From: XTAL FUNKE
To: DLNR.BLNR.Testimony
Subject: [EXTERNAL] Fwd: Oppose J-4, The DOBOR, DLNR request to offer DOCARE an MOA to occupy the fuel dock area, Parcel C
Date: Thursday, May 9, 2024 9:47:42 AM

Get Outlook for Android

From: XTAL FUNKE <xtalfunke@hotmail.com>
Sent: Thursday, May 9, 2024 8:52:26 AM

Get Outlook for Android

From: XTAL FUNKE <xtalfunke@hotmail.com

Ala Wai Harbor is known as the largest small boat harbor in the state of Hawaii.
It is home to Hawaii Yacht Club, Waikiki Yacht Club, and is the destination for Transpac. It is a source for adventure boating, diving, cruises, paddling and surfing.
Hawaii.gov advertises that Ala Wai Harbor offers 699 berths with docks, 22 dry storage spaces, vessel washdown, msd pump out, 1 launch ramp, restrooms and showers, and can accommodate vessels up to 85' in length.
The Ala Wai Harbor has not had an operational fuel dock since March of 2013.
The Harbor is "situated near Ala Moana Center, a premier retail complex that draws 48 million shopping visitations annually, the Ala Wai should offer safe and aesthetically pleasing facilities. Yet, the harbor languishes in disrepair." Ed Underwood of DOBOR (excerpted from Strategic Action Plan-2019)
"Although the Ala Wai stands out as the highest net-income-generating harbor, its earning potential remains untapped." Ed Underwood of DOBOR (S.A.P.-2019)
"The Ala Wai Small Boat Harbor is just one example of a state small boat harbor that can be better managed in order to protect the resources sustainably and serve the people of Hawaii." Ed Underwood of DOBOR (S.A.P.-2019)
"Transforming the facility requires a revision of management strategy to enable the asset to generate greater revenues..." Ed Underwood of DOBOR (S.A.P.-2019)
Ed Underwood of DOBOR's vision involves "public-private partnerships".
The People of Ala Wai Harbor have a different vision.
The Harbor is already "world-class". It has the history, the location, the infrastructure, and the love and support of the People of The Island and elsewhere.
The Harbor simply requires proper maintenance and management thereof.
The Ala Wai Harbor fuel dock has not been operational since March of 2013.
Harbor users/boat owners continue to pay rates based on an appraisal which includes a fuel dock that is operational. In fact, slip rates have doubled December of 2019.
DLNR and Ed Underwood of DOBOR have invested time, effort, and resources to produce and support a proposal for a sub-station for law enforcement officers to be located at Ala Wai Harbor's fuel dock instead of investing time, effort, and resources to produce a proposal for a functioning fuel dock to accommodate the largest small boat harbor in the state of Hawaii.

The sensible location for law enforcement officers is the Harbor Office. The Harbor Office has electricity and communication resources. It has storage spaces and slips nearby for convenient access and would be easily accessed by people seeking services of law enforcement officers.
In Appreciation,
Crystal Funke

From:	info Surf Parking
To:	DLNR.BLNR.Testimony
Cc:	Kate Thompson; info Surf Parking
Subject:	[EXTERNAL] Oppose J-4 the DOBOR/DLNR request to offer DOCARE an MOA to occupy the Fuel Dock area, Parcel C, Save this area for the public and to provide fuel services
Date:	Thursday, May 9, 2024 9:10:41 AM
Attachments:	Honey Bee Ledger.pdf

Dear members of the Board of Land and Natural Resources including Chair Dawn Chang,

Please oppose the request for an MOA to DOCARE.

This STAFF SUBMITTAL that you are VOTING on today looks harmless, like asking for a routine land use revocable permit and or revocable short term lease to a Government agency, but its much more hate that.

It presents a big question of how did we get here?

How did a successful functional Fuel Dock that was open for several decades, until 2013, fall apart?

Was it greed, mismanagement, a failed contract, a sign of the times?

The amenities of Ala Wai fuel dock included a long dock to park at, a choice of fuel types, Ice, water, fresh food deli, boating supplies and a launderette, and well as the legally required sewage pump out station.

Can this small patch of land, about the size of a 10K square feet home site be restored to meet its original design and function, and provide the essential marina amenities?

I think so. The majority of the boaters think so.

We desperately need a public meeting on the 'Fuel Dock' area which is Parcel C, or Lot 7 on the Tax key map, to look at how this plot of land will be used, and how the harbor can be RESTORED, IDEALLY ONE PARCEL AT A TIME.

Please watch this **2 minute news clip,** it's worth the 10 seconds of ad to watch, because it show the last days of the functional fuel dock in March of 2013, at the Ala Wai Small Boat Harbor.

https://www.hawaiinewsnow.com/story/21539942/ala-wai-dock-dispute/

From 2007 to 2017, the goal to privatize to area started and the Honey Bee Corporation was initially bidding 2008, then holding the contract and then was the corporation was the subject of law suits to remove the corporation from the land.

Honey Bee corporation is a Japan based developer that won the bid to two lots the fuel dock and larger lot near the Prince hotel, on Ala Wai Small Boat Harbor. Once the project was completed "it is estimated to generate a half a million dollars a year for the state", the Colliers report to DOBOR May 2013, page 48.

Unfortunately, the entire project collapsed, partly to time it took to 'expand' the project at the 'haul-out' site, the investor issues and later bankruptcy. Leading to the eviction in 2017. Honey Bee still owes the State 800K.

I plan to testify in person tomorrow,

Kate Thompson

Tenant Ledger

Date:	07/11/19
Tenant Code:	bo13120
Property:	z01
Unit:	500-1415
Status:	Past
Rent:	68,471.04
Deposit:	0.00
Move In Date:	02/12/14
Move Out Date:	04/01/16
Due Day:	1
Tel# (O):	
Tel# (H):	

HONEY BEE USA, INC.
1001 BISHOP STREET, SUITE 985
ASB TOWER
HONOLULU, HI 96813

Date	Description	Charges	Payments	Balance
	Balance Forward			0.00
05/27/10	T215102 DEVELOPMENT FEE		150,000.00	-150,000.00
03/16/11	T210754 DEVELOPMENT FEE		30,000.00	-180,000.00
04/12/11	T212418 DEVELOPMENT FEE		15,000.00	-195,000.00
05/13/11	T214026 DEVELOPMENT FEE		15,000.00	-210,000.00
05/13/11	T214020 DEVELOPMENT FEE		15,000.00	-225,000.00
06/29/11	T216385 DEVELOPMENT FEE		15,000.00	-240,000.00
08/02/11	T201303 DEVELOPMENT FEE		15,000.00	-255,000.00
08/22/11	T202119 DEVELOPMENT FEE		15,000.00	-270,000.00
09/28/11	T203777 DEVELOPMENT FEE		15,000.00	-285,000.00
10/19/11	T204744 DEVELOPMENT FEE		15,000.00	-300,000.00
12/05/11	T206510 DEVELOPMENT FEE		15,000.00	-315,000.00
02/10/12	T209313 DEVELOPMENT FEE		15,000.00	-330,000.00
02/17/12	T209725 DEVELOPMENT FEE		15,000.00	-345,000.00
09/06/12	T202839 DEVELOPMENT FEE		108,202.95	-453,202.95
10/31/12	T205208 DEVELOPMENT FEE		15,000.00	-468,202.95
01/31/13	T209306 DEVELOPMENT FEE		30,000.00	-498,202.95
06/24/13	T216516 DEVELOPMENT FEE		75,000.00	-573,202.95
01/02/14	T208663 PAYMENT		37,543.50	-610,746.45
01/02/14	T208663 DEVELOPMENT FEE		105,000.00	-715,746.45
01/31/14	RENT-1/1/14-2/28/14	78,087.00		-637,659.45
02/20/14	chk# 10363 CRB0017 PAYMENT		37,543.50	-675,202.95
02/27/14	chk# 10372 CRB0012 PAYMENT		37,543.50	-712,746.45
03/01/14	RENTAL OF LAND&WHARF - BOR (03/2014)	37,543.50		-675,202.95
03/01/14	Late Fee	50.00		-675,152.95
03/21/14	REVISE-RENT 1/1/14-2/28/14 (IJVB059)	-78,087.00		-753,239.95
03/21/14	CORRECT-RNT 1/1/14-2/28/14 (IJVB059)	75,087.00		-678,152.95
03/21/14	WAIVE 3/1/14 LATE FEE	-50.00		-678,202.95
04/01/14	RENTAL OF LAND&WHARF - BOR (04/2014)	37,543.50		-640,659.45
05/01/14	RENTAL OF LAND&WHARF - BOR (05/2014)	37,543.50		-603,115.95
05/01/14	Late Fee	50.00		-603,065.95
05/31/14	WAIVE 5/1/14 LATE FEE	-50.00		-603,115.95
05/31/14	DEVELOPMENT FEES (PRIOR TO 1/1/14)	678,202.95		75,087.00
05/31/14	chk# 1119 CRB0029 PAYMENT		37,543.50	37,543.50
05/31/14	chk# 1120 CRB0030 PAYMENT		37,543.50	0.00
06/01/14	RENTAL OF LAND&WHARF - BOR (06/2014)	70,699.55		70,699.55

CONTINUED

Tenant Ledger

Date: 07/11/19
Tenant Code: bo13120
Property: z01
Unit: 500-1415
Status: Past
Rent: 68,471.04
Deposit: 0.00
Move In Date: 02/12/14
Move Out Date: 04/01/16
Due Day: 1
Tel# (O):
Tel# (H):

HONEY BEE USA, INC.
1001 BISHOP STREET, SUITE 985
ASB TOWER
HONOLULU, HI 96813

Date	Description	Charges	Payments	Balance
	Balance Forward			70,699.55
06/09/14	CORRECT COST CENTER	150,000.00		220,699.55
06/09/14	CORRECT COST CENTER	105,000.00		325,699.55
06/09/14	CORRECT COST CENTER	75,000.00		400,699.55
06/09/14	CORRECT COST CENTER	15,000.00		415,699.55
06/09/14	CORRECT COST CENTER	123,202.95		538,902.50
06/09/14	CORRECT COST CENTER	142,543.50		681,446.00
06/09/14	JB00407 CORRECT COST CENTER		150,000.00	531,446.00
06/09/14	JB00407 CORRECT COST CENTER		105,000.00	426,446.00
06/09/14	JB00407 CORRECT COST CENTER		75,000.00	351,446.00
06/09/14	JB00407 CORRECT COST CENTER		15,000.00	336,446.00
06/09/14	JB00407 CORRECT COST CENTER		123,202.95	213,243.05
06/09/14	JB00407 CORRECT COST CENTER		142,543.50	70,699.55
06/09/14	(Pay# 8231) JB00407 CORR COST CTR	-150,000.00		-79,300.45
06/09/14	(Pay# 8232) JB00407 CORR COST CTR	-105,000.00		-184,300.45
06/09/14	(Pay# 8233) JB00407 CORR COST CTR	-75,000.00		-259,300.45
06/09/14	(Pay# 8234) JB00407 CORR COST CTR	-15,000.00		-274,300.45
06/09/14	(Pay# 8235) JB00407 CORR COST CTR	-123,202.95		-397,503.40
06/09/14	(Pay# 8236) JB00407 CORR COST CTR	-142,543.50		-540,046.90
06/18/14	Check # 6270 paid out		-610,746.45	70,699.55
07/01/14	RENTAL OF LAND&WHARF - BOR (07/2014)	70,699.55		141,399.10
07/01/14	Late Fee	50.00		141,449.10
07/18/14	chk# 1128 CRB0020 PAYMENT		20,000.00	121,449.10
08/01/14	RENTAL OF LAND&WHARF - BOR (08/2014)	70,699.55		192,148.65
08/01/14	Late Fee	50.00		192,198.65
08/22/14	chk# 1136 CRB0006 PAYMENT		192,098.65	100.00
09/01/14	RENTAL OF LAND&WHARF - BOR (09/2014)	70,699.55		70,799.55
09/10/14	chk# 1145 CRB0012 PAYMENT		70,699.55	100.00
10/01/14	RENTAL OF LAND&WHARF - BOR (10/2014)	70,699.55		70,799.55
10/03/14	chk# 1152 CRB0015 PAYMENT		100.00	70,699.55
11/01/14	RENTAL OF LAND&WHARF - BOR (11/2014)	70,699.55		141,399.10
11/01/14	Late Fee	50.00		141,449.10
12/01/14	RENTAL OF LAND&WHARF - BOR (12/2014)	70,699.55		212,148.65
12/01/14	Late Fee	50.00		212,198.65
01/01/15	RENTAL OF LAND&WHARF - BOR (01/2015)	68,471.04		280,669.69
01/01/15	Late Fee	50.00		280,719.69

