen. The cancellation due to insufficient funding of construction of planned facilities in the ports of Bellingham and Seattle underscores the lack of reasonable availability of adequate facilities and reinforces why Ecology should not rely on theoretical expanded future capacity. The cancellation of these projects also demonstrates that Ecology lacks adequate plans to build supposedly sufficient pumpout facilities. Where will the facilities be? How many facilities will there be? What will it cost to build them? How will such projects be funded? What will the capacity of those facilities be? The current lack of such facilities, in conjunction with the extreme financial burdens that will be imposed on ACL to retrofit or redesign vessels or discharge to pumpout facilities, demonstrates that there are no reasonably adequate discharge facilities reasonably available to all vessels within the proposed NDZ.

Commenter: Foss Maritime Company - Comment O-12-5

We are also very concerned that there is not adequate services available for pump out if a Puget Sound wide NDZ is established for all recreational and commercial vessels. We have not been able to identify a single commercial pump out facility which could be utilized by our vessels.

Commenter: American Cruise Lines, Inc. - Comment O-23-15

As set forth above, Ecology has failed to identify reasonably available pumpout facilities that can currently accommodate all of the vessels that operate in Puget Sound. As a result, Ecology's petition is overreaching and other, less stringent alternatives are appropriate.

Commenter: Holland America Line - Comment O-41-6

In order to authorize Washington State to designate Puget Sound as a no discharge zone, the Clean Water Act that required EPA to test the adequate facilities for safe and sanitary removal are available. The cruise terminals 91 and Pier 66 are not equipped to offload sewage contrary to these rulemaking claims.

There is nowhere for a cruise ship, or any other large commercial vessel, for that matter, to offload liquid waste. If we were to use mobile pump trucks, the typical offload of treated wastewater -- our typical offload daily requirement is about 600 cubic meters or 600 metric tons of treated water. That equates to 158,500 gallons of liquid or 374 barrels. That would require 54 70-barrel vacuum trucks to line up and offload our waste while we're calling to port. Typically, on a typical summer day in Seattle, there are three cruise ships calling at any day, so that would be 161 additional vacuum trucks running on the highways every single day in Seattle to offload all this waste.

Commenter: Passenger Vessel Association - Comment O-28-6

An additional factor justifying a "grandfather" for the three existing U.S.-flagged "small ship" overnight cruise vessels is that there are no pump-out facilities (either shoreside or mobile) that exist now or that are likely to be made available that can reasonably service the particular vessels. The proposed rule's five-year enforcement delay is an implicit acknowledgement of this fact. The finding by the regional office of the U.S. Environmental Protection Agency that adequate facilities are available was simply wrong with respect to the three existing "smallship" overnight cruise vessels.

Commenter: Recreational Boating Association of Washington - Comment O-40-6

The only usable commercial pump-out facility for larger vessels is in Bellingham, which would be unreasonable for tugboat operators to use of operating in Tacoma. The concept of adequate facilities is highly in question.

Commenter: Jerry Hillis - Comment I-2249-4

Why not phase in a plan that puts pumpouts on every dock, a plan that is based on hard science which can provide an achievable and measurable improvement to infrastructure and water quality. This is something I could actually comply with.

Commenter: The American Waterways Operators - Comment O-24-8

Ecology provided information to EPA that misrepresented both the adequacy and the reasonable availability of pumpout capacity for the regulated community of vessels in Puget Sound;

Summary Response to: Inadequate pumpouts

Ecology considered the number and location of existing pumpouts throughout Puget Sound. On February 13, 2017, the EPA issued its final affirmative determination that adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels are reasonably available for waters of the Puget Sound, allowing the State of Washington to finalize the designation. The EPA based its determination on existing pumpout availability. After early work identified areas where additional pumpouts for recreational vessels should be added, grants were provided and

additional pumpouts were installed including eight in the San Juan Islands. As determined by the EPA, the currently availability of pumpouts is sufficient; however, Ecology continues to assess the pumpout availability along with our partners. It is part of the implementation strategy to continue to assess and improve pumpout availability and convenience. Grants for pumpouts for commercial vessels were awarded and under contract, however, the recipients withdrew from the grants due to costs and scheduling difficulties. Large cruise ships that call to Pier 91 and 66 in Seattle can hold their sewage on average for 2-3 days and have not been discharging vessel sewage in the Puget Sound No Discharge Zone area since 2012. On the rare occasion that a large cruise ship is at port for a lengthier time, the vessels have the option of pumping out enough sewage for capacity with pumper trucks, as has been done on occasion. There are a number of companies that specialize in commercial marine work and pump out commercial vessel holding tanks (see the document Supplemental Information on Commercial Vessel Sewage Pumpout Availability). Small commercial passenger vessels may also use such service companies which include barges and pumper trucks. Ecology disagrees with the comment that information Ecology provided to the EPA misrepresented both the adequacy and the reasonable availability of pumpout capacity for the regulated community of vessels in Puget Sound.

Comments on: Include the Strait of Juan de Fuca and other waters

Commenter: Mike Sennett - Comment I-1970-3

So now I'm reading about this sewage discharge-free zone, & the 1st thing that occurs to me is - has the state has been letting ships dump their dung in the Salish Sea until now? This "big step" is a no-brainer, but the zone is too small. It should be extended to all fresh waters & 200 miles out to sea. Or dump it off Victoria, B.C.

Commenter: Stephen Wille - Comment I-1183-2

Future designations should include ALL marine waters and estuaries of the State, especially Willapa Bay (Didn't some politician say once, "I can see Willapa Bay from my house?") and Gray's Harbor.

Commenter: Alex Young - Comment I-1-2

Please pass this and include the straight of Juan de fuca as well. This should have been done long ago. Protect the puget sound ecosystem and prevent more human shit from being dumped in our waters. People eat from that water, sea animals have to live in it.

Commenter: Friends of the Earth Commenter - Comment O-33-6

All 7 seas must be recognized as a No Discharge Zones. I support establishing a No Discharge Zone because of the critical protection it will provide to the people, marine creatures, and water quality of not just Puget Sound, but All 7 seas. [T]hese waters are threatened by many sources of pollution and while no one source is solely responsible for the Sound's water quality problems, all of the sources add up. It is time to address ship pollution in order to help All 7 seas, forests and atmosphere recover the health of the ecosystem. Again, thank you for your hard work and I strongly support the establishment of All 7 seas as No Discharge Zones.

Commenter: Washington Dept. of Natural Resources - Comment A-2-7

Though it may be late in the process, DNR recommends that the NDZ include the Strait of Juan de Fuca to Cape Flattery. This area includes significant commercial and recreational fisheries and is an important destination for other water dependent tourism activities.

Summary Response to: Include the Strait of Juan de Fuca and other waters

Ecology petitioned the EPA and obtained approval for the geographic area in the rule language. This is the area that the State can move forward on designating at this point in time. It is possible to consider additional designations in the future. While most vessels in the Strait pass through, there are only a few pumpout stations in that area and other areas haven't been evaluated. The EPA standards prohibit any discharge of treated and untreated sewage in fresh non-navigable waters. See 33 C.F.R. §159.57(17).

Comments on: Industry committed safety/environment

Commenter: American Cruise Lines, Inc. - Comment O-23-3

ACL is committed to the safety of its passengers and the environmental well-being of the waterways and ports in which it operates. ACL strives to comply with all local, state, and federal laws and regulations, including those that seek to protect and preserve the environment.

Commenter: The American Waterways Operators - Comment O-24-3

Nationwide, AWO's member companies are proud to be part of an industry that is the safest and most fuel-efficient, and has the smallest carbon footprint, of any surface transportation mode. We are deeply committed to building on the natural advantages of marine transportation and leading the development of higher standards of marine safety and environmental protection. In 1994, AWO became the first transportation trade association to adopt a code of safe practice and environmental stewardship for member companies. Today, compliance with the Responsible Carrier Program is a condition of AWO membership and members undergo independent third-party audits every three years to demonstrate their continued compliance. This history and these organizational characteristics inform our view of Ecology's proposed rulemaking. We seek to protect the marine environment in which our vessels operate, to provide a practicable regulatory framework that allows for the safe and efficient movement of essential commerce, and to ensure that unwarranted regulations do not result in the diversion of cargo to other ports outside of Puget Sound or to other transportation modes that pose increased risks to safety and the environment.

Summary Response to: Industry committed safety/environment

Ecology appreciates the various industries' commitment to safety and the environment. This rule is in line with those priorities.

Comments on: Industry vital

Commenter: Richard Porter - Comment I-12-5

I am very much in favor of a no-discharge zone as shown on your map. I live overlooking Fairhaven Harbor in South Bellingham, Whatcom County.

As well as, serving Alaska ferries, the Coast Guard and several local marine businesses, this harbor is also used for several individual pleasure activities. There are kayakers and standup paddleboards, swimmers and divers off Taylor Dock, and as anchorage for 8-24 (depending on season) private boats.

Commenter: Alki Kayak Tours - Comment O-13-2

My husband and I have operated a small recreation business on Puget Sound for the past 13 years (www.kayakalki.com). We guide visitors and residents of Washington State on sea kayak tours in and around Elliott Bay and the Alki peninsula. We fully support Ecology's determination and proposal to establish the Puget Sound No Discharge Zone.

Commenter: American Cruise Lines, Inc. - Comment O-23-2

ACL is a privately held, Connecticut, USA based, small business that operates a small fleet of American flagged small overnight passenger cruise ships. ACL specializes in small overnight passenger ship cruising on near coastal and inland waterways and rivers of the U.S. ACL's vessels, all built after 2002, typically carry between 98 and 183 passengers and comprise, we believe, the world's newest fleet of vessels of this size that offer overnight cruises in the USA. ACL currently offers itineraries in the Pacific Northwest, Coastal New England, the Hudson River, the Chesapeake Bay, the Atlantic Intra Coastal Waterway between Norfolk, Virginia and St. Augustine, Florida, the St. Johns River, the Historic South & Golden Isles, the Ohio and Cumberland Rivers, the Mississippi River, Southeastern Alaska, Puget Sound, and on the Columbia and Snake Rivers.

Passenger cruising with ACL is focused on a narrow market of well-educated and culturally discriminating clientele and is intentionally contrary to the experience offered by mass-market operators carrying thousands of passengers per voyage and offering extravagances such as onboard casinos and swimming pools. The hallmark of cruising with ACL is the ability of its small vessels to reach deep into smaller and shallower U.S. ports where larger cruise ships cannot go, allowing our passengers the opportunity to explore the scenic, cultural, and historical benefits of America's unique waterways, smaller towns, and attractions without the crowds and clamor of the typical mass-market cruise setting.

ACL's ships are among the smallest overnight passenger cruising vessels currently operating in the U.S., and perhaps the world. Most in the cruise industry would describe a "small" cruise ship as one which carries fewer than 1,500 overnight passengers. Our ships carry only approximately 10% of that number. Larger American flag overnight passenger cruise ships must be designed, built, and operated so as to comply with Subchapter H of Title 46 of the Coast Guard regulations but for many reasons, none have been built for several decades. By contrast, ACL's ships are designed and built to be sufficiently small so as to qualify for Subchapter K or T of Title 46, not Subchapter H.

While we comply with regulations applicable to small vessels, we avoid the increased manning and construction costs associated with vessels built to the large ship requirements. By keeping our ships very small we keep costs down so that we may compete in our narrow market.

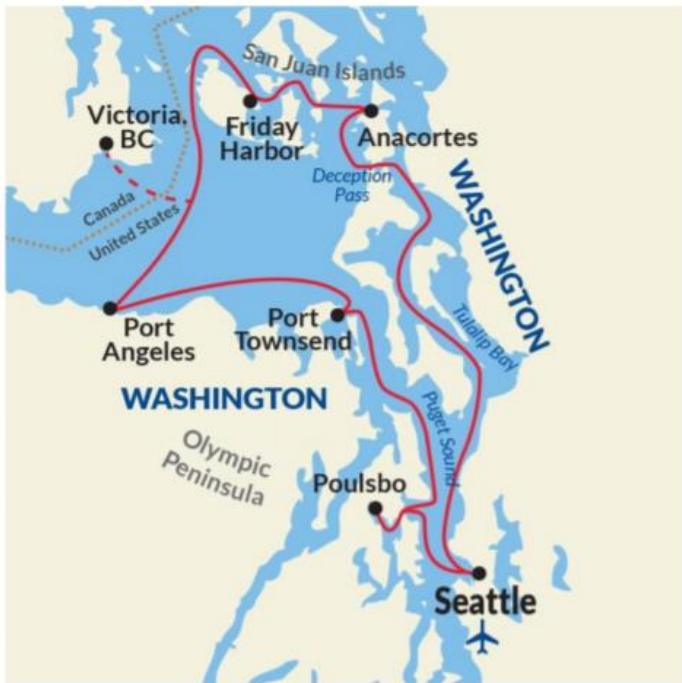
ACL offers overnight passenger cruises, including aboard the M/V American Spirit, which engages in interstate commerce between Washington's Puget Sound and southeast Alaska. American Spirit was built in 2005, is 214.4' long, 45' wide, has an 8' draft, and is 93 gross registered tons (1955 ITC). Her U.S. Coast Guard certificate of inspection allows American Spirit to carry 98 passengers and up to a total of 136 persons.

American Spirit has 53 passenger state rooms and 10 crew state rooms. American Spirit is equipped with one Coast Guard approved Type II Marine Sanitation Device ("MSD-II") and has blackwater¹ holding tank capacity of approximately 20,000 gallons.

ACL will soon offer similar service in the Puget Sound on its new vessel, M/V American Constellation. American Constellation was built in 2017, is 268' long, 56' wide, has a 9' draft, and is 99 gross registered tons (4057 ITC). Her certificate of inspection allows American Constellation to carry 173 passengers and up to a total of 227 persons. American Constellation has 89 passenger state rooms and 26 crew state rooms. American Constellation is equipped with an AWWTS type sewage treatment system (see Section IV below) and has mixed blackwater/graywater holding tank capacity of approximately 50,000 gallons.

American Spirit offers seven day cruises in Puget Sound during approximately 30 weeks each year. Her typical itinerary in Puget Sound begins and ends at Shilshole Bay Marina in Seattle. Passengers embark on Saturday morning between 9AM and 12PM (noon) and after a 1:30PM safety briefing the ship departs for Anacortes. American Spirit arrives in Anacortes on Saturday at 8PM and departs Anacortes for Friday Harbor at 5:30PM on Sunday. She arrives at Friday Harbor at 7:30PM on Sunday evening and departs at 9AM on Tuesday morning for a sightseeing tour of the northern San Juan Islands and Haro Strait on her transit to Port Angeles. American Spirit arrives in Port Angeles at 2PM on Tuesday and departs between 6 and 7AM on Thursday (depending on tides and currents) for Port Townsend. Arrival in Port Townsend is at 10AM on Thursday and departure is at 4AM Friday for a sunrise cruise to the Poulsbo anchorage. American Spirit arrives in Poulsbo at 8AM Friday and departs at noon Friday for the return trip to Seattle. Arrival in Seattle is at 2PM on Friday and passengers disembark on Saturday morning. (See chart and map below.) This schedule results in nearly 150 port calls in Puget Sound by American Spirit each year.

M/V AMERICAN SPIRIT ITINERARY		
PORT	DAY	ARRIVAL/DEPARTURE TIME
Seattle	Saturday	Departure 1:30PM
Anacortes		Arrival 8PM
Friday Harbor	Sunday	Departure 5:30PM
		Arrival 7:30PM
Port Angeles	Monday	
	Tuesday	Departure 9AM
Port Townsend	Wednesday	Arrival 2PM
		Thursday
Poulsbo (anchorage)	Friday	Arrival 10AM
		Departure 4AM
Seattle		Arrival 8AM
		Departure 12PM (noon)
		Arrival 2PM



American Spirit has been sailing this schedule during her seasons in Puget Sound since 2012. During that time, ACL has carried an average of 1,545 passengers annually on cruises in Puget Sound for a total of approximately 9,627 passengers. These passengers come to Puget Sound to vacation aboard American Spirit from all over the country, some from other countries. Many of American Spirit's passengers are repeat cruisers and the market has come to expect that ACL offer her standard week-long schedule, with a different port of call nearly every night, exploring the scenic beauty and natural wonder of Puget Sound's waters.

As a result of ACL's operation of American Spirit, her passengers and crew bring substantial revenue to each port called on, including for hotel stays in Seattle, for meals, travel to and within Washington, for incidental purchases at various ports of call during on-shore excursions, and for other incidental vacation expenditures.

ACL itself regularly spends significant money incidental to the operation of American Spirit, purchasing bunkers, stores, food, equipment, supplies, and other necessities at Puget Sound ports. Because she trades in Puget Sound, American Spirit typically performs annual maintenance during her off season at shipyards in Washington. Because of sales by Washington businesses to passengers and to ACL itself, and income generated by ACL in Washington, the operation by ACL of American Spirit in Puget Sound results in considerable tax revenues to the State of Washington. As a result of American Constellation's additional passenger capacity and service in Puget Sound, ACL anticipates that commensurate and substantial additional economic gain and tax revenue will be generated for Washington.

Commenter: Drayton Harbor Oyster Company - Comment O-19-2

Drayton Harbor in northern Whatcom County has been the focus of years of effort to improve water quality in this small bay. Last year, after 20 years of work and millions of dollars of infrastructure improvement, the bay was upgraded to fully approved allowing for the year-round harvest of commercial and recreational shellfish.

We know maintaining clean water is a tenuous thing. There are plenty of examples, both locally and nationwide, where shellfish growing areas are cleaned up then slowly slide back to earlier conditions. The work of maintaining clean water is never done.

Commenter: Foss Maritime Company - Comment O-12-2

As background, Foss Maritime Company (Foss) is headquartered in Seattle and is one of the largest coastal tug and barges companies in the United States with operations in Washington, Oregon, California, Alaska, Hawaii, as well as international operations. Foss has been continuously operating in Puget Sound since 1889. We also own and operate two shipyards, our largest in Seattle and a second shipyard in Rainier, Oregon. We provide approximately 1,580 good family wage jobs with about 700 employees in Washington State. In addition, Foss has invested hundreds of millions of dollars in assets and infrastructure in Washington State. Foss is owned by Saltchuk Resources, Inc. also headquartered in Seattle. Saltchuk is the largest private employer in the state of Washington. Foss and Saltchuk have deep financial and historical roots in Puget Sound and we are deeply committed to the health and vibrancy of our home waters. Foss currently maintains a fleet of eight vessels year round in Puget Sound and an additional eight ocean going tugs which are based in Puget Sound but operate in Alaska on a seasonal basis or in other worldwide locations. The crewmembers who work on these vessels are also primarily resident in Washington State.

Commenter: Outcomes by Levy - Comment O-6-7

We are proud of the stewardship record of our organizations, which includes establishment of the Boater Education Card program, the donation of Sucia Island to the State of Washington, efforts to phase out the use of copper-bottom-painted boats, collaboration with state agencies in combating aquatic invasive species, financial support for the Derelict Vessel Removal program, year-to-year increases in pump-out volumes as demonstrated by Washington Sea Grant data collections, and many more initiatives. Boaters depend on a clean-water environment and it is unfortunate that our substantive objections to the NDZ have led to us being portrayed otherwise in some quarters.

Commenter: Pacific Coast Shellfish Growers Association - Comment O-11-3

PCSGA was founded in 1930 and began as an Oyster Growers Association. Today the association represents well over a hundred shellfish companies in Alaska, Washington, Oregon, California, and Hawaii. The majority of our members are from right here in Washington State and often represent the third, fourth, and even fifth generation of shellfish producer, who grow a variety of healthful shellfish; including oysters, clams, mussels, and geoduck. The estimated value of shellfish in our state well exceeds \$190 million, and for some coastal communities the shellfish industry remains the only real economic engine.

Commenter: The American Waterways Operators - Comment O-24-2

The U.S. tugboat, towboat and barge industry is a vital segment of America's transportation system. AWO's 350-member companies own and operate barges and towing vessels operating on the U.S. inland and intra coastal waterways; the Atlantic, Pacific and Gulf coasts; and the Great Lakes. Our industry's 5,500 towing vessels and 31,000 barges comprise the largest segment of the U.S.-flag domestic fleet. The tugboat, towboat and barge industry provides family-wage jobs and ladders of career opportunity for more than 50,000 Americans, including 38,000 positions as mariners on board our vessels, and supports more than 300,000 jobs in related industries nationwide. Each year, our vessels safely, securely and efficiently move more than 760 million tons of cargo critical to the U.S. economy, including petroleum products, chemicals, coal, grain, steel, aggregates, and containers. Tugboats also provide essential services in our nation's ports and harbors, including ship docking, tanker escort and bunkering. These vessels transit 25,000 miles of inland and intra coastal waterways, providing the nation with a safe, secure, low-cost, environmentally friendly means of transportation for America's domestic commerce. Many AWO members operate towing vessels and barges in Puget Sound, moving freight and reducing congestion on Washington's highways and railroads while producing fewer pollutants than trucks and trains. In addition, harbor, ship assist and crew boats perform lightering, ship docking, tanker escort, bunkering, marine construction and other services in ports throughout Puget Sound, supporting the maritime industry that is critical to the region's economy.

Commenter: Washington Scuba Alliance - Comment O-2-3

As local and tourist divers throughout the Puget Sound, our sport depends upon the health and vitality of Washington State's marine environment. Our presence under the water and in and around the shoreline roots us in the importance of safeguarding our resources. Scuba divers see firsthand the problems from dumping debris of any kind into the water either killing, changing or effecting sea life in the future by introducing invasive species from other locations. Washington Scuba Alliance (WSA) is the voice for the dive community in the Northwest. We represent the 100,000 divers in our state as well as Oregon, Idaho and Montana (when they visit our state). The previous governor considered divers as the underwater police, keeping track of the health of the waters in the Northwest. We have done and continue to do many conservation efforts. We are amazed that this has not happened before now. • The Puget Sound area provides \$5.2 billion in tourism revenue, including 68,000 tourism-related jobs and \$2 billion in income annually. • Whale watching in the state was estimated by researcher Erich Hoyt to generate \$13.6 million (2001) and Audubon Washington estimated that bird watching generated approximately \$1 billion in income for 22,000 Washingtonians that same year. • Washington was also ranked 4th in the nation for number of sport scuba divers by NOAA and USFS.

- Boat sales in Washington State were valued at \$85.4 million in the first quarter of 2010. The National Marine Manufacturers Association has ranked Washington State 10th in the 50 states for \$464 million in combined boat, motor, trailer & accessory purchases.

Commenter: Washington State Department of Health - Comment O-5-4

The Department of Health shellfish program evaluates and classifies all shellfish harvesting locations for a commercial shellfish industry supporting thousands of jobs and providing an approximate \$200 million economic benefit, and supplying Puget Sound shellfish to consumers worldwide. We also monitor the public health risk on over 250 publicly-owned recreational shellfish beaches. We close commercial and recreational harvesting in areas when pollution threatens public health.

Summary Response to: Industry vital

Ecology recognizes the vitality of industries in the Puget Sound area including, but not limited to, the vessel industries such as tugs, cruise ships, and recreational vessels along with boating sales and maintenance industries, tourism, recreational sport industries, and the aquaculture and shellfish industries. Each provides jobs and local revenue and many have deep local roots. All of these industries rely on clean and healthy water.

Comments on: Liability of delayed implementation

Commenter: Foss Maritime Company - Comment O-12-8

Our understanding is that the NDZ would apply immediately to all vessels in Puget Sound but a temporary exception is provided for: “Tug boats, commercial fishing vessels, small commercial passenger vessels, and National Oceanic and Atmospheric Administration (NOAA) research and survey vessels, which have a delayed implementation lasting five years from the effective date for this rule in the Puget Sound No Discharge Zone. The vessels would still be required to comply with existing state and federal discharge regulations in the interim.” While Foss appreciates this attempt to recognize the challenges of extensive retrofits and drydock scheduling, we are concerned with the potential legal liabilities. The exception would exempt a subset of the regulated vessels from the complete prohibition required by federal law thereby creating exposure for liability under 33 U.S.C. 1365.

Commenter: United States Coast Guard - Comment A-4-7

The text of the proposed regulation presents four additional areas of concern... (4) the delayed and potentially inconsistent enforcement scheme. Finally, the state of Washington's plan to provide a five-year delayed implementation for certain vessel types presents enforcement issues as both 33 U.S.C. 1322(f)(3) and 40 C.F.R. S 140.4 appear to prohibit the discharge from all vessels within an NDZ. I am concerned that the proposed rule penalty provision lacks specificity for violations. Additionally, the state agencies may have a different approach to enforcement and penalty provisions that the Coast Guard. We request that the state of Washington work with the Coast Guard to harmonize enforcement issues.

Summary Response to: Liability of delayed implementation

The commenter views the delayed implementation as an exemption from the no discharge prohibition. The rule applies to all vessels, with a delayed implementation for certain vessels for five years, simply giving some vessel owners additional time to come into compliance with the prohibition, not exempting any vessels. The NDZ Enforcement Committee has already begun coordination work with enforcement authorities including the USCG, and that work includes harmonizing enforcement issues.

Comments on: Misinformation from industry

Commenter: Washington Environmental Council - Comment O-29-13

Continued Misinformation from Industry Charlie Costanzo and several marine industry representatives wrote to EPA Administrator Scott Pruitt in March 2017 requesting that he reconsider EPA's confirmation that sufficient pumpout capacity exists to serve the needs of the Puget Sound NDZ. In the letter, included as Attachment 1, Mr. Costanzo includes inaccurate and incomplete information not substantiated by the record.

We understand that Mr. Costanzo met with EPA representatives in Washington, DC, sometime in spring 2017 to discuss the letter. After we learned of this letter, WEC, together with Friends of the Earth, Futurewise, Puget Soundkeeper Alliance, and Sierra Club, wrote a May 2017 letter to Administrator Pruitt to correct several errors and misrepresentations. We include that letter as Attachment 2 to these comments. Finally, we recently learned that American Waterways Operators continues to petition Administrator Pruitt to reconsider the pumpout determination, although the content has evolved from the March letter (November 15, 2017 letter from Jennifer Carpenter, American Waterways Operators, included as Attachment 3). Cost to build proposed facility at Port of Seattle increased following a meeting with tug companies. We understand that industry continues to dispute that sufficient pumpouts exist, particularly in the Seattle area. We point out communications within the Port of Seattle that costs increased substantially after a meeting with the tug companies.

Summary Response to: Misinformation from industry

Ecology notes your comments. Ecology reviewed and considered the attachments to this comment, which are part of the rule file.

Comments on: Modeling refuted

Commenter: Outcomes by Levy - Comment O-6-5

We expressed strong concerns –through detailed analysis done by two independent water quality scientists (Mark Larsen and Lincoln Loehr) – that Ecology's modeling of vessel discharges at six Puget Sound locations was not at all representative or scientifically accurate. What's more, the work of the scientists showed the modeling to be misleading and simply not possible. The findings of these scientists, as well as, a modeling scenario (Scenario E) more closely resembling conditions relevant to the NDZ petition, was disregarded.

Commenter: The American Waterways Operators - Comment O-24-14

Ecology also attempted to justify this rule making by misrepresenting the pollution load contribution of vessels in Puget Sound. In December 2015 and April of 2016, it commissioned analyses of tracer simulations that purported to support its Certificate of Need by demonstrating the impact of vessel sewage in Puget Sound. Anchor QEA, a nationally recognized environmental and engineering consulting firm that specializes in aquatic, shoreline and water resource projects, analyzed these findings. Anchor QEA's analysis concluded that Ecology had utilized an accurate hydrodynamic model, but had input modeling scenarios that were "fundamentally flawed" and produced results that were "absurd by any stretch of the imagination." Specifically, Ecology's modeling scenarios envisioned hourly discharges from a single vessel containing 2.017 billion persons discharging raw sewage. In all other modeling scenarios, Anchor QEA concluded that "Ecology's pulse modeling predicted compliance with state water quality standards with very wide safety margins."

Summary Response to: Modeling refuted

Ecology's Environmental Assessment Program used an existing model of water circulation throughout Puget Sound to simulate hypothetical vessel discharges with a release of a conservative tracer. The model was developed by Pacific Northwest National Laboratory (PNNL) in collaboration with Ecology, and is actively being used to address other water quality improvement efforts in Puget Sound.

The main objective of the tracer modeling analysis was to understand the connectivity of water masses in Puget Sound and determine if areas where vessels discharge are connected to near-shore sensitive areas. Modeling results showed that water masses in the Puget Sound are highly connected and that there is potential for a vessel discharge, either raw or treated with MSD Type II, to reach sensitive resources, such as shellfish and swimming beaches, and violate the State's water quality standard for fecal coliform bacteria. Documentation of the analysis was explicit about the assumptions that went into the analysis, and potential variables that might have resulted in an underestimation or overestimation of modeled results. After the initial analysis, we met with Anchor QEA and commenters to obtain further input and then conducted additional analysis as well as provided revisions to the final modeling memo incorporating relevant input.

The Anchor/Loehr memo used less conservative assumptions for the environmental analysis than those used in the economic analysis (Costanzo, 2014). We believe that more conservative assumptions/inputs are more appropriate for assessing potential environmental influence and impact of vessel discharges.

With regards to scenario E (in Table 3 of the Tracer Memo) – this scenario was not disregarded, but objectively presented alongside other scenarios which used different model inputs/assumptions. The memo discusses clearly how the range of scenarios present high and low bound estimates. Since our agency's mission is to protect, preserve, and enhance the environment, it is appropriate to use conservative assumptions to evaluate whether there is a potential for vessel discharge to result in bacterial pollution, especially near sensitive areas. This does not mean that every vessel discharge will have an equally negative impact. However, in light of the unique qualities and diverse resources of Puget Sound, the potential for bacterial pollution is one of the reasons for establishing the No Discharge Zone.