CONTINUED

Tenant Ledger

Date:	07/11/19
Tenant Code:	bo13120
Property:	z01
Unit:	500-1415
Status:	Past
Rent:	68,471.04
Deposit:	0.00
Move In Date:	02/12/14
Move Out Date:	04/01/16
Due Day:	1
Tel# (O):	
Tel# (H):	

HONEY BEE USA, INC.
1001 BISHOP STREET, SUITE 985
ASB TOWER
HONOLULU, HI 96813

Date	Description	Charges	Payments	Balance
	Balance Forward			280,719.69
02/01/15	RENTAL OF LAND&WHARF - BOR (02/2015)	68,471.04		349,190.73
02/01/15	Late Fee	50.00		349,240.73
03/01/15	RENTAL OF LAND&WHARF - BOR (03/2015)	68,471.04		417,711.77
03/01/15	Late Fee	50.00		417,761.77
03/27/15	INTEREST,DELINQUENT ACCOUNT-10/14	707.00		418,468.77
03/27/15	INTEREST,DELINQUENT ACCOUNT-11/14	1,413.99		419,882.76
03/27/15	INTEREST,DELINQUENT ACCOUNT-12/14	2,120.99		422,003.75
03/27/15	INTEREST,DELINQUENT ACCOUNT-01/15	2,805.70		424,809.45
03/27/15	INTEREST,DELINQUENT ACCOUNT-02/15	3,490.41		428,299.86
03/27/15	INTEREST,DELINQUENT ACCOUNT-03/15	4,175.12		432,474.98
03/27/15	chk# 30624 CRB0016 PAYMENT		417,661.77	14,813.21
04/01/15	RENTAL OF LAND&WHARF - BOR (04/2015)	68,471.04		83,284.25
04/01/15	Late Fee	50.00		83,334.25
05/01/15	RENTAL OF LAND&WHARF - BOR (05/2015)	68,471.04		151,805.29
05/01/15	Late Fee	50.00		151,855.29
06/01/15	RENTAL OF LAND&WHARF - BOR (06/2015)	68,471.04		220,326.33
06/01/15	Late Fee	50.00		220,376.33
07/01/15	RENTAL OF LAND&WHARF - BOR (07/2015)	68,471.04		288,847.37
07/01/15	Late Fee	50.00		288,897.37
08/01/15	RENTAL OF LAND&WHARF - BOR (08/2015)	68,471.04		357,368.41
08/01/15	Late Fee	50.00		357,418.41
09/01/15	RENTAL OF LAND&WHARF - BOR (09/2015)	68,471.04		425,889.45
09/01/15	Late Fee	50.00		425,939.45
10/01/15	RENTAL OF LAND&WHARF - BOR (10/2015)	68,471.04		494,410.49
10/01/15	Late Fee	50.00		494,460.49
11/01/15	RENTAL OF LAND&WHARF - BOR (11/2015)	68,471.04		562,931.53
11/01/15	Late Fee	50.00		562,981.53
12/01/15	RENTAL OF LAND&WHARF - BOR (12/2015)	68,471.04		631,452.57
12/01/15	Late Fee	50.00		631,502.57
01/01/16	RENTAL OF LAND&WHARF - BOR (01/2016)	68,471.04		699,973.61
01/01/16	Late Fee	50.00		700,023.61
02/01/16	RENTAL OF LAND&WHARF - BOR (02/2016)	68,471.04		768,494.65
02/01/16	Late Fee	50.00		768,544.65
03/01/16	RENTAL OF LAND&WHARF - BOR (03/2016)	68,471.04		837,015.69
03/01/16	Late Fee	50.00		837,065.69

CONTINUED

Tenant Ledger

Date:	07/11/19
Tenant Code:	bo13120
Property:	z01
Unit:	500-1415
Status:	Past
Rent:	68,471.04
Deposit:	0.00
Move In Date:	02/12/14
Move Out Date:	04/01/16
Due Day:	1
Tel# (O):	
Tel# (H):	

HONEY BEE USA, INC.
1001 BISHOP STREET, SUITE 985
ASB TOWER
HONOLULU, HI 96813

Date	Description	Charges	Payments	Balance
	Balance Forward			837,065.69
04/01/16	RENTAL OF LAND&WHARF - BOR (04/2016)	68,471.04		905,536.73
04/01/16	Late Fee	50.00		905,586.73
05/01/16	RENTAL OF LAND&WHARF - BOR (05/2016)	68,471.04		974,057.77
05/01/16	Late Fee	50.00		974,107.77
06/01/16	RENTAL OF LAND&WHARF - BOR (06/2016)	68,471.04		1,042,578.81
06/01/16	Late Fee	50.00		1,042,628.81
07/01/16	RENTAL OF LAND&WHARF - BOR (07/2016)	68,471.04		1,111,099.85
07/01/16	Late Fee	50.00		1,111,149.85
08/01/16	RENTAL OF LAND&WHARF - BOR (08/2016)	68,471.04		1,179,620.89
08/01/16	Late Fee	50.00		1,179,670.89
09/01/16	RENTAL OF LAND&WHARF - BOR (09/2016)	68,471.04		1,248,141.93
09/01/16	Late Fee	50.00		1,248,191.93
10/01/16	RENTAL OF LAND&WHARF - BOR (10/2016)	68,471.04		1,316,662.97
10/01/16	Late Fee	50.00		1,316,712.97
11/01/16	RENTAL OF LAND&WHARF - BOR (11/2016)	68,471.04		1,385,184.01
11/01/16	Late Fee	50.00		1,385,234.01
12/01/16	RENTAL OF LAND&WHARF - BOR (12/2016)	68,471.04		1,453,705.05
12/01/16	Late Fee	50.00		1,453,755.05
01/01/17	RENTAL OF LAND&WHARF - BOR (01/2017)	68,471.04		1,522,226.09
01/01/17	Late Fee	50.00		1,522,276.09
02/01/17	RENTAL OF LAND&WHARF - BOR (02/2017)	68,471.04		1,590,747.13
02/01/17	Late Fee	50.00		1,590,797.13
03/01/17	RENTAL OF LAND&WHARF - BOR (03/2017)	68,471.04		1,659,268.17
03/01/17	Late Fee	50.00		1,659,318.17
04/01/17	RENTAL OF LAND&WHARF - BOR (04/2017)	68,471.04		1,727,789.21
04/01/17	Late Fee	50.00		1,727,839.21
05/01/17	RENTAL OF LAND&WHARF - BOR (05/2017)	68,471.04		1,796,310.25
05/01/17	Late Fee	50.00		1,796,360.25
06/01/17	RENTAL OF LAND&WHARF - BOR (06/2017)	68,471.04		1,864,831.29
06/01/17	Late Fee	50.00		1,864,881.29
06/15/17	CANCELLED EFFECTIVE 4/1/16 (RENT)	-1,093,254.27		771,627.02
06/15/17	CANCELLED EFFECTIVE 4/1/16 (LATE FEE)	-650.00		770,977.02
07/01/17	RENTAL OF LAND&WHARF - BOR (07/2017)	68,471.04		839,448.06

Current	30 Days	60 Days	90 Days	Amount Due
0.00	0.00	0.00	839,448.06	839,448.06

From: Hardy Spoehr
To: DLNR.BLNR.Testimony
Cc: Hardy Spoehr
Subject: [EXTERNAL] OPPOSE J-4: to have DOCARE at the fuel dock
Date: Thursday, May 9, 2024 7:42:41 AM

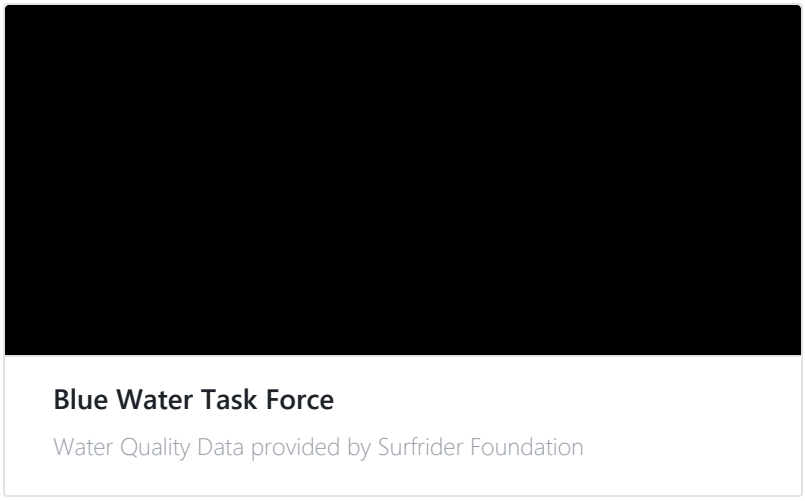
Aloha. We oppose this spot for DOCARE - this spot is ideal for the boaters to once again have a fuel dock and a sewage pump station. DOCARE would best be located at the site of the old Ala Wai Marine building...Please start to include boaters in revamping the masterplan for the area...best, Hardy Spoehr, Spoerh foundation

From:	arleen Velasco
To:	DLNR.BLNR.Testimony
Subject:	[EXTERNAL] J-4 Testimony
Date:	Wednesday, May 8, 2024 7:03:15 PM
Attachments:	SanitaryRegulations.pdf EPA312CoastalWatersLaw (2).pdf

---

Hello BLNR Board,

I have attached a copy of the EPA section 312 "Protecting Coastal Waters from Vessel and Marina Discharges". EPA 312 act requires a state designate their coastal waters as no discharge areas, which then entitles a state to apply for federal grants for upgrading and maintaining their marinas. Why have the coastal waters around each island not been designated a "no discharge area"? The entire coast of California is designated as a no discharge area. There is no working pump out station at the Ala Wai harbor which has over 700 boats. I believe the state might be violating the federal Clean Water Act. This past Sunday, the waters in the canoe launch area of the Ala Wai harbor tested extremely high for the presence of enterococcus bacteria, which is an indicator of the presence of fecal matter(Blue Water Task Force). The reading was 605 and anything over 130 is considered a hazard to humans. The existing location of the not working pump-out station and fuel dock must be repaired so that the waters in our harbor can be safe for the public.



I have also copied a study from the University of Mississippi that details the requirements for each states discharge plan. Hawaii is listed as having no provisions and this is appalling.

Instead of filling such a prime piece of land with trucks and junk, fix the pump-out station and fuel dock, rebuild the store, add picnic areas and make the very prominent entrance to the harbor beautiful again.

Sincerely,

Arleen Velasco

The University of Mississippi
Oxford • Jackson • Tupelo • Southaven

National Sea Grant Law Center
Kinard Hall, Wing E - Room 262
Post Office Box 1848
University, MS 38677-1848
Office Phone: (662) 915-7775
Fax: (662) 915-5267
E-mail: sealaw@olemiss.edu

July 23, 2010

Thomas J. Murray
VIMS Marine Advisory Services
Virginia Institute of Marine Science
College of William & Mary
P.O. Box 1346
Gloucester Point, Virginia 23062

Re: Sanitary Regulations at Marinas (NSGLC-10-04-01)

This product was prepared by the National Sea Grant Law Center under award number NA09OAR4170200 from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of the author and do not necessarily reflect the views of NOAA or the U.S. Department of Commerce.

Dear Tom,

Please find attached the summaries of state laws and regulations mandating sanitary facilities at marinas as requested by the Virginia Sea Grant Marine Extension Program on behalf of the National Clean Marina Committee. Specifically, you were interested in (1) the fixture requirements for restrooms; (2) the requirements for on-site septic system capacity; and (3) the requirements for dump stations and pump-out stations. The attached information is intended as advisory research only and does not constitute legal representation of Virginia Sea Grant or its constituents. It represents our interpretations of the relevant laws and regulations.

This report was prepared using traditional legal research methods. For each state, state laws and regulations were searched using Westlaw, an online legal database, for any provisions addressing sanitary facilities at marinas. Very few states have detailed laws or regulations related to this issue on the books. Subsequent internet searches for many of those states found only references to best management practices in clean marina guidebooks. Marina development requires multiple permits from state and federal agencies, however, and agencies in states without specific laws and regulations may still have the authority to mandate sanitary facilities in individual permits. We did not undertake an analysis of state marina permits, as that was beyond the scope of the research request.

I hope you find the following information useful. The Law Center would be happy to conduct any follow-up research if you or the National Clean Marina Committee have any additional questions.

Thank you for bringing your questions to the Law Center and we look forward to working with you in the future.

Sincerely,

Stephanie E Showalter

Stephanie Showalter
Director, National Sea Grant Law Center

STATE REQUIREMENTS FOR SANITARY INFRASTRUCTURE AT MARINAS

PREPARED BY THE NATIONAL SEA GRANT LAW CENTER
JULY 2010

ALABAMA

Requirements for Sewage Pumpout and Disposal Facilities

An owner, operator, employee, or agent of a marina which does not provide a pumpout station or other approved means of properly disposing of sewage from recreational vessels, must not permit a recreational vessel with a Type III marine sanitation device to moor, anchor, dock, or be stored at the marina. ALA. CODE § 33-6A-5 (2010) (http://www.legislature.state.al.us/codeofalabama/1975/coatoc.htm).

Applicants desiring to construct and operate a new marina or expand an existing marina within the coastal area must demonstrate that adequate sewage pumpout and disposal facilities will be provided for vessels. ALA. ADMIN. CODE r. 335-8-2.04(1)(b)(3) (2010) (http://www.alabamaadministrativecode.state.al.us/docs/adem/index.html).

Requirements for Restroom Facilities

Applicants desiring to construct and operate a new marina or expand an existing marina within the coastal area must demonstrate that adequate restrooms for patrons will be provided. ALA. ADMIN. CODE r. 335-8-2-.04(1)(b)(3) (2010) (http://www.alabamaadministrativecode.state.al.us/docs/adem/index.html).

ALASKA

Requirements for Sewage Pumpout and Disposal Facilities

No provision.

Requirements for Restroom Facilities

No provision.

CALIFORNIA

Requirements for Sewage Pumpout and Disposal Facilities

Every vessel terminal must be equipped with vessel pumpout facilities for the transfer and disposal of sewage from marine sanitation devices. In imposing this requirement, the California regional water quality control board with authority over the terminal must take into account the number and type of vessels that use or are berthed at the vessel terminal and whether there exists at other locations pumpout facilities that have a total capacity sufficient for, and are convenient and accessible to, vessels that use or are berthed at the vessel terminal. CAL. HARB. & NAV. CODE § 776 (2009)

(http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hnc&group=00001-01000&file=775-786).

Requirements for Restroom Facilities

No provision.

CONNECTICUT

Requirements for Sewage Pumpout and Disposal Facilities

The Department of Environmental Protection may require any docking facility constructed with or expanded to 150 slips or more on or after October 1, 1990, and may, on or after the effective date of regulations adopted, order any docking facility in a no discharge zone with 150 slips or more or, if no docking facility has 150 slips, the docking facility with the greatest number of slips to (1) provide and operate pumpout facilities on the premises for marine sanitation device holding tanks or (2) have a valid contract for the use of a reasonably proximate pumpout facility. CONN. GEN. STAT. § 15-172(a) (2010) (http://www.cga.ct.gov/2009/pub/chap268.htm).

The Commissioner of the DEP must adopt regulations in order to carry out the above provisions. Such regulations may include: (1) standards and criteria for the design and operation of pumpout facilities including, but not limited to, the specification of reasonable capacities, number of stations, methods of disposal and standards and criteria for marina sanitation facilities and (2) provisions for contracts for the use of reasonably proximate pumpout facilities. CONN. GEN. STAT. § 15-174 (2010) (http://www.cga.ct.gov/2009/pub/chap268.htm).

Requirements for Restroom Facilities

No provision.

DELAWARE

Requirements for Sewage Pumpout and Disposal Facilities

Regardless of the number of slips, any marina providing other than transient berthing for any vessel containing a Type III marine sanitation device must provide access to a sewage pumpout or dump station. In addition, the marina owner must post signs to identify the location of the marina's pumpout/dump stations. If the marina is not required to provide this service, the marina owner must post a sign identifying the location of the nearest pumpout station. 7-7000-7501 DEL. CODE REGS. § 14.1 (2010) (http://regulations.delaware.gov/AdminCode/title7/7000/7500/7501.shtml).

Owners/operators of marinas that are located in whole or in part on tidal waters of the State, and that provide dockage for vessels with portable toilets or Type III marine sanitation devices must provide convenient access to an approved, fully operable and well maintained pumpout facility and/or dump station for the removal of sewage from said vessels to a DNREC approved sewage disposal system. DEL. CODE ANN. tit. 7, § 6035(a) (2010) (http://delcode.delaware.gov/title7/c060/sc02/index.shtml).

The owner/operator of any boat docking facility that is located in whole or in part on tidal waters of the

State, and that provides dockage for live-aboard vessels with Type III marine sanitation devices, must install and maintain at all times, in a fully operable condition, an approved dedicated pumpout facility at each live-aboard vessel slip for the purpose of removing sewage from the live-aboard vessel on a continuous or automatic, intermittent basis to a Department of Natural Resources and Environmental Control approved sewage disposal system. DEL. CODE ANN. tit. 7, § 6035(b)(2) (2010) (http://delcode.delaware.gov/title7/c060/sc02/index.shtml).

Requirements for Restroom Facilities

Adequate restroom facilities must be provided to discourage any overboard of untreated or inadequately treated sewage from vessels, and to protect water quality. The number of toilets required for any given marina is determined by the nature (recreational, public, or commercial) and size of the marina and by its specific configuration. 7-7000-7501 DEL. CODE REGS. § 11.4.7.3 (2010) (http://regulations.delaware.gov/AdminCode/title7/7000/7500/7501.shtml).

FLORIDA

Requirements for Sewage Pumpout and Disposal Facilities

Marinas must provide sewage pumpout facilities. FLA. ADMIN. CODE ANN. r. 62-312.430(4) (2010) (https://www.flrules.org/gateway/ruleNo.asp?id=62-312.430).

Requirements for Restroom Facilities

No provision.

GEORGIA

Requirements for Sewage Pumpout and Disposal Facilities

Marinas must have an approved disposal system of wastewater generated by boats and upland facilities at the marina. GA. COMP. R. & REGS. 391-2-3.03(6)(a)(14) (2010) (http://rules.sos.state.ga.us/submit.asp?path=d:%5Cdocs%5C391%5C2%5C3%5C&file=03.doc).

Marinas must have a working pumpout facility and dockside wastewater collection system for sanitary wastes from vessels, adequate for the capacity of the marina (number and size of vessels) and require their use by boats using the marina. GA. COMP. R. & REGS. 391-2-3.03(6)(a)(16)(i) (2010) (http://rules.sos.state.ga.us/submit.asp?path=d:%5Cdocs%5C391%5C2%5C3%5C&file=03.doc).

Requirements for Restroom Facilities

The marina should provide onshore restrooms, shower and laundry facilities in the upland component of the project. GA. COMP. R. & REGS. 391-2-3.03(6)(a)(13) (2010) (http://rules.sos.state.ga.us/submit.asp?path=d:%5Cdocs%5C391%5C2%5C3%5C&file=03.doc).

HAWAII

Requirements for Sewage Pumpout and Disposal Facilities

No provision.

Requirements for Restroom Facilities

No provision.

ILLINOIS

Requirements for Sewage Pumpout and Disposal Facilities

At marinas where docking of boats having self-contained toilets is permitted in recreational areas, facilities for disposal of sewage from boat holding tanks must be provided. ILL. ADMIN. CODE tit. 77, § 800.1300(a) (2010) (http://www.ilga.gov/commission/jcar/admincode/077/077008000L13000R.html).

Requirements for Restroom Facilities

Where boat docking facilities are provided in recreational areas, at least one toilet for males and one toilet for females must be available within 200 feet of the facility. ILL. ADMIN. CODE tit. 77, § 800.1300(b) (2010) (http://www.ilga.gov/commission/jcar/admincode/077/077008000L13000R.html).

INDIANA

Requirements for Sewage Pumpout and Disposal Facilities

A person must not operate a marina unless the person provides a pumpout that is in good working order and readily accessible to patrons of the marina. 312 IND. ADMIN. CODE 6-4-3(a)(1) (2010) (http://www.in.gov/legislative/iac/iac_title?iact=312).

Requirements for Restroom Facilities

No provision.

LOUISIANA

Requirements for Sewage Pumpout and Disposal Facilities

No provision.

Requirements for Restroom Facilities

No provision.

MAINE

Requirements for Sewage Pumpout and Disposal Facilities

A marina serving coastal waters must provide a pumpout facility or provide through a written contractual agreement approved by the Maine Department of Marine Resources for a facility to remove sanitary waste from the holding tanks of watercraft. ME. REV. STAT. ANN. tit. 38, § 423-B(2) (2009) (http://www.mainelegislature.org/legis/statutes/38/title38sec423-B.html).

Requirements for Restroom Facilities

No provision.

MARYLAND

Requirements for Sewage Pumpout and Disposal Facilities

Existing marinas wishing to expand to a total of more than 10 slips that are capable of berthing vessels that are 22 feet or larger and new marinas with more than 10 slips that are capable of berthing vessels that are 22 feet or larger must meet the following requirements:

- The wastewater collection and treatment system at the marina must be adequate to handle any existing and increased flow; and

- There must be a pumpout station on-site at the marina that is adequate to handle the increased sewage capacity from vessels that use the marina and that is operable and accessible at reasonable times. MD. CODE ANN., ENVIR. § 9-333(c) (2010) (http://law.justia.com/maryland/codes/gen/9-333.html).

A marina that berths any vessel that is over 22 feet in length and has 50 or more slips must have a pumpout facility and a waste reception facility on-site that is operable, adequate to handle any existing and increased flows, and accessible at reasonable times. MD. CODE ANN., ENVIR. § 9-333(d) (2010) (http://law.justia.com/maryland/codes/gen/9-333.html).

Requirements for Restroom Facilities

No provision.

MASSACHUSETTS

Requirements for Sewage Pumpout and Disposal Facilities

The Division of Water Pollution Control will not issue a license for the operation of a marina unless the marina provides adequate facilities for the collection, treatment, and disposal of sewage or other sanitary waste, including facilities for the purging out and cleaning of holding tanks. MASS. ANN. LAWS ch. 91, § 59B (2010) (http://www.mass.gov/legis/laws/mgl/91-59b.htm).

Any project that includes a new marina, or any expansion of a marina to 10 or more berths greater than the number of berths existing on April 30, 2010, must provide sanitary facilities, including sewage pumpout facilities as appropriate based on the number of berths and type of vessels at the marina, the availability of such facilities nearby, and environmental considerations including the water circulation patterns of the waterway and the proximity of shellfish resources; in general, there should be a sewage pumpout facility for marinas with more than 50 berths, or as otherwise specified in a municipal harbor plan. 310 MASS. CODE REGS. 9.39(1)(a)(3)(b) (2010) (http://www.lawlib.state.ma.us/source/mass/cmr/310cmr.html).

Requirements for Restroom Facilities

The division of water pollution control will not issue a license for the operation of a marina unless the marina provides adequate and conveniently located dockside toilet facilities for the use of the occupants or watercraft. MASS. ANN. LAWS ch. 91, § 59B (2010) (http://www.mass.gov/legis/laws/mgl/91-59b.htm).

Any project that includes a new marina, or any expansion of a marina to 10 or more berths greater than the number of berths existing on April 30, 2010, must provide sanitary facilities, including an adequate number of restrooms and refuse receptacles appropriate for the number of berths at the marina; in general, there should be one toilet fixture per sex for every 50 berths, and refuse receptacles at every gangway and restroom area. 310 MASS. CODE REGS. 9.39(1)(a)(3)(a) (2010) (http://www.lawlib.state.ma.us/source/mass/cmr/310cmr.html).

MICHIGAN

Requirements for Sewage Pumpout and Disposal Facilities

All docking facilities must provide pumpout facilities for marine sanitation device holding tanks on the watercraft. MICH. COMP. LAWS § 324.9504(1) (2010) (http://www.legislature.mi.gov/%28S%28uvcp2buts3frz0jpd2rqbke0%29%29/mileg.aspx?page=getObject&objectName=mcl-324-9504).

A marina required to install a pumpout facility must provide a facility capable of lifting sewage not less than 12 feet under vacuum and delivering it to the receiving facility free from spillage and clogging. MICH. ADMIN. CODE r. 325.2588 (2010) (http://www.state.mi.us/orr/emi/admincode.asp?AdminCode=Single&Admin_Num=32502581&Dpt=&RngHigh=32599408).

Requirements for Restroom Facilities

A marina furnishing boat docking facilities for in excess of 10 transient customers must provide minimum toilet facilities in accordance with a statutory table that delineates the number of toilets, urinals, lavatories, and showers required per number of slips. MICH. ADMIN. CODE r. 325.2587 (2010) (http://www.state.mi.us/orr/emi/admincode.asp?AdminCode=Single&Admin_Num=32502581&Dpt=&RngHigh=32599408).