In addition to the Tracer Modeling, the CORMIX model was also run at one location in Puget Sound. CORMIX accounts for bacteria die-off, more localized wind speed, and smaller scale hydrodynamic processes. A suite of scenarios were run in CORMIX to represent a range of best-case to worst-case conditions under which a vessel discharge may occur. For example, five different effluent concentrations were used, in combination with uniform vs. stratified ambient density, and two different ambient velocities – this resulted in a total of 15 scenarios. Eight out of the 15 scenarios showed that the WQ standard would not be met at the shoreline or in Samish Bay where shellfish areas are located. This modeling demonstrated that in this particular location, vessel discharge has a chance of violating the WQ standard in more than half of the scenarios run, and provides further support towards preventing such discharges via the establishment of the No Discharge Zone.

Comments on: MSDs insufficient

Commenter: Rein Attemann – Comment I-2551-9

Marine sanitation devices, which are on-board treatment systems, use decades old technology and have no enforcement that they are functioning.

They do not sufficiently protect water quality and public health, as even partially treated sewage does not kill the bacteria and other microorganisms that can make people sick. This is another good reason for boaters to use pump-out stations to properly treat sewage.

Commenter: Chris Wilke - Comment I-2555-8

The marine sanitation devices that are allowing compliance with rudimentary treatment are not monitored and we don't know what the discharge is from those, or if those devices are even maintained.

Commenter: Friends of the Earth - Comment O-35-5

Marine sanitation devices used on board some vessels do not sufficiently kill microorganisms and do not protect public health. Raw or partially treated sewage discharged in one location can impact water quality miles away because the waters of Puget Sound are so highly connected. Establishment of a No Discharge Zone would protect water quality Current Clean Water Act regulations do not require that minimally-treated sewage from vessels meet water quality standards. United States Coast Guard (USCG) and EPA regulations concerning marine sanitation devices (MSDs) require that treatment devices meet certain specifications when installed. However, MSDs require maintenance over time or they fall into disrepair, resulting in decreased treatment efficacy. There is no USCG oversight to ensure that MSDs maintain functionality after their installation date. In addition, the EPA MSD standards have not been updated in more than 35 years. There is no monitoring to track the level of pathogens, bacteria and other harmful pollutants in vessel discharges. The inadequacy of current marine treatment systems is evinced in the State Department of Health's automatic closure of shellfish beds within a designated proximity of moorage areas. Establishing a No Discharge Zone would strengthen the state's ability to regulate and enforce water quality related protections to this source in state waters and protect resources and beneficial uses.

Commenter: Friends of the Earth - Comment O-44-3

It's incredibly important with what we know about how damaging, and highly polluting sewage from marine sanitation devices can be.

Commenter: Futurewise - Comment O-17-6

Establishment of a No Discharge Zone will ensure water quality standards are met and would also provide clarity for marine vessel operators. Current regulations allow for the discharge of minimally treated sewage anywhere in Puget Sound and the discharge of untreated sewage beyond three miles from shore. Many vessels operators, especially recreational boaters, think that no sewage is allowed to be discharged at all and others are unsure. Messaging on signage around Puget Sound is not consistent. The regulations do not require that minimally treated sewage meet water quality standards. The establishment of a No Discharge Zone would provide for a mechanism to send a consistent message and to ensure that there is no opportunity to impair waters with discharges that do not meet water quality standards.

Commenter: Puget Soundkeeper Alliance - Comment O-42-3

Even partially treated sewage doesn't always kill all the bacteria that can make people sick.

And, you know, we have protections in place to manage land-based sewage. We ought to take this step. It's much needed to manage sewage that's currently being discharged directly into the Sound.

Commenter: Puget Soundkeeper Alliance - Comment O-16-5

Marine sanitation devices used on board some vessels do not sufficiently kill microorganisms and do not protect public health. Raw or partially treated sewage discharged in one location can impact water quality miles away because the waters of Puget Sound are so highly connected.

Commenter: Taylor Shellfish Farms - Comment O-8-5

Despite Washington's outstanding program we live in fear of discharge of raw or inadequately treated sewage from passing boats. These discharges would likely go undetected by current DOH monitoring.

Commenter: Washington Environmental Council - Comment O-45-6

Earlier, folks mentioned marine sanitation devices. Unfortunately those just don't achieve enough kill of the microorganisms in order to protect public health. So, we're concerned because each year shellfish beds have to be closed down in Puget Sound due to bacterial contamination so we'd like to see this practice followed by everyone.

Commenter: Washington Environmental Council - Comment O-29-2

Raw residential human sewage has concentrations of fecal coliform bacteria on the order of 10,000 to 100,000,000 per 100 mL (Rose et al., 1996). Boater sewage is likely more concentrated than measured in Rose et al. (1996) because it has not been diluted by typical residential water uses that introduce little to no fecal coliform bacteria, such as showering and laundry.

An EPA (2008) study of effluent from Type II marine sanitation devices indicates that discharges contained average fecal coliform concentrations of 2,040,000 MPN per 100 mL; the range was non-detect to 24,000,000 MPN per 100 mL. The Washington State water quality standard for fecal coliform bacteria in sensitive areas is a geometric mean of no more than 14 per 100 mL and no more than 10% of samples above 43 per 100 mL. The concentration of fecal coliform in vessel sewage, even when partially treated by marine sanitation devices, is far greater than the values in the marine water quality standard. Surface water discharges can travel quite far in Puget Sound (Roberts and Mohamedali, 2016; Fricke, 2016; Roberts et al., 2014) and can influence water quality many miles away. Boats that discharge sewage through MSDs in or near shellfish beds pose risks to water quality in those resource areas. Because of the tremendous connectivity of Puget Sound waters, a full NDZ is needed to protect sensitive areas, which occur throughout Puget Sound.

Summary Response to: MSDs insufficient

Ecology's Final Petition to Designate the Waters of Puget Sound as a No Discharge Zone (Ecology, July 2016) provides a summary of MSD performance. Ecology concurs with the comments noting that MSD treatment systems are not regulated regarding proper operation and maintenance requirements nor do they have specified monitoring schedules. The Type II MSDs have only manufacturer-derived performance limits (not water-quality based) for fecal coliform bacteria (pathogen indicator) and solids or a general narrative of no visible solids.

The manufacturer-derived performance limits are less stringent than the State's water quality criteria for fecal coliform bacteria, and do not include performance limits for the variety of toxic pollutants in vessel sewage.

Comments on: MSDs performance verified

Commenter: The American Waterways Operators - Comment O-24-10

The 2008 EPA study represents the entire basis for the draft petition's discussion about MSD performance. Ecology did not consult manufacturers of Type II MSDs or the United States Coast Guard, which approves MSDs for use aboard vessels. The Coast Guard regularly inspects these MSDs to verify that they are installed and performing as intended. Ecology conducted no tests of its own and cites no other studies or documentation to support its conclusion about MSD performance. Ecology is proposing to prohibit the use of onboard treatment technology in Puget Sound without justification.

Summary Response to: MSDs performance verified

Ecology disagrees that the 2008 EPA study represents the entire basis for the draft petition's discussion about MSD performance. The section on MSDs also details other studies including the Evaluation of Improved Type I Marine Sanitation Devices, Performance Evaluation Report (EPA 2010), and the Alaska Department of Environmental Conservation small cruiseship sample reports. Ecology has consulted with the United States Coast Guard and has considered input from MSD manufacturers and sales on the No Discharge Zone.

In addition, Ecology considered the Assessment of Potential Health Impacts of Virus Discharge from Cruise Ships to Shellfish Growing Areas in Puget Sound (Washington State Department of Health/University of Washington, November 2007), Tracer simulations to investigate how waters move in Puget Sound and the Salish Sea to address questions related to the draft proposed No Discharge Zone petition (Ecology 2016), the Liberty Bay Marina Study (Kitsap Public Health, 2010), as well as stakeholder input.

Comments on: MSDs sufficient

Commenter: Scott Anderson - Comment I-667-2

Puget Sounds has big tides and fast moving currents. This makes for a great mixing zone. All pleasure boats already have holding tanks for black water.

Commenter: Richard Brown - Comment I-2420-2

The proposed rule as written unfairly burdens boat owners of vessels with a type I or II MSD for no benefit to public safety or the ecology. Type I and II MSDs can be shown to treat sewage to an acceptable level of coliform contaminates.

Commenter: James Metcalfe - Comment I-2183-2

The proposed rule as written unfairly burdens boat owners of vessels with a type I or II MSD for no benefit to public safety or the ecology. Type I and II MSDs can be shown to treat sewage to an acceptable level of coliform contaminates.

Commenter: Lee Roussel - Comment I-2282-5

It appears that on-board treatment technology for recreational boats has developed significantly over the past two decades. Boat US Magazine, Boat Waste-Treatment - Technology: Developments in onboard waste-treatment technology have created a more effective MSD., published: April/May, 2012, <http://www.boatus.com/magazine/2012/april/taking-care-of-business.asp>. According to Boat US, the Raritan Electro Scan, for example, can treat waste "to a the fecal coliform (FCU) content of only 2.43FCU/100mL". Any no discharge zone should provide a mechanism for permitting on board treatment systems as an alternative to holding tanks and pumpouts.

Commenter: American Cruise Lines, Inc. - Comment O-23-4

When American Constellation begins passenger service in Puget Sound, she will offer a similar schedule. She will also take over cruises currently offered on American Spirit in southeastern Alaska. While in Alaska, American Constellation will operate under a Best Management Practices Plan to comply with Alaska's strict graywater and blackwater discharge regulations and monitoring requirements. Those regulations set effluent discharge levels for both graywater and blackwater and the monitoring component of the program ensures that vessel discharges stay within the required limits. American Constellation will employ the same equipment and operational practices with respect to graywater and blackwater discharges whether she is operating in Alaska or Washington and, therefore, will comply with the Alaska regulations even while in Washington State waters. Currently, to keep up with blackwater generation and maintain a safe level of blackwater in her holding tanks, American Spirit runs her MSD-II

essentially all the time when she is underway at or over six knots, beyond one nautical mile from shore between her Puget Sound ports. ACL anticipates the same operational requirements for American Constellation, whose AWWTS system treats discharge to the levels similar to those of Washington State municipal waste treatment plants which discharge treated sewage directly into Puget Sound. ACL thus fully complies with EPA regulations that prescribe permitted discharges of treated blackwater by American Spirit and American Constellation. Ecology's proposal to delay applicability of the NDZ prohibitions as to commercial vessels is a recognition that adequate discharge facilities are not reasonably available for these vessels. Because no shore-based (or barge) pumpout facilities are currently reasonably available in any of the ports ACL's vessels call on, it is not reasonable to require ACL's vessels to refrain from making any discharges of treated blackwater as permitted by EPA regulations while in Puget Sound except to shore-based (or barge) pumpout facilities. For vessels constructed after December 19, 2013,⁶ the VGP additionally requires that graywater be treated to discharge requirements similar to those imposed on land-based municipal waste water plants. As a result, newly constructed vessels are designed to mix graywater and blackwater to be treated by an "advanced waste water treatment system" ("AWWTS"). This equipment is much more technologically advanced than the MSD-II on American Spirit. The biological and chemical processes used in this equipment are similar to those applicable to land based, municipal waste water treatment plants.

In order to comply with these regulations, ACL installed an AWWTS system on the American Constellation at a cost of approximately \$500,000. Again, the proposed NDZ threatens to make that expense useless.

Commenter: Draper Machine Works Inc. - Comment O-15-3

A better solution is to create open season on marine mammals in specific zones of shellfish production and fish spawning grounds, and to allow treatment plants on boats that render any effluent sterile and thereby eliminating any ecological affects. As has been stated, over 97% of boaters already do the right thing – they have holding tanks onboard to store sewage or have portable treatment systems that renders any sewage discharge sterile thereby eliminating a contamination issue.

Commenter: Foss Maritime Company - Comment O-12-3

All our vessels are outfitted with U.S. Coast Guard approved Type II Marine Sanitation Devices (MSDs) which are regularly maintained and inspected to manufacturer's and U.S. Coast Guard specifications. There are usually between four and five crew members on board the vessel at any one time. The operational range of our Puget Sound tug fleet spans locations in Seattle, Tacoma, Everett, Olympia as well as other North Sound locations and Neah Bay.

Commenter: Holland America Line - Comment O-41-3

I've never seen any evidence that permeate -- which is the word we use for the water from a sewer treatment plant -- so permeate from an advanced wastewater treatment system has any evidence of detrimental effects. It's approved for use in the U.S. under the vessel general permit. So discharge of this treated water, which is close to drinking water standards, is approved already. It far exceeds the effluent treatment standards when compared to a traditional marine sanitation device, so enactment of a no discharge zone could set a precedent that Canada could then follow, shutting their ability, and then Alaska, and then after a while nobody is allowing discharges of any treatment or any treated water.

So it has the effect of a not in my backyard philosophy, where you push it off to become someone else's problems, when in fact it really isn't a problem.

Commenter: Outcomes by Levy - Comment O-6-6

Along with what we believe to be a lack of scientific evidence that the use of Coast Guard-approved marine sanitation devices (MSDs) would cause any measurable harm to the marine environment of Puget Sound, we also have joined our colleagues within the Marine Alliance in stipulating that a 'sufficiency' of commercial pump-out devices within the Sound has not been demonstrated.

Commenter: Recreational Boating Association of Washington - Comment O-40-4

The treatment systems on the boats being targeted, at least the ones I'm aware of, discharge effluent far below the current safety health standards. The Coast Guard standards are higher than the Department of Ecology standards, however, the reality of the systems being put on boats these days are multiple times greater, more safe than the Ecology health standards. The likely result of this effort of the no discharge zone would be to replace the safe treatment systems with inadequately sized holding tank systems that would in reality create more raw water discharge rather than less.

Commenter: Recreational Boating Association of Washington - Comment O-46-2

We are very discouraged as being characterized as polluters. We all use pumpouts except those of us who have approved marine sanitation devices, which are very effective. Those of our members who travel in Canadian waters have these sanitation devices because there are no pumpouts up north, or very few.

Commenter: The American Waterways Operators - Comment O-24-6

Ecology's study that purported to support its claim that federal performance standards for Type II Marine Sanitation Devices (MSDs) are inadequate for all of Puget Sound has been refuted; Nor has Ecology demonstrated that federally-approved MSD technology is inadequate to protect water quality in Puget Sound. To support its contention that MSDs are inadequate, the agency cites one nine-year-old study to stand for the proposition that "many MSDs often perform far below the mandated treatment standards under normal use." The 2008 EPA study cited to support this conclusion examined cruise ships carrying approximately two thousand passengers each. Yet the study's conclusions were applied to all other vessels including towing vessels operating with typical crews of between three and 12 persons. Ecology ignored the thrust of the 162-page EPA study and relied wholly on five pages of information that described the performance of MSDs aboard cruise ships seventeen years ago in Alaska.

Summary Response to: MSDs sufficient

The referenced report *Evaluation of Improved Type I Marine Sanitation Devices; Performance Evaluation Report* (EPA 2010), shows a coliform ranging from zero to Too Numerous To Count (TNTC) with a mean concentration of 82 ± 350 MPN/100 ml for the Electro Scan device.

The Alaska Department of Environmental Conservation (ADEC) provided sample reports for small cruiseships were considered, which shows for 2013, results ranging from zero to 4,600,000 fecal coliform/100 milliliters. For 2016, the average fecal coliform for small cruise ships and ferries in Alaska was 212,008 cfu/100 ml (mixed treated blackwater and graywater).

The *Final Petition to Designate the Waters of Puget Sound as a No Discharge Zone* (Ecology July 2016) provides information on why Ecology is addressing vessel sewage discharge and the risks associated with vessels and the potential to discharge over or near sensitive resources.

The report, *Tracer simulations to investigate how waters move in Puget Sound and the Salish Sea to address questions related to the draft proposed No Discharge Zone petition*, (Ecology 2016) was conducted by Ecology's Environmental Assessment Program. Ecology used an existing model of water circulation throughout Puget Sound to simulate hypothetical vessel discharges with a release of a conservative tracer. The model was developed by Pacific Northwest National Laboratory (PNNL) in collaboration with Ecology, and is actively being used to address other water quality improvement efforts in Puget Sound.

This modeling showed that water masses in the Puget Sound are highly connected and that there is potential for a vessel discharge, either raw or treated with MSD Type II, to reach sensitive resources, such as shellfish and swimming beaches and violate the State's water quality standard for fecal coliform bacteria.

The rule is a pollution prevention effort to help protect water quality and public health. Ecology considered numerous scientific studies and reports, including, but not limited to: data from the Alaska Department of Environmental Conservation small cruiseship sample reports, the *Assessment of Potential Health Impacts of Virus Discharge from Cruise Ships to Shellfish Growing Areas in Puget Sound* (Washington State Department of Health/University of Washington, November 2007), the *Cruise Ship Discharge Assessment Report*, (Environmental Protection Agency, 2008), *Tracer simulations to investigate how waters move in Puget Sound and the Salish Sea to address questions related to the draft proposed No Discharge Zone petition* (Ecology 2016), *Evaluation of Improved Type I Marine Sanitation Devices, Performance Evaluation Report* (EPA 2010), and the *Liberty Bay Marina Study* (Kitsap Public Health, 2010).

The *Cruise Ship Discharge Assessment Report*, (Environmental Protection Agency, 2008), included traditional (non-advanced) type II MSDs, similar to those used on tugs.

Comments on: No Discharge Zone only for vessels with holding tanks

Commenter: The American Waterways Operators - Comment O-24-19

Alternatively, using the state-wide California NDZ as a model, the maritime industry is willing to cooperate on Sound-wide policy that allows only vessels without holding tanks to release treated effluent through a federally-approved MSD.

Summary Response to: No Discharge Zone only for vessels with holding tanks

The referenced California No Discharge Zone is for the whole coast line of California. California's No Discharge Zone was petitioned and designated via 33 U.S.C. §1322 (f)(4), which allows for exceptions as opposed to Ecology's proposal under 33 U.S.C. §1322 (f)(3), which applies to all vessels.

33 U.S.C. §1322 (f)(3) authorizes the State to prohibit the discharge from all vessels of any sewage in some or all of the waters within such State. Ecology may prohibit the discharge, but it must be for all vessels. In order to best protect water quality and public health, the rule is established to apply to all vessels. The Clean Water Act which authorizes the designation of no discharge zones does not have conditions to allow for vessels with certain holding capacity to be exempted, as it applies to all vessels.

Comments on: Need "vessel" and "vessels of the armed forces" definitions:

Commenter: Paul Pickett - Comment I-662-3

There is no definition of "vessel". It would make sense to set some minimum size for the rule. Are you really asking every rowboat, canoe, kayak, paddle board, skiff, etc to have a portable toilet? It would be good to clarify the size limit, such as for privately owned boats over 15 feet.

Commenter: Department of the Navy - Comment O-38-3

Navy region Northwest invites your attention to the Department of Defense (DoD) regulation 4715.6-R1, which implements Section 312(d) of the Clean Water Act (Section 1322 of Title 33, United States Code (U.S.C.)) by issuing standards governing the design, construction, installation, and operation of MSDs in public vessels owned or operated by the DoD. Under the authority of Section 1322(d) of the Clean Water Act, as implemented by DoD Regulations 4715.6-R1, the Secretary of Defense has decided that, at certain times and under certain circumstances, compliance with MSD requirements for certain vessels of the Armed Forces would excessively and unreasonably detract from their military characteristics, effectiveness, or safety, which would not be in the interest of national security. DoD Regulation 4715.6-R1 establishes exemptions for certain vessels, including vessels which are currently homeported in or may visit Washington. Accordingly, we request that the vessels of the Armed Forces be explicitly referenced, defined and excepted from the proposed rule and the NDZ be created under the Clean Water Act Section 312 (f) (3). For the purposes of supporting a common understanding of Navy ship capabilities and regulatory authorities, Navy Region Northwest further recommends that vessels of the Armed Forces be defined in accordance with the definition provided at Clean Water Act (Section 1322 of Title 33, U.S.C.) Section 312 (a) (14): "vessel of the armed forces" means -

(A) any vessel owned or operated by the Department of Defense, other than a time or voyage chartered vessel; and (B) any vessel owned or operated by the Department of Transportation that is designated by the Secretary of the department in which the Coast Guard is operating as a vessel equivalent to a vessel described in subparagraph (A)."

Summary Response to: Need “vessel” and “vessels of the armed forces” definitions:

Under 33 U.S.C. §1322 (f)(3), a no discharge zone applies to all vessels and Ecology is not able to exempt vessels of a particular size or vessels owned by a particular entity. 33 U.S.C. section 1322(a)(14) defines “Vessels of the armed forces,” and section 1322(d) provides the requirements related to them. It is not necessary to repeat these provisions in the rule.

Comments on: Negative economic effect

Commenter: Scott Anderson - Comment I-667-4

What would the cost to tax payers to improve the pump out stations? What would the cost to the commercial fleet? The commercial fleet is already vary competitive. This could take away jobs which would mean less tax money for the state. I vote NO for the no discharge zone

Commenter: Charles Draper - Comment I-2110-5

In addition to pass your proposal will result in boating being eliminated in Puget Sound which is a \$3 billion industry for recreation.

Commenter: Elizabeth Ray - Comment I-8-2

The implementation of this rule will be costly with nebulous benefits. Recreational charter boating provides great tourism dollars to my Anacortes community and this regulation will severely cut into operations, requiring retro-fitting all charter boats to comply.

Commenter: Draper Machine Works Inc. - Comment O-15-2

This proposal is redundant and will add another layer of costs, harm a \$4 billion recreational boating industry, and not address the real problems of runoff, Septic system failure, and protected mammals that contribute significant un-treated contaminants into the receiving waters. I, along with thousands of residents and users of Puget Sound, strongly do not support establishing another No Discharge Zone Layer for Puget Sound. The maritime community values Puget Sound and I am confident that implementing another Discharge layer will adversely affect the maritime community. The addition of another layer of redundant laws will adversely affect the \$4 billion dollar recreational boating industry, not to mention the commercial fisheries within the Puget Sound basin including the tribes.

Commenter: The American Waterways Operators - Comment O-24-9

The proposed NDZ will negatively impact Washington's economy by imposing significant additional regulatory compliance costs on vessel operators;

Summary Response to: Negative economic effect

The Regulatory Analyses estimate the costs of expanding recreational pumpouts, as well as using commercial (mobile or trucked) pumpout services. They also use an economy-wide input-output economic model to estimate the impact of compliance costs on jobs.

Please see the Final Regulatory Analyses for the most up-to-date estimates and discussion of compliance costs and jobs impacts.

Ecology disagrees with the assertion that the No Discharge Zone will eliminate boating in Puget Sound. A 2012 recreational boater survey indicated that 91 percent of vessels greater than 26 feet in length have Type III MSD systems, and are already in compliance with No Discharge Zone requirements. Vessels under 26 feet in length were identified as not likely to have toilets, and not required to alter equipment or behavior under the rule.

All companies contacted during rule development that operate small charter cruises and whale-watching excursions indicated they already have Type III MSD treatment systems, and use pumpouts when docked. During rule development, Ecology also found that: “The certified charter boat captains that were contacted indicated that holding waste and using pumpout stations/services is compulsory to maintaining status as a certified charter boat. Therefore, certified charter vessels are already in compliance with a No Discharge Zone. The charter boat captains of non-certified boats that were interviewed also indicated that No Discharge Zone compliance should not be difficult. The captains interviewed indicated that their vessels either have Type III MSDs or porta-potties and that they already use pumpout or dump stations.” (*Phase 2 Commercial Vessel Sewage Management and Pumpout*, Herrera 2013). Charter boats less than 26 feet in length were identified in a 2012 boater survey as not having toilets and therefore not needing to alter equipment or behavior in response to the No Discharge Zone.

Comments on: Number of vessels not correct

Commenter: The American Waterways Operators - Comment O-24-12

Ecology provided information to EPA that misrepresented the size and scope of the regulated community by as much as 470%;

Summary Response to: Number of vessels not correct

The commenter does not provide data showing how the information is misrepresented by as much as 470%. The information provided to the EPA, including the supplemental data, is accurate.

Comments on: Opposes proposed rule

Commenter: Brian Clampitt - Comment I-18-2

I am strongly opposed to this rule. I am a professional as well as a recreational mariner. I work and play on Puget sound the year round. I sail on the University of Washington's oceanographic research vessel and thru my work am intimately familiar with water quality issues in these waters. This rule targets a very small and politically weak section of our regional population, boat and ship owners, and puts a false veneer of dealing with this issue while putting the entire burden on this population.

Commenter: Charles Draper - Comment I-2110-6

I DO NOT support Department of Ecology's determination and proposal to establish the Puget Sound No Discharge Zone.

I, along with many residents and users of Puget Sound, strongly do not, I repeat DO NOT support establishing a No Discharge Zone for Puget Sound. The maritime community values Puget Sound.

Again, Please Do NOT establish the Puget Sound No Discharge Zone.

Commenter: Charles Long - Comment I-11-2

This is one of those brilliant ideas that looks great on paper and plays well to the non-boating public. To the state's recreational boaters, however, it is a nightmare.

If this regulation becomes law, it will force us to either (a) give up boating and attempt to sell the boat (and who will buy it?) or (b) become criminals by dumping our TREATED sewage. WE STRONGLY OPPOSE THIS PROPOSED REGULATION.

Commenter: Jay Spearman - Comment I-1020-5

I, along with many practical residents and users of Puget Sound, strongly disagree with establishing a No Discharge Zone for Puget Sound. The maritime community and I regard this as a well intended but unproductive and costly exercise of tax resources.

Commenter: Boyer Towing, Inc.- Comment OTH-1-4

Lacking all of these scientific facts, this proposal has no scientific basis. It may make Ecology "feel good" when there is no proof that a No Drop Zone will do anything other than ruin interstate commerce, affect international traffic and inconvenience owners of boats. This is an exercise in futility and should be cancelled.

Commenter: The American Waterways Operators - Comment O-24-15

Given the absence of data to support the conclusion that the regulation would achieve significant or measurable benefits to water quality, and given the fact that Ecology misrepresented the nature of the regulated activity, the scope of the pollution caused by the regulated activity, and the performance of devices that it seeks to ban from use in Puget Sound, the rule making should be withdrawn. AWO recognizes the importance of a healthy Puget Sound. Many of our member companies and their employees live and work on the Sound. We have a mutual obligation to ensure that the Sound's environmental, economic and recreational benefits can be sustained for future generations. AWO would actively support remedial or protective actions that are grounded in scientific evidence and could be empirically demonstrated to improve water quality in Puget Sound. However, it is difficult to discern how or where the Sound-wide NDZ contemplated by this rule making would meaningfully contribute to water quality improvement. It is, however, easy to identify where it would negatively impact the region's maritime industry and economy. For these reasons, AWO expects Ecology to withdraw this rule making and to work closely with stakeholders to identify practical, science-based solutions to water quality problems in Puget Sound.

Summary Response to: Opposes proposed rule

Ecology appreciates your comments. The rule is a pollution prevention effort to protect water quality and public health. Ecology considered numerous scientific studies and reports, research, and stakeholder input. Under current federal law, vessels are prohibited from discharging raw sewage within three miles from shore, but can discharge treated sewage anywhere in Puget Sound. There are four areas in the Puget Sound No Discharge Zone that are greater than three miles from shore, including a large area west of Whidbey Island. The federal standard for treatment from Type I and Type II MSD treatment systems does not meet State water quality standards for fecal coliform bacteria and other pollutants that can pose a risk as vessels are over or near sensitive water bodies.

Comments on: Other

The below comments are on topics other than the specific topics identified throughout this response. Each is more unique and includes a specific response.

Commenter: Scott Anderson - Comment I-667-5

What would be the cost of installing grey water tanks and where would you put them on an existing boat. Room in the bilge will be a problem.

Response to Comment I-667-5:

This rule is a prohibition on vessel sewage only and does not regulate graywater from vessels.

Commenter: Carolyn DeFord-Eden - Comment I-1356-2

The Federal Government has an obligation to maintain fishing rights for native peoples under Article 3 of the Treaty of Medicine Creek of 1854. I urge you to consider the dumping of human waste in treaty waters a violation of treaty rights, human rights and the environmental protections promised in the Endangered Species act and the Clean Water Act.

I fully support Department of Ecology's determination and proposal to establish the Puget Sound No Discharge Zone and plead with you to also review and evaluate the impacts of expanded industry, fossil fuel and cumulative of the pollution released by these industries.

Response to Comment I-1356-2:

Ecology appreciates tribal treaty rights, human rights and the environmental protections of the Endangered Species Act and the Clean Water Act. This rule aims to prevent vessel sewage discharges which will enhance a number of environmental protections.

Commenter: Luci Lytle - Comment I-728-2

RVers can't dump their sewer tanks along the roadside, boaters (including cruise ships and freighters) should be responsible for keeping Puget Sound clean.

Response to Comment I-728-2:

Ecology appreciates the context of RV dumping compared with the need to also not discharge vessel sewage.

Commenter: Melissa Mager - Comment I-2554-1

The benefits in designating Puget Sound as a no discharge zone far outweigh opposition to designation, most certainly as it impacts our health and the health of the critters with whom we share the Sound, as well as aesthetically. I believe this designation is analogous to the public's original resistance to vehicle emission checks and mandatory seatbelts. In both cases, some of the public and related industries bridled against the change, however, now are both overwhelmingly accepted as the norm, and wholly beneficial to saving lives and vastly improving our environment. I doubt any among us would elect to go back to the old days.

This has proven to be the case for boaters and their wide acceptance of regulations throughout the waters of the United States and Puget Sound, especially in our state which has made it increasingly easy to comply with pump-outs. Pump-outs are assessable, they're clean, and they're easy to operate.

Just as with emission controls and seatbelt wearing, the initial inconvenience will give way to general wide spread acceptance and an appreciation for the resulting health benefits. It's just the right thing to do. Please designate Puget Sound has a no discharge zone.

Response to Comment I-2554-1:

Ecology agrees that the benefits of a No Discharge Zone for Puget Sound far outweigh the costs as noted in various documents, including the Final Petition and the Regulatory Analysis.

Commenter: Dawn Morgan - Comment I-2352-2

We would never allow an RV to discharge a holding tank into the sound. This is no different. Continuing to allow boats to use the sound in this manner hurts the community.

Response to Comment I-2352-2:

Ecology appreciates the context of RV dumping compared with the need to also not discharge vessel sewage.

Commenter: Ileen Weber - Comment I-1259-2

I own an RV trailer and am required to discharge my grey and black tanks in appropriate receptacles. I also live by a Native Growth Protected Area with Swamp Creek running through it. Our condo association is vigilant by enforcing the rule that only clean water can go surface water drains in our driveways and discharge into Swamp Creek. I expect the same vigilance of the maritime industry with their blackwater tanks.

Response to Comment I-1259-2:

Ecology appreciates the context of RV dumping compared with the need to also not discharge vessel sewage.

Commenter: Friends of the Earth Commenter - Comment O-31-4

Dumping is also responsible for many of our alien invasive species.

Response to Comment O-31-4:

While Ecology is concerned about invasive species in Puget Sound, this rule only addresses vessel sewage.

Commenter: Friends of the Earth Commenter - Comment O-31-6

Gray water dumping is also damaging!!

Response to Comment O-31-6:

This rule is a prohibition on vessel sewage only and does not regulate graywater from vessels.

Commenter: Friends of the Earth Commenter - Comment O-32-2

Treating sludge into biosolids and using for fertilizer is a great alternative! Please consider.

Response to Comment O-32-2:

The wastewater treatment plants that accept most of the vessel sewage have biosolids programs for beneficial use.

Commenter: Friends of the Earth Commenter - Comment O-31-14

Also, don't let ships pump out the bilge water. This often leads to invasive species in our Sounds and a loss of native species.

Response to Comment O-31-14:

While Ecology is concerned about invasive species in Puget Sound, this rule only addresses vessel sewage.

Commenter: Friends of the Earth Commenter - Comment O-31-16

Do these ship owners think that soon the oceans will be destroyed anyway due to those tanks of nuclear waste were dumped into the ocean almost 50 years ago? If you know anything about this and who I can contact about how to clear this up before these nuclear tanks open up, let me know since I do have an idea how to do this if they know where they are. Please reply or wouldn't that be an insult to my intelligence? I have my first invention patented and my first paperback book published, that is a shame if you never heard of me.

Response to Comment O-31-16:

Ecology appreciates your comment. The comment is outside of the scope of this rulemaking. We have forwarded your comment to Ecology's Nuclear Waste Program.

Commenter: Holland America Line - Comment O-41-7

Your earlier comments said modeling of the West Point discharge of millions of gallons of partially treated black water over multiple weeks will have negligible long term effects on water

quality of Puget Sound, yet your basis for this rulemaking states that boating discharges have detrimental effects. These seem to be contradictory, and those are hard to believe. The cruise association that we belong to has a member policy not to discharge untreated sewage of any distance even when permitted by federal regulation and international requirements, and we ask that you follow those same rules.

Response to Comment O-41-7:

The King County West Point Wastewater Treatment Plant discharges stemming from the February 2017 flooding event was a short term discharge event which has been sampled and analyzed showing negligible long-term effect on the quality of Puget Sound. The discharges were not permitted and were subject to serious enforcement actions from Ecology. The discharges occurred at known outfall locations with shellfish closure areas, while vessels have the ability to discharge anywhere, including over or near sensitive resources.

Commenter: Sierra Club Commenter - Comment O-30-5

When we condemn North Korea for using human waste for fertilizing farms, should we should consider our dumping of human waste any better?

Response to Comment O-30-5:

The rule is a pollution prevention effort to help protect water quality and public health.

Commenter: Sierra Club Commenter - Comment O-30-15

FIRST: do you want sewage in your front yard?

Response to Comment O-30-15:

The rule is a pollution prevention effort to help protect water quality and public health.

Commenter: Sierra Club Commenter - Comment O-30-27

We need to do this before dead zones start showing up in Puget Sound. And don't forget to go after those oozing failed septic systems too. Too many contaminated beaches and shellfish closures!

Response to Comment O-30-27

Puget Sound is threatened by a number of sources of pollution. Along with the work being done to address sources such as stormwater and industrial pollution, vessel sewage should also be addressed.

Commenter: Sierra Club Commenter - Comment O-30-40

And once again, the yuppies come up with an unfunded mandate the poor cant afford.

Response to Comment O-30-40:

The Regulatory Analyses considers the cost-benefit component (performed in compliance with chapter 34.05 RCW).

Commenter: Mike Sennett - Comment I-1970-2

I hope the DOE does the right thing here, the rulings on the Millennial Bulk Terminal coal heap permits have given me some hope that WA state can be an example of a place that protects its natural resources, what is left of the original bounty that is, & values Nature & people above corporations. Thank you for taking my comment.

Response to Comment I-1970-2:

Puget Sound is threatened by a number of sources of pollution. Along with the work being done to address sources such as stormwater and industrial pollution, vessel sewage should also be addressed.

Commenter: Sierra Club Commenter - Comment O-30-41

I know firsthand the impact of poop water because I help clean up beaches and see what washes ashore. I've also seen the Norovirus sweep through my community after seeing ships dump their effluent in the water. Keeping the waters clean mean safer beaches and healthier people.

Response to Comment O-30-41:

Norovirus is just one of the types of viruses, and pathogen influences that can pose a risk from vessel sewage. Ecology considered this risk in establishing this rule.

Comments on: Other pollutants in sewage concern

Commenter: Cherry Point Aquatic Reserve Citizens Stewardship Committee - Comment O-22-5

In addition to our concern about bacterial pollution from non- or partially treated waste, we are also disturbed about the drugs, hormones and other pharmaceuticals that are flushed with this waste into the Salish Sea. We understand that relatively little is known about the effects of these chemicals on marine species. We know that even scarcely detectable concentrations of petroleum-derived constituents can have strong negative effects on fish (and probably other species') embryos (Incardona, J.P. et al. Very low embryonic crude oil exposures cause lasting cardiac defects in salmon and herring. *Sci. Rep.* 5, 13499 (2015)), and we suspect that pharmaceuticals may be found to exert similar detrimental effects. For this reason, and to foster water quality improvement generally in the Salish Sea, we encourage you to adopt the proposed rule.

Commenter: Friends of the Earth - Comment O-35-7

Protection of swimmers, shellfish resources and marine mammals in the nearshore is especially important. In addition to toxic pollutants that are released from marine vessels, including cleansers, detergents, personal care products, pharmaceuticals, and other contaminants, we are concerned about pathogens and other human health-related pollutants that can potentially harm important contact recreation and shellfish harvesting beneficial uses in the nearshore. Contact recreation in our waters, a growing beneficial use in recent years, includes swimming, diving, paddling and rowing, kite-boarding and stand-up paddle boarding. Use of our waterways and health of our shellfish are pillars of local culture, including tribal interests.

In addition, recent studies have shown the endangered southern resident orca community has antibiotic resistant strains of bacteria in their respiratory tracts. As we all work to reduce pollution from all sources, including stormwater, wastewater treatment plants, industrial discharges, and aerial deposition, we must include direct sources such as marine vessels. It all adds up. Nutrient releases contribute to dissolved oxygen and ocean acidification problems. Especially in the South Sound, Hood Canal, and in bays and inlets around the Sound and Straits, releases of excess nutrients have been documented to lead to low dissolved oxygen conditions and potentially fish kills. In addition, new research is showing that these conditions may exacerbate ocean acidification problems leading to potential impairments to the calcification process for shellfish and other species and the weakening of the ability of species like mussels to hang on to rocks. Marine vessels, especially recreational boaters, are out in large numbers in the Sound at exactly the time of year – the warm summer and early fall months – when these problems are experienced in our marine waters. Nutrient loading also acts as a stressor for species such as eelgrass.

Commenter: Futurewise - Comment O-17-7

Protection of swimmers and shellfish resources in the nearshore is especially important. In addition to toxic pollutants that are released from marine vessels, including cleansers, detergents, personal care products, pharmaceuticals, and other contaminants, there is also concern about pathogens and other human health-related pollutants that can potentially important contact recreation and shellfish harvesting beneficial uses in the nearshore.

Summary Response to: Other pollutants in sewage concern

Ecology concurs with the concerns over the pollutant components of vessel sewage and the potential effects to the marine environment and public health.

Comments on: Other pollution sources the concern

Commenter: Craig Adams - Comment I-9-1

Come on ...this is ridiculous....solve the problem with the cities dumping MILLIONS of gallon every year, not the small users. MILLIONS, every year. You are wasting govt money and resources spending time on this at all.

Commenter: Brian Clampitt - Comment I-18-3

The root cause of our water quality issues is our large and growing population with all of the attendant ills, from failing sewage systems, septic fields, and storm run off, to aquaculture and fertilizer use. Implementing this rule will not help the health of the sound by any appreciable amount until the major points of pollution are addressed. Implementation of this rule is a specious attempt at seeming to address the issue while not actually doing so.

Commenter: Charles Draper - Comment I-2110-3

There are more contaminants being emptied into the receiving waters by roads than any number of boats having treated sewage would contribute .

Commenter: Captain Mark D. Flaten - Comment I-2-1

Dear Dept. of Ecology, on the surface this might seem like the route to go, but just last year there were millions of gallons of raw untreated sewer dumped directly into our Puget Sound. This seems like an annual occurrence if you check your history. Before forcing the marine industry to a standard your own local governments can't meet why don't you look there first and then there are the hundreds of thousands of failing private sewer systems on the shores of our Puget Sound, why don't start there. Why must you go after a marine industry that is treating its waste properly? In typical government fashion lets go for the easy target and not where the problem is really originating from !!!

Commenter: William Haimes - Comment I-669-6

Ecology should target it's effort toward non-point sources. Mandatory separation of storm and sanitary sewers would do the most good in eliminating coliform contaminates. Elimination of combined sewer overflows and treatment plant overloads would be the most economical solution. How many times do we have to clean up Puget Sound. Do it right the first time so we do not have to revisit this problem in 20 years.

Commenter: Charles Long - Comment I-11-5

And while this onerous regulation destroys the recreational boating industry in Washington, large industrial polluters continue to dump tons of who-knows-what into Puget Sound and municipal entities such as Seattle Metro continue to have "accidental releases" that far exceed the pollution caused by the TREATED sewage coming from boats like ours!

Commenter: Elizabeth Ray - Comment I-8-4

What would best protect these two entities is ELIMINATING SEPTIC SYSTEMS from alongshore front lots. Boaters do not release sewage close enough to shore to have an affect! I am strongly opposed to the far reaching legislation in that 1: we boaters are not the primary contributor. If you want to protect shoreline ecosystems, eliminate septic tanks that cause the problems directly.

Commenter: Jay Spearman - Comment I-1020-4

I spent my career working with environmental issues and support WDOEs efforts. I have conducted WQ studies around marinas. I am unconvinced this proposal is any more than ineffective eye wash. One case in point is the volume of discharge already permitted from municipal treatment plants. Don't hide behind the silo'd fact it is a separate permit. That volume dwarfs most all other sources. How about the chemicals and medical drugs that pass through untreated? The proposed no discharge designation will not address that real and significant impact on Puget Sound. Another major problem that is given attention but is far from being adequately mitigated is storm water runoff from new upland developments all around Puget Sound. I have seen neighboring industrial applicants with separate permits programs experience significantly different discharge requirements.

There are programmatic explanations, but the environment doesn't distinguish and the applicants are not treated on an equal basis. That kind of thing should be a much higher priority than subject proposal. Please re-evaluate your priorities to protect Puget Sound.

Commenter: Draper Machine Works Inc. - Comment O-15-6

The proposal is not a simple and common sense approach that will improve important shellfish harvesting areas. The most important issues with shellfish are septic systems, runoff and sea mammals, not the already treated sewage from boaters. I have certified shellfish beds for oyster and clam production and am familiar with the issues.

If the Dept of Ecology was concerned about POOP in the water, it would go after some of the laws that protect sea otters, sea lions and seals in specific areas and that create significant non-treated sewage in the water and shellfish beds.

Commenter: The American Waterways Operators - Comment O-24-17

Ecology's NDZ rule making should be withdrawn because it does not address the real issues facing water quality, disproportionately penalizes one industry and is too detrimental to the Puget Sound maritime industry and the region's economy. Ecology should take additional time to consider all of the factors mentioned in this and previous letters from AWO, the Puget Sound NDZ Marine Alliance and other comments from concerned stakeholders.

Summary Response to: Other pollution sources the concern

Ecology appreciates your comments. The rule is a pollution prevention effort to help protect water quality and public health. Ecology considered numerous scientific studies and reports, research, and stakeholder input.

Ecology agrees with the commenters that the Puget Sound is threatened by a number of sources of pollution. Along with the work being done to address sources, such as stormwater, municipal, and industrial pollution, vessel sewage should also be addressed.

Ecology's *Final Petition to Designate the Waters of Puget Sound as a No Discharge Zone* (Ecology, July 2016) provides a summary of MSD performance. The treatment MSDs limits for fecal coliform bacteria (pathogen indicator) and solids per current federal standards are less stringent than the State's water quality criteria.

The King County West Point Wastewater Treatment Plant discharges stemming from the February 2017 flooding event was a short term discharge event. The discharges were not permitted and were subject to serious enforcement actions from Ecology. The discharges occurred at known outfall locations with shellfish closure areas, while vessels have the ability to discharge anywhere, including over or near sensitive resources.

Comments on: Overbroad regulations

Commenter: William Haimes - Comment I-669-2

The proposed rule is overly broad and will do little to improve conditions on Puget Sound.

Commenter: Jay Spearman - Comment I-1020-3

I believe it to be a political correctness issue that will not have any measurable effect on water quality in Puget Sound. We should not care what other parts of the country do. Let's get specific about our problems and what solutions might work.

Commenter: United States Coast Guard - Comment A-4-6

The text of the proposed regulation presents four additional areas of concern... (3) references to certain federal regulations are overbroad, ... Third, the Coast Guard recommends that WAC 173-228-040(2) be amended to specify that "vessels with marine sanitation devices must secure the devices to prohibit the discharge of sewage per 33 C.F.R. S 159.7(b)" instead of "33 C.F.R. S 159.7," which includes provisions not applicable to this NDZ. Specifically, 33 C.F.R. S 159.7(a) generally requires vessels that have installed toilet facilities to have certified Type I, II, or III devices, which contradicts the requirement of WAC 173-228-040(1). Furthermore, 33 C.F.R. S 159.7(c) only applies to vessels operating on a body of water where the discharge of untreated sewage is prohibited by the Environmental Protection Agency under 40 C.F.R. S 140.3. As such, 33 C.F.R. S 159.7(c) only applies to vessels on "freshwater lakes, freshwater reservoirs, or other freshwater impoundments whose inlets or outlets are such as to prevent the ingress or egress by vessel traffic subject to this regulation, or in rivers not capable of navigation by interstate vessel traffic.

Only 33 C.F.R. S 159.7(b) specifically refers to vessels operating on a body of water where discharges are prohibited pursuant to CWA Section 312(f)(3), and the Coast Guard recommends referencing this specific cite in the proposed rule.

Summary Response to: Overbroad regulations

Ecology concurs with the commenter that the referenced C.F.R 159.7 should be more specific to the subpart 33 C.F.R. §159.7(b). The rule language has been amended.

Puget Sound is threatened by a number of sources of pollution. Along with the work being done to address sources such as stormwater, municipal, and industrial pollution, vessel sewage should also be addressed.

Comments on: Pathogen risk - shellfish/beach protection

Commenter: Rein Attemann - Comment I-2551-4

Without a no discharge zone in place, boats could discharge raw or partially treated sewage close to or within shellfish beds and other areas where public health could be affected. We need a no discharge zone to protect public health, especially when it comes to both commercial and recreational shellfish harvesting. Safely harvesting shellfish needs clean water to protect our health.

Commenter: Mark Blitzer - Comment I-864-5

If nothing else, and there IS much else, raw sewage in Puget Sound is a health hazard, and a threat to the local shellfish industry.

Commenter: Esther Kirchner - Comment I-19-1

I recently heard on NPR about the proposal to make Puget Sound a no discharge zone. I recently moved to Olympia, and our home is within a few miles of several shellfish beds. I have taken a bit of an interest in the industry since moving here, and I've been pleased to learn that shellfish farming represents an important part of our regions history, and that it is a viable and sustainable form of animal agriculture. For this reason, I would like to voice my support for making Puget Sound a no discharge zone. The costs are relatively low, and in return our region can continue to foster a traditional and sustainable food way.

Commenter: Bruce Wade - Comment I-668-1

Every step towards making the Salish Sea cleaner is precious.

Our abundant sea life and sea food are healthier, and healthier for us as consumers, as we remove contaminants from the water.

This movement toward a no-discharge zone inspires me to think that we could establish the region as a seafood variation of organic, further increasing the market value of food harvested here.

Commenter: Chris Wilke - Comment I-2555-5

I'm alarmed when I visit the Lake Island State Park and I see a sign put up by the Department of Health that says 'no shellfishing May through September.' I initially thought it potentially was because of algal blooms, or something like that, and then I found out, no, it's too close to a marina and a popular boating anchorage so we just close that area for shellfishing as a precaution because of the risk of boat discharges. That's unacceptable.

Commenter: Citizens for a Healthy Bay - Comment O-18-7

A No Discharge Zone will protect public health of the communities living, working and recreating in and around Puget Sound. Recreational and commercial shellfish harvesting are economically significant activities that require clean water to protect public health. Even partially treated sewage carries bacteria and other microorganisms that can cause human illness. Without a NDZ, boats could discharge sewage close to or within shellfish beds or other critical areas, negatively affecting public health. There are protections in place to manage land-based sewage, and we need this rule to manage sewage discharged directly to the sensitive waters of Puget Sound.

Commenter: Drayton Harbor Oyster Company - Comment O-19-3

Every day commercial and recreation vessels past by our farm and with each passing we wonder if they are aware of the potential impact they could have on the health of our product. Our farm is within a mile of two marinas which provide moorage for hundreds of commercial and recreation vessels. Most of the vessels have year-round slips, some are just passing through.

As the grower, we do what we can do to notify vessel owners of the sensitive crop in the bay but never really know if they fully understand the potential impact of discharging waste near the farm. It is for this reason we believe it is time to remove the grey area which surrounds this question. We believe Department of Ecology's new rule establishing Puget Sound as a no discharge zone does this and support the department's effort.

Commenter: Ecosystem Coordination Board - Comment O-9-3

Sewage discharges, even by a small number of vessels in small quantities, can cause pollution that may be a problem for sensitive resources, such as swimming beaches and shellfish beds. Restoring and re-opening shellfish beds is one of the three Strategic Initiatives in the 2016 Action Agenda, our region's shared roadmap to protect and restore Puget Sound. Establishing an NDZ in Puget Sound is also a Near-Term Action in the 2016 Action Agenda, which further establishes its significance in context of the Puget Sound recovery effort.

Commenter: Friends of the Earth - Comment O-35-4

Vessel sewage, either treated or not, directly discharged into Puget Sound contains high concentrations of bacteria and other pathogens that can impact public health and shutdown shellfish beds. Every year shellfish beds must be closed due to bacterial contamination. Tracking down the source can be timely and complicated, particularly if the source is mobile or intermittent.

Commenter: Kitsap Public Health District - Comment A-1-3

Prohibiting the release of sewage, treated or untreated, is in alignment with our agency's mission to protect the public from nonpoint pollution related disease. The protection of our surface waters and shellfish beds from human caused nonpoint pollution and sewage discharges is one of our priorities as a health district.

In 1999, the Kitsap Board of Health passed local ordinance Bremerton-Kitsap County Board of Health, 1999-13 Marina Sewage Regulations, which required all marina operators to provide sewage pump out facilities for all liveaboard vessels in moorage and prohibited the discharge of any untreated sewage from all vessels in the waters of Kitsap County. This ordinance displays our agency's understanding of the negative public health effects that vessel sewage discharges cause to our shellfish beds and recreational surface waters.

Commenter: Pacific Coast Shellfish Growers Association - Comment O-11-4

Shellfish farming can only take place in the cleanest waters that have been certified under the National Shellfish Sanitation Program, or the NSSP, which is maintained by a collection of state and federal control agencies, the shellfish industry and the economic community. The NSSP standards led to the first estuarine and marine monitoring program for fecal coliform bacteria, Vibrios, heavy metals, and other contaminants, and are the most stringent of all water quality classifications far exceeding those required for swimming. Regular monitoring is required to maintain certification of shellfish beds, and the harvesting is banned if a problem is detected. These bans remain in effect until the problem is corrected and water quality monitoring indicates the area once again meets standards. Most closures come after significant rainfall events, and in some cases and places may be predicted with help of accurate weather forecast.

When a closure comes from an isolated discharge of human waste, such as from a vessel, there is no warning and the impact can be long and significant. According to the CDC, as few as 18 virus particles can make a person sick, and human vomit or diarrhea releases billions of virus particles which can last in the environment well past exposure. Since oysters filter 40 gallons of water per day, the risk of picking up viruses is unfortunately extremely high regardless of where this waste was released. In the late 1990s the national shellfish community was alerted to some cases of shellfish contamination in the Gulf Coast. Two viral outbreaks associated with human waste closed these shellfish areas. These incidents sparked a launch of a national education effort about viral contamination of marine waters, and the industry fortified that message and addressed that situation locally. I'm aware of two more cases recently where direct discharge of human waste has closed shellfish areas due to Norovirus, one in Tomalas Bay, California, and the other in Sammamish Bay here in Washington. Norovirus presents a known risk. However, the data on the marine sanitation devices' ability to treat these viruses, particularly Norovirus, is inconclusive. In the absence of current technology ability to treat for Norovirus, a no discharge zone for Puget Sound is the only responsible option. PCSGA supports a no discharge zone designation for Puget Sound. Knowingly releasing human waste into Puget Sound and risking the health of the state's natural resources should not be allowed.

Commenter: Puget Soundkeeper Alliance - Comment O-16-4

Vessel sewage directly discharging into Puget Sound contains high concentrations of bacteria and other pathogens that can impact public health and shutdown shellfish beds. Every year shellfish beds are closed due to bacterial contamination that renders shellfish unfit for consumption.

Commenter: Seattle Audubon Society - Comment O-27-4

It is critical for the health of the avifauna reliant in our region that the flow of sewage and accompanying viruses and diseases be halted through the designation of Puget Sound as a NDZ.

Commenter: Sierra Club - Comment O-37-4

As it stands now, boats can discharge sewage directly into the sound, thus contaminating the water with high concentrations of bacteria and pathogens putting public health, marine life and clean water dependent businesses at risk. A No Discharge Zone would significantly diminish this risk.

Commenter: Taylor Shellfish Farms - Comment O-8-4

Taylor Shellfish has oyster, clam and mussel farms throughout Puget Sound. We and other shellfish growers in the Sound rely on clean water to grow shellfish that is safe to consume. To ensure this, Washington's Department of Health manages an outstanding shellfish sanitation program that includes routine water quality sampling on our shellfish farms and periodic screening for potential pollution sources. We know from norovirus outbreaks in Washington and elsewhere around the country that hundreds of people can be made ill from waste from one sick individual and that large areas can be contaminated with a relatively small amount of sewage. This rule significantly reduces this risk.

Commenter: The SeaDoc Society - Comment O-3-3

Science and monitoring efforts underway in Washington State demonstrate that Over 41,000 acres of shellfish harvesting areas are classified as prohibited due to the proximity of pollution sources or poor water quality. High levels of human feces, or more specifically bacteria associated with human feces (fecal coliforms), are an important contributor to causing many shellfish closures. The presence of high levels of human feces not only closes these areas to recreational and commercial harvest but also diminishes local food gathering and economic opportunities for the residents of Puget Sound. Furthermore human feces have been suggested as a source for the spread of drug-resistant bacteria from humans to wildlife, including southern resident killer whales.

Commenter: WA State Board of Health - Comment A-3-3

The mission of the State Board of Health is to protect and improve the health of people in Washington State. Preventing discharges and exposure to human sewage and other pathogen pollution is a key strategy to preventing the spread of communicable disease. The proposed rules prohibiting the discharge of sewage from vessels in the designated area will help protect the health of Puget Sound and help protect public health in waters used for swimming, kayaking, and other recreational activities and waters used for shellfish harvesting where people are directly exposed to pathogens in human sewage.

Commenter: Washington Environmental Council - Comment O-29-7

Over 90 No Discharge Zones have been established throughout the United States, and the Puget Sound designation will be the first in the Pacific Northwest. Puget Sound and the waters covered by the proposed NDZ are sensitive to inputs of bacteria from any source, and this designation will add an important protection that covers sewage from boats.

The Washington State Department of Health maps the status of commercial and recreational shellfish beds, based on frequent monitoring conducted by their scientists. Figures 1 and 2 present shellfish bed status for commercial and recreational beds, respectively, as of December 20, 2016. While some beds are currently closed due to pollution or closed to harvesting certain species, shellfish beds occur throughout the area proposed for the No Discharge Zone. Every year shellfish beds must be closed due to bacterial contamination (<https://www.doh.wa.gov/CommunityandEnvironment/Shellfish/BeachClosures>). Tracking down the source can be timely and complicated, particularly if the source is mobile or intermittent. In the September 27, 2017, Results Washington presentation on Puget Sound recovery, Department of Health Scientist Emily Sanford noted that shellfish beds are closed simply due to proximity to boats, citing the potential for sewage releases (Sanford, 2017).

Commenter: Washington Environmental Council - Comment O-45-5

Vessel sewage, whether it's raw or partial, does contain high concentrations of bacteria and other pathogens that, even in very small amounts, can travel miles and miles away in Puget Sound because our waters are so connected. And Ecology's own Water Quality studies indicated these high concentrations can occur within sensitive areas even when vessels discharge over three miles away.

Commenter: Washington State Department of Health - Comment O-5-3

Pathogenic bacteria and viruses in wastewater discharges have the potential to impact bathers and consumers of shellfish. The implementation of the NDZ will result in the protection of public health for shellfish consumers and recreational water users by reducing under-treated wastewater discharges from vessels travelling along Puget Sound. As the Food and Drug Administration's designated shellfish authority in Washington State, we have concluded that implementation of this act will protect and improve marine water quality, and thereby allow additional safe commercial and recreational shellfish harvesting opportunities.

Summary Response to: Pathogen risk - shellfish/beach protection

Ecology concurs that vessel sewage, whether raw or partially treated, can contain high concentrations of bacteria and other pathogens that, even in very small amounts, can travel miles away in Puget Sound because our waters are so connected. And Ecology's own Water Quality studies indicated these high concentrations can occur within sensitive areas even when vessels discharge over three miles away.

Ecology concurs with the importance of the shellfish industry, as noted in the Preliminary and final Regulatory Analysis.

Ecology also agrees that shellfish farming can only take place in the cleanest waters that have been certified under the National Shellfish Sanitation Program and Washington State Department of Health. Areas where vessels congregate are downgraded or closed by the Washington State Department of Health due to the risk from vessel sewage. With the Puget Sound No Discharge Zone, they expect to upgrade or open about 1,000 acres.

Ecology concurs that when a closure comes from an isolated discharge of human waste, such as from a vessel, there is no warning and the impact can be long and significant. Oysters and other shellfish are filter feeders as noted in the *Assessment of Potential Health Impacts of Virus Discharge from Cruise Ships to Shellfish Growing Areas in Puget Sound* (Washington State Department of Health/University of Washington, November 2007).

Comments on: Protect whales, fish and habitat

Commenter: Mark Blitzer - Comment I-864-6

Puget Sound is an iconic body of water whose apex predator, the orca, is in danger of local extinction because its own prey (Chinook salmon) are dwindling precipitously in number, partly due to pollution in the sound.

Commenter: Terrill Chang - Comment I-2351-3

Salish Sea salmon stocks are declining, which in turn affect orcas, which harm the important tourist industry. So there IS an economic penalty for boater pollution.

Commenter: Paul Dobson - Comment I-1700-1

The Sound as an ecosystem - including its fishes and its sea-mammals - need interventions to survive, and any and all interventions are necessary.

Commenter: Jennifer Lutz - Comment I-21-3

Both salmon and orca are indicator species and the declining numbers of both of these species is telling us these bodies of water are not healthy. Both of these species are listed "threatened", though technically, by the numbers their numbers are so low they are endangered species. These species have several challenges and clean habitats are one of them. Both of these species are critically important to the economy of our region whether it be sport fishing (catch and release of our endangered salmon species), whale watching, photography and tourism to name just a few economic connections. Both orca and salmon are culturally important - certainly to native nations but, also, to all people of the Puget Sound area. These are iconic animals that do provide a spiritual, aesthetic presence to all of us and it is our responsibility to care for them by providing the healthiest environment we can. We are stewards of this region! If we can identify specific actions that improve the health of our bodies of water we need to step up and do this! Dumping sewage within these waters is horrifying - the pathogens, endocrine disruptors and chemicals that are present in human waste potentially cause immeasurable damage, are persistent and not easily broken down! Our waters are not a toilet, items are not flushed away - they remain within the sediments, water column and food web for decades. I send an urgent "call to action" making it illegal to dump sewage within our waters.

Commenter: Dr. J. Pete Schroeder, Marine Mammal Vet - Comment I-2510-1

I second the comments made by so many others in favor of the proposed new rule. Additionally, and extremely importantly, the benefits described in the rule may play an important role in the survival of the Endangered Southern Resident Killer Whale (SRKW) population. These iconic animals were listed by Washington State as Endangered in 2003, Giles, G, WDFW, as endangered.

The Recovery Plan for SRKW (*Orcinus orca*), to which I made contributions, was published in 2008 and the SRKW were listed as endangered by NOAA, National Marine Fisheries Service, North West Regional Office. My main contributions were in section II H. Potential Threats to SRKW, especially Environmental Contaminants, Disease and the Cumulative Effects Of Chronic Stressors.

Since 2006 my co-investigators and I have been documenting the respiratory biome of the orcas, now back to their 1978 population level of 76-78 individual orcas. We also investigated the microbiota of the surrounding sea surface microlayer (SML) in the eastern north pacific, concentrating on the San Juan Island waters. (2017, Raverty, SA, et al.) Our data, an array of bacteria and fungi in breath and SML samples were identified, as well as microorganisms that exhibited resistance to multiple antimicrobial agents, identified, for the first time. The SML microbes and respiratory microbiota carry a pathogenic risk which we propose as an additional, forth putative stressor, (biological pollution) which may adversely impact the endangered SRKW population. The theory of dilution of pollution by the ocean is outdated. Free ranging SRKW and other cetacean species do not recognize boundarys, but they may be impacted by ship discharge, biological pollution, into their critical habitat, anywhere in the Salish Sea.