MINNESOTA

Requirements for Sewage Pumpout and Disposal Facilities

No provision.

Requirements for Restroom Facilities

No provision.

MISSISSIPPI

Requirements for Sewage Pumpout and Disposal Facilities

A wastewater pumpout facility must be provided for the following: marinas that berth more than 25 boats, marinas that berth any boats used in a live-aboard status, marinas that berth a majority of commercial boats. 08-030-007 MISS. CODE. R. § VI (2010). (http://www.deq.state.ms.us/MDEQ.nsf/pdf/Main_WPC-1/$File/WPC-1%20as%20ammended%2001%2028%2010.pdf?OpenElement)

The Mississippi Department of Marine Resources requires that all marinas all marinas have proper disposal facilities on site for all vessel wastes, including, but not limited to: garbage, dishwater, graywater, including drainage of toilets, marine sanitation devices (MSD's), urinals, hospitals and cargo space, harmful substances and hazardous substances, plastics, and victual waste. 22-10-05 MISS. CODE R. § 100 (2006) (http://www.dmr.state.ms.us/ordinances/TITLE-22-PART-10.pdf).

Marinas must have facilities for the collection and disposal of wastewater generated on-site and provide pumpout facilities for the collection and disposal of wastewater from onboard holding tanks. Connections from marina disposal systems to existing sewage collection systems is preferable to collection of waste in a holding tank and holding tanks are preferable to on-site collection and treatment of wastewater. If a holding tank collection system is utilized, proof of a contract with a pumpout service must be provided. 43-000-041 MISS. CODE. R. § 2 (2010). (Text not available online).

Requirements for Restroom Facilities

No provision.

NEW HAMPSHIRE

Requirements for Sewage Pumpout and Disposal Facilities

Applicants for marina construction or expansion must provide the department with plans showing the location of a pumpout facility. N.H. CODE ADMIN R. ANN. ENV-WT 402.16(b)(3) (2010) (http://des.nh.gov/organization/commissioner/legal/rules/).

Requirements for Restroom Facilities

No provision.

NEW JERSEY

Requirements for Sewage Pumpout and Disposal Facilities

Marinas with dockage for 25 or more vessels or any one vessel with live-aboard arrangement must provide for adequate and conveniently located pumpout stations. N.J. ADMIN. CODE § 7:7-7.13(b)(1)(vi) (2010) (http://www.michie.com/newjersey/lpext.dll?f=templates&fn=main-h.htm&cp=).

Discharge from the pumpout facility must either be to a municipal or regional treatment plant where practicable or to a subsurface sewage disposal system; or discharge to a holding tank with waste being removed by a licensed septage hauler. N.J. ADMIN. CODE § 7:7-7.13(b)(3) (2010) (http://www.michie.com/newjersey/lpext.dll?f=templates&fn=main-h.htm&cp=).

Requirements for Restroom Facilities

The marina must provide or maintain restrooms and at least one portable toilet emptying receptacle. N.J. ADMIN. CODE § 7:7-7.13(b)(1)(v) (2010) (http://www.michie.com/newjersey/lpext.dll?f=templates&fn=main-h.htm&cp=).

Discharge from the restroom facilities must either be to a municipal or regional treatment plant where practicable, or to a subsurface sewage disposal system designed with capacity to accommodate the new restroom facilities; restrooms must provide both hot and cold water and be maintained in a sanitary, warm, dry, brightly-lit and well-ventilated condition; the restroom building must be set back a minimum of 100 feet from the mean high water line unless the Department of Environmental Protection determines that there is no alternate location; and the restroom building must be set back a minimum of 50 feet from the inland limit of any wetlands, unless the Department determines that there is no alternate location. N.J. ADMIN. CODE § 7:7-7.13(b)(2) (2010) (http://www.michie.com/newjersey/lpext.dll?f=templates&fn=main-h.htm&cp=).

NEW YORK

Requirements for Sewage Pumpout and Disposal Facilities

No provision.

Requirements for Restroom Facilities

No provision.

NORTH CAROLINA

Requirements for Sewage Pumpout and Disposal Facilities

The owner or operator of any large vessel marina that is located on coastal waters designated as a no discharge zone by the EPA or that is located in a county or municipality that has adopted a resolution to petition the EPA for a no discharge zone designation must either (i) install and maintain an operational pumpout facility at the marina that is available to customers patronizing the marina or (ii) contract with an outside service provider to provide pumpout services on a regular basis to the marina. N.C. GEN. STAT. § 77-126(a) (2010) (http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/BySection/Chapter_77/GS_77-126.html).

The Department must establish appropriate criteria for pumpout facilities and pumpout services provided at large vessel marinas that offer docking services to the general public. The criteria must include the following requirements: that the facility or services be available to the public and that the facility be open during normal hours. N.C. GEN STAT. § 77-127(a) (2010) (http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/BySection/Chapter_77/GS_77-127.html).

The Department must also establish appropriate criteria for pumpout facilities and services provided at privately owned large vessel marinas that do not offer docking services to the general public. The criteria must include the following requirement: that the facility or services be made reasonably available to members of the private marina. N.C. GEN STAT. § 77-127(b) (2010) (http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/BySection/Chapter_77/GS_77-127.html).

Requirements for Restroom Facilities

No provision.

OHIO

Requirements for Sewage Pumpout and Disposal Facilities

The licensee of a marina which provides dockage for watercraft with permanently installed sewage holding tanks must provide a sewage pumpout facility. OHIO ADMIN. CODE 3701-35-05(D) (2010) (http://codes.ohio.gov/oac/3701-35).

No person may: (1) construct a marina unless the director of health has approved detailed plans for the proposed sanitary facilities as being adequate; (2) alter the sanitary facilities of a marina unless the director of health has approved detailed plans for the alterations as providing adequate sanitary facilities; (3) substantially increase the size or number of watercraft using the marina so as to affect the adequacy of existing sanitary facilities unless the director of health has approved the plans for the increase as providing adequate sanitary facilities. OHIO ADMIN. CODE 3701-35-03(A) (2010) (http://codes.ohio.gov/oac/3701-35).

Requirements for Restroom Facilities

Restroom facilities, including portable toilets, must be maintained in a safe and sanitary condition, and comply with the following: (1) Water closets and urinals must be available for both men and women within 500 feet from the farthest mooring at the marina; (2) a hand washing facility must be supplied with potable water, detergent or soap, and approved drying facilities, or hand sanitizer; (3) A shower facility, if provided, must be supplied with potable water for human consumption. OHIO ADMIN. CODE 3701-35-04(D) (2010) (http://codes.ohio.gov/oac/3701-35).

OREGON

Requirements for Sewage Pumpout and Disposal Facilities

No provision.

Requirements for Restroom Facilities

No provision.

PENNSYLVANIA

Requirements for Sewage Pumpout and Disposal Facilities

No provision.

Requirements for Restroom Facilities

No provision.

RHODE ISLAND

Requirements for Sewage Pumpout and Disposal Facilities

No provision.

Requirements for Restroom Facilities

No provision.

SOUTH CAROLINA

Requirements for Sewage Pumpout and Disposal Facilities

For marinas, including commercial and community docks with more than 250 linear feet of effective docking space, adequate working wastewater pumpout facilities must be provided at each marina.

These facilities must be adequate to handle all wastewater generated at the marina. The marina operator may charge a reasonable fee for the use of the pumpout facilities. S.C. CODE ANN. REGS. 30-12(E)(3)(b)(i) (2009) (http://www.scstatehouse.gov/coderegs/c030.htm).

Requirements for Restroom Facilities

For marinas, including commercial and community docks with more than 250 linear feet of effective docking space, adequate bathroom facilities must be provided in order to discourage any overboard discharge of sewage from boats. The number of toilets required for any given marina is determined by the nature and size of the marina and by its specific site location. However, two toilets and one lavatory for women and one toilet, one urinal, and one lavatory for men are required for all marinas with 100 or fewer slips, and unless there are mitigating circumstances, the Department must require one toilet and one lavatory for women and one toilet, one urinal, and one lavatory for men for every additional 100 boat slips or fraction thereof. Toilet facilities must be constructed in a location to encourage their use. Additional facilities may be required where restaurants, motels, laundries, and other non-water-dependent structures are located in close proximity to the marina. S.C. CODE ANN. REGS. 30-12(E)(3)(b)(ii) (2009) (http://www.scstatehouse.gov/coderegs/c030.htm).

TEXAS

Requirements for Sewage Pumpout and Disposal Facilities

Marinas with the capacity for long-term anchorage of more than 10 vessels must provide pumpout facilities for marine toilets, or other such measures or facilities that provide an equal or better level of water quality protection. 31 TEX. ADMIN. CODE § 501.24(a)(3) (2010) (http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=31&pt=16&ch=501&rl=24).

Requirements for Restroom Facilities

No provision.

VIRGINIA

Requirements for Sewage Pumpout and Disposal Facilities

All marinas and other places where boats are moored which allow overnight docking or mooring of boats, regardless of size or number of boat moorings, must provide pumpout facilities for pumping or removing sewage from boats. These pumpout facilities must include all the equipment, structures, and treatment or disposal facilities necessary to ultimately discharge or dispose of boat sewage in an efficient and sanitary manner without causing a public health hazard. Marinas and other places where boats are moored which do not allow boats with an installed toilet with a discharge overboard or a sewage holding tank to use any of the services provided, including moorage, except in an emergency, are exempt from this requirement.

- Where pumpout facilities are required, the owner must install, maintain in good operating condition, and provide pumpout during normal working hours to users of the marina or other

places where boats are moored except in those cases where adequate facilities are provided in accordance with subsection B of this section (next paragraph), then, the normal working hours requirement will apply to the facility using the agreement, as well as the facility with the alternate pumpout service.

- Marinas and other places where boats are moored which provide less than 50 seasonal (or transient) slips for boats of 26 feet or more in length and less than 20 seasonal (or transient) slips for boats of 40 feet or more in length may be exempted from the requirement to install pumpout facilities. Such exemption will be granted by the director of the division whenever alternate pumpout service is provided at a nearby marina or other place where boats are moored. 12 VA. ADMIN. CODE § 5-570-180 (2010) (http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+12VAC5-570-180).

All marinas and other places where boats are moored, regardless of size or number of boat moorings, must have an acceptable receiving station for sewage from portable toilets used on boats. The owner must install, maintain in good operating condition, and provide a sewage dump station to users of the marina or other places where boats are moored. Certain exceptions apply.

- Where a sewage dump station is required, the owner must install, maintain in good operating condition, and provide the facilities to users of the marina or other places where boats are moored. 12 VA. ADMIN. CODE § 5-570-190 (2010) (http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+12VAC5-570-190).

Requirements for Restroom Facilities

Marinas are required to install restrooms in accordance with a table that delineates the minimum number of commodes, urinals, lavatories, and showers per number of slips. 12 VA. ADMIN. CODE 5-570-150 (2010) (http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+12VAC5-570-150).

WASHINGTON

Requirements for Sewage Pumpout and Disposal Facilities

A marina which meets one or more of the following criteria must be designated by the State Parks and Recreation Commission as appropriate for installation of a sewage pumpout or dump unit:

- The marina is located in an environmentally sensitive or polluted area; or
- The marina has 125 slips or more and there is a lack of sewage pumpout or dump units within a reasonable distance. WASH. REV. CODE § 79A.60.530(1) (2010) (http://apps.leg.wa.gov/rcw/default.aspx?cite=79A.60.530).

In addition, the Commission may at its discretion designate a marina as appropriate for installation of a sewage pumpout or dump unit if there is a demonstrated need for a sewage pumpout or dump unit at the marina based on professionally conducted studies undertaken by federal, state, or local government, or the private sector; and it meets the following criteria:

- The marina provides commercial services, such as sales of food, fuel, or supplies, or overnight or live-aboard moorage opportunities;

- The marina is located at a heavily used boating destination or on a heavily traveled route; or
- There is a lack of adequate sewage pumpout or dump unit capacity within a reasonable distance. WASH. REV. CODE § 79A.60.530(2) (2010) (http://apps.leg.wa.gov/rcw/default.aspx?cite=79A.60.530).

Requirements for Restroom Facilities

No provision.

WISCONSIN

Requirements for Sewage Pumpout and Disposal Facilities

A self-priming pump, suitable for pumping sewage, must be provided for the on-shore removal of sewage from boat holding tanks and toilets. Head characteristics and capacity must be based on installation needs for the site. WIS. ADMIN. CODE COMM. § 86.08(1) (2010) (http://nxt.legis.state.wi.us/nxt/gateway.dll?f=templates&fn=default.htm&d=code&jd=ch. comm 86).