I have seen live and stranded orcas inside the Dungeness Spit, so there is no doubt, having lived on the bluff overlooking Dungeness Bay, for 27 years, that cetaceans have to pass east of the New Dungeness Lighthouse to get there.

I too strongly recommend passage of the subject rule. Thank you for the opportunity to submit comments. I won't add to your volumes of material that will be generated by this request for information, but will recommend your library acquire the publication, including the bibliography of, Respiratory Microbiome of Endangered Southern Resident Killer Whales and Microbiota of Surrounding Sea Surface Microlayer in the Eastern North Pacific, March, 2017, Scientific Reports, Nature, Raverty, et al..

Commenter: Chris Wilke - Comment I-2555-3

The obvious connection here is swimming and recreational contact, as well as shellfishing, and those risks are well established. But let's not forget about the other contributions of nutrients and solids. It's been shown to really have a detrimental effect on the ability of seagrass, like eelgrass, to grow – which of course, forms habitat for herring and salmon, which goes all the way up to the orca whale. And, as we've seen in the last few weeks, we are in danger of losing our southern resident killer whales forever.

Commenter: Verner Wilson - Comment I-2565-3

It is a reasonable proposal that helps not only human health, but also to help the marine wildlife including endangered stocks of wild Pacific salmon and orcas. And as a commercial sport and subsistence fisherman, and someone who is also a seafood connoisseur, I appreciate that this proposal also helps the local seafood industry and consumers such as the shellfish community.

Commenter: Center for Biological Diversity - Comment O-36-2

It is important to take this common-sense action to maintain water quality, thereby protecting an already impacted ecosystem, habitat of numerous fish, shellfish, marine mammal species, and other wildlife in Puget Sound.

One particular benefit of the new rule will be to protect the critically endangered Southern Resident killer whale, that are highly affected by contaminants also found in sewage waters. The population has been in an alarming decline in the past 20 years. As of September 2017, there were only 76 Southern Resident killer whales remaining, the lowest number in over 30 years. 1 Although the population has experienced several periods of growth and decline, the last continued decline is unprecedented. 2 NMFS projects a downward trend in population growth over the next 50 years (Fig. 1). 3 Data from the Center for Whale Research, graphically represented at http://www.biologicaldiversity.org/news/press_releases/2017/orca-09-25-2017.php. 2 NMFS, Recovery Plan for Southern Resident Killer Whales (*Orcinus orca*) (Jan. 17, 2008), at II-58. http://www.nmfs.noaa.gov/pr/pdfs/recovery/whale_killer.pdf. 3 NMFS, 2017. Endangered Species Act Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response – Impacts of the Role of the BIA Under its Authority to Assist with the Development of the 2017-2018 Puget Sound Chinook Harvest Plan, Salmon Figure 1. Southern Resident killer whale population size projections 2016-2066 using two scenarios:

- (1) projections using demographic rates held at 2016 levels (red), and

(2) projections using demographic rates from 2011-2016 (blue). Source: NMFS 2017. The Puget Sound No Discharge Zone will address one of the three primary threats identified for Southern Resident killer whales – the high levels of contaminants found in their tissue– by prohibiting the release of sewage that contain pollutants. Other contaminant sources may include contaminated prey, wastewater treatment plans, sewer outfalls, and pesticides. Eliminating sewage discharge from vessels is a step in the right direction toward a cleaner Puget Sound that can help in killer whale's recovery.

Commenter: Defenders of Wildlife - Comment I-2562-2

We are at risk of losing these whales from the waters of Puget Sound and the outlook for them doesn't look very good. There are multiple threats to our southern residents. One of them is pollution. This is an important step in ensuring that the amount of pollution that enters Puget Sound and slowly bioaccumulates its way up through our southern resident orcas, making them sick and depleting their population, is important. So we fully support the No Discharge Zone, and hope to see it move forward.

Commenter: Defenders of Wildlife - Comment O-10-4

For too many years we have burdened this important resource with excessive pollution, waste and garbage. And, because of its unique geography of fjords and islands, flushing out hazardous chemicals and contaminants occurs at a slower rate, or in some parts of the estuary, not at all. The 76 remaining Southern Resident orcas are already exposed to high levels of pollutants and contaminants. The National Marine Fisheries Service lists "Pollution/Contamination" as a major barrier to Southern Resident orca recovery (January 2008). Eliminating further exposure to sewage waste pollution by enacting a No Discharge Zone is a straightforward solution for Southern Resident orcas because it does not require a major behavior change.

Commenter: Friends of the Earth Commenter - Comment O-33-7

As a professional biologist who has conducted research on northern fishes for the last 35 years, I am well informed on the value of our living marine resources and their potential to provide great benefits to the United States if we use sound information and make the small economic sacrifices to support their resilience. For example, salmon fisheries can extract extraordinary wealth and benefit (i.e., high quality protein) from the ocean without damaging the ecosystem if we adopt sound environmental and fisheries management policies. Allowing discharge of raw sewage into Puget Sound, through which economically important Pacific salmon populations pass, is not in the national economic interest. It saves the shipping industry a little money and puts extraordinarily valuable and sustainable Pacific salmon resources at risk. This simple and common sense approach will protect public health, keep our waters clean, protect sensitive marine waters, and important Pacific salmon and shellfish harvesting areas.

Commenter: Friends of the Earth Commenter - Comment O-34-5

Please do everything you can to stop ships from dumping raw sewage into the waters of Puget Sound. The contaminated waters can severely damage the health and lives of creatures such as orcas and even vegetation such as eelgrass, and also humans who eat the creatures of the ocean. Thank you!

Commenter: Friends of the Earth Commenter - Comment O-34-6

The sound supports thousands of animal and plant species, from orcas to eelgrass! And, local fishermen depend on it for their livelihoods! But, the sound and its tributaries, are in trouble! Huge ships are endangering its wildlife by dumping raw or partially untreated sewage! When ships dump untreated, or, even partially treated sewage into Puget Sound, the bacteria, viruses, and, other pathogens can harm the fragile ecosystem! The impacts on wildlife--from salmon to endangered orcas--can be huge! And, it can even get into our food and make us sick! The state of Washington is poised to stop shipping companies from dumping raw sewage into the sound! This would make a big impact for all the people and wildlife who call Puget Sound home! It will also send a message to trump's EPA that states will not allow industry to pollute our waterways! While several places in the u.s. have discharge bans, puget sound would be one of the biggest, and, would set a precedent for regions like the gulf, alaska, and, the southeast, that do not have these protections! But, the shipping industry is doing everything it can to fight back! We need to make sure that the department of ecology does not cave in to these big polluters!

Commenter: Friends of the Earth Commenter - Comment O-34-9

With Salmon numbers at extinction levels all Orca will have died in the next decade, when will the commerce of consumption & cruising be held responsible for toxic seas?!? What Is The Point Of A Cruise Ship Industry That Promotes Poisonous Pathgens?

Commenter: Friends of the Earth Commenter - Comment O-31-15

Besides the obvious, ships clearing their ballast tanks introduce foreign species into areas where they have no natural predators. The Zebra mollusk in the Great Lakes is one such disaster. The Asian carp (Jumping Fish) invading the whole Mississippi tributary system is another.

Commenter: Futurewise - Comment O-43-2

We are very much in favor of the No Discharge Zone, and are particularly concerned about the orca, and this is one of the pieces of the puzzle that help with making sure that we do not lose our orcas.

Commenter: Seattle Audubon Society - Comment O-27-3

Over 70 bird species are highly dependent on Puget Sound. For many, these waters serve as an important stop during migrations from tropical, temperate, and Polar Regions while others have made the area their home all year.

Commenter: Sierra Club Commenter - Comment O-30-3

Our iconic orcas and vitally important salmon & shellfish depend on clean waters.

Commenter: Sierra Club Commenter - Comment O-30-6

I am horrified at the way humans treat our precious Northwest resources, our orcas prime among them.

Commenter: Sierra Club Commenter - Comment O-30-13

We live in such a beautiful place, filled with wildlife. And yet the health of the wildlife in the Salish Sea is in trouble. just one example, our Orcas are having difficulty finding enough food.

Increased pollution from sewage in the water must be avoided for the health of our waters and their inhabitants.

Commenter: Sierra Club Commenter - Comment O-30-45

I've lived my entire life in the Puget Sound area. My family are fishermen, sailors, and appreciate the beauty and bounty that Puget Sound waters provide. As fishermen and sailors, we understand the need to be stewards of the fragile ecosystems that bring salmon and oysters to our table year after year and provide habitat to the orcas, porpoise, harbor seals, otters, osprey, and so many more that make this place we live inspire awe and humble us. We also do not see disposing responsibly of material from the head as any kind of hardship, and feel strongly that it should be considered part of every boater's responsibility. As we see such rapid growth in the region, it is imperative we take action to protect Puget Sound in sensible ways.

Commenter: Skagit Audubon Society - Comment O-47-3

The mission of Audubon, of National Audubon, is to further the preservation and restoration of wildlife habitat with a special, but not a sole, emphasis on birds. Our members also enjoy the simple joy of learning about and observing birds. The marine waters of Skagit County are a particular haven for birds in winter when many species of waterfowl, sea birds, and raptors gather here. These birds depend on the fish, invertebrates, and plants in Puget Sound which, in turn, need clean water in order to thrive. To give one example specific to Skagit County, virtually all the Grey-bellied race, pardon me, virtually all the Grey-bellied race of Brant, a small goose nesting in the Canadian arctic, winter off Skagit County, particularly on Padilla and Samish Bays. Brants feed directly on eelgrass, and Padilla Bay National Estuarine Research Reserve protects 8,000 acres of that plant. This is the largest eelgrass meadow in the U.S. Pacific Coast, and it's highly important for a variety of marine creatures, from Dungeness crab to Chinook salmon to Grey-bellied Brant. Nutrient loading from sewage discharge acts as a stressor for species such as eelgrass, on which so many creatures depend.

I would also mention the federally and State listed Marbled Murrelet, which is in rapid decline around Puget Sound. While the loss of nesting habitat for this bird is likely the single greatest

cause of its decline, the Murrelet is also stressed by decline in forage fish populations, which provide its principle food. Forage fish depend on both the presence of their necessary spawning habitat, and also on clean water with abundant plankton, on which they feed. Sewage discharges are detrimental to water quality and threaten stability of the food web on which the Marbled Murrelet, forage fish, and many other species depend.

Summary Response to: Protect whales, fish and habitat

Ecology concurs with the need to protect all of the marine environment: fish, shellfish and marine mammal species, threatened, endangered and otherwise, and their habitat. This rule aims to prevent the pollution source of vessel sewage. Ecology agrees that habitat such as eelgrass is vital to a number of marine species and is a sensitive resource at risk from pollution such as vessel sewage. In addition, waterfowl, sea birds, raptors and other species are also dependent on the Puget Sound and in need of protection.

Comments on: Puget Sound - not a waterway

Commenter: Draper Machine Works Inc. - Comment O-15-4

Puget Sound should not join 90 other waterways across the United States as a No Discharge Zone. The Puget Sound Basin is not a waterway and is different than the other 90 "waterways" across the United States that were a result of the equal footings doctrine.

Summary Response to: Puget Sound - not a waterway

Section 312(f)(3) of the Clean Water Act authorizes a state to establish a no discharge zone for "some or all of the waters within such state." The Puget Sound is a water of the state of Washington and it is therefore appropriate to implement a no discharge zone for this important water of the State.

Comments on: Puget Sound a treasure – ecologically, economically, culturally

Commenter: Rein Attemann - Comment I-2551-3

Puget Sound is a crown jewel and deserves to be designated as a no discharge zone.

Commenter: Mark Blitzer - Comment I-864-2

Puget Sound is a local, regional, national, and, if my add, marine treasure of world importance. As such, it deserves the utmost protection and currently is not receiving it. It needs formal designation as a No Discharge Zone!

Commenter: Robert Jenson - Comment I-2564-2

I would also like to congratulate the Department of Ecology, after these many years, of making this major step forward. Puget Sound is an invaluable asset to all of us who live in Washington, and even those who don't.

It's really been a difficult battle over the years to try to reduce the pollution that's been caused particularly from boats, now that they're coming under this Discharge, or No Discharge Rule. I think it's long overdue. I really congratulate you for making this step and hope it will be respected and be enforced adequately.

Commenter: Jennifer Lutz - Comment I-21-2

I am writing urging you to establish "A Puget Sound No Discharge Zone" making it illegal to dump sewage within Puget Sound (which includes all waters within Skagit County). These waters are so vital to the organisms that live there, as well as the economy and culture of our area! Puget Sound and surrounding waters are beautiful, vibrant waterways, but, they are not healthy.

Commenter: Leslie Sinclair - Comment I-853-3

Keep all sewage out of Puget Sound. It is a treasure in Washington State. Keep it that way.

Commenter: Peggy Willis - Comment I-2560-5

I'm delighted that we had ten million gallons of sewage that was pumped out in 2016, which otherwise would have gone into polluting our Sound. And with our growth in our region we just have to make sure that other generations can continue to enjoy our beaches and swimming and boating. We just need to properly manage our sewage. And I think we can really make a difference in protecting our clean water and public health, our marine life and our shellfish.

Commenter: Alliance for a Healthy South Sound - Comment O-21-3

Support for no discharge zone. South Puget Sound is home to significant commercial, recreational, and tribal shellfish resources. Counties, cities, and tribal governments in South Puget Sound have invested considerably in protection and restoration of water quality and habitat necessary to protect and sustain healthy shellfish and will continue to do so. We welcome the additional protection that a no discharge zone for vessels will provide.

Commenter: Citizens for a Healthy Bay - Comment O-18-4

Over ninety No Discharge Zones have been designated across the United States. To date, the Environmental Protection Agency (EPA) Region 10 is the only region in the nation that has not designated No Discharge Zones for any waters. Puget Sound, a national treasure, needs this type of protection. Now is the time to prohibit discharging raw or partially treated sewage to our waters. It has been determined by the EPA that there are enough pumpout stations and capacity for both recreational and commercial vessels.

Commenter: Defenders of Wildlife - Comment O-10-3

Puget Sound is the largest estuary in the nation, by volume of water, and among the most beautiful. It is an economic driver for the entire region that supports tribal, sport and commercial salmon fisheries, crabbing, oyster farms, trade, recreation-based industry, and a thriving tourism industry. The Sound is the source of many livelihoods and the backbone of the local economy. Puget Sound is also a cultural icon. First Nations have sustained their culture along the Salish Sea's coastline for centuries. The region is also home to majestic wildlife like the critically endangered Southern Resident orcas. It is truly an American treasure. But this remarkable place is in trouble.

Commenter: Defenders of Wildlife - Comment I-2562-3

Puget Sound is obviously a cultural treasure, and an ecological treasure as well, and for years it has been polluted from a variety of sources.

Commenter: Kitsap County Board of Commissioners - Comment O-39-3

Kitsap County is virtually surrounded by Puget Sound waters and includes 186 miles of saltwater shoreline. Since time immemorial, the tribes that call Kitsap home depended on Puget Sound for food, travel, recreation, and quality of life. That tradition continued with European/American settlers, and it continues today with Kitsap County's diverse population.

Commenter: Pacific Shellfish Institute - Comment O-1-2

To date the Pacific Northwest is the only region in the nation that has not designated No Discharge Zones for any waters.

Puget Sound, a national treasure and important shellfish growing region, needs this type of protection. Over 90 No Discharge Zones have been designated across the United States. To date the Pacific Northwest is the only region in the nation that has not designated No Discharge Zones for any waters. Puget Sound, a national treasure and important shellfish growing region, needs this type of protection. Many boaters already store their sewage onboard and use the pumpout facilities that exist around Puget Sound and the Straits of Georgia and Juan de Fuca.

Commenter: Puget Soundkeeper Alliance - Comment O-20-5

As a resident of Puget Sound, I believe that the NDZ is a critical step to protect our waterways from degradation, recover endangered species and protect human health. Puget Sound bears the burden of pollution from many sources. No Discharge Zones across the country have been highly successful in protecting waterways. It's past time to grant the Sound this important and common-sense protection.

Commenter: Samish Indian Nation - Comment T-1-3

The Samish People have been stewards of the land and waters in and around the San Juan Archipelago for hundreds of generations. Samish's connection to the natural resources of the Salish Sea run deep and are indistinguishable from our identity as a tribal people. Our efforts continue today through the efforts of the Samish Nation's Department of Natural Resources and their restoration, marine debris clean up and research activities, and by supporting efforts aimed at protecting the waters and habitats of our Traditional Territory. With this in mind, we very much support Ecology's efforts to eliminate the discharge of sewage in the waters of the Salish Sea and the issues that such pollution has in our environment.

Commenter: Seattle Audubon Society - Comment O-27-5

Puget Sound is a major regional ecosystem vital to the economy and well-being of its human and wild inhabitants. Each year tens of millions of dollars are spent to restore its health and the establishment of a NDZ would be a major step forward to this effort. Seattle Audubon has worked diligently on the recovery of this ecosystem, including conducting systematic studies on the status and trends of seabirds which as a ecological proxies of the health of the marine ecosystem and serve as a Vital Sign for the Puget Sound Partnership.

In addition to the ecological threat that face the wildlife in and around Puget Sound, we want to additionally highlight the economic benefit of a clean and healthy Sound brings to our region. We echo the voices of many in the food industry, marine recreationalists, and birders around our region (nationally, a ~ billion dollar industry) in support of the NDZ.

Commenter: Sierra Club - Comment O-37-2

The Puget Sound is a treasure that deserves the highest protection, as it is one of the most diverse ecosystems in the world. It is crucial to the region's economic, cultural and ecological well-being, but this is all threatened by diminishing water quality.

Commenter: Washington Scuba Alliance - Comment O-2-5

From just an economic perspective, clean water in Puget Sound is essential. Over \$20 billion in economic activities each year are at risk (scuba diving included) from some form or other (oil, affluent, etc.). The waters of Washington State is the home to some of the largest and most unique sea life found anywhere in the world.

We have the largest octopus, two of the largest sharks and many other species which bring divers from around the world to see them, bringing much needed tourism dollars to our state. Puget Sound is a crown jewel and should be treated as such.

Summary Response to: Puget Sound a treasure – ecologically, economically, culturally

Ecology concurs that Puget Sound is a treasure of ecological, economic, cultural, and tribal importance. The ecologically and geographically unique Puget Sound is also a treasure for recreation, trade, and tourism. It is important to protect the Puget Sound for existing and future generations.

Comments on: Pumpout locations inadequate

Commenter: Elsie Hulsizer - Comment I-1819-3

Observations on specific pumpouts and localities: The manual pumpout in Reid Harbor on Stuart Island was difficult to use. We could not get an adequate suction and had to give up. The pumpout in Friday Harbor requires tricky maneuvering which can be hazardous in strong winds. The planned pumpout at Blind Bay on Shaw Island may not be built because the legislature failed to pass a capital budget. The Rosario Strait area including Deception Pass area and Skagit Bay has no public pumpouts. Although Gig Harbor has several pumpouts, the two we tried had extremely short docks and in a strong wind were risky to approach. The one in the public park had small boats overhanging the side of the pumpout dock, adding to the difficulty. Even the most environmentally conscientious boater is unlikely to risk damaging his/her boat in a risky situation. The pumpout in Penrose Pt State Park, the only one in the eastern portion of South Sound, is limited to boats under 30ft, not accessible to sailboats at low tide and was not operating when we visited. Another boater told us he never had seen it working over several trips. The pumpout at the King County Park at Dockton was also not operating when we visited therein the fall of 2016. The pumpout at the State Park in Mystery Bay was also not operating that year. The Park Ranger told us he knew of no plans to fix it.

We encountered a number of pumpouts lacking wash-down hoses leading to odor problems both at the pumpout and on the boats using them. Port Madison on Bainbridge Island has a large number of small marinas (probably permitted as single family docks) with no public pumpout in the bay. The nearest ones are in Poulsbo, Kingston, Shilshole and Eagle Harbor, all at least an hour away with a small boat or sailboat, meaning a three hour round trip counting pumpout and maneuvering time. Although Shilshole marina where we keep our boat has three pumpouts, on Sunday afternoons we frequently have to wait for access. This will only get worse if more boats add holding tanks and some who now have them start using them. The pumpout at the south end of the marina is beam to the prevailing winds, northerly and southerly, and has a round bull rail, which is slippery and dangerous in wet weather.

Commenter: Charles Long - Comment I-11-4

Now, the proponents of this regulation will tell you that there are "many conveniently-located pumpout facilities all over the Puget Sound area."

All we boaters need to do is stop by one of them, pump out our holding tanks, and go merrily on our way. The reality is somewhat different. Depending on exactly where you are, the nearest "conveniently located pumpout facility" could be 20 miles or more away! At the speed our boat travels, that's about a three-hour run! Convenient? Hardly! And when we arrive at the pumpout dock, it is possible (more correctly, "highly probable") that we'll find it graced by a large "Out of Order" sign. These proponents will also say, "Just install a larger holding tank." This might be possible on a 600-foot container ship, but not on our little trawler without additional thousands of dollars spent on modifications.

Commenter: Alliance for a Healthy South Sound - Comment O-21-5

We are also concerned that the distribution of existing facilities is not a good match for use patterns in the South Sound. Many of the destinations in the South Sound require alternative pump-out facilities. Areas such as Filucy Bay, Oro Bay and Cutt's Island (Kopachuck State Park) are destination boating areas, but currently no alternative facilities are available for boaters that frequent these sites. The South Sound is seeing increasing amounts of day-use by smaller vessels and kayaks, with users availing themselves of the state parks and other day and overnight use areas. Without adequate shore-based sanitation facilities for these users, we will continue to see water quality impacts from these users.

Commenter: American Cruise Lines, Inc. - Comment O-23-5

Based on prior experience operating American Spirit, ACL estimates that she generates a minimum of 12,000 gallons of blackwater per week, although higher rates are frequently observed. The two methods to dispose of this blackwater during a cruise are either to discharge blackwater after treatment²to within EPA/U.S. Coast Guard standards using American Spirit's MSD-II, or to discharge blackwater to shore-based facilities. Discharging to shore-based facilities would be an option only if adequate pumpout facilities were reasonably available at the docks American Spirit calls on, but in fact, no such facilities are reasonably available. American Spirit's blackwater holding tank capacity of 20,000 gallons is clearly inadequate to hold the amount of blackwater generated during her season in Puget Sound - a total of over 250,000 gallons. In order for American Spirit to comply with the proposed NDZ, there would have to be reasonably available pumpout facilities at Shilshole Bay Marina in Seattle and where American Spirit docks in Port Angeles. As explained in detail below, because of logistical/operational and cost considerations, facilities are not reasonably available in Seattle.

Facilities in Port Angeles alone are not sufficient to allow American Spirit to maintain an adequate safety margin of holding tank capacity. This leaves the ports of Seattle and Port Angeles as the only potential ports where American Spirit could theoretically pumpout. Based on the average capacities of pumpout trucks, it would take at least two pumpout trucks in both the ports of Seattle and Port Angeles in order to discharge the needed amounts of blackwater and maintain an appropriate safety margin of holding tank capacity. It is estimated that it would take at least four hours to discharge the needed amount of blackwater to two trucks if both of those trucks were available at the same time. If only one truck was available and that same truck had to make two trips, discharge time would increase substantially. Because discharging blackwater in Seattle is not a reasonable or practical option, the only remaining port where American Spirit theoretically could discharge blackwater is Port Angeles. But because that is the only such port, American Spirit would not be able to maintain a safe margin of capacity in her blackwater holding tank for an entire week.

Even if such a margin could be maintained for an entire week, pumpout operations at Port Angeles still would have to occur late at night, costing a premium and requiring additional crew to be called out to oversee the operations. Because of considerations of safety and extraordinary cost and additional crew requirements, pumpout facilities are not reasonably available in Port Angeles to accommodate American Spirit or vessels like her. At one time, it was anticipated that a commercial vessel pumpout facility was going to be built in Bellingham harbor. According to the Bellingham Harbor Master's office, this project has now been cancelled due to inadequate funding. As set forth below, to provide the cruising experience ACL's passengers expect and demand, it would not have been reasonable or practical for American Spirit or American Constellation to divert to Bellingham for the sole purpose of pumping out. In addition to the unreasonable extra costs of such a diversion, ACL's vessel itineraries do not reasonably allow enough time for such a lengthy deviation and ACL's passengers would not accept a diversion to a port only to discharge blackwater. Moreover, length limitations would have precluded American Spirit and American Constellation from calling on the proposed facility in any event. (See Section III C below.) Ecology has not demonstrated that there are adequate pumpout facilities for all vessels operating in the proposed NDZ at this time, or that such facilities will exist in the future. Ecology proposes an NDZ that includes essentially all of Puget Sound when, in fact, there are not available pumpout facilities reasonably adequate for all vessels operating in all of Puget Sound. A. Ecology's Initial Petition to EPA Fails to Identify Reasonably Available Pumpout Facilities. In Table 9 of its final petition, Ecology identified a number of facilities that are ostensibly "Commercial Vessel Pumpouts." As a review of the Table 9 facilities shows, however, nearly all of them are limited to service of only state ferry systems. In fact, only two entries on Table 9 –McNeil Island and Port of Bellingham - even suggest there are facilities for commercial vessels other than ferries. ACL contacted each of those facilities. The company that operates the McNeil Island pier at Steilacoom confirmed that it does not offer commercial pumpout services and that the Washington Department of Corrections (which maintains a presence at that dock) also does not offer such services. The office of the Harbor Master of the Port of Bellingham also confirmed that, as of the date of these comments, no facility in Bellingham has close to sufficient capacity to accept even a small fraction of the amount of blackwater generated on American Spirit or American Constellation during their cruises.⁴ B. Ecology's October 2016 Supplemental Submission Fails to Identify Reasonably Available Pumpout Facilities On October 14, 2016, Ecology submitted supplemental comments in support of its petition in response to a request from EPA for additional information concerning availability of commercial vessel pumpout facilities.

The supplemental submission also fails to demonstrate reasonably available commercial pumpout facilities on Puget Sound. 1. Tables 5 and 6 do not identify reasonably available facilities for small passenger vessels Table 5 of the October 2016 supplemental submission appears to be identical to Table 9 of Ecology's final submission and identifies no additional facilities. Table 6 of the supplemental submission identifies a number of "Mobile" pumpout facilities. These facilities all have a capacity only in the range of a maximum of several hundred gallons of blackwater. They completely lack sufficient capacity to be considered as reasonably available discharge facilities for overnight passenger cruise ships like American Spirit and American Constellation which generate thousands of gallons of blackwater during a cruise itinerary. The prices (in the range of \$20 per pumpout) for mobile pumpout facilities on Table 6 that have "unidentified" capacities make clear that those facilities also do not have sufficient capacity because it is implausible that a mobile pumpout facility would charge such a rate to accept the volume of effluent ACL's vessels would need to discharge.

The last facility on Table 6 only provides service to vessels within its marina. Table 6 of Ecology's supplemental submission adds no additional discharge facilities reasonably available for overnight passenger cruise ships like American Spirit and American Constellation in commercial operation. 2. Tables 7 and 8 do not identify reasonably available facilities for small passenger vessels American Spirit Table 7 of Ecology's supplemental submission purports to identify trucks or barges that constitute reasonably available discharge facilities for commercial vessels. The tank trucks and the barges identified by Ecology are not reasonable alternative pumpout facilities for American Spirit for a number of reasons, however, including: (1) fewer than half of the docks visited by American Spirit allow access for pumpout trucks; (2) the docks that do allow access for pumpout trucks require the pumpout operations to occur in close proximity to passengers and food deliveries and passengers who are paying for an enjoyable experience find the sight and odors of a sewage pumpout truck unacceptable; (3) the added cost of discharging blackwater to mobile pumpout trucks, estimated to be over \$97,200 per year for American Spirit, is unduly expensive; (4) the two barges identified in Table 7 have a capacity of only 3,000 gallons each, which is insufficient to meet the needs of American Spirit; (5) even if the barges had sufficient capacity to meet ACL's vessels' needs, it is unreasonable to expect that those two barges will be reasonably available to serve the over 600 commercial vessels identified by Ecology as operating within Puget Sound and needing regular pumpout services; (6) even if other, additional barges were reasonably available, ACL is advised by the operator of the barges that it would take 15 hours to discharge the needed amounts of blackwater for American Spirit and, therefore, the operator does not wish to do business with ACL; and (7) the added costs of discharging blackwater to the barges identified by Ecology is estimated to be over \$350,000 per year for the American Spirit. Table 8 and Appendix A in the October 2016 submission also appear to list mobile pumpout trucks, but as set forth above, mobile pumpout trucks are not a reasonable pumpout alternative for American Spirit. In sum, the October 2016 supplemental submission adds no additional discharge facilities reasonably available for overnight passenger cruise ships like American Spirit in commercial operation. As set forth above, because of the lack of reasonably available adequate pumpout facilities, it would not be feasible from a practical standpoint for ACL's vessels to operate in Washington State if they must discharge sewage to the facilities relied on by Ecology. C. A Proposed Facility in Bellingham Would Not Be a Reasonably Available Facility, Even if Built as Proposed Ecology has suggested that a planned facility in the port of Bellingham will make up for the absence of other reasonably available pumpout facilities for all commercial vessels in Puget Sound. Plans to build that proposed facility and a similar facility in Seattle have now both been cancelled.

Even if the proposed Bellingham facility had been built, it would not be a viable pumpout option for overnight passenger cruise ships like American Spirit in commercial operation. To use the proposed facilities at Bellingham, American Spirit would have to: (1) divert to Bellingham which is nearly 20 nautical miles each way off of the closest point in her route, a roundtrip that would take at least six hours in planning and transit time alone; (2) depart Anacortes (the closest itinerary port to Bellingham) on Saturday night at 10PM, transit to Bellingham and return to Bellingham by 6AM so passengers could go on shore-based excursions in Anacortes; (3) conduct a pumpout in Bellingham between midnight and 4AM, which would depend on the dock and pumpout station happening to be available and operating during those times; and (3) hire an additional licensed master in order to maintain sufficient work-rest periods for its crew - Saturday is the busiest day for ACL's crew because preparations for disembarking passengers begins at 0200 and embarking oncoming passengers ends at noon, in addition, the ship is loading or offloading luggage, food, stores, and trash.