Requirements for Restroom Facilities

No provision.

United States
Environmental
Protection Agency

Office of Water
Washington, DC 20460

EPA 842-B-94-004
August 1994

EPA

Protecting Coastal Waters from Vessel and Marina Discharges:

A Guide for State and Local Officials

Volume I. Establishing No Discharge Areas under §312 of the Clean Water Act

FINAL

PROTECTING COASTAL WATERS FROM VESSEL AND MARINA DISCHARGES: A GUIDE FOR STATE AND LOCAL OFFICIALS

Volume I. Establishing No Discharge Areas under §312 of the Clean Water Act

Prepared by

ENVIRONMENTAL PROTECTION AGENCY
Oceans and Coastal Protection Division
Washington, DC

AUGUST 1994

Prepared under

EPA Contract No. 68-C2-0134
Work Assignment No. 1-25

Acknowledgement

This guidance document was prepared for the U.S. Environmental Protection Agency, Office of Wetlands, Oceans, and Watersheds, Oceans and Coastal Protection Division under EPA Contract No. 68-C2-0134 by Battelle Ocean Sciences, Duxbury, MA and A.T. Kearney, Inc., Alexandria, VA.

Table of Contents

Table of Contents (cont'd)

List of Exhibits

Purpose

As recreational and commercial vessel traffic continues to increase in volume, harmful discharges resulting from the operation, maintenance, and protection of vessels is proportionately increasing in importance for water quality issues. Although individual discharges from vessels and marinas are relatively small scale, their combined effects can significantly degrade water quality and marine habitats. Fortunately, there are methods readily available to help control these discharges and protect the marine environment.

Protecting Coastal Waters from Vessel and Marina Discharges: A Guide for State and Local Officials was developed as a reference tool for individuals interested in learning about the options available for addressing impacts linked to vessel and marina discharges. Examples of vessel and marina discharges likely to enter adjacent waters include: effluents from vessel repair and maintenance; storm water runoff from marina parking lots; effluents from vessel fuel docks at marinas; and vessel sewage. Most discharges from vessels and marinas have some harmful effect on the marine environment and are important to control. However, all of these discharges cannot be effectively addressed in one concise document, so this guidance document focuses on only one type of vessel/marina-generated discharge -- vessel sewage. Due to recent legislation and regulations to implement Federally-sponsored programs related to the discharge of vessel sewage, this particular type of discharge was selected as the focus of this guidance document. This document addresses other types of discharges (e.g., storm water runoff from marinas) by including general information on programs implemented to support protection of waters from these discharges.

Audience

This guidance document was designed as a reference tool for state and local officials interested in protecting waters in their jurisdiction from vessel sewage discharges. The application of information provided in this document is not limited to these individuals, but may also be helpful to marina owners and operators, Publicly Owned Treatment Works operators, recreational boaters, and other individuals with an interest in this issue or a desire to learn more about marine sanitation.

Overview

This document begins by providing background information related to marine sanitation and vessel sewage and builds to more detailed, specific guidance on vessel sewage control options.

Overview (cont'd)

The background information on vessel sewage and marine sanitation includes definitions of basic terminology (e.g., three types of marine sanitation devices, five types of pumpout facilities), an overview of key issues, and a summary of relevant Federal statutes and regulations.

The remainder of the guidance document provides step-by-step instructions for individuals who would like to apply for U.S. Environmental Protection Agency (EPA) approval of an area as a "No Discharge Area" (vessels travelling in the area are prohibited from discharging both treated and untreated sewage). One section of the guidance document is dedicated to describing the Clean Water Act §312 No Discharge Area application process and regulatory requirements. A sample application is provided for reference. Strategies to achieve compliance in an EPA-approved No Discharge Area through public outreach and enforcement are also provided in the guidance document.

There are several appendices that provide supplemental information to the guidance document. These appendices are as follows:

A. Overview of Storm Water and Wetlands Programs

B. Summary of Federal Programs and Tools Related to the Discharge of Vessel Sewage

C. Relevant Federal Regulations on Vessel Sewage

D. Sample §312(f)(3) No Discharge Area Application

E. List of Contacts

F. Annotated List of References Related to the Discharge of Vessel Sewage

Section 1: Introduction

How can a state/local official's jurisdiction address vessel sewage discharges?

One source of water pollution -- sewage released or discharged from recreational and commercial vessels -- has been in the spotlight recently. Although the volume of sewage discharged from vessels is less than pollution resulting from other sources (e.g., agricultural runoff, industrial effluent), the areas where this type of pollution usually occurs are particularly vulnerable. Typically marinas are located in areas where flushing occurs at a slow rate, therefore, any pollutants deposited in the area may remain there or only be slowly flushed out. Proper marina design and location can help alleviate some of the flushing-related problems. Many shellfish harvesting beds and recreational swimming areas are naturally located near marinas or other low-flushing areas. The presence of raw sewage in these and other sensitive areas can pose a health threat to the general public. In addition, the aesthetic value of an area can be damaged with the presence of sewage.

Section 312 of the Clean Water Act (CWA), and subsequent Environmental Protection Agency (EPA) regulations (40 CFR Part 140), provides state and local governments the opportunity to apply for the approval of a defined area as a "No Discharge Area." This Federal approval allows for complete prohibition of the discharge of treated and untreated vessel sewage into the waters of an approved No Discharge Area. This approval is one of the primary tools available to state and local governments to provide additional protection of waters from vessel sewage discharges.

This document is designed to provide state and local government personnel, who are interested in protecting waters within their jurisdiction from sewage discharged from recreational or commercial vessels, with both basic and detailed information on the relevant regulations, key issues, and possible solutions to the problem. In addition to this background information, the guidance document focuses on the procedures of implementing No Discharge Area approvals for vessel sewage under CWA §312. This document may also be a useful reference for marina owners and operators.

Although this document focuses on the issue of vessel sewage discharges, it is recognized that state and local officials and other readers may be interested in marina-generated discharges unrelated to vessels (e.g., storm water runoff). Information is provided in Appendix A on two fundamental Federal government-sponsored programs which address marina-generated discharges. These programs are the EPA National Pollutant Discharge Elimination System (NPDES) Storm Water Program and the EPA/U.S. Army Corps of Engineers Wetlands Program.

In addition to this introduction, the guidance document has five sections beginning with background information on the issue and leading to more detailed, specific guidance

needed to apply for a No Discharge Area and strategies to achieve compliance in an approved No Discharge Area. The organization of this guidance document is centered around six questions related to the control of recreational and commercial vessel sewage discharges. Each of the six sections of the document provides answers to one of the questions. These questions and their corresponding section numbers and titles are presented in Exhibit 1. The content of each section is briefly summarized below.

- **Section 2: Background Information**. This section provides a basic foundation of knowledge on marine sanitation devices, sanitary waste reception facilities (i.e., pumpout facilities, portable toilet dump stations), and issues related to vessel sewage discharge and management which are relevant to the remainder of the guidance document.

- **Section 3: Overview of Key Federal Statutes and Regulations**. The four Federal laws most relevant to this issue, and the related regulations, are summarized in this section. These laws are the Federal Water Pollution Control Act of 1956 (also referred to as the Clean Water Act), the Clean Vessel Act of 1992, and the Coastal Zone Management Act of 1972 and the Coastal Zone Act Reauthorization Amendment of 1990.

- **Section 4: Guidelines for No Discharge Area Application Process under CWA §312**. For governments that plan on proposing an area to EPA for No Discharge Area approval under CWA §312(f)(3), §312(f)(4)(A), or §312(f)(4)(B), this section provides step-by-step instructions on how to prepare and submit the application.

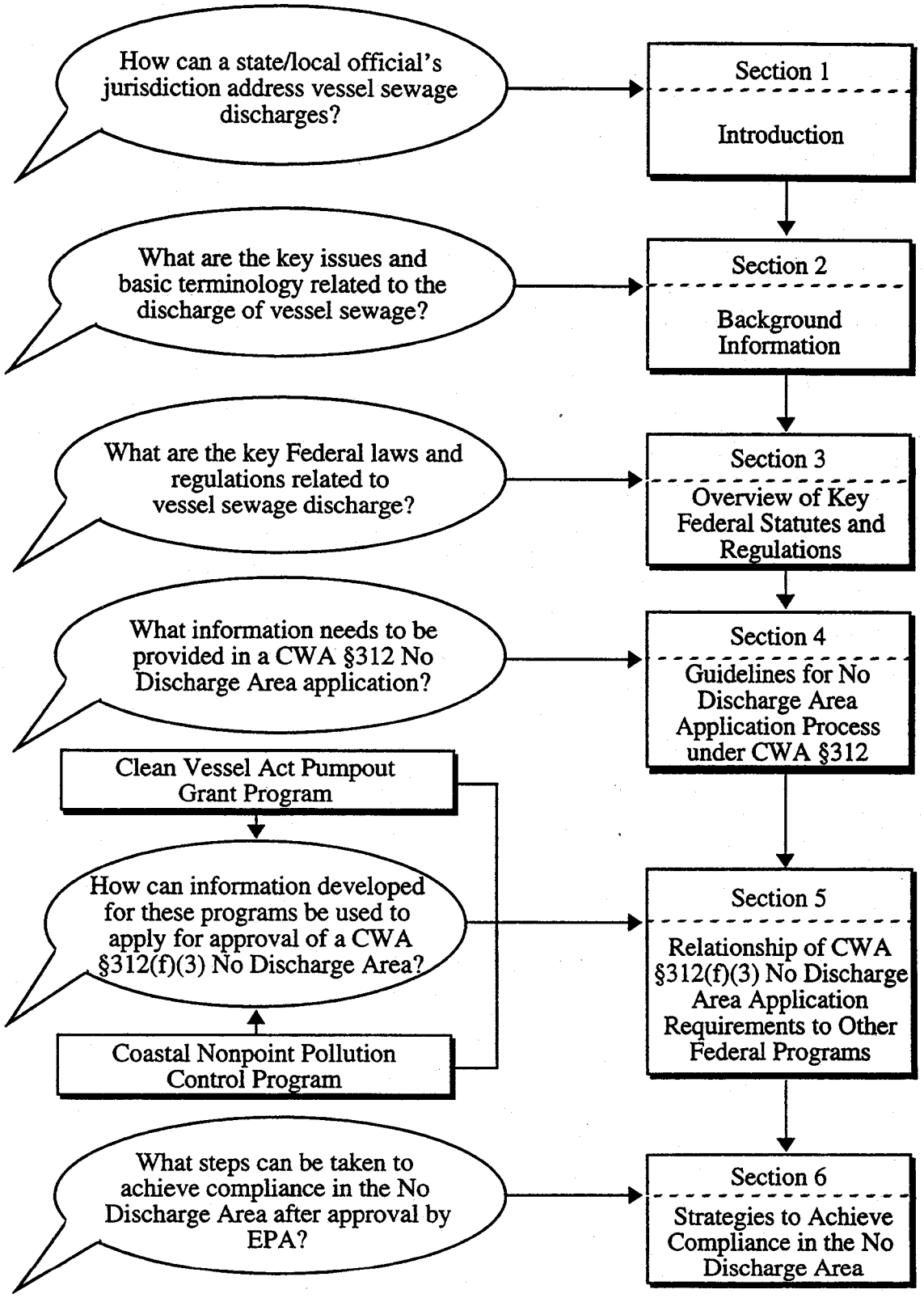
- **Section 5: Relationship of CWA §312(f)(3) No Discharge Area Application Requirements to Other Federal Programs**. For governments that have already developed a Coastal Nonpoint Pollution Control Program or applied for a grant under the Clean Vessel Act Pumpout Grant Program, this section correlates elements of these programs with the CWA §312(f)(3) No Discharge Area application requirements.

- **Section 6: Strategies to Achieve Compliance in the No Discharge Area**. This section provides guidance on public outreach and enforcement after EPA approves a No Discharge Area application.

Six appendices at the end of the document provide additional reference material:

- **Appendix A: Overview of Storm Water and Wetlands Programs.** Information on two programs that address marina-generated discharges that are not related to vessels is provided in this appendix. These programs are the EPA NPDES Storm Water Program and the EPA/U.S. Army Corps of Engineers Wetlands Program.

Overview Of Guidance Document



- **Appendix B: Summary of Federal Programs and Tools Related to the Discharge of Vessel Sewage.** Appendix B provides a summary of the key financial, technical, and policy programs and related tools, sponsored by the U.S. Federal government, which provide support to organizations and governments on the subject of vessel sewage discharges.

- **Appendix C: Relevant Federal Regulations on Vessel Sewage.** Several Federal regulations are referenced throughout the guidance document. Copies of the following key relevant Federal regulations are provided for the guidance document user.

  -- 40 CFR Part 140: EPA Marine Sanitation Device Standard Regulations
  -- 33 CFR Part 159 (Subpart A): U.S. Coast Guard Marine Sanitation Device Regulations
  -- 50 CFR Part 85: Clean Vessel Act Pumpout Grant Program (Federal Register, Vol. 59, No. 47, March 10, 1994, pp. 11204-11209)
  -- Clean Vessel Act: Pumpout Station and Dump Station Technical Guidelines (Federal Register, Vol. 59, No. 47, March 10, 1994, pp. 11290-11306)

- **Appendix D: Sample §312(f)(3) No Discharge Area Application.** As a tool for the guidance document user, this appendix provides a complete hypothetical sample application for approval of an area as a No Discharge Area under CWA §312(f)(3). Each part of this sample application is presented and discussed separately throughout Section 4 (Guidelines for No Discharge Area Application Process under CWA §312).

- **Appendix E: List of Contacts.** A list of contacts by contact category (e.g., Federal) is provided in Appendix E. The list can be used to obtain additional information on Federal programs of interest in Appendix B as well as other programs implemented at a state or local level.

- **Appendix F: Annotated List of References Related to the Discharge of Vessel Sewage.** An annotated list of references has been compiled on documents related to the issue of sewage discharge from vessels. The guidance document user will find the list to be a useful tool when additional, in-depth information is desired on a specific topic. A key word guide is available near the front of the appendix to provide easy access to information.

Section 2: Background Information

What are the key issues and basic terminology related to the discharge of vessel sewage?

There is some basic terminology related to sanitary waste from vessels which would be helpful to learn or review before proceeding. The following sections provide regulatory background and definitions relevant to marine sanitation devices, describe the different types of marine sanitary waste reception facilities, and provide an overview of sewage discharge and management issues. Terminology highlighted in a box provides detailed definitions or other basic information pertaining to the section, but can usually be skipped or quickly reviewed by those with a general knowledge of the subject.

For supplemental information on topics related to the discharge of sanitary waste from vessels, an annotated list of references, including a key word guide, is provided in Appendix F.

2.1 Marine Sanitation Device Definitions and Background

Under Section 312 of the Clean Water Act (CWA), a marine sanitation device, commonly referred to as a MSD, "includes any equipment for installation on board a vessel which is designed to receive, retain, treat, or discharge sewage, and any process to treat such sewage." A MSD is a permanently installed device connected to the vessel's marine head, or toilet.

Two U.S. Federal government agencies, the EPA and the U.S. Coast Guard, have been given authority through CWA §312 to regulate MSDs. EPA is responsible for establishing standards of performance (effluent levels) for vessel MSDs (see 40 CFR Part 140). The U.S. Coast Guard is responsible for providing MSD certification, design, construction, and testing regulations consistent with these EPA standards (see 33 CFR Part 159). Section 3 of this guidance document provides a detailed discussion of the CWA and the MSD regulations.

There are three types of MSDs (I, II, and III) used to meet different needs and effluent level requirements.

MSD Types	
Type I (Vessel size = <65 ft.)	This MSD is a flow-through type where the sewage is filtered through an on-board treatment system and then directly discharged. The Type I MSD is required to produce an effluent having a fecal coliform bacteria count not greater than 1,000 per 100 milliliters and no visible floating solids. Type I devices rely on maceration and disinfection for treatment of the sanitary waste prior to discharge into the water.
Type II (Vessel size = >65 ft.)	This MSD is a larger flow-through type device. The Type II MSD is required to produce an effluent having a fecal coliform bacteria count not greater than 200 per 100 milliliters and suspended solids not greater than 150 milligrams per liter. The Type II device is similar to the Type I; however, the Type II provides an advanced form of the same type of treatment and discharges wastes with lower fecal coliform and suspended solids counts.
Type III (All vessel sizes)	This MSD is designed to prevent the overboard discharge of treated or untreated sewage. Type III MSDs are commonly called holding tanks because the sewage flushed from the marine head is deposited into a tank containing deodorizers and other non-treatment chemicals. The contents of the holding tank are stored until the boater can properly dispose of them at a shoreside pumpout facility. Type III MSDs can be equipped with a discharge option, usually called a Y-valve, which allows the boater to direct the sewage from the head either into the holding tank or directly overboard (which is legal only outside the U.S. navigable waters, or 3 or more miles from shore).

As of January 30, 1980, a vessel must be equipped with one of the three MSD types if the vessel has an installed toilet. Since portable toilets can be moved on and off a vessel, they are not considered installed toilets, therefore, they are not subject to the MSD regulations. Vessels over 65 feet in length are required to equip all installed toilets with a Type II or Type III MSD.

2.2 Overview of Sanitary Waste Reception Facility Types

For vessels that are not equipped with Type I or Type II MSDs, there are several types of reception facilities designed to receive sanitary waste generated on vessels. For boaters who use Type III MSDs, or holding tanks, shoreside pumpout stations empty the holding tank and dispose of the sewage. Portable toilets can also be emptied at some pumpout stations, but it is becoming more common to have a separate, designated facility, called a dump station, for dumping the contents of portable toilets.

2.2.1 Pumpout Facilities

For vessels using Type III MSDs, shoreside facilities need to be available to periodically empty, or pump out, the holding tank contents. There are four general types of pumpout facility systems: stationary; mobile; portable; and remote operated multi-station. These pumpout systems use one of five types of pumps to collect sewage from vessel holding tanks: centrifugal, reciprocating, vacuum, flexible vein impeller, and progressive cavity.

Stationary Pumpout System

The most common type of pumpout system is positioned at a centralized stationary location (i.e., pier, dock, or bulkhead) in a port or marina. This type of pumpout facility has one or more hoses available for pumping out holding tanks. Vessels temporarily dock, attach a flexible hose to the vessel's holding tank deck fitting, and the pump empties the holding tank contents into an onshore holding tank, a truck equipped with a holding tank, or a wastewater collection and treatment system (either public or private). This type of pumpout facility is also referred to as a marina-wide system because it services the entire marina from one location, so each vessel must come to the dock to use the pumpout.

Mobile Pumpout System

A mobile pumpout system is similar to the stationary pumpout system, however, the equipment is situated on a vessel instead of onshore. This type of system is more adaptable than the shoreside stationary system because the pumpout can relocate to wherever a vessel is moored, docked, or anchored and, therefore, can usually accommodate vessels with deeper draughts than shoreside facilities. The sewage pumped out of vessels is stored in a large holding tank which is then emptied into a stationary pumpout system or directly into an onshore wastewater collection and treatment system.

Portable Pumpout System

The portable pumpout system is typically a cart, or other movable object, equipped with a pump mechanism and a small holding tank. The entire system is moved around the dock or marina to service vessels docked at any location. The contents of the system's holding tank are discharged periodically into a larger holding tank or to an on-site wastewater collection and treatment system. This collection system usually requires more operation and maintenance attention than the other collection systems.

Remote Operated Multi-Station System

The remote operated multi-station system, also known as a slipside system, has permanently-installed pumpout hoses that connect to each vessel slip in the marina. It is a less common collection system primarily because of the greater cost of design and installation. This type of system provides continuous wastewater collection on demand, therefore, it is useful in areas with a high percentage of live-aboards. The wastewater collected through each hose is fed into a central holding tank for disposal.

2.2.2 Portable Toilet Dump Stations

Many smaller vessels are not equipped with installed toilets, therefore, if they provide on-board sanitary facilities, they use portable toilets. Some marinas use a designated stall in the public restrooms as a dump station for portable toilets. This approach is not recommended, as it can be very unsanitary and hazardous. The best alternative is the

installation of a portable toilet dump station which is designed to provide a sanitary receiving unit for dumping the contents of the portable toilet and for rinsing it out.

2.3 Overview of Sewage Discharge and Management Issues

The discharge of sewage from vessels is considered to be a type of nonpoint source pollution. Point sources of pollution include water pollutants that originate from a specific location (e.g., outlet pipe from an industrial facility into a river). Conversely, types of nonpoint source pollution originate from an undefined location (e.g., streambank and shoreline erosion). The following sections discuss the environmental concerns, management issues, and vessel sewage treatment issues related to the nonpoint pollution source of vessel sewage.

2.3.1 Environmental Concerns

The discharge of raw and partially treated sewage poses a serious threat to the surrounding environment. The introduction of microbial pathogens, one of the harmful elements of sewage, into the environment can cause a significant degradation of water quality. The degree to which the environment is affected depends on the characteristics of the waterbody polluted by the sewage. Low flushing areas (e.g., bays with a small outlet/inlet) are more susceptible to the effects of discharged sewage than those areas that have greater hydrologic flushing activity (e.g., oceans).

This degradation of water quality has its effects on the marine habitat and recreational and tourism activities in the contaminated area. The presence of sewage in water increases biological oxygen demand (BOD) which then affects the production, growth, and sanitation of fish and shellfish. The presence of sewage can also close beaches and swimming areas as a measure to protect the public's health. Even perceptions of waste problems caused by infrequent closures can result in a reduction in the usefulness of a beach to recreational users.

Not only is the presence of raw sewage in water potentially harmful, but treated sanitary waste can also be detrimental to the environment. The sewage discharged by MSDs is treated with chlorine, quaternary ammonia, and formaldehyde, which can all pose threats to the marine environment, especially if present in substantial, concentrated amounts.

2.3.2 Management Issues

Besides the environmental issues related to the discharge of vessel sewage, there are several considerations for management of proper sewage disposal. These issues include:

- Effective education of the boater, marina owner/operator, and Publicly Owned Treatment Works operator of proper disposal practices for vessel sewage;
- Practical and effective discharge enforcement techniques; and

- Appropriate methods of disposal for boater sanitary waste after collection at the pumpout facility or dump station.

Section 6 (Strategies to Achieve Compliance in the No Discharge Area) discusses the issues related to public education and enforcement.

2.3.3 Cooperation of Publicly Owned Treatment Works

Publicly Owned Treatment Works (POTWs) are sometimes reluctant to accept sanitary waste that has been collected from vessels because they think that the disinfecting chemicals and deodorizers used in MSDs harm the biological processes used at the POTWs. There have been several studies (see Appendix F) that address this issue and suggest that this reluctance is unfounded. The other potential problem with POTWs treating vessel sewage is the high concentration of sewage to water in comparison to normal household sewage. POTWs on the Great Lakes have accepted vessel sewage for more than 20 years without any treatment or operation problems. Any obstacles related to vessel sewage acceptance by POTWs can generally be overcome by making arrangements between the waterfront facilities offering pumpout and dump services and the POTW. The state can assist marinas facing this challenge by drafting a letter to the POTW written on behalf of the marina that states the POTW should accept vessel sewage from the marina's pumpout facility and/or dump station.

Section 3: Overview of Key Federal Statutes and Regulations

What are the key Federal laws and regulations related to vessel sewage discharge?

There are three key Federal laws which relate to the discharge of sewage from vessels into waterways. These statutes, including their subsequent amendments, are:

- Federal Water Pollution Control Act of 1956 (also referred to as the Clean Water Act);
- Clean Vessel Act of 1992; and
- Coastal Zone Management Act of 1972 (CZMA) and Coastal Zone Act Reauthorization Amendment of 1990 (CZARA).

These laws and the relevant regulations are described in the following sections. See Appendix C for copies of the relevant regulations.

3.1 Federal Water Pollution Control Act of 1956 (Clean Water Act)

Section 312 (33 U.S.C. 1322) of the Clean Water Act (CWA), entitled "Marine Sanitation Devices," provides the Federal laws pertaining to MSDs. Among other things, CWA §312:

- Identifies which new and existing vessels are expected to comply with the law and when compliance is mandatory.

- Allows states to "adopt and enforce a statute or regulation with respect to design, manufacture, or installation or use of any marine sanitation device on a **houseboat**, if such statute or regulation is more stringent than" those standards established under the Act.

- Provides an opportunity for states to apply for a complete prohibition of vessel sewage discharge, treated and untreated, in some or all of the state's waters (CWA §312 otherwise generally provides that states may not regulate MSDs).

- Establishes fines for non-compliance (individuals who operate a vessel with an installed toilet, which is not connected to a certified MSD on the U.S. navigable waters, are subject to a civil penalty of not more than $2,000 for each violation).