The added costs of the transit to Bellingham would be tens of thousands of dollars per season in fuel costs alone and it would require ACL to hire another master mariner with appropriate credentials (at great cost) solely to facilitate pumpouts. Passengers paying for a seven-day cruise with ACL will not tolerate losing a day devoted to pumpout. More importantly, it is ACL's understanding that the maximum length the planned facility at Bellingham will not be able to accommodate American Spirit's 214' length. The proposed facility at Bellingham would have added no additional discharge facilities reasonably available for overnight passenger cruise ships like American Spirit in commercial operation. These same logistical, operational, consumer constraints, and added costs will apply equally to American Constellation, and mean that the proposed Bellingham facility will not provide a reasonably available facility for American Constellation, which, at 268', is also longer than American Spirit.

Commenter: Passenger Vessel Association - Comment O-28-7

The only two identified shoreside facilities that are theoretically available to the three existing "small ship" overnight cruise vessels cannot process the amounts of treated effluent that the vessels generate and their docks and mooring facilities cannot accept vessels of this size and draft. Furthermore, the geographic location of these shoreside facilities (Bellingham) is too far removed from the typical itineraries of the vessels for the facilities to be considered to be reasonably available. There appears to be no rational expectation that properly-sized and -located shoreside pump-out facilities will be installed in the Puget Sound area during the five-year delay of the effective NDZ enforcement date for smaller cruise vessels.

Summary Response to: Pumpout locations inadequate

On February 13, 2017, the EPA issued its final affirmative determination that adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels are reasonably available for waters of the Puget Sound, allowing the State of Washington to finalize the designation. The determination occurred after reviewing Ecology's final petition and supplemental information to establish a No Discharge Zone for Puget Sound and was based on existing pumpout availability.

As determined by the EPA, the currently availability of pumpouts is sufficient, however, Ecology continues to assess the pumpout availability along with our partners and it is part of the

implementation strategy to continue to assess and improve pumpout availability and convenience. There are a number of companies that specialize in commercial marine work and pumpout commercial vessel holding tanks as specified and verified in the Supplemental Information on Commercial Vessel Sewage Pumpout Availability document. Small commercial passenger vessels have the option to use such service companies which include barges and have used pumper trucks for smaller/off season volumes at Fisherman's terminal. The EPA's final determination also considered over 40,000 comments received from individuals, environmental organizations, vessel associations, boating and yacht clubs, industrial representatives, port authorities, federal, county, local and tribal governmental entities, and other interested groups. Ecology recognizes challenges associated with pumpouts that are out of operation or in areas where a vessel may not be able to get to a stationary pumpout. In addition to the stationary pumpouts, there are a number of mobile pumpout boats for recreational vessels as well as pumper trucks available to get to most docks.

There are currently eight pumpouts for recreational vessels in the San Juan Islands as confirmed by Washington State Parks, and the Shaw Island pumpout is underway upon signature of the contract. There is a pumpout at Skyline Marina, Deception Pass State Park are public pumpouts in the Rosario Strait/Skagit Bay area. Ecology recognizes challenges associated with pumpouts that are out of operation or in areas where a vessel may not be able to get to a stationary pumpout. In addition to the stationary pumpouts, there are a number of mobile pumpout boats for recreational vessels as well as pumper trucks available to get to most docks.

There is a pumpout at Penrose Point State park in the Carr Inlet area and at Zittel's Marina near Oro Bay. Ecology recognizes challenges associated with pumpouts that are out of operation or in areas where a vessel may not be able to get to a stationary pumpout. In addition to the stationary pumpouts, there are a number of mobile pumpout boats for recreational vessels as well as pumper trucks available to get to most docks.

Comments on: Pumpout logistical challenges

Commenter: Lee Roussel - Comment I-2282-4

There have been reports of pump line problems at the existing Penrose Point pumpout. Pumping waste uphill from a dock to a septic system or a vault on higher ground can be challenging... Pumplines could also be a risk at other sites. During such problems, the pumpout may need to be shut down. While in urban areas a closed pumpout commonly means only a few minutes motoring to the next marina, that would not be the case in the South Sound if only the minimum required were installed. Distance and adverse currents could require hours of travel to reach a working pumpout, particularly for a sailboat with an auxiliary engine. As a practical matter, a closed pumpout can transform a no discharge zone into a must discharge zone. Biology does not stop when pumpouts close. Concerns about pumpout capacity and reliability, therefore, should be resolved before a NDZ is implemented. A no discharge zone should not be declared until pumpouts have been proven to operate reliably. To evaluate reliability, operational and closure data from Penrose Point be recorded and made publicly available, and two (2) years of actual operational and closure data from each new pumpout should be recorded and made publicly available.

Commenter: American Cruise Lines, Inc. - Comment O-23-8

There are no reasonably available pumpout options at any of American Spirit's ports of call. Specifically, the docks American Spirit calls on in Anacortes, Friday Harbor, and Port Townsend are wooden docks that will not support the weight of a pumpout truck. Barges offering pumpout services have indicated that it would take approximately 15 hours for American Spirit to discharge the needed amounts of blackwater and, for that reason, the barges are not interested in doing business with ACL. While in Seattle, American Spirit's crew already oversee provisioning for the next cruise and coordinate the disembarking and embarking passengers. Because of the nature of ACL's services and its clientele, pumpout operations would have to be conducted during non-business hours, e.g., between 10PM and 2AM. This timing would require ACL to pay a premium for those pumpout services. In addition, to accommodate and oversee the proposed discharge of blackwater, at least two additional personnel, including the captain or

mate and an additional crewmember, would have to be called out so that the operation could be conducted safely. This process would unreasonably divert crew from ensuring a safe and enjoyable cruising experience for its passengers. As a result, it is neither reasonable nor practical for American Spirit to discharge blackwater to pumpout trucks in Seattle. In fact, there simply are not reasonably available pumpout facilities in Seattle for overnight passenger cruise ships like American Spirit in commercial operation. American Constellation is expected to have a similar itinerary to American Spirit and is expected to call on the same ports and docks. American Constellation's holding tank capacity for mixed blackwater and graywater is 50,000 gallons. Because of the VGP requirements applicable to American Constellation's and the fact that both blackwater and graywater are both required to be treated and are stored together, American Constellation will need to discharge approximately 56,000 gallons of treated mixed blackwater and graywater per week. If American Constellation was forced to discharge to pumpout trucks, it is estimated it would take 38 hours to discharge the total 56,000 gallons generated in a week. Due to operational, logistical, and passenger expectation limitations, the American Constellation would have to discharge every day to keep up with blackwater and graywater production. Because pumpout trucks are not available at all of the docks American Constellation is anticipated to call on, discharging to mobile pumpout trucks is not feasible.

Commenter: Passenger Vessel Association - Comment O-28-8

Pump-out trucks cannot reasonably access the three vessels and are too limited in their receiving capacity; furthermore, the extended times that would be necessary for a fleet of trucks to offload the effluent from a "small ship" overnight cruise vessel would so disrupt the typical sailing schedule of a vessel to make it an impractical option. The same deficiencies attendant to pump-out trucks also apply to small mobile pump-out vessels or barges.

Summary Response to: Pumpout logistical challenges

Ecology recognizes challenges associated with pumpouts that are out of operation or in areas where a vessel may not be able to get to a stationary pumpout. In addition to the stationary pumpouts, there are a number of mobile pumpout boats for recreational vessels as well as pumper trucks available to get to most docks.

On February 13, 2017, the EPA issued its final affirmative determination that adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels are reasonably available for waters of the Puget Sound, allowing the State of Washington to finalize the designation. The determination occurred after reviewing Ecology's final petition and supplemental information to establish a No Discharge Zone for Puget Sound, and was based on existing pumpout availability.

As determined by the EPA, the current availability of pumpouts is sufficient. As part of the No Discharge Zone implementation strategy, Ecology and our partners will continue to assess pumpout availability, maintenance and convenience, and work to address barriers to use pumpout facilities and services.

There are a number of companies that specialize in commercial marine work and pumpout commercial vessel holding tanks as specified and verified in the Supplemental Information on Commercial Vessel Sewage Pumpout Availability document.

Comments on: Requires greater protection - Puget Sound

Commenter: Rein Attemann - Comment I-2561-4

I care about Puget Sound, as stated earlier. When I was chartering a boat for a week long sail was kind of horrified to be instructed to go ahead and empty the head into the Puget Sound that we all depend on for livelihood, our recreation, and also the animals that live there.

Commenter: Kathleen Hiatt - Comment I-2553-1

Just very happy to see that we're moving forward to create a no discharge zone in the Puget Sound. I believe that it's very urgent for us to move forward with this and that Puget Sound needs all the protection we can give it in all ways possible. The pressures are only increasing from increased population. And we are paying, as individual citizens, incredible costs to improve the sewage system. And it seems that the boating community needs to be a part of this improved attention.

Commenter: Jerry Joyce - Comment I-2552-2

One of the old saws about Puget Sound that is dying from a thousand cuts, but one of the deepest cuts is from dumping sewage, ground up or not, into Puget Sound. We need and can stop this.

Commenter: Alki Kayak Tours - Comment O-13-3

This simple and common sense approach will better protect public health and the marine ecosystem on which our services and employees depend. Puget Sound is a national treasure should join 90 other iconic waterways across the United States as a No Discharge Zone.

Commenter: Citizens for a Healthy Bay - Comment O-18-3

CHB firmly believes that a No Discharge Zone (NDZ) is a critical step to protect the health of our waters and community. Commencement Bay and the Puget Sound ecosystem is remarkably delicate and deserves to be protected from vessel sewage.

Commenter: Friends of the Earth Commenter - Comment O-33-5

No boat operator, whether personal or commercial, has any right to use our oceans as an open sewer for waste products as a cost-saving and convenience measure. All who partake of this fragile marine space must respect the extremely limited capacity of Puget Sound to absorb organic waste, and the need for utmost personal responsibility among such a numerous populate of boaters in this small space. Such a modest imposition of 'packing out what you pack in,' as said in a terrestrial context, is eminently reasonable in exchange for the great privilege of using Puget Sound.

Commenter: Friends of the Earth Commenter - Comment O-34-2

I am a sailor as well as a scuba diver. As stated below, boaters do not discharge black water into coastal waters, and commercial vessels shouldn't either. These waters are the home to many diverse species, and they need pure water as surely as we need clean air.

Take a look at this You Tube video of the marine life in the Puget Sound.
<https://images.duckduckgo.com/iu/?u=https%3A%2F%2Fi1.yimg.com%2Fvi%2FWvi11-labKI%2Fmqdefault.jpg&f=1> This is our responsibility as stewards of the waters where we live.

Commenter: Friends of the Earth Commenter - Comment O-31-13

Puget sound is exceptionally sensitive because the "hold-up time" for parcels of water to be flushed out is particularly long, thus allowing for an additive effect of the amount of effluence being put into the Sound. (see <https://www.pmel.noaa.gov/pubs/PDF/cann593/cann593.pdf>)

Commenter: Futurewise - Comment O-17-4

Pursuant to Clean Water Act Section 312(f)(3), Ecology has determined that the protection and enhancement of the quality of the waters of Puget Sound requires greater environmental protection. We support establishing a No Discharge Zone because of the critical protection it will provide to the water quality of Puget Sound and Lake Washington. This use of a protection tool is common across the United States and, to date, Region 10 of EPA is the only region in the nation that has not designated any No Discharge Zones. While there are many sources of pollution to our waters, it is important to address all of them overtime, including pollution from marine vessels, as we move forward towards recovery of the health of the Puget Sound ecosystem. For that reason, the establishment of a No Discharge Zone has been identified as a key strategy in the Puget Sound Partnership's Action Agenda.

Commenter: Kitsap County Board of Commissioners - Comment O-39-4

The waters of Puget Sound are central to our Kitsap culture. This is not some abstract historical notion; it is our reality today. Kitsap County was settled by water, its development patterns are determined by water, and its substantial role in Naval operations is driven by water. Thousands of Kitsap residents commute across Puget Sound water daily; in 2016, State ferry trips from Kitsap County ports alone exceeded 7.8 million trips. Kitsap County residents consume Puget Sound finfish and shellfish, rely on Puget Sound for jobs, swim in its waters, and enjoy its marine shorelines.

That is why establishment of a No Discharge Zone is important to Kitsap County. We have substantial ongoing investments to maintain clean water, clean-up legacy pollution, manage discharge of pollutants, improve community and on-site wastewater systems, and manage shoreline impacts. We have worked as a community to clean and re-open shellfish areas closed due to wastewater pollution. Prohibiting the disposal of untreated waste in Puget Sound waters is a logical next step to protect the health, safety, and welfare of our residents.

Commenter: Puget Soundkeeper Alliance - Comment O-42-4

This step was highlighted in the Puget Sound Partnership action agenda for shellfish protection, and it's definitely needed.

Commenter: Seattle Aquarium - Comment O-26-3

We have supported the efforts for years advocating for clean water, and progress has been made, informed by improved scientific understanding and efforts by government, industry, and private citizens. That said, we appreciate and support ecology's recognition that Puget Sound's water quality requires greater environmental protection.

Commenter: Sierra Club Commenter - Comment O-30-4

No body of water can continually absorb pollutants and forever support aquatic life. It is cheaper to keep a body of water clean than to try to mitigate decades of damage.

Commenter: Sierra Club Commenter - Comment O-30-14

What we are discharging into the Sound is changing the marine ecosystem in ways we could never have conceived---and not in a good way. We need to aim for zero discharge and runoff.

Commenter: Sierra Club Commenter - Comment O-30-20

As waters get warmer and dead zones are getting larger, we need to do everything we can to help the sound be as clean as possible.

Commenter: Sierra Club Commenter - Comment O-30-44

As a very enclosed ecosystem, it is exceedingly susceptible to the effects of sewage dumping.

Commenter: Washington Dept. of Natural Resources - Comment A-2-4

DNR is the steward of more than 2.6 million acres of state-owned aquatic lands and responsible for ensuring its protection. The proposed NDZ will contribute to the public health and safety of the state's marine waters and Puget Sound recovery and support Washington's Shellfish Initiative. The public waters and sensitive resources of the state should not be the treatment solution for vessel-generated sewage, both treated and untreated. Public, private, and non-profit agencies are spending enormous resources to clean up Puget Sound. Declaring a NDZ is an important action that shows the state of Washington is taking serious action toward restoring the Puget Sound and preventing risks to public health.

Summary Response to: Requires greater protection - Puget Sound

Ecology concurs that Puget Sound requires greater protection. It is important to protect the Puget Sound for existing and future generations. Ecology agrees with the commenters that the Puget Sound is threatened by a number of sources of pollution and that along with the work being done to address sources such as stormwater and industrial pollution, vessel sewage should also be addressed.

Comments on: Retrofit requirement not allowed

Commenter: United States Coast Guard - Comment A-4-5

The text of the proposed regulation presents four additional areas of concern... (2) the requirements for all vessels to be refitted with a specific type of marine sanitation device... Second, the proposed regulation in WAC 173-228-040(1) violates the plain language of the Clean Water Act.

The proposed regulation requires vessels that currently have a Type I or Type II Marine Sanitation Device (MSD) to install a Type III MSD. Section 312(f)(1) of the Clean Water Act expressly preempts state regulation of the installation of MSDs, other than more stringent statutes or regulations for houseboats, by indicating that "no State or political subdivision thereof shall adopt or enforce any statute or regulation of such State or political subdivision with respect to the design, manufacture, or installation or use of any marine sanitation device on any vessel subject to the provisions of this section (emphasis on "installation" added). The state's proposed requirement for vessels currently using approved Type I and Type II MSDs to retrofit or install a Type III MSD is a regulation regarding the installation of a MSD in contravention of the statute. While the state may prohibit discharge from Type I and II MSDs in a no discharge zone, the statute is clear that the state may not regulate in the realm of construction and installation of MSDs.

Summary Response to: Retrofit requirement not allowed

Ecology concurs with the commenter that the language should be consistent with Clean Water Act and CFR, which was the original intention. The rule language has been clarified by amending it as suggested.

Comments on: Rule Unconstitutional

Commenter: Boyer Towing, Inc.- Comment OTH-1-5

How many millions of dollars have you allotted for compensation for what will amount to a "taking" contained in the of the 5th Amendment clause to the U.S. Constitution, which requires that the government agency taking property must compensate the owner, because individuals and companies are put out of business as it is impossible for them to comply? Has the Washington State Legislature been made aware of this potential expenditure?

Summary Response to: Rule Unconstitutional

Ecology disagrees that the No Discharge Zone amounts to a "taking" as referenced in the 5th Amendment to the U.S. Constitution. No property is being taken for public use. Designating a no discharge zone has occurred in 90 areas in the United States and is allowable under the Clean Water Act.

Comments on: Science not shown/proven

Commenter: American Cruise Lines, Inc. - Comment O-23-14

Notably, municipal, land-based wastewater treatment plants in Washington are permitted to and do discharge wastewater into Puget Sound. ⁷ Ecology has provided no reasoned basis why it is permissible for land-based wastewater plants to discharge effluent into Puget Sound while it is impermissible for all commercial vessels, even small cruise ships, to discharge effluent treated to substantially similar standards into Puget Sound.

This failure is especially noteworthy when Ecology also has failed to demonstrate the reasonable availability of pumpout facilities for all of the affected vessels. In fact, the opposite conclusion was reached after a multi-agency study led by King County Wastewater Treatment Division, which found: "There is no identified benefit of channeling wastewater from cruise ships to the regional conveyance and treatment system."⁸

⁷ For Context, the West Point sewage treatment plant outside of Seattle discharges 90 million gallons of treated wastewater per day into Puget Sound.

⁸ King County Department of Natural Resources and Parks, Wastewater Treatment Division, Cruise Ship Wastewater Management Report, August 2007, 1.1 Summary of Findings and Conclusions 1.

Commenter: Boyer Towing, Inc. - Comment OTH-1-8

While Ecology has had several Public Meetings and knows how many recreational vessels and commercial vessels are on Puget Sound, it has not presented a proper scientific foundation. Where is the scientific study showing that you tracked the raw sewage pumped directly into the Straits of Juan de Fuca at Victoria, B.C. to see how much reaches Puget Sound as the waters mix and mingle? How can you stop that? Where is the scientific study showing that you tracked the Fraser River Spring Runoff into the Straits of Georgia to see how that affects Puget Sound Waters? Where is the scientific study showing that treated sewage is the cause of the problem when in fact in 2016 the U.S. EPA put out information of the total Salish Sea, of which Puget Sound is a part, that it is unknown if man is the cause of the Problem? Where is the scientific study showing that all of the sewage treatment plants will no longer be allowed to release treated sewage into Puget Sound? What will these plants do with the treated sewage? Where is the scientific study showing what effect this will have on interstate shipping? How can you justify the extreme burden this will place on interstate commerce, which is prohibited by several U. S. Supreme Court cases? Where is the scientific study showing the effect this will have on international shipping? How many millions of dollars have you allotted for compensation for what will amount to a "taking" contained in the of the 5th Amendment clause to the U.S. Constitution, which requires that the government agency taking property must compensate the owner, because individuals and companies are put out of business as it is impossible for them to comply? Has the Washington State Legislature been made aware of this potential expenditure? Lacking all of these scientific facts, this proposal has no scientific basis. It may make Ecology "feel good" when there is no proof that a No Drop Zone will do anything other than ruin interstate commerce, affect international traffic and inconvenience owners of boats. This is an exercise in futility and should be cancelled.

Commenter: Foss Maritime Company - Comment O-12-6

Foss complies and, in many cases, exceeds environmental regulations and is very supportive of effective protocols based on rigorous scientific data. In the case of the proposed Puget Sound NDZ, we feel Ecology has not built the proposed solution on the foundation of basic sound science. According to the analysis of Anchor QEA, the input modeling scenarios used to demonstrate the impact of vessel sewage in Puget Sound used hourly discharges from a single vessel assumed to contain over two billion persons discharging raw sewage which is manifestly absurd. The absence of credible data to support the conclusion that the regulation would achieve measurable benefits to Puget Sound water quality leads to the conclusion that the proposed NDZ is a solution in search of a problem.

Commenter: Holland America Line - Comment O-41-2

So my comments relate to Washington State proposes to create the largest no discharge zone in the United States by promulgating a regulation that has no scientific basis and provides no measurable environmental benefit. And it poses substantial and unnecessary costs.

There is no scientific evidence to justify why treated sewage, or permeate, cannot be released in Washington waters.

Commenter: The American Waterways Operators - Comment O-24-5

Ecology has not demonstrated that the proposed rule making will provide any benefit or water quality improvement in Puget Sound; There is no empirical evidence to suggest that use of these federally approved on-board sewage treatment systems has caused any water quality impairment in Puget Sound. Ecology cannot justify this rule making based on any scientific or technical basis. Ecology's petition to EPA does not even allege that treated sewage from vessels is a problem in Puget Sound: Even though vessel sewage discharges may account for only a small portion of the total pollutant load entering Puget Sound, their impacts may be disproportionately large. Because vessels are mobile, their discharges may occur directly over sensitive environmental resources, causing localized water quality problems. An analysis of the contribution of treated sewage from vessels using Type II MSDs to the total pollutant load entering Puget Sound suggests that even given an extraordinary amount of on water activity of the affected vessel population, their total contributed pollutant load would be 0.006% of the total regional contribution.² Ecology has not produced any evidence to suggest that this tiny percentage of treated effluent from vessels has had any impact on water quality whatsoever, let alone impacts which are "disproportionally large." Furthermore, there is no evidence whatsoever to suggest that the activity being regulated by this rule making has ever caused water quality problems of any kind in Puget Sound.

¹ We note that we generally use "MSDs" to refer to Type II MSDs, not to Type I MSDx, which are not employed by towing vessels, or Type III MSDs, which are holding tanks.

² Anchor QEA Letter to Heather Bartlett, Washington Dept. of Ecology, pp. 2-3 (August 11, 2016)

Summary Response to: Science not shown/proven

The *Final Petition to Designate the Waters of Puget Sound as a No Discharge Zone (Ecology July 2016)* provides information on why Ecology is addressing vessel sewage discharge and the risks associated with vessels and the potential to discharge over or near sensitive resources. This is in addition to continued work being done to address all sources of pollution.

The report, *Tracer simulations to investigate how waters move in Puget Sound and the Salish Sea to address questions related to the draft proposed No Discharge Zone petition, (Ecology 2016)* was conducted by Ecology's Environmental Assessment Program. Ecology used an existing model of water circulation throughout Puget Sound to simulate hypothetical vessel discharges with a release of a conservative tracer. The model was developed by Pacific Northwest National Laboratory (PNNL) in collaboration with Ecology, and is actively being used to address other water quality improvement efforts in Puget Sound.

The memo discusses a range of high and low bound estimates. Since our agency's mission is to protect, preserve, and enhance the environment, it is appropriate to use conservative assumptions to evaluate whether there is a potential for vessel discharge to result in bacterial pollution, especially near sensitive areas. This does not mean that every vessel discharge will have an equally negative impact. However, in light of the unique qualities and diverse resources of Puget Sound, the potential for bacterial pollution is one of the reasons for establishing the No Discharge Zone.

In addition to the Tracer Modeling, the CORMIX model was also run at one location in Puget Sound. CORMIX accounts for bacteria die-off, more localized wind speed, and smaller scale hydrodynamic processes. A suite of scenarios were run in CORMIX to represent a range of best-case to worst-case conditions under which a vessel discharge may occur. For example, five different effluent concentrations were used, in combination with uniform vs. stratified ambient density, and two different ambient velocities – this resulted in a total of 15 scenarios. Eight out of the 15 scenarios showed that the WQ standard would not be met at the shoreline or in Samish Bay where shellfish areas are located. This modeling demonstrated that in this particular location, vessel discharge has a chance of violating the WQ standard in more than half of the scenarios run, and provides further support towards preventing such discharges via the establishment of the NDZ.

The referenced report from King County was conducted with a focus on the potential of accepting high percentage solids (biomass or sewage sludge) and was not a comprehensive scientific analysis of the quality of effluent including all types of pollutants from the cruise ships. Subsequently, a report was issued from the EPA that assesses discharges from cruise ships (*Cruise Ship Discharge Assessment Report*, Environmental Protection Agency, 2008).

In regards to science on all of the sewage plants and what these treatment plants will do with their sewage in a no discharge zone, the No Discharge Zone is a ban on vessel sewage, not land-based sewage treatment plants. While land-based municipal wastewater treatment plants are permitted to discharge treated effluent into the Sound, these discharges can only occur under a NPDES permit. NPDES permits include limits on the magnitude and concentrations of the discharge for a multitude of parameters (including fecal coliform levels), as well as extensive monitoring and reporting requirements, and are subject to enforcement for violations.

These requirements are often based on numerical modeling and mixing zone analysis to ensure that discharges do not impair water quality.

This rule is for vessel sewage in portions of Washington State waters. Even though, in Canada, local and provincial governments are still in the process of improving Victoria area sewage treatment, vessel sewage in Puget Sound is being addressed with this rule.

The rule is a pollution prevention effort to help protect water quality and public health. Ecology considered numerous scientific studies and reports, including, but not limited to: data from the Alaska Department of Environmental Conservation small cruiseship sample reports, the *Assessment of Potential Health Impacts of Virus Discharge from Cruise Ships to Shellfish Growing Areas in Puget Sound* (Washington State Department of Health/University of Washington, November 2007), the *Cruise Ship Discharge Assessment Report*, (Environmental Protection Agency, 2008), *Tracer simulations to investigate how waters move in Puget Sound*

and the Salish Sea to address questions related to the draft proposed No Discharge Zone petition (Ecology 2016), Evaluation of Improved Type I Marine Sanitation Devices, Performance Evaluation Report (EPA 2010), and the Liberty Bay Marina Study (Kitsap Public Health, 2010).

The modeling did not involve the release of sewage equivalent to “two billion persons discharging raw sewage”. It involved releasing a pulse of 3000 gallons of vessel discharge over a period of one hour at the concentration of 2.34×10^{14} particles per liter (p/L). This concentration value was selected to overcome some of the initial instantaneous artificial dilution that occurs in the model and the basis of this is described on pg. 29 of the Tracer modeling memo.

Ecology disagrees that the No Discharge Zone amounts to a “taking” as referenced in the 5th Amendment to the U.S. Constitution. No property is being taken for public use. Designating a no discharge zone has occurred in 90 areas in the United States and is allowable under the Clean Water Act. Ecology also disagrees that the No Discharge Zone violates the Commerce Clause in the U.S. Constitution.

Comments on: Shellfish beds need upgrade

Commenter: Washington State Department of Health - Comment O-5-5

Currently, there are nearly 3,000 acres in Puget Sound closed due to potential pollution from marinas and boat moorage. The implementation of the NDZ will lead to the re-evaluation of 36 marina and boat moorage areas, upgrading the classification within portions of these areas. Evaluations will be based on updated survey information showing improved waste-holding capacity in vessels, the increase in boat waste pump-out stations, and the implementation of the NDZ. Each of these factors results in improved water quality and a lowered risk to shellfish consumers. Preliminary modeling shows we may be able to remove harvest restrictions on just over 1,000 acres, approximately one-third of the currently closed area. Further water quality and shoreline pollution source analysis will be completed in these areas to determine the total acres that will be open for harvest.

Summary Response to: Shellfish beds need upgrade

Ecology agrees that there is the potential for approximately 1,000 acres of shellfish beds to have harvesting restrictions removed, and the rule will provide water quality and public health protection.

Comments on: Small amounts pollution no harm

Commenter: Rufus W. Clark Clark - Comment I-3-1

Gosh, what about the marine life discharging their waste into our beautiful Puget Sound. The boaters are a drop in the bucket compared to all the seals fish birds etc.

You people should find real productive work that actually produces something for society rather than use public monies to live on and tell productive people how to live. Just something to think about: I gave up boating and fishing because of all the rules that you regulators put on the rest of us.

Commenter: Charles Draper - Comment I-2110-4

Further , it has also been proven that the treated sewage from treatment plants released into the sound creates a larger fish habitat then existed prior to the treated sewage distribution.

Commenter: Jerry Hillis - Comment I-2249-2

I strongly oppose the proposed no discharge zone. First I don't believe it will show a measurable improvement in water quality in the Salish Sea. I have a boat at Shilshole Marina and watched the West Point sewage disaster with alarm. Millions of gallons of sewage were discharged in one location over months, probably as much as all the boaters in the Sound do all year. Yet how many clam and/or oyster beds were closed or are now closed because of it? The impact boaters have is minimal.

Commenter: Paul Pickett - Comment I-662-4

Also, the main problem here I assume is fecal matter. Do you really intend to make criminals of fisherman pissing from their boats? Urine is sterile and when mixed in the Sound would have not appreciable impact.

Commenter: Elizabeth Ray - Comment I-8-3

The contribution of recreational boaters sewage to our vast water ways is minuscule. Your claim that eliminating boaters release of sewage will help protect shellfish beds and swimming beaches is a far reach.

Commenter: Passenger Vessel Association - Comment O-28-9

Washington Department of Ecology can preserve the continued Puget Sound operations of the three existing "small ship" overnight cruise vessels by altering the proposed rule to permanently "grandfather" the vessels from the enforcement of the NDZ. The vessels' relatively small amounts of discharges of treated effluent (lawful under the federal Clean Water Act) will pose no environmental harm to Puget Sound waters. PVA urges the Department of Ecology to reconsider this limited aspect of the proposed rule.

Summary Response to: Small amounts pollution no harm

The *Final Petition to Designate the Waters of Puget Sound as a No Discharge Zone (Ecology July 2016)* provides information on why Ecology is addressing vessel sewage discharge and the risks associated with vessels and the potential to discharge over or near sensitive resources. This is in addition to continued work being done to address all sources of pollution.

The report, *Tracer simulations to investigate how waters move in Puget Sound and the Salish Sea to address questions related to the draft proposed No Discharge Zone petition, (Ecology 2016)* was conducted by the Ecology's Environmental Assessment Program.

Ecology used an existing model of water circulation throughout Puget Sound to simulate hypothetical vessel discharges with a release of a conservative tracer. The model was developed by Pacific Northwest National Laboratory (PNNL) in collaboration with Ecology, and is actively being used to address other water quality improvement efforts in Puget Sound. The results of this tracer modeling analysis showed that there is potential for a vessel discharge, either raw or treated with MSD Type II, to reach sensitive resources, such as shellfish and swimming beaches and violate the State's water quality standard for fecal coliform bacteria.

The rule is a pollution prevention effort to help protect water quality and public health. While vessels may not be the largest source of pollution to the Sound, they are a mobile source, which makes their potential impact variable and their effluent challenging to manage Sound-wide. We are confident that eliminating this source of pollution and its potential to impact sensitive areas will benefit the Puget Sound ecosystem. Ecology considered numerous scientific studies and reports, including, but not limited to: data from the Alaska Department of Environmental Conservation small cruiseship sample reports, the *Assessment of Potential Health Impacts of Virus Discharge from Cruise Ships to Shellfish Growing Areas in Puget Sound* (Washington State Department of Health/University of Washington, November 2007), the *Cruise Ship Discharge Assessment Report*, (Environmental Protection Agency, 2008), *Tracer simulations to investigate how waters move in Puget Sound and the Salish Sea to address questions related to the draft proposed No Discharge Zone petition* (Ecology 2016), *Evaluation of Improved Type I Marine Sanitation Devices, Performance Evaluation Report* (EPA 2010), and the *Liberty Bay Marina Study* (Kitsap Public Health, 2010).

While natural sources of bacteria do exist from wildlife, these are considered background sources. Our goal is to limit additional human contributions to waste, including pathogens, and limit human impact in Puget Sound, which is an already stressed ecosystem.

While land-based municipal wastewater treatment plants are permitted to discharge treated effluent into the Sound, these discharges can only occur under a NPDES permit. NPDES permits include limits on the magnitude and concentrations of the discharge for a multitude of parameters (including fecal coliform levels), as well as extensive monitoring and reporting requirements, and are subject to enforcement for violations. These requirements are often based on numerical modeling and mixing zone analysis to ensure that discharges do not impair water quality.

Urine is, in fact, not sterile. It does have low levels of bacteria. Urine can still have other pollutants such as ammonia/urea and pharmaceuticals.

European Urology Volume 68. 2016. "Sterile Urine" and the Presence of Bacteria." Accessed March 2018 via [http://www.europeanurology.com/article/S0302-2838\(15\)00206-7/pdf](http://www.europeanurology.com/article/S0302-2838(15)00206-7/pdf) ; NCBI US National Library of Medicine National Institutes of Health. 2015. "The Characterization of Feces and Urine. A Review of the Literature to Inform Advanced Treatment Technology." Accessed March 2018 via <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4500995/>

Comments on: Stakeholder work for consistency

Commenter: Hans Mak - Comment I-13-2

I would prefer a public education outreach for regular folks. I didn't see this at Mason County's "Oyster fest" this past weekend.

Commenter: Pacific Coast Shellfish Growers Association - Comment O-11-6

We also want to see a broad scale education program to ensure that all who use marine waters and tributaries understand how their actions can result in devastating consequences. As small business owners, our members do not want to see an unfair impact to any business and would like to see an economic responsible path forward. This may include allowing vessel owners to phase improvements over a set period of time. And we believe that the proposed rule addresses these concerns.

Commenter: Seattle Aquarium - Comment O-26-5

During the current rulemaking phase, we urge Ecology to meet with maritime representatives to assure that standards will be measurable and applied evenly and consistently.

Commenter: Taylor Shellfish Farms - Comment O-8-6

Many of the smaller recreational vessels frequenting our shellfish growing areas may not have any toilet facilities. We are hopeful, the extensive public education that will accompany the NDZ designation will help inform owners of these smaller vessels of the harm that comes from overboard discharge of sewage.

Commenter: WA State Board of Health - Comment A-3-4

As you move forward, we encourage you to continue working with your project partners and other stakeholders to advance education of boaters and vessel operators and investment in the region's sewage pumpout infrastructure to promote safe and legal sewage disposal and compliance with the new rules.

Summary Response to: Stakeholder work for consistency

Ecology and the NDZ Education and Outreach Committee partners are preparing for initial education and outreach efforts to begin with the final adoption of the rule. These efforts will adjust and expand over time as implementation evolves and effectiveness is assessed. Ecology's work with the NDZ Education and Outreach Committee includes coordinating and developing key messages and educational tools with partner organizations, along with strategies for reaching out to boaters and vessel operators in a number of different ways. Ecology's work with the NDZ Enforcement Committee includes work to develop and implement enforcement strategies.

In addition to the Rule Implementation Plan, the *No Discharge Zone Implementation Strategy, A Framework for Action* (Framework for Action) document, provides more detail as a living document to be updated and expanded as implementation progresses.

Ecology conducted extensive stakeholder outreach beginning in 2012 and the implementation plans continue this work. Communicating why the No Discharge Zone and pumping out vessel sewage is important is a part of the implementation and outreach plans.

The NDZ Enforcement Committee has already begun coordination work with enforcement authorities including the USCG.

Comments on: Study pumpout infrastructure

Commenter: Elsie Hulsizer - Comment I-1819-6

Evaluation should include surveying boaters on their opinion of the adequacy of pumpouts, their maintenance and their location. If there is an increase in boats both having and using holding tanks, competition for pumpout use will add more wear and tear on the equipment, potentially leading to less availability.

Commenter: Alliance for a Healthy South Sound - Comment O-21-6

We suggest that implementation should include an ongoing effort to verify the continued availability of the pump out facilities relied upon in the rulemaking effort, to identify gaps in service areas, and to support construction and maintenance of additional facilities focusing on areas of impact that require alternative pump-out solutions. These could include: floating pump-out station, seasonal mobile pump-out services, floating toilets, and composting toilets on shore.

Commenter: Citizens for a Healthy Bay - Comment O-18-10

Lastly, CHB recommends that Ecology perform a study to determine where new pumpout infrastructure and capacity is needed the most to prioritize grant funding.

Commenter: Cherry Point Aquatic Reserve Citizens Stewardship Committee - Comment O-22-4

We also note that you have attempted to ensure the practicality of the rule by providing for adequate pump-out stations across the Salish Sea. We encourage you to continue to promote and expand that network. The easier it is to comply, the more people will do it.

Summary Response to: Study pumpout infrastructure

Ecology's work with the NDZ Education and Outreach Committee includes coordinating and developing key messages and educational tools with partner organizations, along with strategies for reaching out to boaters and vessel operators in a number of different ways. In addition to the Rule Implementation Plan, the *No Discharge Zone Implementation Strategy, A Framework for Action* (Framework for Action) document, provides more detail as a living document to be updated and expanded as implementation progresses. Implementation plans include stakeholder input such as boater survey input.

As determined by the EPA, the current availability of pumpouts is sufficient, however, Ecology continues to assess the pumpout availability along with our partners and it is part of the implementation strategy to continue to improve pumpout availability and convenience.

Comments on: Study treated sewage

Commenter: Seattle Aquarium - Comment O-26-6

In addition, an analysis should be made of whether vessels could meet the NDZ standards by use of treated discharges.

Summary Response to: Study treated sewage

33 U.S.C. §1322 (f)(3) authorizes the State to prohibit the discharge from all vessels of any sewage in some or all of the waters within such State. Ecology may prohibit the discharge, but it must be for all vessels, whether the sewage is treated or not. In order to best protect water quality and public health, the rule is established to apply to all vessels. 33 U.S.C. § 1322(f)(3) does not allow for certain treatment technologies to be exempted as it applies to all vessels.

Comments on: Supports proposed rule

Commenter: Carrie Anderson - Comment I-177-1

Thank you for your thorough and careful evaluation of the need to designate Puget Sound as a No Discharge Zone. Puget Sound should join 90 other iconic waterways across the United States as a No Discharge Zone. We appreciate your hard work. Please establish the Puget Sound No Discharge Zone.

Commenter: Heidi Antrim - Comment I-1392-1

My family has personally owned boats my entire life and we use them regularly. And my whole life I've watched as we expell waste into the water. Ever since I was young I've found it absolutely disgusting, completely disrespectful, and a horrible mistreatment of the beautiful waters we are priviliged enough to have access to.

I thoroughly believe it is our duty to preserve these waters. Not only for our current and future use, but for the health of our environment and the other species that live there. This is not something we can just push out of our minds. This is something that needs to be resolved and put an end to immediately.

I seriously implore that the Puget Sound be declared a No Discharge Zone as soon as possible. I have grown up loving the waters around Washington but I now refuse to step a foot in them because of the contaminants I see dumped into them on a daily basis. Please, for us and the future, make the Puget Sound a No Discharge Zone!

Commenter: Rein Attemann - Comment I-2551-2

We have tens of thousands of supporters throughout the state and many here in the Salish Sea. We have a priority focus of addressing the most urgent threats to Puget Sound; including reducing water pollution, protecting and securing habitat, and preventing devastating oil spills. We fully support the Puget Sound no discharge zone So finally, over 90 no discharge zones have been established in 26 states around the country, and it's high time that the Puget Sound is added to that long list.

Commenter: Stephen Bailey - Comment I-2454-2

We have fenced off many thousands of miles of creeks to keep the cows from shitting in our waters WE HUMANS KNOW BETTER THAN TO BE DUMPING SHIT INTO OUR WATERSPLEASEMAKE THIS OFFICIAL LAW!

Commenter: Michael Blome - Comment I-1230-1

I am writing support of the Department of Ecology's determination and proposal to establish the Puget Sound No Discharge Zone. This is a common-sense proposal and long-overdue. As population pressures increase all citizens must be held accountable to minimize their impact on the environment as much as possible.

Commenter: Coleman Byrnes - Comment I-4-1

Puget Sound is suffering from excessive human abuses. A Vessel Sewage No Discharge Zone would be an excellent way to help reverse the decline of Puget Sound. Please implement this rule and please keep me informed about this issue. Thank you. Coleman Byrnes.

Commenter: Susan Crampton - Comment I-2157-1

As a retired MD and someone who has visited friends who live on Puget Sound waters, I strongly support the DOE designation of Puget Sound as a No Discharge Zone. Thank you for your attention to protect public health and clean water.

Commenter: Greg Eide - Comment I-20-1

I support the rule to restrict the discharge of wastewater into Puget Sound. This should have been passed a long time ago. The shellfish industry is already suffering from ocean acidification which is beyond the state's control, and anything we can do to support it should be done. I am an avid recreational shellfisher which is why I personally support the proposed rule.

Commenter: Maureen Faccia - Comment I-5-2

I am unable to attend public forum dates but want to express my support for passing a No Discharge Zone for sewage for vessels.

Commenter: Kate Floumer - Comment I-2558-1

Thank you. I am just weighing in to say I approve and support Ecology's work on creating a No Discharge Zone. I think it's critically important to the recovery of Puget Sound. Obviously, my dog agrees. Thank you for letting us weigh in. I won't keep on here with the dog making such a racket.

Commenter: Joanne Frank - Comment I-1465-1

Thank you for your thorough and careful evaluation of the need to designate Puget Sound as a No Discharge Zone.

Puget Sound should join 90 other iconic waterways across the United States as a No Discharge Zone.

To date, our region is the only one in the nation that has not designated No Discharge Zones for any waters.

Human waste does not belong in the Puget Sound. I fully support Department of Ecology's determination and proposal to establish the Puget Sound No Discharge Zone.

Commenter: James Hampton - Comment I-22-1

I am in support of this change. It is good for the environment and Washington state industries.

Commenter: Mark Harris - Comment I-1955-3

It's odd that the Pacific Northwest is the only U.S. region that has not designated "No Discharge Zones" for its waters. Puget Sound should have this type of protection. Designating Puget Sound as a "No Discharge Zone" will protect public health. It will also keep Puget Sound's waters clean, protect its sensitive marine waters and important shellfish harvesting areas. Please support the establishment of a Puget Sound No Discharge Zone.

Commenter: Jessica Heaton - Comment I-23-1

I support restricting the discharge of sewage into the Puget Sound. We must be good stewards of our natural resources, in order to protect them for future generations.

Commenter: Nancy Johnson - Comment I-6-1

Strongly support this rule

Commenter: Laura Lanti - Comment I-670-1

We are residents of the Puget Sound area since 1970. Over these years our awareness of the damage to the saltwater ecosystem by untreated sewage has increased (along with an incremental increase in such pollution itself related to population growth and even the corresponding growth in numbers of pets. With all the incidental and accidental runoff into this basin, it is certainly reasonable now to curtail the sea-going source of sewage pollution as the Department of Ecology is proposing to do in its proposed ruling (ch 173-228 WAC vessel sewage no-discharge). This beautiful, life-giving resource deserves strong protection. We are grateful for your thoughtful, well-planned proposal and request that the enforcement be sufficient to make measurable improvements in water quality, decreased number of annual algae blooms, etc. Kindly reply to us by mail at the address above when replies are issued. We thank you for your vigilance on behalf of the quality of life we humans enjoy here and on behalf of the mute underwater beings whose very lives hang in the balance.

Commenter: Alisha Leviten - Comment I-2028-2

why we have zero no discharge zones in our region at all is confusing, and we should start with the puget sound and work from there.

Commenter: Joyce Lewis - Comment I-184-1

OUR region is the ONLY ONE that allows this?!
Do your job & fix this!

Commenter: Benjamin Majsterek - Comment I-24-1

I am in support of banning the dumping of sewage into any of our marine waterways (or freshwater). The current dumping probably has a negative effect on the salmon (in one way or another), and if we want wild salmon for generations to come (as I do), I believe we need to start acting now. The state should do everything it can to ensure that only the highest level of treated waters/waste enter into our freshwater and marine water ways. Thank you for reading my comment.

Commenter: Donna Mason - Comment I-7-1

I fully support having a no-discharge area in the Salish Sea, including Canada as well as the U.S.

Commenter: Jon Martin McCallum - Comment I-666-1

I support the new rule to establish a Puget Sound No Discharge Zone. Thank you.

Commenter: David McCaughey - Comment I-2556-1

I'm a resident of Bainbridge Island. I'm a past board member of People for Puget Sound and a current board member of the Washington Environmental Council. I'm also a past commodore of the Eagle Harbor Yacht Club. And I do, as the others have said, I feel that this is very important, if nothing else, increase awareness for new people to the community, both commercial and recreational boaters. In a previous life I was also a pharmacologist, so I also know the human and health impacts that potentially come with this, both marine and human. So, I'm very happy to see this coming through, and the campaign I think will do a lot to educate all of the residents of Puget Sound. Thank you very much.

Commenter: Kate McLaughlin - Comment I-311-1

Puget Sound should join 90 other iconic waterways across the United States as a No Discharge Zone.

I fully support Department of Ecology's determination and proposal to establish the Puget Sound No Discharge Zone.

Again, thank you for your hard work. Please establish the Puget Sound No Discharge Zone.

Commenter: arvia morris - Comment I-1804-2

Please support the no discharge zone. Puget Sound supports so much important wild life and human activities and we need to do all we can to keep the water clean. Human sewage and partially treated sewage in the amounts that boaters contribute is not a natural part of this ecosystem and can be removed with the no discharge zone designation

Commenter: Judy Murphy - Comment I-1406-2

The No Discharge Zone for Puget Sound is a no-brainer. Unwillingness to take time and effort to keep our waters clean is no excuse! I have a relative who once had a live-aboard sailboat moored in Bellingham, and he would motor out to deeper water to dump his black water just because it was easier to do so.

Commenter: Elric Paauw - Comment I-1608-1

I am a Puget Sound boater, and honestly I thought this was already in place! We need to put this on the books to ensure that everyone complies. Let's protect these sacred waters!

Commenter: Jill Patenaude - Comment I-2557-2

I just want to say I'm in full support of the No Waste Zone, I think that this is long overdue for our region, and I think we should be leaders in this. We have a beautiful, pristine region here, and we need to be protecting it.

So I just want to say thank you for this. I also want to say that I am excited for the outcome that you're going to be measuring. And I hope there are some short term measures in place as well as the long-term measures. I would love to open up new shellfish harvesting. We've been having a tough time with the closures lately.

Commenter: Paul Pickett - Comment I-662-2

I support this rule. I own a 20' sailboat with a portable toilet and I have no problem complying with the rule.

Commenter: Richard Porter - Comment I-12-2

I am very much in favor of a no-discharge zone as shown on your map. I live overlooking Fairhaven Harbor in South Bellingham, Whatcom County. As well as serving Alaska ferries, the Coast Guard and several local marine businesses, this harbor is also used for several individual pleasure activities. There are kayakers and standup paddleboards, swimmers and divers off Taylor Dock, and as anchorage for 8-24 (depending on season) private boats.

The problem for me are the private boats anchored in the harbor. Usually several of these have full time liveaboard residents. I also know that some of these boats almost never leave their anchorage so I think they must be discharging all their sewage into the local water. That's bad for all of us, particularly the swimmers. Eliminating sewage discharge here would be a great thing.

Commenter: Christian Richards - Comment I-167-1

We strongly support the proposed rule prohibiting the discharge of sewage from all vessels in Puget Sound waters because it will improve the health of the Sound and all the animals that live there.

Commenter: Mathew Roper - Comment I-15-1

I absolutely agree with the proposal to setup a no discharge zone in the Puget Sound under Chapter 173-228 WAC.

Commenter: Karen Salerno - Comment I-1595-2

When I was a kid so many years ago, you could see the bottom of Puget Sound in shallow places. The water was crystal clear. When I went out fishing as an adult, the water was like a sewer. You could not see anything under the water. There was also oil and/or gas floating on the top. What a disgrace. We need to clean up our Sound.

Commenter: Peter Smith - Comment I-25-1

This need to be fixed!

Commenter: Joanna Soren - Comment I-1063-1

I was dismayed to learn that our region is the only one in the nation that has not designated No Discharge Zones for any waters. Puget Sound needs this type of protection and should not be treated as a giant toilet. Please designate the beautiful Puget Sound as a No Discharge Zone.

Commenter: Mary Ann Swain - Comment I-14-1

I strongly support the proposal to prohibit discharge of treated and untreated sewage from boats into Puget Sound. Orcas and other sea life need clean water. Thank you for taking the time and effort to protect Puget Sound.

Commenter: Patty Teubner - Comment I-349-1

Please designate Puget Sound as a No Discharge Zone and keep our waters clean! This will not only be better for the public, but also for our environment.

Commenter: Steve Uyenishi - Comment I-466-1

Keep the Sound clean!

Commenter: Nancy Vandenberg - Comment I-581-1

I appreciate your thorough evaluation of the need to designate Puget Sound as a No Discharge Zone. Puget Sound should join 90 other iconic waterways across the United States as a No Discharge Zone.

Puget Sound, a national treasure, needs this type of protection. I fully support Department of Ecology's determination and proposal to establish the Puget Sound No Discharge Zone.

Again, thank you for your hard work. Please establish the Puget Sound No Discharge Zone.

Commenter: Marilyn Vogler - Comment I-2333-2

I cannot believe that with all the regulations for on-shore development, with the economic loss due to closed shellfish areas, with beaches closed during summer tourist season-- I cannot believe boats are still allowed to dump raw sewage into the water!

Commenter: Frederic Webster - Comment I-75-1

Please enact designation of Puget Sound as a No Discharge Zone for raw and partially treated sewage from boats and ships. Our Puget Sound should not be treated as a giant toilet!

Commenter: Chris Wilke - Comment I-2555-9

I think it's time the Puget Sound join the other 90 No Discharge Zones around the country. These are very positive things. It's time that Washington State have its first No Discharge Zone. It's time that EPA Region 10 had its first No Discharge Zone. So, in short, there's plenty of pump-out available already been determined.

There's a generous compliance schedule -which I do believe is the right thing to do - that will help the industries adapt. They do know that this is coming. They shared that with us. They shared that they expect a No Discharge Zone coming in the future, and the fact that some of them are fighting it so aggressively is unconscionable. This is the right thing to do for Puget Sound and we urge you to move forward with the No Discharge Zone.

Commenter: Peggy Willis - Comment I-2560-2

I'm here today to support this measure for establishing a Puget Sound No Discharge Zone, and I think it's long overdue. I'm delighted to urge you to create this No Discharge Zone for Puget Sound and the Salish Sea.

Commenter: Verner Wilson - Comment I-2565-2

As a resident of Eastlake Union, I fully support making Puget Sound, and bodies like Lake Union, a No Discharge Zone. Some of my favorite times with friends were on Lakes Union, Washington, and in Puget Sound. We love going swimming here, and so want to insure the waters are not polluted by discharges. As a [garbled audio connection*] born and raised in Alaska, whose family still lives there, the [garbled audio connection*] depends on goods shipped out of [garbled audio recording*] area, I know my family [garbled audio connection*] want the waters that help them get their goods to have the proper protections, like a No Discharge Zone. Finally, as a Native American, my Tribe, like many others, wants to help protect the land and waters as part of our cultural values. So, I support this proposed No Discharge Zone for Puget Sound. Thanks for all of your hard work on this.

*[*Note: this comment was provided by oral testimony and Ecology reached out to the commenter requesting clarification on the portions of the recorded oral testimony which were unintelligible, but did not receive a response]*

Commenter: Alliance for a Healthy South Sound - Comment O-21-2

The Alliance for Healthy South Sound is a collaboration between Thurston, Pierce, and Mason Counties, the Squaxin Island Tribe, and the Nisqually Tribe. We are writing to express our support for the concept of a no discharge zone for vessels in Puget Sound and our concerns about implementation of the proposal.

Commenter: Center for Biological Diversity - Comment O-36-3

The Center for Biological Diversity supports the Department of Ecology's new rule, the Vessel Sewage No Discharge Zone, Chapter 173-228 WAC. This rule will establish a Puget Sound No Discharge Zone, which would prohibit the release of sewage (black water) from vessels, whether treated or not. We sincerely appreciate this opportunity to weigh in to support a Puget Sound No Discharge Zone that will also protect human health, shellfish growing areas, recreational assets, and help with the overall recovery of our beloved Puget Sound. This action item "No Discharge Zone" is a priority for all stakeholders in Puget Sound and those who want a clean Puget Sound for future generations.

Commenter: Cherry Point Aquatic Reserve Citizens Stewardship Committee - Comment O-22-2

We strongly support adoption of the proposed NDZ rule.

Commenter: Citizens for a Healthy Bay - Comment O-18-2

Staff and expert members of CHB's Policy and Technical Advisory Committee have reviewed the proposed rule and related materials. CHB fully supports the implementation of a No Discharge Zone for vessel sewage in Puget Sound. Our comments are outlined below.

While CHB fully supports the designation of a Puget Sound No Discharge Zone, we will outline a few suggestions below concerning the phase-in period, enforcement and identifying key areas for new pumpouts.

Commenter: Defenders of Wildlife - Comment O-10-2

Defenders of Wildlife (Defenders) supports the Department of Ecology's new rule, Vessel Sewage No Discharge Zone, Chapter 173-228 WAC. This rule will establish a Puget Sound No Discharge Zone, which would prohibit the release of sewage (black water) from vessels, whether treated or not. Defenders is a national non-profit conservation organization with more than 1,200,000 members and supporters and is dedicated to the protection of native wild animals and plants in their natural communities. With more than 24,000 members and supporters here in Washington State, Defenders is actively engaged in numerous wildlife issues in the state, including the recovery of the critically endangered Southern Resident orca who visit the Salish Sea, which includes Puget Sound, every year during summer and fall. Over 90 No Discharge Zones have been designated across the United States. To date EPA Region 10 (the Pacific NW) is the only region in the nation that has not designated No Discharge Zones for any waters. Puget Sound, a national treasure, needs this type of protection. We fully support designating Puget Sound as a No Discharge Zone. This is one positive step the state can take toward addressing the problems of pollution and contamination that are impacting orcas, other wildlife and the health of Puget Sound.

Commenter: Elsie Hulsizer - Comment I-1819-5

I have closely followed the issue of sewage from recreational boats since the 1980s when I worked on the issue at the (now defunct) Puget Sound Water Quality Authority. At that time few boaters wanted to use holding tanks and those who wanted to had trouble finding pumpouts. Boaters' attitudes have changed significantly and it is no longer acceptable to admit you don't pumpout. Ecology's own reports for the NDZ proposal show most boaters already comply with the regulations. The only real change in the regulations is to outlaw Type I and II systems and according to Ecology's own documents, only approximately 5% of boaters have them. Given this situation, you may not see a significant increase in usage of pumpouts following the NDZ.

Commenter: Ecosystem Coordination Board - Comment O-9-2

On behalf of the Puget Sound Partnership's Ecosystem Coordination Board, I'm writing to express the Board's support for the Department of Ecology's proposed rule (Chapter 173-228 WAC) to establish a vessel sewage No Discharge Zone (NDZ) in Puget Sound. The Ecosystem Coordination Board's members include representatives of business, environmental organizations, Tribes, all levels of government, local watershed groups, and others. Although the Board's business caucus has expressed concerns about the costs of retrofitting commercial vessels to comply with a Puget Sound-wide NDZ, we note that the State plans to use a phased approach to implementation to help mitigate these effects.

Commenter: Fidalgo Bay Aquatic Reserve Citizen Stewardship Committee - Comment O-7-2

Support for No Discharge Zone We are the Fidalgo Bay Aquatic Reserve Citizen Stewardship Committee. We are one of several such committees that work, as volunteers, with the

Washington Department of Natural Resources to help promote, study, and protect the Aquatic Reserves. One of our duties is to provide comment on potential actions that could have impact on the Reserve, and this is one of those actions. We wholeheartedly support the No Discharge Zone and look forward to it enacted and then even strengthened over time. We have attended study groups and workshops and have provided previous feedback of support as this proposal has moved along. It has been a long time coming and the right thing to do.

Commenter: Friends of the Earth - Comment O-35-2

Friends of the Earth fights to protect our environment and create a healthy and just world by promoting clean energy and solutions to climate change, keeping toxic and risky technologies out of the food we eat and products we use, and protecting marine ecosystems and the people who live and work near them. Friends of the Earth's oceans campaign fights to protect our waters from the threats posed by oil spills, air and water pollution from the shipping industry, industrial ocean fish farming, and unnatural ocean noise. We are one and a half million members and activists across all 50 states working to make these visions a reality. We are part of the Friends of the Earth International federation, a network in 74 countries working for social and environmental justice. Together with Futurewise, Puget Soundkeeper Alliance, the Sierra Club, and Washington Environmental Council, our members strongly support establishing the Puget Sound No Discharge Zone. Our coalition of groups has generated over 25,000 comments in 2014 supporting Ecology's draft designation and over 40,000 comments in 2016 supporting EPA's determination. Friends of the Earth's members have generated almost 34,000 comments supporting the Puget Sound No Discharge Zone during this comment period and establishing a Puget Sound No Discharge Zone is wildly popular with our members and the general public. No Discharge Zones in other areas of the country have been widely supported and successful once approved. Other states have paved the way for No Discharge Zones. No Discharge Zones now exist along the entire California coast (for large vessels), Florida Keys coast, inland waters of Texas, Michigan, Minnesota, Missouri, numerous areas in the Great Lakes and much of the east coast, including New York, Massachusetts, Connecticut, Virginia, Rhode Island, Vermont, North Carolina, New Jersey and New Hampshire, Maine and Maryland. In many of these places, No Discharge Zone approval has been met with widespread community support as it is a source of pride for boaters and regulators alike. Overwhelming support for establishing a No Discharge Zone. Over the years, people have consistently weighed in supporting the Puget Sound No Discharge Zone. During the 2014 draft petition comment period, over 25,000 comments supported the No Discharge Zone while 250 opposed it. In December 2016, during EPA's public comment period regarding the adequacy and availability of pumpout facilities, over 40,000 comments supported the No Discharge Zone. And Friends of the Earth members have submitted nearly 34,000 comments supporting this rule. Rarely do the Department of Ecology and EPA receive this level of support. In summary, Friends of the Earth and our members and activists support establishing a No Discharge Zone for the marine waters of Washington State inward from the line between the New Dungeness Lighthouse and the Discovery Island Lighthouse to the Canadian border, and fresh waters of Lake Washington, Lake Union and connecting waters between and to Puget Sound. Now is the time to add this protection for Puget Sound.

Commenter: Friends of the Earth - Comment O-44-2

I just wanted to weigh in and say that we are extremely supportive of the designation of Puget Sound as a No Discharge Zone. We have been working on a number of the No Discharge Zone

designations around the country, including those that have been set up for National Marine Sanctuaries, in particular in California, Florida, and we hope in Washington State. And we're just really happy to see this move forward and we'll do what we can to support the designation throughout both this period and as the additional vessels that have been given an extension, or, you know, a phase in period, to make sure that they are also compliant because we believe that everyone, from recreational boaters all the way on up to the large cruise ships should be doing the most that they can to protect the Sound and Washington waters from sewage by not discharging at all.

Commenter: Friends of the Earth Commenter - Comment O-31-3

Do these ships' owners require permission to empty their toilets in your waterways or is their dumping disguised in some Republican-like double speak? This is so outrageous that it doesn't sound 'real' though I know that it is.

Commenter: Friends of the Earth Commenter - Comment O-31-7

Pollution such as is the issue at hand here, as well as many other forms of exudates from our out-of-control way of life are responsible for most of the biodegradation we have endured, and hits me very close to home because it is the major contributor to the accelerating rates of mental disorders (of which I have NO doubt.)

Commenter: Friends of the Earth Commenter - Comment O-31-8

So, making a discharge-free zone would also aid economic development, as well as public health and the health of the environment.

Commenter: Friends of the Earth Commenter - Comment O-31-11

Finally! Somebody used his brain and realized what have become the major polluter factor for our oceans! Ships! They use the immensity of the oceans as their very personal garbage can and sewer line! DO SOMETHING ABOUT THIS ABUSE THAT AFFECTS EVERYONE OF US!