The U.S. Coast Guard (or any other Federal or state government entity under agreement with the U.S. Coast Guard) is responsible for enforcing the provisions of CWA §312.

CWA §312 designates the EPA with responsibility for developing effluent performance standards for MSDs. The Act also designates the U.S. Coast Guard as the agency responsible for providing MSD design, construction, installation, and operation regulations, and for certifying and enforcing compliance of the MSDs with the EPA regulations.

CWA §312 also provides states with the opportunity to apply to EPA for a complete prohibition of vessel sewage (treated and untreated) in all or some of a state's waters. The area designated for no discharge, if approved by EPA, is called a No Discharge Area. There are three parts of CWA §312 that are related to the establishment of No Discharge Areas.

> **§312(f)(3).** After the effective date of the initial standards and regulations promulgated under this section, if any State determines that the protection and enhancement of the quality of some or all of the waters within such States require greater environmental protection, such State may completely prohibit the discharge from all vessels of any sewage, whether treated or not, into such waters, except that no such prohibition shall apply until the Administrator determines that adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels are reasonably available for such water to which such prohibition would apply. Upon application of the State, the Administrator shall make such determination within 90 days of the date of such application.
>
> **§312(f)(4)(A).** If the Administrator determines upon application by a State that the protection and enhancement of the quality of specified waters within such State require such a prohibition, he shall by regulation completely prohibit the discharge from a vessel of any sewage (whether treated or not) into such waters.
>
> **§312(f)(4)(B).** Upon application by a State, the Administrator shall, by regulation, establish a drinking water intake zone in any waters within such State and prohibit the discharge of sewage from vessels within that zone.

Most states have designated and gained approval of No Discharge Areas under §312(f)(3). This method requires the state to demonstrate a need for the discharge prohibition and the existence of adequate sanitary waste reception facilities. The other two methods under CWA §312 typically have fewer conditions to meet because the proposed No Discharge Area is an area of particular environmental importance [§312(f)(4)(A)] or is a proposed drinking water intake zone [§312(f)(4)(B)]. The relevant regulations promulgated under CWA §312 are described in the following section.

3.1.1 40 CFR Part 140: EPA Marine Sanitation Device Standards

CWA §312 authorizes the EPA to develop regulations on the standard of performance for MSDs (see 40 CFR Part 140). The standard only applies to vessels equipped with installed toilets. The first part of the standard applies to vessels traveling on waters which are land-locked and do not have interstate traffic. MSDs on these vessels must

be designed and operated so that no discharge of sewage, either treated or untreated, occurs. The second part of the standard pertains to all other waters and provides specific effluent levels MSDs must meet.

As provided for in CWA §312, the EPA regulations also provide states with the opportunity to apply for a No Discharge Area, or a complete prohibition of vessel sewage (treated and untreated) in all or some of a state's waters. There are seven application and information requirements given in 40 CFR §140.4(a) of the regulation. The information required includes:

(1) A certification that the protection and enhancement of the waters described in the petition require greater environmental protection than the applicable Federal standard;
(2) A map showing the location of commercial and recreational pumpout facilities;
(3) A description of the location of pumpout facilities within waters designated for no discharge;
(4) The general schedule of operating hours of the pumpout facilities;
(5) The draught requirements on vessels that may be excluded because of insufficient water depth adjacent to the facility;
(6) Information indicating that treatment of wastes from such pumpout facilities is in conformance with Federal law; and
(7) Information on vessel population and vessel usage of the subject waters.

Another section of the regulation, 40 CFR §140.4(b), states that these requirements may not need to be met, contingent on approval of an application by EPA under CWA §312(f)(4)(A) and (B), if the waters proposed for a No Discharge Area are of particular environmental importance (e.g., Boundary Waters Canoe Area), or if a state wishes to establish a drinking water intake zone.

3.1.2 33 CFR Part 159 (Subpart A): U.S. Coast Guard Marine Sanitation Device Regulations

CWA §312 directs the U.S. Coast Guard to develop regulations on certification procedures, design, construction, installation, operation, maintenance, and testing of MSDs. In addition, the regulations provide MSD requirements for vessel manufacturers and operators, including the requirement that all installed toilets must be equipped with a MSD. The regulations also provide definitions and effluent levels for Type I, II, and III MSDs.

3.2 Clean Vessel Act of 1992

The Clean Vessel Act of 1992 (P.L. 102-587, Subtitle F) provides funding to states for the "construction, renovation, operation, and maintenance" of additional pumpout facilities and sanitary waste reception facilities at marinas and other vessel facilities.

The Act authorizes the Director of the U.S. Fish and Wildlife Service to award grants, on a competitive basis, to states for the construction of new facilities, renovation, operation, and maintenance of existing facilities, and implementation of an education/information program. Coastal states may also receive grants for conducting surveys of the status of existing facilities and the need for additional facilities.

3.2.1 50 CFR Part 85: Clean Vessel Act Pumpout Grant Program

Under authority of Section 5604 of the Clean Vessel Act, this interim rule specifies the requirements for participation in the Clean Vessel Act Pumpout Grant Program. The rule covers information collection, record keeping, and reporting requirements, eligible grant activities, grant application procedures, grant proposal guidelines, the grant selection criteria and processes, and conditions on the use and acceptance of funds granted (e.g., fee charges for use of facilities, maintenance of facilities).

3.2.2 Clean Vessel Act: Pumpout Station and Dump Station Technical Guidelines

Under authority of Section 5605 of the Clean Vessel Act, technical guidelines were issued to provide states with technical information for evaluating the adequacy, type, and location of pumpout stations and dump stations, surveying and developing plans for pumpout stations and dump stations, developing education and information plans, and constructing pumpout stations and dump stations.

3.3 Coastal Zone Management Act of 1972 (CZMA) and Coastal Zone Act Reauthorization Amendment of 1990 (CZARA)

The Coastal Zone Management Act of 1972 (CZMA) was enacted to protect the coastal zone of the United States. CZMA's significant amendment in 1990, referred to as the Coastal Zone Act Reauthorization Amendment (CZARA), strengthened provisions for protecting coastal waters though expanded control of nonpoint source pollution. CZARA requires each state that has an approved coastal zone management plan to develop and submit a Coastal Nonpoint Pollution Control Program to help control nonpoint pollution along the U.S. coastline.

After enactment of CZARA, EPA and the National Oceanic and Atmospheric Administration (NOAA) developed guidance for development of the Coastal Nonpoint Pollution Control Programs, as well as guidance for the development of best management measures and practices for marinas and other nonpoint pollution sources. This guidance includes management measures and related practices for sewage facilities (pumpout facilities, dump stations, and shoreside restrooms).

Section 4: Guidelines for No Discharge Area Application Process under CWA §312

What information needs to be provided in a CWA §312 No Discharge Area application?

The best tool that a state or local government can use for protection of waters from recreational and commercial vessel sewage discharges is designation of an area as a No Discharge Area. Vessels traveling in a No Discharge Area are prohibited from discharging both treated and untreated sewage from vessels. As noted in Section 3 (Overview of Key Federal Statutes and Regulations), the requirements for applying to EPA for approval of a No Discharge Area under CWA §312 are provided in 40 CFR Part 140. Section 4 provides guidance on the three methods available under CWA §312 [(f)(3), (f)(4)(A), and (f)(4)(B)] for a state to designate an area as a No Discharge Area.[1]

Each section below focuses on one of these three methods and provides a step-by-step process for fulfilling the regulatory application requirements and supplying supplemental information on the proposed area which would be helpful for the EPA reviewers to make an informed and balanced decision. Section 4.1 describes the No Discharge Area application guidelines for CWA §312(f)(3). Section 4.2 provides guidelines for a No Discharge Area application under CWA §312(f)(4)(A). Section 4.3 describes the No Discharge Area application guidelines for CWA §312(f)(4)(B).

4.1 No Discharge Area Application Guidelines for §312(f)(3)

The sections below discuss the requirements that need to be fulfilled in an application for No Discharge Area approval under Clean Water Act (CWA) §312(f)(3). An expanded interpretation of these requirements is presented to help the guidance document user enhance the application submitted for EPA approval. There are eight sections within these guidelines. Each of the first seven sections is related to one of the seven requirements from the EPA MSD regulations (40 CFR §140.4(a)(1)-(7), respectively; see Section 3.1.1). In the first part of each regulatory requirement section, the essential information that is specifically stated in the regulation and should be included in the application to fulfill the requirement is discussed. In the second part of each requirement section and in the eighth section, optional information and data are suggested for inclusion in the application.

---

[1] See Section 3.1 for a complete description of the three methods under CWA §312 by which a state may prohibit vessel sewage discharge in a specified area. The method under CWA §312(f)(3) is the most common one used by states. It requires the state to demonstrate a need for the discharge prohibition and the existence of adequate sanitary waste reception facilities. The other two methods under CWA §312(f) [(4)(A) and (4)(B)] typically have fewer conditions to meet because the proposed No Discharge Area is an area of particular environmental importance or is a proposed drinking water intake zone.

Sample Application

Table of Contents

Exhibits

Tables

To expedite preparation of the application, suggestions are provided in each section of the guidelines on where to locate the information, how to interpret the information collected, and how to effectively present it.

A complete sample application is provided in Appendix D. In the following sections which describe each regulatory requirement for the application, the relevant part of the sample application is provided on the opposite page of the discussion. Reference codes, set apart in bold and brackets (e.g., **[1a]**), are used to help the guidance document user match the application guideline's text to the relevant part of the sample application. The number in the reference code refers to the section in which the sample is explained (e.g., a paragraph coded with **[3b]** is the second sample element explained in Section 4.1.3).

In general, the application should be clearly typed, include a table of contents and page numbers, and, when possible, provide sources for data and information. Any supplemental information included in the application (e.g., copy of local ordinances) that is more than two pages in length should be attached to the back of the application as an appendix.

The format shown in the sample application is presented only as a suggestion to the applicant. The applicant can put the application in any format which best suits the situation; however, use of section headings and organization consistent with those presented in the sample application will help expedite the EPA review. The facing page provides the Table of Contents for the sample application.

It is recommended that the guidance document user read through the following discussion on essential and optional information for each regulatory application requirement and examine the sample application as it appears within the discussion of each requirement. The applicant will then have a clearer understanding of why the essential and optional information segments are important to the EPA before approving an area as a No Discharge Area. A checklist is provided at the end of Section 4.1 which summarizes the essential and optional information segments and can be used by the applicant as a planning and tracking tool (see Exhibit 3).

1.0 Greater Protection and Enhancement Certification

[1a] The Bayside Channel area is located just to the north of the City of Bayside. It is approximately 25 miles long and varies in width from 5 to 10 miles. Bayside Channel and its tributaries, Long River, Surf Bay, Tidal Bay, and Island Bay, discharge to the Atlantic Ocean.

[1b] The surface waters associated with the Bayside Channel and its tributaries are important economic and recreational resources. Specifically, the Channel and associated tributaries are used in shellfish propagation or harvesting. Shellfish harvesting accounts for 200 total full-time jobs during the spring and summer months (State Sea Grant Study). In addition, the Bayside Channel includes approximately 1,000 acres of public and private beaches which are used for recreational activities that account for 35,000 visitor-days during the spring and summer months (State Comprehensive Outdoor Recreation Plan).

[1c] Over the past 10 years, recreational boating in the Channel has significantly increased. As indicated in Table 1, fecal coliform levels in the Bayside Channel have increased during the summer months when recreational vessels are on the Channel in great numbers. Based on the increasing trends, it can be assumed that discharges from recreational vessels are impacting the water quality. Due to these conditions, the surface waters are currently patrolled during the summer months to control discharges of sanitary wastes from recreational vessels. Since 1987, several beaches and over 1,500 acres of shellfish harvesting areas have been closed due to high levels of fecal coliform in the surface water. Therefore, greater protection of the surface water is required than the applicable Federal standards to protect the degrading water quality and stop the decline in the local economy which has been impacted by beach and shellfish harvesting closures.

Table 1

Marine Fisheries Fecal Coliform Data (per 100ml)

Monitoring Site	3/91	6/91	8/91	4/92	6/92	8/92
Island Bay Dock	1.1	8.6	8.4	N/A	6.4	6.7
Long River	0.8	3.2	4.2	0.6	5.1	4.8
Tidal Bay Marina	0.4	1.2	3.2	N/A	4.0	3.2
Surf Bay Marina	1.0	4.0	4.4	0.5	3.2	4.2

Source: "Ocean State 305(b) Water Quality Assessment Report," Ocean State Environmental Protection Agency, Division of Water, 1993, pp. 211-215.