Commenter: Friends of the Earth Commenter - Comment O-32-3

If you read back into a little history you will find the negative impact that dumping raw sewage from NYC had on the New Jersey shore. Folks, this is a no brainer.

Commenter: Friends of the Earth Commenter - Comment O-32-4

We are watching everyday the destruction of big business to our enviroment that hurt our health and also the welfare of our wildlife! We get so sick of the disrespect these company have for us and our planet! We live here too and they do not own this planet, we all do! There are more of us ,who do not want our planet to be destroyed for greed of the green dollar bill! If life is destroyed, what good will that paper be doing anyone good! Our poor children will be the ones to suffer for the ignorance of the few ,who put the dollar bill before life on this planet!

Commenter: Friends of the Earth Commenter - Comment O-32-5

We have been killing our life partners upon this earth without knowing the wrong, now in 2017 we know the wrongs of human bad behaviors, Now is the time to continue our change to good behaviors that will Stop the poisoning pollution on our shrinking land mass, our growing toxic

oceans that are rising and what's left of our Oxygen in the air that's supposed to be cleaner than 40 years ago when Clean Air Laws saved people from Smog. Be Smart, continue to save our only home, planet earth.

Commenter: Friends of the Earth Commenter - Comment O-32-6

There comes a point where garbage cannot be absorbed into oceans without destroying marine life; let us not get to that level but be proactive and smart!

Commenter: Friends of the Earth Commenter - Comment O-33-2

Home and property owners in the area have spent hundreds of thousands of dollars upgrading septic systems, etc... Why should ships and boats be exempt from this clean-up project? Homeowners aren't happy that ships and boats are being allowed to negate the progress they have made.

Commenter: Friends of the Earth Commenter - Comment O-33-3

Please keep in mind, that in this time of wanton, ignorant abdication of leadership and enforcement on environmental regulations. it is only regional, state and local regulations and laws that can lead to progress, and even maintenance of what we have done.

Commenter: Friends of the Earth Commenter - Comment O-33-4

This simple and common sense approach will;* protect public health, * keep our waters clean, * protect sensitive marine waters, and important shellfish harvesting areas.

Commenter: Friends of the Earth Commenter - Comment O-33-8

Do we possibly think that cruise ship companies can not afford to pay proper wastewater treatment fees for the leftovers from their trips. I expect if they had to hike the price of each ticket a few \$ to compensate for treating their sewage just like everyone else does, they will be OK as an industry.

Commenter: Friends of the Earth Commenter - Comment O-34-3

It is critical that we protect our resources to avoid the huge cost of cleanup and treatment. we need to have clear rules preventing the trashing of our resources, or we as a country will be left paying the bill to clean up the mess from which others made a profit.

Commenter: Friends of the Earth Commenter - Comment O-34-4

Marine environments are not garbage dumps -- help keep our waters clean by creating No Discharge zones.

Commenter: Friends of the Earth Commenter - Comment O-34-7

For large marine operators NOT to do this is extreme irresponsibility, and abuse of a resource they depend on.

Commenter: Friends of the Earth Commenter - Comment O-34-8

The oceans same vast but over time it millions of gallons of sewage all thrown overboard, eventually we will start seeing the dangers. Dying fish and other see creatures. Noticeable pollution in the water. No longer safe to eat fish call from the effected area.

Commenter: Friends of the Earth Commenter - Comment O-31-12

Trust erodes when agencies created for specific purposes are stimyied by bad politics, or ignore their mandate, and we discover enforcement and participation is optional. I'd imagine if an average citizen dumped a gallon of copper-based paint in the Sound, there would be hell to pay. Yet adherence to the legislation behind environmental protection, and many other of our finest institutions, is apparently a matter of choice for participation by industry.

Commenter: Futurewise - Comment O-17-2

We strongly support the establishment of a No Discharge Zone for Puget Sound and Lake Washington. Futurewise is a non-profit organization that works throughout Washington State to create livable, equitable communities, protect our working farmlands, forests, and waterways, and ensure a better quality of life for present and future generations. We work with communities to implement effective land use planning and policies and ensure healthy natural systems. We have supporters across Washington State. Since 2011, Futurewise staff, including time previously at People For Puget Sound, have been involved in work associated with the establishment of a No Discharge Zone for Puget Sound, including raising public awareness, conducting boater surveys, assistance with implementation programs, and technical reviews. We urge Ecology to, in accordance with CWA section 312(f)(3), completely prohibit the discharge from all vessels of any sewage, whether treated or not, into the designated area of Puget Sound and Lake Washington.

Commenter: Kitsap County Board of Commissioners - Comment O-39-2

We are writing in support of the Department's rulemaking proposal to establish a No Discharge Zone in the greater Puget Sound and Hood Canal region. We encourage adoption of the No Discharge Zone proposed rule as written, and we thank the Department for its action and resolve in this matter.

Commenter: Kitsap Public Health District - Comment A-1-2

The Kitsap Public Health District has reviewed the proposed new rule Chapter 173-228 WAC, Vessel Sewage No Discharge Zones and support the establishment of a Puget Sound No Discharge Zone.

Commenter: Loki Fish Company - Comment O-25-2

We support measures which will preserve, protect and restore the marine resources of Puget Sound. We supply consumers throughout Puget Sound with locally produced salmon. We do support the rule. So, yes, we support the proposed rule as far as it goes.

Commenter: Pacific Coast Shellfish Growers Association - Comment O-11-2

We applaud the state's efforts to address pollution into Puget Sound through wastewater and stormwater infrastructure, as well as through reducing direct discharges. We see controlling waste from vessels as an important component to ensuring the health of Puget Sound.

Commenter: Pacific Shellfish Institute - Comment O-1-1

The Pacific Shellfish Institute (PSI) supports the Washington Department of Ecology rulemaking for a No Discharge Zone for Puget Sound and the fresh waters of Lake Washington and Lake Union.

PSI is a 501(c)(3) non-profit research organization based in Olympia, Washington. Our mission is: "Fostering sustainable shellfish resources and a healthy marine environment through research and education." We therefore urge the proposed No Discharge Zone for Puget Sound to protect water quality and important shellfish resources in Washington State. We support the adoption of Washington Administrative Code 173-228-010 to establish no discharge zones for vessel sewage, and specifically, the Puget Sound No Discharge Zone.

Commenter: Puget Soundkeeper Alliance - Comment O-20-2

We are submitting comments from members. All are signers of a petition with the following language. There are 48 signers in total and their information is in the attached document. Puget Sound needs this designation to protect public health, sensitive habitat, and shellfish resources. I fully support Department of Ecology's determination and proposal to establish the Puget Sound No Discharge Zone.

Commenter: Puget Soundkeeper Alliance - Comment O-42-2

We've been working on this issue for some time, and we are highly supportive of the No Discharge Zone. I was personally shocked to find out that we were still using Puget Sound as a toilet. I didn't know that, that type of activity went on before I moved out here. But, we need a No Discharge Zone to protect public health, and our shellfish beds, and our other resources, and our water quality in this region. So, I guess, in short, we're highly supportive. The No Discharge Zone is definitely needed, and we can't wait to see it happen.

Commenter: Puget Soundkeeper Alliance - Comment O-16-2

Together with Friends of the Earth, Futurewise, Sierra Club, and Washington Environmental Council, Puget Soundkeeper and our members strongly support establishing the Puget Sound No Discharge Zone. Our coalition generated over 25,000 comments in 2014 supporting Ecology's draft designation, over 40,000 comments in 2016 supporting EPA's determination, and another 25,000+ comments supportive of the No Discharge Zone designation in 2017. Establishing a Puget Sound No Discharge Zone is very important for our members and the general public. Over the years, people have consistently weighed in supporting the Puget Sound No Discharge Zone. During the 2014 draft petition comment period, over 25,000 comments supported the No Discharge Zone while 250 opposed it. In December 2016, during EPA's public comment period regarding the adequacy and availability of pumpout facilities, over 40,000 comments supported the No Discharge Zone. Rarely do the Department of Ecology and EPA receive this level of support. In summary, Puget Soundkeeper and our members support establishing a No Discharge Zone for the marine waters of Washington State inward from the line between the New

Dungeness Lighthouse and the Discovery Island Lighthouse to the Canadian border, and fresh waters of Lake Washington, Lake Union and connecting waters between and to Puget Sound. Now is the time to add this protection for Puget Sound.

Commenter: Samish Indian Nation - Comment T-1-2

I am writing to you today to express the support of the Samish Indian Nation in your agency's efforts to designate the US portion Of the Salish Sea as a "No Discharge Zone".

Commenter: Seattle Aquarium - Comment O-26-4

The Seattle Aquarium supports a NDZ in Puget Sound, Lake Washington and their connecting waters. Such a NDZ will join more than 90 others in 26 states, including zones in the Great Lakes and the entire California coast. It will be the first one in Washington State.

Commenter: Seattle Audubon Society - Comment O-27-2

The Seattle Audubon Society applauds and supports the evaluation and plan of the WA State Department of Ecology to designate Puget Sound as a No Discharge Zone (NDZ). Following through with this designation is critical for the health of our marine and terrestrial wildlife, safety of our residents, and economic prosperity in our region. Seattle Audubon is Washington State's oldest environmental group. We have advocated and fought for the birds that depend on Puget Sound for decades, including support of the Puget Sound NDZ from the original proposal. Salish Sea protection remains one of our top conservation priorities due to the many threats that this waterway faces, and the unique wildlife and people that it supports. We must ensure that vessels are not dumping waste into Puget Sound through a Sound-wide NDZ. Please ensure the No Discharge Zone is implemented.

Commenter: Sierra Club- Comment O-37-9

I want to thank you for this opportunity to speak on the no discharge zone. Sierra Club is absolutely in favor of the no discharge zone. The health of the Puget Sound is in trouble, and I think that this would go a long way in addressing that issue, so we would like to see this be implemented. I also just want to say our organization will be submitting more detailed comment, so I'll just keep it short and sweet. Just last week I sent out an email letting our supporters know about this opportunity to comment, and so far we have had tremendous response in support of this no discharge zone. My hope is, of course, that they will submit their own comments, but should that not happen, I just wanted to be on record as saying that we have had thousands of people respond to this, and I want to make sure their voices in support of this no discharge zone are heard.

Commenter: Sierra Club Commenter - Comment O-30-9

This requirement should also apply to Naval vessels and commercial vessels.

Commenter: Sierra Club Commenter - Comment O-30-10

The recent news about sewage discharges into Puget Sound has been a travesty and is totally unacceptable in an ecologically aware area like this one. I strongly support a No Discharge Zone for Puget Sound and Lake Washington. Everyone needs to do their part to protect our fragile environment, and boaters are no exception. I urge you to designate Puget Sound a No Discharge Zone.

Commenter: Sierra Club Commenter - Comment O-30-11

I support this necessary action to improve the health of the Washington State Puget Sound and all the wildlife and humans that depend upon this wonderful resource.

Commenter: Sierra Club Commenter - Comment O-30-12

WHAT KIND OF POLITICAL BS PUBLIC REPRESENTATIVE IS IT THAT WOULD NOT SUPPORT SUCH UNIVERSALLY SOCIALLY BENEFICIAL EXPENDITURE AS THIS? ONLY A "TRUMP-PUPPET" 'FAKE' REPRESENTATIVE comes to mind! Don't YOU be one. Support the practical step of designating Puget Sound as a No Discharge Zone now!

Commenter: Sierra Club Commenter - Comment O-30-16

I support designating Puget Sound, Lake Washington, and the associated waters. as a No Discharge Zone now! Keep our waters free of caca!

Commenter: Sierra Club Commenter - Comment O-30-17

Allowing boats to dump sewage into our waters is disgusting!

Commenter: Sierra Club Commenter - Comment O-30-18

Not dumping sewage into our waters is so obvious we shouldn't even have to fight for it. This is a no brainer!

Commenter: Sierra Club Commenter - Comment O-30-19

This measure should have been passed years ago. It's a logical ecological no-brainer for everyone living in the greater Puget Sound area. As a resident of Washington State, friend to so many who live there, and someone who cares about clean water and the health of our ecosystem, I am writing to express support for a No Discharge Zone for Puget Sound, Lake Washington and the associated waters. Far too many people pollute it without a second thought and it is too late in the game now. We must act to quickly restore its health Support designating Puget Sound as a No Discharge Zone now, since delaying for years to come will result in a complete loss for the State of Washington at large, and all of its shoreline residents in particular.

Commenter: Sierra Club Commenter - Comment O-30-21

I have personally witnessed sewage being dumped into Commencement Bay at Point Defiance. This has occurred over many years. Our waters are not a dumping ground. Please stop it!!!!

Commenter: Sierra Club Commenter - Comment O-30-22

This is not a third world country and this is unacceptable.

Commenter: Sierra Club Commenter - Comment O-30-23

We need to address all sources of pollution to Puget Sound so that we can restore its health AND KEEP IT HEALTHY. Support the practical step of designating Puget Sound as a No Discharge Zone now!

Commenter: Sierra Club Commenter - Comment O-30-24

I am a Washington state resident, and I had no idea that people were still allowed to dump sewage - raw and treated - into the Puget Sound. that is so horrible and disgusting. I fully support a no discharge zone for Puget Sound, lake Washington and all waters here in our state.

Commenter: Sierra Club Commenter - Comment O-30-28

The fact that this behavior has been allowed all these years is a disgrace, Who has been minding the store on this disgusting practice? Overdue is a misnomer. Stop it NOW.

Commenter: Sierra Club Commenter - Comment O-30-29

This is so important to our health and the health of our marine biology!

Commenter: Sierra Club Commenter - Comment O-30-30

I live on Puget Sound and do not dump my sewage into the Sound. No one should be allowed to dump untreated sewage into the Puget Sound. This is one of the most beautiful and special bodies of water in the world. We should do everything we can do to keep it clean and healthy for natural life, for ourselves and for those who will come after us. Please do not allow waste discharge into the Puget Sound.

Commenter: Sierra Club Commenter - Comment O-30-31

This is long overdue! How could anyone be against this? It's time the 3% of boaters who don't deal with their sewage in a responsible manner, be held accountable because their refusal to be good citizens is polluting our beloved Sound. So, Yes, please make PS a No Discharge Zone!

Commenter: Sierra Club Commenter - Comment O-30-32

I live on the shores of Puget Sound, and I am tired of seeing garbage/sewage wash up on the beach! Every time I see a cruise ship go by, I shudder to think of what they're dumping in our water (the water at our nearby beach park has been tested as unsafe to swim in, due to so many contaminants). So PLEASE, we DESPERATELY need to make Puget Sound a No Discharge Zone!!! PLEASE!

Commenter: Sierra Club Commenter - Comment O-30-33

In my view, this is a no-brainer. Toilet contents do not belong in Puget Sound. When I first came to Seattle in 1963 and lived in a houseboat on Lake Union, I went swimming once. The experience was so disgusting, from toilets that flushed directly into the lake that I certainly never did that again. BUT within a matter of years, Lake Union water quality became a public issue, and the effort to clean it up was started. Some people said it couldn't be done, but the effort turned into a success. Puget Sound is larger. To make an understatement, there are more challenges, but Puget Sound is truly a treasure, and one that is crucial to the region's economic, cultural and ecological well-being and should be given the respect it deserves, not the poop it currently receives. If Lake Union could be cleaned up in the 60s, surely Puget Sound can be cleaned up now, so many years later.

Commenter: Sierra Club Commenter - Comment O-30-36

I was born here, in Washington State, and have a vested interest in the beauty and quality of life here. There are too many people and boats now to allow sewage of any kind to be dumped into the water. We depend, all of us, on the health of Puget Sound and should not be treating it as a toilet. Stop the dumping!

Commenter: Sierra Club Commenter - Comment O-30-37

Puget Sound has been in decline for decades; we need to stop that.

Commenter: Sierra Club Commenter - Comment O-30-38

There's no excuse for dumping raw sewage and fouling up our waters.

Commenter: Sierra Club Commenter - Comment O-30-39

This should, and MUST, include CANADA, which has been pumping in their own waste for many years (the latest claim I read said "the sewage is cleared out by the tides!") AAAGH! NO!

Commenter: Sierra Club Commenter - Comment O-30-42

I lived near Puget Sound or beside two of our lakes and have been a boater most of my 79 years. I have seen our waters become increasingly polluted and am concerned about the health of our waters and of the people of this area. We should all care about clean water and the health of our ecosystem, and I am writing to express support for a No Discharge Zone for Puget Sound, Lake Washington and the associated waters.

Commenter: Skagit Audubon Society - Comment O-47-2

Three years ago, we joined other Audubon chapters and conservation groups signing a letter in support of designating a No Discharge Zone in Puget Sound. I'm repeating that support today. Establishing a No Discharge Zone in Puget Sound is an obvious and necessary step towards protecting and restoring the Sound and its diverse wildlife.

Commenter: Taylor Shellfish Farms - Comment O-8-3

This letter is to express the support of Taylor Shellfish Farms for designation of the Puget Sound as a No Discharge Zone (proposed Chapter 173-228 WAC). As a business, we are sympathetic to the concerns raised by the tug and commercial vessel operators about the cost and practicality of making necessary modifications to their vessels and availability of pumpouts for commercial vessels. We appreciate Ecology listening to these concerns and extending the time period for the requirements to be phased in and securing funding for additional commercial pumpouts.

Commenter: The SeaDoc Society - Comment O-3-2

I am writing in support of the Department of Ecology's proposed new rule, Chapter 173-228 WAC— Vessel Sewage No Discharge Zones, to establish a Puget Sound No Discharge Zone and clarify requirements needed to implement the No Discharge Zone determination by the EPA earlier this year. It is my understanding that this rule change would prohibit the release of sewage from vessels, even if it were treated and will cover 2,300 square miles of inland marine waters. It is also my understanding that during this process the EPA determined that this region as adequate facilities for the proper removal and treatment of sewage from all vessels.

As a science program that has been studying water quality, public health, and marine mammal health for over 15 years, we strongly support proposed new rule, Chapter 173-228 WAC – Vessel Sewage No Discharge Zones.

Commenter: United States Coast Guard - Comment A-4-2

The Coast Guard appreciates the opportunity to comment on the Washington State Department of Ecology's new proposed rule, Chapter 173-228 WAC - Vessel Sewage No Discharge Zones (NDZ). The Coast Guard supports the protection of Puget Sound from sewage discharges and strives to continue its stewardship of the marine environment in partnership with the state.

Commenter: WA State Board of Health - Comment A-3-2

I'm writing to voice our support for the Washington State Department of Ecology's proposed rules to establish a No Discharge Zone in Puget Sound for vessel sewage

Commenter: Washington Dept. of Natural Resources - Comment A-2-3

DNR supports the proposed rule and welcomes any opportunity for contributing to its successful implementation.

Commenter: Washington Environmental Council - Comment O-29-3

Together with Friends of the Earth, Futurewise, Puget Soundkeeper Alliance, and the Sierra Club, WEC and our members strongly support establishing the Puget Sound No Discharge Zone. Our coalition generated over 25,000 comments in 2014 supporting Ecology's draft designation and over 40,000 comments in 2016 supporting EPA's determination. Thousands of our members have taken individual actions already during this final comment period in support of establishing a No Discharge Zone, which is wildly popular with our members and with the public. Specifically, we agree with the proposed language in WAC 173-228-030 defining the Puget Sound No Discharge boundaries as all marine waters of Washington state inward from the line between New Dungeness Lighthouse and the Discovery Island Lighthouse to the Canadian border, and fresh waters of Lake Washington, Lake Union, and connecting waters between and to Puget Sound. Over the years, people have consistently weighed in supporting the Puget Sound No Discharge Zone. During the 2014 draft petition comment period, over 25,000 comments supported the No Discharge Zone while 250 opposed it. In December 2016, during EPA's public comment period regarding the adequacy and availability of pumpout facilities, over 40,000 comments supported the No Discharge Zone. Rarely do the Department of Ecology and EPA receive this level of support. In summary, WEC, our partners, and our members strongly support establishing a No Discharge Zone for the marine waters of Washington State inward from the line between the New Dungeness Lighthouse and the Discovery Island Lighthouse to the Canadian border, and fresh waters of Lake Washington, Lake Union and connecting waters between and to Puget Sound. Now is the time to add this protection for Puget Sound.

Commenter: Washington Environmental Council - Comment O-45-2

I'm a fortunate person to be able to forage food from the intertidal areas of Puget Sound and I soundly support establishing a No Discharge Zone. Frankly, our experience is that the boating community really values Puget Sound and we are confident that the remaining vessels and companies that need to install tanks will step up and do their part to protect Puget Sound.

Commenter: Washington Scuba Alliance - Comment O-2-4

We take this opportunity to express our support for EPA's preliminary affirmative decision regarding a Puget Sound No Discharge Zone. When finalized this No Discharge Zone will join more than 70 others around the country, including zones in the Great Lakes and the entire California coast that have been highly successful in other areas to protect human health, shellfish resources and sensitive habitat for fish and wildlife. It will be the first one in Washington State that will support Puget Sound recovery. • This action item is a priority for the Puget Sound Partnership; Washington Scuba Alliance sincerely appreciates this opportunity to weigh in to support a Puget Soundwide No Discharge Zone that will protect human health, shellfish growing areas, recreational assets, and help with the overall recovery of our beloved Puget Sound.

Commenter: Terrill Chang - Comment I-2351-2

As an environmental engineer for 40 years, I have strong opinions about NOT adding boater sewage to the toxic urban runoff we already have.

Commenter: Washington State Department of Health - Comment O-5-2

The Washington State Department of Health supports Ecology's rulemaking designating the waters of Puget Sound a No Discharge Zone (NDZ). The Department of Health supports the conclusions and find that implementation of the NDZ will lead to increased public health protection through improved marine water quality and will allow additional recreational and commercial shellfish harvesting opportunities.

Summary Response to: Supports proposed rule

Ecology thanks you for your support for the No Discharge Zone rulemaking. It is the result of countless combined efforts over many years.

Comments on: Targeted No Discharge Zone instead

Commenter: Richard Brown - Comment I-2420-3

If further conservatism is required, NDZs could be established around sensitive areas and areas where people might use the water, such as in Lake Washington. Australian rules seem to be adequate to protect the environment and humans from contamination and could be considered a model for Puget Sound. The link will take you to the Australian rule:<https://www.amsa.gov.au/environment/regulations/maritime-discharges/discharges/index.asp>. Canada is another example where our NW waters are not adversely affected by recreation boats discharging where no dump outs are available.

Commenter: William Haimes - Comment I-669-5

Targeted zones will work better. A long phase-in for work boats would also work.

Commenter: James Metcalfe - Comment I-2183-3

If further conservatism is required, NDZs could be established around sensitive areas and areas where people might use the water, such as in Lake Washington.

Australian rules seem to be adequate to protect the environment and humans from contamination and could be considered a model for Puget Sound. The link will take you to the Austrail rule:<https://www.amsa.gov.au/environment/regulations/maritime-discharges/discharges/index.asp>

Commenter: Paul Pickett - Comment I-662-6

A complete ban on the discharge of fecal material from any boat or vessel. A ban on urine being discharged in marinas or within 100' (or 200'?) of the shoreline. Keep the directive to collect waste and dispose in a facility where treatment is provided.

Commenter: Outcomes by Levy - Comment O-6-4

Additionally, as Ecology officials know, we have been disappointed that Ecology has been unwilling to work with our organizations and a larger "Marine Alliance" on a proposal to establish targeted NDZs as other areas and states have enacted (i.e. California, Chesapeake Bay).

Commenter: Recreational Boating Association of Washington - Comment O-40-2

Fundamentally, RBAW has strong concerns about the blanket designation of Puget Sound as a no discharge zone. We are not opposed to having targeted discharge zones over highly sensitive areas. Puget Sound would be the largest contiguous no discharge zone in the country. Other areas have the ability for boats to move in and out of discharge zones.

Commenter: The American Waterways Operators - Comment O-24-18

The maritime sector is prepared to collaborate on meaningful measures to safeguard water quality, including AWO's recommendation of targeted NDZs for high-risk areas of water quality impairment. AWO, along with a great many concerned stakeholders, would support a series of targeted NDZs for shellfish beds, areas of impaired water quality, and areas of high-bacteria concentrations. We believe that targeted NDZ initiatives would address all of Ecology's concerns and safeguard the interests of recreational users, the aquaculture industry and commercial vessel operators. AWO believes that targeted NDZs would provide a better level of protection, would ease administration and compliance and would provide a comparatively low-impact means of demonstrating the effectiveness of NDZ policy.

Summary Response to: Targeted No Discharge Zone instead

The *Final Petition to Designate the Waters of Puget Sound as a No Discharge Zone (Ecology July 2016)* provides information on why Ecology is addressing vessel sewage discharge and the risks associated with vessels and the potential to discharge over or near sensitive resources. This is in addition to continued work being done to address all sources of pollution.

The report, *Tracer simulations to investigate how waters move in Puget Sound and the Salish Sea to address questions related to the draft proposed No Discharge Zone petition, (Ecology 2016)* was conducted by Ecology's Environmental Assessment Program. Ecology used an existing model of water circulation throughout Puget Sound to simulate hypothetical vessel discharges with a release of a conservative tracer. The model was developed by Pacific Northwest National Laboratory (PNNL) in collaboration with Ecology, and is actively being used to address other water quality improvement efforts in Puget Sound.

The results of this tracer modeling analysis showed that there is potential for a vessel discharge, either raw or treated with MSD Type II, to reach sensitive resources, such as shellfish and swimming beaches and violate the State's water quality standard for fecal coliform bacteria.

The rule is a pollution prevention effort to help protect water quality and public health. While vessels may not be the largest source of pollution to the Sound, they are a mobile source, which makes their potential impact pretty variable and their effluent challenging to manage Sound-wide. We are confident that eliminating this source of pollution and its potential to impact sensitive areas will benefit the Puget Sound ecosystem. Ecology considered numerous scientific studies and reports, including, but not limited to: data from the Alaska Department of Environmental Conservation small cruiseship sample reports, the *Assessment of Potential Health Impacts of Virus Discharge from Cruise Ships to Shellfish Growing Areas in Puget Sound* (Washington State Department of Health/University of Washington, November 2007), the *Cruise Ship Discharge Assessment Report*, (Environmental Protection Agency, 2008), *Tracer simulations to investigate how waters move in Puget Sound and the Salish Sea to address questions related to the draft proposed No Discharge Zone petition* (Ecology 2016), *Evaluation of Improved Type I Marine Sanitation Devices, Performance Evaluation Report* (EPA 2010), and the *Liberty Bay Marina Study* (Kitsap Public Health, 2010). Ecology also considered stakeholder input and the advisory group input on the pros and cons of targeted or a Puget Sound-wide no discharge zone.

33 U.S.C. §1322 (f)(3) authorizes the State to prohibit the discharge from all vessels of any sewage in some or all of the waters within such State. Ecology may prohibit the discharge, but it must be for all vessels. In order to best protect water quality and public health, the rule is established to apply to all vessels and all areas of Puget Sound. 33 U.S.C. § 1322(f)(3) does not have conditions to allow for certain treatment technologies to be exempted as it applies to all vessels. The rule does allow for a five-year delayed implementation for certain commercial vessels including: tug boats, commercial fishing vessels, small commercial passenger vessels, and National Oceanic and Atmospheric Administration (NOAA) research and survey vessels.

Comments on: Vessel discharges directly to sensitive resources

Commenter: Fidalgo Bay Aquatic Reserve Citizen Stewardship Committee - Comment O-7-3

The Fidalgo Bay Aquatic Reserve is at the bottom of Fidalgo Bay and some of the busiest tourist and commercial boat traffic goes on around Anacortes at the top of the bay. Many large tankers and supply boats use that area. Any discharge pollution can easily find its way into the Reserve, which already receives a healthy dose from Anacortes storm water outfalls.

Commenter: Friends of the Earth Commenter - Comment O-31-5

Eventually, sewage dumping should not be allowed in any body of water, as we know that this material will move to other places with the currents, etc.

Commenter: Puget Soundkeeper Alliance - Comment O-16-6

Tracking down the source of bacteria and other pathogens from inadequate or untreated sewage discharges can be timely and complicated, particularly if the source is mobile or intermittent such as a travelling vessel.

Commenter: Sierra Club - Comment O-37-3

As it stands now, boats can discharge sewage directly into the sound, thus contaminating the water with high concentrations of bacteria and pathogens putting public health, marine life and clean water dependent businesses at risk. A No Discharge Zone would significantly diminish this risk.

Commenter: Washington Scuba Alliance - Comment O-2-8

Boat sewage is concentrated and can travel long distances;

Summary Response to: Vessel discharges directly to sensitive resources

Ecology concurs that there is a risk from vessel discharges directly or even indirectly to sensitive resources. The report, *Tracer simulations to investigate how waters move in Puget Sound and the Salish Sea to address questions related to the draft proposed No Discharge Zone petition*, (Ecology 2016) was conducted by Ecology's Environmental Assessment Program. Ecology used an existing model of water circulation throughout Puget Sound to simulate hypothetical vessel discharges with a release of a conservative tracer. The model was developed by Pacific Northwest National Laboratory (PNNL) in collaboration with Ecology, and is actively being used to address other water quality improvement efforts in Puget Sound. The results of this tracer modeling analysis showed that there is potential for a vessel discharge, either raw or treated with MSD Type II, to reach sensitive resources, such as shellfish and swimming beaches and violate the State's water quality standard for fecal coliform bacteria.

The rule is a pollution prevention effort to help protect water quality and public health. While vessels may not be the largest source of pollution to the Sound, they are a mobile source, which makes their potential impact variable and their effluent challenging to manage Sound-wide. We are confident that eliminating this source of pollution and its potential to impact sensitive areas will benefit the Puget Sound ecosystem. Ecology considered numerous scientific studies and reports, including, but not limited to: data from the Alaska Department of Environmental Conservation small cruiseship sample reports, the *Assessment of Potential Health Impacts of Virus Discharge from Cruise Ships to Shellfish Growing Areas in Puget Sound* (Washington State Department of Health/University of Washington, November 2007), the *Cruise Ship Discharge Assessment Report*, (Environmental Protection Agency, 2008), *Tracer simulations to investigate how waters move in Puget Sound and the Salish Sea to address questions related to the draft proposed No Discharge Zone petition* (Ecology 2016), *Evaluation of Improved Type I Marine Sanitation Devices, Performance Evaluation Report* (EPA 2010), and the *Liberty Bay Marina Study* (Kitsap Public Health, 2010).

Comments on: Vessels equipped to comply

Commenter: Rein Attemann - Comment I-2551-6

Most within the boating community already properly manage their sewage. Over 97 percent of boaters do the right thing. They have marine toilets and tanks on board to store sewage while they're on the water, then pump out using shore-line stations at state parks, marinas, and docks. Of the 3600 commercial vessels that operate within Puget Sound, about 3400 already have tanks on board to store the sewage, and use those pump-out facilities on land or engage mobile trucks or barges. Furthermore, the cruise ship industry has been complying with the no discharge zone for many years and that was voluntary.

Commenter: Jerry Joyce - Comment I-2552-3

As a marine biologist, I have spent much of the past 30 years at sea from the Arctic to the Antarctic and much of the area in between. Many of these ships were small re-purposed vessels from whaling ships and sealing ships to crab boats and trawlers. We would sometimes stop in a foreign or remote port that does not allow discharge of sewage into their waters. It's quite surprising how many places in the world there are that prohibit discharge of sewage. These ships all found relatively inexpensive methods to prevent discharge of sewage. Sometimes this was done on the cheap by closing all the heads but one, and equipping that one with a head that incorporated a holding tank. Others were more extensive with the entire sewage stream contained in a larger tank that has later pumped out or discharged out at sea. But these were all workable and affordable fixes.

Commenter: Chris Wilke - Comment I-2555-6

In fact, 97% of recreational boats already have this pump-out capability, and retrofits are not very expensive to accomplish. It could be as simple as adding a Port-A-Potty to a small boat.

Commenter: Peggy Willis - Comment I-2560-3

And I am delighted that 97% of boaters already are complying

Commenter: Alki Kayak Tours - Comment O-13-4

Fortunately, over 97% of boaters already do the right thing and pump out their blackwater at the 100 designated pumpout facilities that are available throughout the Puget Sound. The maritime community highly values Puget Sound, and we are confident that the remaining vessels that don't have proper holding tanks onboard will step up to do their part to keep our waters clean and healthy.

Commenter: Citizens for a Healthy Bay - Comment O-18-5

Many boaters already store their sewage onboard and use the pumpout facilities that exist around Puget Sound and the Straits of Georgia and Juan de Fuca. All sources of water pollution should be controlled, and this is a common-sense action that reflects the value of Puget Sound.

Commenter: Defenders of Wildlife - Comment O-10-5

Over 97% of boaters already store their sewage onboard and use any of the 100 pumpout facilities that exist around Puget Sound and the Straits of Georgia and Juan de Fuca.

All sources of pollution should be controlled, and this is a common-sense action that reflects the value of Puget Sound.

Commenter: Friends of the Earth - Comment O-35-9

Most vessels already comply As Ecology's web site explains, only 2% or fewer vessels would need to add holding tanks. The vast majority of vessels already comply with a No Discharge Zone. Commercial Vessels already have holding tanks and use pumpouts Costanzo (2013)¹ indicates about 25% of the tugboat fleet based out of Puget Sound already utilize holding tanks. Many of these have simply adopted the company-wide policy to store and pump out all blackwater. The Economic Evaluation also mentions that Campbell Maritime, a small tugboat company has outfitted every tugboat with 50 to 100-gallon holding tanks because those were less expensive than MSDs. The owner noted that while he had no detailed information on the cost of these retrofits, "they were not 'a memorably significant cost. " U.S. Navy already uses pumpouts The Department of Ecology confirmed that Navy vessels already use pumpout facilities to treat wastewater generated onboard their ships.

Commenter: Futurewise - Comment O-43-3

Over 97% of the boater already do pump out their waste, and we're very confident that almost all boaters are going to be willing to do that because they care so much about the environment. That's it.

Commenter: Pacific Shellfish Institute - Comment O-1-3

Many boaters already store their sewage onboard and use the pumpout facilities that exist around Puget Sound and the Straits of Georgia and Juan de Fuca. All sources of pollution should be controlled, and this is a common-sense action that reflects the value of Puget Sound.

Commenter: Passenger Vessel Association - Comment O-28-3

PVA's membership includes entities that operate different types of passenger vessels in Puget Sound. These include ferries (Washington State Ferries, Pierce County Ferries, King County Marine Division, Clipper Navigation, etc.),sightseeing vessels (Argosy Cruises), dinner cruise vessels, whale watching vessels, and "small ship" overnight cruise vessels. For the most part, these passenger vessels do not discharge treated sewage effluent into Puget Sound, utilizing shoreside pump-out facilities. Therefore, most existing vessels operated by PVA members will be able to comply if the state designates the waters in question as a NDZ. One PVA member has recently been constructing two new "small ship" overnight cruise vessels. These vessels have been designed and constructed with sufficient holding tank capacity so that treated sewage effluent can be stored on board the vessels and will not need to be discharged into the waters under consideration, should the PVA member choose to operate them in Puget Sound. [note additional comments with concerns]

Commenter: Puget Soundkeeper Alliance - Comment O-20-4

Fortunately, over 97% of boaters already do the right thing, using holding tanks onboard to store sewage and disposing of the waste at one of the 100 pumpouts available throughout the region. The maritime community values Puget Sound and I am confident that the remaining vessels that don't have proper holding tanks onboard will step up to do their part to keep our waters clean.

Commenter: Puget Soundkeeper Alliance - Comment O-42-5

We would point out that a lot of the boating community here, actually the majority of the boating community, over 97%, are already doing the right thing. Of those 153,000 recreational boaters, most of them already have marine toilets and tanks onboard to store their blackwater. And of the 36,000 commercial vessels that operate in the Sound, about 34,000 already have tanks onboard, so this isn't going to be a huge heavy lift for them particularly because there's going to be a grace period that's quite generous. For commercial vessels to retrofit, they have five years. So, I think that's a great compromise.

Commenter: Puget Soundkeeper Alliance - Comment O-16-8

Significantly, most vessels already comply and hold their sewage. As Ecology's website explains, only 2% or fewer vessels would need to add holding tanks. The vast majority of vessels already have the equipment necessary to comply with a No Discharge Zone. Costanzo (2013)⁶ indicates about 25% of the tugboat fleet based out of Puget Sound already utilize holding tanks. Many of these have simply adopted the company-wide policy to store and pump out all blackwater. The Economic Evaluation also mentions that Campbell Maritime, a small tugboat company has outfitted every tugboat with 50 to 100-gallon holding tanks because those were less expensive than MSDs (cited in Herrera, 2015). The owner noted that while he had no detailed information on the cost of these retrofits, "they were not 'a memorably significant cost.'"

The Department of Ecology confirmed that Navy vessels already use pumpout facilities to treat wastewater generated onboard their ships.

Commenter: Sierra Club - Comment O-37-6

At least 97% of boaters are already practicing proper pump-out procedures. The vast majority of commercial vessels are already equipped to comply and the cruise ship industry has been complying for several years.

Commenter: Washington Dept. of Natural Resources - Comment A-2-5

Current waste management technologies are readily available for the proper disposal and treatment of vessel-generated wastewater.

Commenter: Washington Environmental Council - Comment O-45-3

Not surprising to all of you, Ecology spent many years considering a No Discharge Zone. The good news is that today over 97% of boaters already comply with the No Discharge Zone. So, they store blackwater onboard and then use stationary and mobile pumpouts to properly dispose of their waste where it can be treated.

Commenter: Washington Environmental Council - Comment O-29-11

As Ecology's web site explains, only 2% or fewer vessels would need to add holding tanks. The vast majority of vessels already comply with a No Discharge Zone. Commercial Vessels already have holding tanks and use pumpouts Herrera (2015) cites a 2013 personal communication from Costanzo that about 25% of the tugboat fleet based out of Puget Sound already utilize holding tanks. Many of these have simply adopted the company-wide policy to store and pump out all blackwater.

The Economic Evaluation also mentions that Campbell Maritime, a small tugboat company has outfitted every tugboat with 50- to 100-gallon holding tanks because those were less expensive than MSDs (cited in Herrera, 2015). The owner noted that while he had no detailed information on the cost of these retrofits, "they were not 'a memorably significant cost.'" U.S. Navy already uses pumpouts The Department of Ecology confirmed that Navy vessels already use pumpout facilities to treat wastewater generated onboard their ships.

Commenter: Washington Scuba Alliance - Comment O-2-7

Tugs and other boats have retrofitted in Great Lakes and the EPA is giving Puget Sound vessels 5 years to comply (longest time for any No Discharge Zone); • The cruise industry has been complying as if Puget Sound is already a No Discharge Zone many years now

Summary Response to: Vessels equipped to comply

Ecology concurs that most vessels are already equipped to comply with the No Discharge Zone. There is a delayed implementation in the rule for certain commercial vessels with more complicated retrofits. And Ecology agrees that vessels have been able to comply in other no discharge zone areas. Ecology's Final Petition and referenced reports analyzed vessel sewage management along with stakeholder input, surveys, and other research.

Comments on: Vessels not equipped for holding

Commenter: William Haimes - Comment I-669-4

Workboats and small passenger vessels do not have sufficient space to install large holding tanks even if they could find a pumpout near their area of operations. This rule will drive small passenger vessels out of the region and cause work boats to incur huge costs in installation and time lost to pumpout in distant locations.

Commenter: American Cruise Lines, Inc. - Comment O-23-7

As a practical matter, in order to keep up with the amount of blackwater generated on a daily basis and because of her cruise itinerary, American Spirit can only hold blackwater for approximately two days before it must be discharged. This timetable is a result of operational considerations including: (1) ACL's policy to maintain the level of blackwater in holding tanks on its vessels to provide a safety factor for unanticipated surges in blackwater generation - on the American Spirit that level is half of total capacity, or 10,000 gallons; (2) ACL's commitment to transit between ports during daylight hours to the extent possible in keeping with passengers' demands and market custom; (3) logistical limitations due to American Spirit's cruise itinerary; and (4) operational limitations of the docks American Spirit calls on. American Constellation's AWWTS sewage treatment system complies with VGP requirements that went into effect in 2013, prior to her date of construction. To comply with the VGP requirements,³ American Constellation must treat both blackwater and graywater with the AWWTS system. As opposed to American Spirit, which has the ability to store blackwater separately from graywater, on American Constellation both blackwater and graywater are stored in the same tanks. Based on ACL's experience in operating its fleet of vessels, it is anticipated that rate of creation of

blackwater and graywater on the American Constellation will be approximately 56,000 gallons per week. The same practical, operational, customer, and logistical constraints that apply to American Spirit as set forth in the preceding paragraph apply to American Constellation, but are magnified due to the substantially greater volume of effluent she will generate because she stores blackwater and graywater together in compliance with VGP requirements. Additionally, because American Constellation must treat and store both blackwater and graywater to comply with the 2013 VGP requirements, American Constellation would need to discharge substantially more effluent to comply with the NDZ as envisioned by Ecology. As a result: (A) the added cost to discharge American Constellation to mobile pumpout trucks is estimated to be \$366,720 per year; (B) the barges would not be able to accommodate the volume of effluent American Constellation is estimated to generate - it is estimated it would take 70 hours to discharge American Constellation to the barges; (C) and the added costs of discharging mixed blackwater and graywater to the barges is estimated to be over \$1,000,000 per year for the American Constellation. Due to the increased volume of effluent American Constellation is anticipated to generate, the pumpout trucks listed in Table 8 are not an option as set forth in the preceding paragraph.

Commenter: Department of the Navy - Comment O-38-2

The U.S. Navy prides itself on being good stewards of our shared environment and being in compliance with all applicable laws and regulations. Unfortunately, due to design characteristics built to support mission requirements, application of the proposed NDZ will impose an unacceptable hardship on the crews of certain classes of vessels that have limited marine sanitation device (MSD) holding capacity. Additionally, due to design/tank configurations, it may be impossible for some vessels to comply, even in non-emergency circumstances. Likewise, the inclusion of a limited Puget Sound NDZ "public vessel" exemption will provide limited relief to the Navy due to limited MSD holding capacity.

Commenter: Passenger Vessel Association - Comment O-28-4

However, three existing "small ship" overnight cruise vessels that currently operate on the waters of Puget Sound do not have sufficient holding tank capacity to safely store treated sewage effluent. These vessels process their sewage effluent through Coast Guard-approved marine sanitation devices (MSDs) and then, as permitted by the federal Clean Water Act, lawfully discharge the treated effluent into the surrounding waters.

Summary Response to: Vessels not equipped for holding

Ecology's Final Petition and referenced reports analyzed vessel sewage management along with stakeholder input, surveys, and other research. Vessels have been able to comply in other no discharge zone areas, including commercial ports.

Ecology appreciates the challenges for small overnight passenger vessels, and the rule provides a 5-year delayed implementation for: tug boats, commercial fishing vessels, small commercial passenger vessels, and National Oceanic and Atmospheric Administration (NOAA) research and survey vessels. The delay allows vessels that have more significant costs and unique challenges, such as engineering designs that require extra safety considerations, more time to make the retrofits.

The Navy previously reported to Ecology and the EPA that military vessels have holding tanks and use large-scale pumpout facilities where they are moored. As confirmed in February of 2016 (Communication with Jabloner, Naval Facilities Engineering Command; 2/8/16), the Navy in Puget Sound doesn't discharge treated or untreated blackwater to Puget Sound and a No Discharge Zone will not affect Naval operations within Puget Sound. The Clean Water Act provides certain military vessels exemptions as applicable. In addition, the rule provides an exemption for public vessels involved in emergency, safety, security, or related contingency operations where it would not be possible to comply with the No Discharge Zone. Navy vessels are public vessels.

Comments on: Victoria sewage a problem

Commenter: Boyer Towing, Inc. - Comment OTH-1-3

Where is the scientific study showing that you tracked the raw sewage pumped directly into the Straits of Juan de Fuca at Victoria, B.C. to see how much reaches Puget Sound as the waters mix and mingle? How can you stop that?

Commenter: Sierra Club Commenter - Comment O-30-35

It is totally unacceptable to hear about the many "failures" we've had which dumped thousands of gallons of raw sewage into Puget Sound! We used to petition Victoria, BC to clean up their mess and we haven't done much better! We have the technology and there is just NO excuse!!

Commenter: Sierra Club Commenter - Comment O-30-43

For way too long, Victoria BC has discharged its untreated sewage into Puget Sound. This is far more polluting than boat travel, although boats are a large part of the problem. GO AFTER VICTORIA!!! GET THEM TO STOP the hideous practice of flushing their toilets directly into the Salish Sea!!!

Summary Response to: Victoria sewage a problem

Local and provincial governments in Canada are in the process of improving Victoria area sewage treatment [<https://www.crd.bc.ca/project/wastewater-treatment-project>]. Vessel sewage in Puget Sound is being addressed with this rule.

Comments on: Whole Puget Sound not targeted

Commenter: Washington Scuba Alliance - Comment O-2-9

The entire Puget Sound needs to be designated as the enforcement of piecemeal zones would be extremely difficult and it would benefit human health and shellfish areas; Boundary is also easy for boats as it is the piloting line (they know where this is)

Summary Response to: Whole Puget Sound not targeted

Ecology concurs that the geographical area in the rule should be designated. The *Final Petition to Designate the Waters of Puget Sound as a No Discharge Zone (Ecology July 2016)* provides information on why Ecology is addressing vessel sewage discharge for the location in the rule and the risks associated with vessels and the potential to discharge over or near sensitive resources.

Comments on: Wastewater Treatment Plant impact not addressed

Commenter: Lee Roussel - Comment I-2282-3

Installing and maintaining adequate pumpouts in the South Sound is complicated by the lack of sewer systems. While urban pumpouts discharge into sewer systems, the South Sound's islands and most of the Key Peninsular use septic systems. Indeed, malfunctioning septic systems are one of the South Sound's water quality threats. Connecting a pumpout to a septic system or more likely a septic storage vault creates capacity issues not present with sewer systems. A storage vault has finite capacity. Overloading a septic system can result in leakage into ground water and Puget Sound. When capacity is reached, the pumpout may be shut down.

Commenter: American Cruise Lines, Inc. - Comment O-23-11

ACL also operates vessels on the Mississippi River. It has been ACL's experience that shoreside pumpout facilities it has contacted to discharge sewage to on the Mississippi have required that ACL provide in advance a sample of the effluent proposed to be discharged before the facilities will accept discharges from ACL's vessels. It is ACL's understanding that these samples are tested to ensure that the effluent discharged from its vessels does not contain harmful bacteria or chemicals that will interfere with the microbial agents used in the municipal waste treatment facilities where the effluent will eventually be discharged by the intermediaries. ACL is not aware that Ecology has considered any of the issues such testing would cause if the NDZ is established as currently proposed. ACL anticipates its vessels operating in Puget Sound would need to discharge a minimum of approximately 66,000 gallons of effluent a week if the NDZ goes into effect. Presumably, that effluent would eventually be discharged into a Washington State municipal wastewater treatment facility. ACL is not aware what sampling or testing will be required by either the intermediary pumpout facilities or the municipal waste treatment facilities where the effluent will eventually be discharged. If such testing is required, it would further complicate the practical, operational, and logistical obstacles set forth above. ACL is not aware that Ecology has considered or addressed any of the constraints that will be imposed by this sampling process. To the extent that an intermediary facility or municipal facility declined to accept the effluent, ACL's entire itinerary would be interrupted until a solution could be reached. Such interruptions and delays would cause extreme and presently incalculable costs to ACL.

Summary Response to: Wastewater Treatment Plant impact not addressed

On February 13, 2017, the EPA issued its final affirmative determination that adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels are reasonably available for waters of the Puget Sound, allowing the State of Washington to finalize the designation. This includes the treatment of sewage. The determination occurred after reviewing Ecology's final petition and supplemental information to establish a No Discharge Zone for Puget Sound. The EPA's final determination also considered over 40,000 comments received from individuals, environmental organizations, vessel associations, boating and yacht clubs, industrial representatives, port authorities, federal, county, local and tribal governmental entities, and other interested groups. Appendix A of Ecology's Final Petition includes data on where the listed pumpouts' sewage goes for treatment. The majority of pumpouts are in areas where pumped out sewage goes to wastewater treatment plants and not septic systems. Land-based wastewater treatment plants and septic tanks are required to meet federal/state requirements to meet the State's water quality standards. Vessel sewage is already commonly pumped out to land based treatment systems, which have typically only seen concerns when bilge water or salt water is pumped to their systems, which isn't a part of this No Discharge Zone. Ecology is unaware of any required sampling by any Puget Sound wastewater treatment plants for vessel sewage components.

Appendix A: Citation List

This citation list contains references for data, factual information, studies, or reports on which the agency relied in the adoption for this rule making (RCW 34.05.370(f)).

At the end of each citation is a number in brackets identifying which of the citation categories below the sources of information belongs. (RCW 34.05.272).

Citation Categories	
1	Peer review is overseen by an independent third party.
2	Review is by staff internal to Department of Ecology.
3	Review is by persons that are external to and selected by the Department of Ecology.
4	Documented open public review process that is not limited to invited organizations or individuals.
5	Federal and state statutes.
6	Court and hearings board decisions.
7	Federal and state administrative rules and regulations.
8	Policy and regulatory documents adopted by local governments.
9	Data from primary research, monitoring activities, or other sources, but that has not been incorporated as part of documents reviewed under other processes.
10	Records of best professional judgment of Department of Ecology employees or other individuals.
11	Sources of information that do not fit into one of the other categories listed.

1. State of Washington Department of Ecology. Water Quality Program. July 2016. Final Petition to Designate the Waters of Puget Sound as a No Discharge Zone. Available at: <https://fortress.wa.gov/ecy/publications/SummaryPages/1610020.html>. This is Department of Ecology's Final Petition requesting that the United States Environmental Protection Agency designate the Puget Sound as defined in the petition a No Discharge Zone for vessel sewage. [#4]
2. State of Washington Department of Ecology. Water Quality Program. October 2016. Supplementary information on vessel pumpout availability to the Final Petition to Designate the Waters of Puget Sound as a No Discharge Zone. Available at: <http://www.ecy.wa.gov/programs/wq/nonpoint/CleanBoating/EPALetterVesselPumpoutAvailabilityOct2016.pdf>.

This is Department of Ecology's supplemental information on commercial vessel pumpout availability per the United States Environmental Protection Agency's request. [#4]

3. United States Environmental Protection Agency Federal Register Notice. February 2017. Washington State Department of Ecology Prohibition of Discharges of Vessel Sewage; Final Affirmative Determination. Available at: <https://www.federalregister.gov/documents/2017/02/21/2017-03353/washington-state-department-of-ecology-prohibition-of-discharges-of-vessel-sewage-final-affirmative>. This is the Federal Register Notice of the Environmental Protection Agency's final determination that adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels are reasonably available for waters of Puget Sound. [#7]
4. United States Environmental Protection Agency. January 2017. Puget Sound No-Discharge Zone Response to Comments. Available at: <https://www.epa.gov/sites/production/files/2017-02/documents/puget-sound-ndz-response-to-comments-01192017.pdf>. This is a response to the 40,462 comments received on the preliminary affirmative determination. [#7]
5. Herrera Environmental Consultants Inc. for the Washington State Department of Ecology. March 2012. No Discharge Zone Petition Requirements and Petition Research. Available at: <https://fortress.wa.gov/ecy/publications/parts/1210031part1.pdf>. This report summarizes the requirements and approaches to petition EPA for a NDZ and an overview of research on some other states petitions. [#3]
6. Herrera Environmental Consultants Inc. for the Washington State Department of Ecology. April 2012. Puget Sound Condition, Vessel Sewage Discharge, and the Costs and Benefits of Establishing an NDZ. Available at: <https://fortress.wa.gov/ecy/publications/parts/1210031part2.pdf>. This report provides an inventory of Puget Sound conditions and identifies areas that are sensitive to nutrients and pathogens. It also has an overview of existing regulations and agreements governing vessel sewage discharges in Puget Sound and a basic assessment of the types of efficacy of MSDs. It summarizes the costs and benefits of establishing an NDZ. [#3]
7. Herrera Environmental Consultants Inc. for the Washington State Department of Ecology. April 2012. Puget Sound Vessel Populations and Pumpout Facility Report. Available at: <https://fortress.wa.gov/ecy/publications/parts/1210031part3.pdf>. This report provides an assessment of Puget Sound's vessel population and the availability of pumpout facilities. [#3]
8. Herrera Environmental Consultants Inc. for the Washington State Department of Ecology. June 2013. Phase 2 Vessel Population and Pumpout Facility Estimates. Available at: <https://fortress.wa.gov/ecy/publications/parts/1210031part4.pdf>. This report provides an assessment of Puget Sound's vessel population and the availability of pumpout facilities. [#3]
9. Herrera Environmental Consultants Inc. for the Washington State Department of Ecology. April 2013. Puget Sound Recreational Boater Survey Results.

Available at: <https://fortress.wa.gov/ecy/publications/parts/1210031part5.pdf>. This report summarizes the Puget Sound Boater Survey for recreational boats that was conducted in the summer of 2012 to collect data about sewage management practices and habits. [#3]

10. Herrera Environmental Consultants Inc. for the Washington State Department of Ecology. November 2013. Phase 2 Commercial Vessel Sewage Management and Pumpout. Available at: <https://fortress.wa.gov/ecy/publications/parts/1210031part6.pdf>. This report summarizes the results of an information gathering effort about wastewater management practices of commercial vessels operating in Puget Sound. [#3]
11. Herrera Environmental Consultants Inc. for the Washington State Department of Ecology. November 2013. A Review of Implementation Strategies in Other States. Available at: <https://fortress.wa.gov/ecy/publications/parts/1210031part7.pdf>. This report provides a summary of NDZ implementation done in other NDZ areas and recommendations for implementation of an NDZ in Puget Sound. [#2]
12. State of Washington Department of Ecology. Water Quality Program. 2013. Advisory Group Meeting Notes. Available at: <http://www.ecy.wa.gov/programs/wq/nonpoint/CleanBoating/NDZadvisorymtgnotes1-2.pdf>. This report summarizes Ecology convened stakeholder meetings that reviewed the available research and addressed other potential issues related to the NDZ. [#3]
13. State of Washington Department of Ecology. Water Quality Program. February 2014. Draft Petition to Designate the Waters of Puget Sound as a No Discharge Zone. Available at: <https://fortress.wa.gov/ecy/publications/documents/1410008.pdf>. This draft petition was submitted to the United States Environmental Protection Agency and for public comment. [#4]
14. State of Washington Department of Ecology. Water Quality Program. January 2015. Response to Comments: 2014 Draft Petition to Designate the Waters of Puget Sound as a No Discharge Zone. Available at: <https://fortress.wa.gov/ecy/publications/documents/1510001.pdf>. This is a response to the more than 26,000 comments received on the draft petition was submitted to the United States Environmental Protection Agency and for public comment. [#10]
15. Herrera Environmental Consultants Inc. for the Washington State Department of Ecology. November 2013. Puget Sound NDZ Commercial Vessel Economic Evaluation Memorandum. Available at: <https://fortress.wa.gov/ecy/publications/documents/1610015.pdf>. This memorandum summarizes an evaluation of potential cost impacts of an NDZ for commercial tugboats, commercial fishing, and small passenger vessels. [#3]
16. State of Washington Department of Ecology. February 2016. No Discharge Zone Implementation Strategy, A Framework for Action. Available at: <https://fortress.wa.gov/ecy/publications/documents/1610016.pdf>. This report lays out the education, outreach and enforcement strategy for implementing an NDZ in Puget Sound. [#3]

17. Alaska Department of Environmental Conservation. 2013. Small Cruiseship sample reports. Available at: http://dec.alaska.gov/water/cruise_ships/reports.htm. Includes sample results including fecal coliform for type II Marine Sanitation Devices for blackwater from small cruise ships in Alaska for each year. [#9]
18. Washington State Department of Health and University of Washington. November 2007. Assessment of Potential Health Impacts of Virus Discharge from Cruise Ships to Shellfish Growing Areas in Puget Sound. Available at: <http://www.doh.wa.gov/Portals/1/Documents/4400/332-062-cruise-ship-report.pdf>. This is a study of potential human health impacts from virus discharges from large passenger vessels. [#11]
19. United States Environmental Protection Agency. December 2008. Cruise Ship Discharge Assessment Report. Available at: <https://nepis.epa.gov/Exe/ZyNET.exe/P1002SVS.txt?ZyActionD=ZyDocument&Client=EPA&Index=1995%20Thru%201999%7C1976%20Thru%201980%7C2006%20Thru%202010%7C1991%20Thru%201994%7CHardcopy%20Publications%7C2000%20Thru%202005%7C1986%20Thru%201990%7C2011%20Thru%202015%7C1981%20Thru%201985%7CPrior%20to%201976&Docs=&Query=EPA842%2007%20005%20&Time=&EndTime=&SearchMethod=2&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C06THRU10%5CTXT%5C00000006%5CP1002SVS.txt&User=ANONYMOUS&Password=anonymous&SortMethod=-f%3Apubnumber&MaximumDocuments=15&FuzzyDegree=-1&ImageQuality=r85g16/r85g16/x150y150g16/i500&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x>. This is an assessment of cruise ship waste streams indicating average fecal coliform concentrations in traditional type II Marine Sanitation Devices blackwater effluent. [#4]
20. Washington State Department of Ecology. Environmental Assessment Program and Water Quality Program. April 2016, January 2016. Tracer simulations to investigate how waters move in Puget Sound and the Salish Sea to address questions related to the draft proposed No Discharge Zone petition; addendum to memo – CORMIX Modeling. Available at: http://www.ecy.wa.gov/programs/wq/nonpoint/CleanBoating/TracerMemo-NDZ-EAP_041216.pdf. <http://www.ecy.wa.gov/programs/wq/nonpoint/CleanBoating/TracerMemoCORMIXAddendum.pdf>. This memorandum and addendum summarizes results from computer modeling that simulates potential vessel discharges of contaminants in Puget Sound and the Salish Sea using a conservative tracer, evaluating areas influenced by those discharges. [#3]
21. United States Environmental Protection Agency. January 2010. Evaluation of Improved Type 1 Marine Sanitation Devices: Performance Evaluation Report. Available at: <https://nepis.epa.gov/Adobe/PDF/P1007JT5.PDF>. This is a study of performance testing of type I Marine Sanitation Devices in a simulated laboratory setting. [#11]

22. Kitsap County Public Health. 2010. Liberty Bay Marina Study. Available at: http://www.kitsapublichealth.org/environment/files/reports/Liberty_Marina_Study_2010.pdf. This is an assessment of the impact to water quality from untreated sewage discharges and differences in water quality inside versus outside the marina. [#11]
23. Boston Redevelopment Authority, Research Division. 2016. "Boston's Economy 2016." Accessed February 2016 via <http://www.bostonplans.org/getattachment/bc3798b0-c79c-46c7-b97c-86abcb9ebba2>. [#11]
24. Massachusetts Port Authority. 2017. "Massport's Conley Container Terminal Continues Trend of Record-Setting Growth." Accessed February 2018 via <http://www.massport.com/massport/media/newsroom/massports-conley-container-terminal-continues-trend-of-record-setting-growth/>. [#11]
25. European Urology Volume 68. 2016. "Sterile Urine" and the Presence of Bacteria." Accessed March 2018 via [http://www.europeanurology.com/article/S0302-2838\(15\)00206-7/pdf](http://www.europeanurology.com/article/S0302-2838(15)00206-7/pdf). [#11]
26. NCBI US National Library of Medicine National Institutes of Health. 2015. "The Characterization of Feces and Urine. A Review of the Literature to Inform Advanced Treatment Technology." Accessed March 2018 via <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4500995/>. [#11]
27. Capital Regional District Wastewater Treatment Project. 2018. Accessed March 2018 via <https://www.crd.bc.ca/project/wastewater-treatment-project>. [#11]