[1d] For the protection and enhancement of waters used by the general public (for various commercial and recreational marine activities), shellfish resources, and other marine life and habitat, it is respectfully requested that a No Discharge Area be approved for the coastal waters in the City of Bayside in Ocean County. This request is made in accordance with 40 CFR §140.4(a).

4.1.1 Certification of Need for Greater Environmental Protection

No Discharge Area Application Requirement #1 (*40 CFR §140.4(a)(1)*):

"A certification that the protection and enhancement of the waters described in the petition require greater environmental protection than the applicable Federal standard."

Essential Information

- **Certification of necessity for greater environmental protection**

The application should begin with a brief overview of the proposed No Discharge Area, which is the subject of the application. The overview should present a compelling argument that the proposed area is in need of greater environmental protection than the current applicable Federal standards provide. As part of this certification, a rationale should be provided which indicates the justification for the No Discharge Area approval. For example, the proposed area may be affected by vessel sewage which has caused beaches to close. Beach closures may substantially reduce tourism and thus, impact the local economy.

An example of this section of the application can be found on the opposite page. Section 1.0 of the sample application contains an example of the certification required under the regulations. Specifically, paragraphs **[1a]** and **[1d]** provide examples of the introduction and required certification statements. Paragraph **[1b]** provides a type of rationale that supports the request for a No Discharge Area.

Optional Information

It is suggested that the applicant add some or all of the following information to the certification described above:

- ***Description of specific resources***
- ***Water quality data, such as fecal coliform counts***

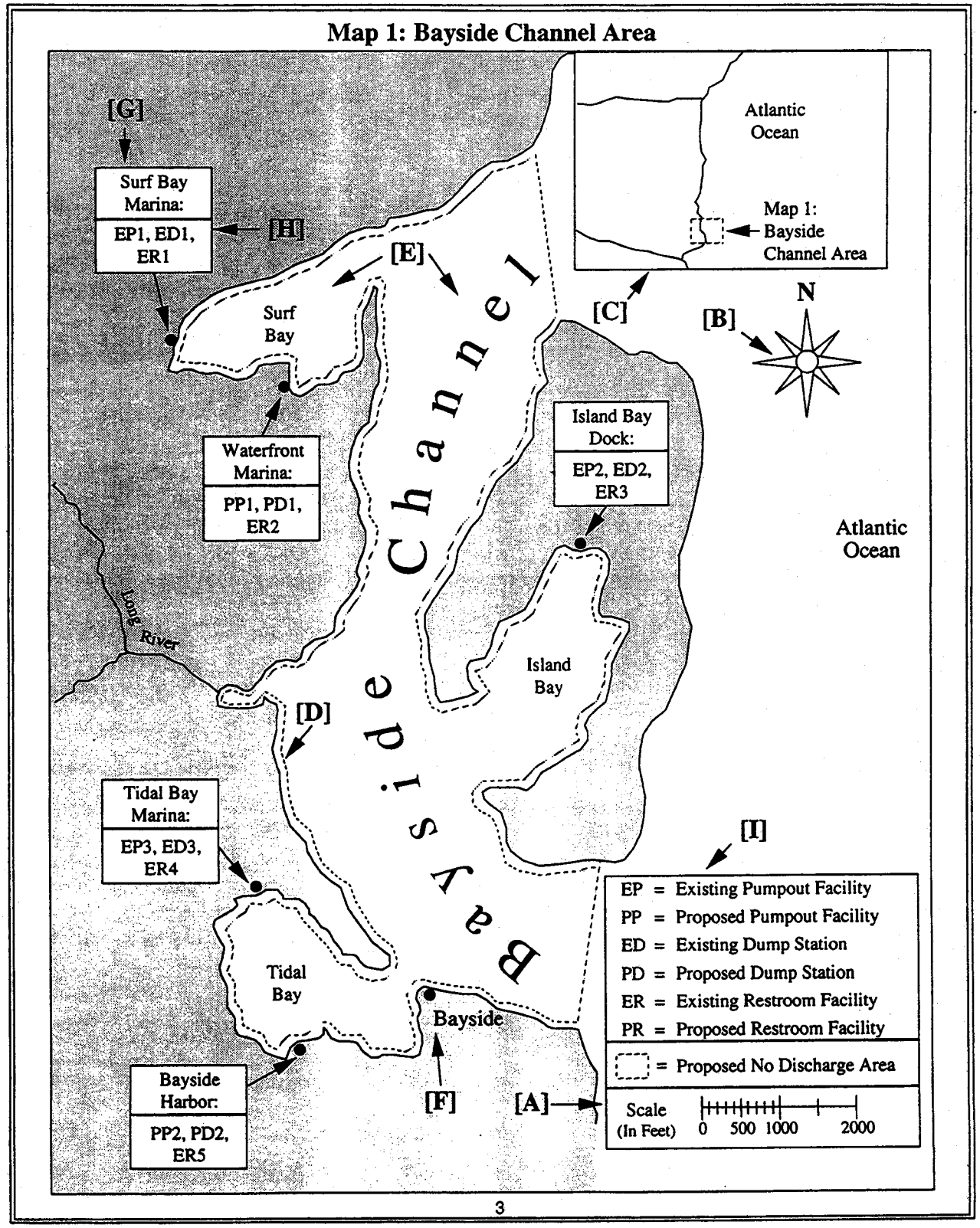
In addition to providing the certification of necessity for greater environmental protection, it is helpful to strengthen the justification with supporting information and data. Information which identifies the affected resources is helpful in supporting the rationale for certification. Examples of affected resources include shellfish harvesting areas, fish spawning areas, and beaches. Once the resources have been identified, indicate how these resources are being detrimentally affected (e.g., shellfish area closings, fish kills, beach closures).

This page is intentionally left blank.

Providing data relating to fecal coliform levels will also help support the rationale for certification. Increases in fecal coliform levels indicate that sanitary waste has increased in the surface waters. The presence of fecal coliform in the water may cause beaches to close due to health risks from bacteria. Similarly, elevated levels impact the dissolved oxygen in the water which may adversely affect the ecological community (e.g., shellfish propagation, fish spawning). Other water quality data or information may also be useful to prove that water quality is being affected and in turn affecting the local environment.

Water quality information and data can be obtained by the applicant through contact with the state water authority, which is typically located in the water division of the state's environmental protection agency. The applicant should ask for a copy of the state's 305(b) water quality assessment report (this report is required under CWA §305(b)). These reports are called different names in each state, but the report should be known internally as the 305(b) report. This report will provide the applicant with water quality information and data for major waterways in the state, however, if more localized data are needed, the applicant should contact the local (county or municipal) water authority.

Paragraph **[1c]** on Page 1 of the sample application contains examples of the supplemental information which can be incorporated into the certification statement. In this example, the optional information provides fecal coliform data which supports the claim that the water quality has been impacted. It also identifies the resources which have been affected and the possible impact on the environment and local economy.


Map 1: Bayside Channel Area
[G]
Surf Bay Marina:
EP1, ED1, ER1
[H]
[E]
Surf Bay
Waterfront Marina:
PP1, PD1, ER2
Island Bay Dock:
EP2, ED2, ER3
Atlantic Ocean
Long River
Island Bay
[D]
Tidal Bay Marina:
EP3, ED3, ER4
Tidal Bay
Bayside
Bayside Harbor:
PP2, PD2, ER5
[F]
[A]
[I]
[C]
[B]
N
Atlantic Ocean
Map 1: Bayside Channel Area
Bayside Channel
EP = Existing Pumpout Facility
PP = Proposed Pumpout Facility
ED = Existing Dump Station
PD = Proposed Dump Station
ER = Existing Restroom Facility
PR = Proposed Restroom Facility
= Proposed No Discharge Area
Scale (In Feet) 0 500 1000 2000
3

4.1.2 Pumpout Facilities Map

No Discharge Area Application Requirement #2 (*40 CFR §140.4(a)(2)*):

"A map showing the location of commercial and recreational pumpout facilities."

Essential Information

- **Map showing location of existing pumpout facilities in proposed area**

Existing pumpout facilities that serve recreational and commercial vessels should be clearly indicated on a map of the proposed No Discharge Area. Maps are available from a variety of sources including county planning offices, the U.S. Geological Survey, and the U.S. National Oceanic and Atmospheric Administration. If there are several maps available, a simple map would be a good selection since additional information will need to be added to it. If the proposed area is widespread, more than one map can be included in the application as long as there is one overview map showing the entire area. The other maps should be referenced on the overview map.

For ease of interpretation by the reviewer, the map(s) included in the application should include the following information:

- Scale (see **[A]** on Map 1 of sample application);
- North orientation symbol (see **[B]**);
- Locator map (smaller map which places the proposed area into context; see **[C]**);
- Delineation of proposed No Discharge Area (i.e., dotted line, shading, coloring, or any other identifying mark; see **[D]** where a dotted line is used);
- Identification of all bodies of water (see **[E]**);
- Identification of relevant and significant cities and towns (see **[F]**);
- Location of all existing recreational and commercial pumpout facilities in the area (see **[G]**); and
- Identification of pumpout facilities with unique identifying letters or numbers, for reference and discussion purposes later in the application (see **[H]**).

Optional Information

It is suggested that the applicant add some or all of the following information to the map described above:

- ***Location of proposed pumpout facilities***
- ***Location of existing and proposed portable toilet dump stations***
- ***Location of existing and proposed shoreside restrooms***

2.0 FACILITY INFORMATION

2.1 Map of Sanitary Waste Reception Facilities

[2a] The following map shows the geographic location of holding tank pumpout facilities, portable toilet dump stations, and shoreside restrooms within the proposed Bayside Channel No Discharge Area.

[2b] The three existing pumpout facilities in the area are identified on the map by an "EP" followed by the number assigned for reference purposes (i.e., EP1, EP2, and EP3). The location of the two proposed pumpout facilities are indicated on the map as PP1 and PP2. The two existing dump stations are designated on the map by ED1, ED2, and ED3, while the two proposed dump stations are shown as PD1 and PD2. The five existing shoreside restroom facilities are labeled on the map as ER1, ER2, ER3, ER4, and ER5. There are no proposed restroom facilities at this time.

If additional pumpout facilities are planned, these proposed pumpouts should be indicated on the map. A brief description of each proposed facility's state of completion and estimated completion date should be provided under the next application requirement (#3).

The location of all types of sanitary waste reception facilities should be presented on the map to provide a complete picture of the options boaters have to dispose of their sanitary waste. In addition to the location of pumpout facilities, the geographic distribution of existing and proposed shoreside public restrooms and portable toilet dump stations is also important for determining availability of discharge alternatives. Since each facility type has a different purpose in the disposal of vessel sewage, all types of facilities should be taken into consideration while evaluating the current situation in the proposed area.

As shown in Map 1 of the sample application, if all of these facilities are indicated on the map, then a code system needs to be used to identify the geographic distribution of the different facility types (see **[H]**). Any simple code system can be used, but each facility (e.g., proposed pumpout facility, existing restrooms) should have a unique identifier. The following codes were used for the sample application: EP = existing pumpout facilities, PP = proposed pumpout facilities, ED = existing dump station, PD = proposed dump station, ER = existing restrooms, and PR = proposed restrooms. A legend should be established on the map which defines these codes (see **[I]**). Each type of facility indicated on the map was assigned a unique number in addition to the unique code (e.g., EP1, EP2).

The text preceding the map in this section of the application should briefly explain the map(s) used to present the geographic distribution of the sanitary waste reception facilities in the proposed area (see **[2a]**). The code or reference system used to identify the different types of facilities should also be explained here (see **[2b]**).

2.2 Description of Facility Locations and Types

[3a] There are five waterfront facilities (e.g., docks, harbors, marinas), which will be subsequently called marinas in this application, that operate pumpout facilities and/or dump stations in the proposed Bayside Channel No Discharge Area. Map 1 in Section 2.1 of this application provided an overview of the geographic distribution of the marinas in the area, however, a more specific description of the location and type of each marina's sanitary waste reception facilities is provided below:

[3b] **Surf Bay Marina.** This marina is located at the west end of Surf Bay about 0.75 miles from the bay entrance off the northern end of the Bayside Channel. The marina currently operates one stationary, marina-wide pumpout facility, which is located directly to the right of the fuel dock at the end of the middle pier. The pumpout facility also accommodates sanitary wastes from portable toilets.

Waterfront Marina. Due to the close proximity (approximately 0.5 miles) of this marina to Surf Bay Marina, it does not currently operate either a pumpout facility or dump station. The Waterfront Marina is closer to the bay entrance off the Bayside Channel than the Surf Bay Marina, so Waterfront Marina has plans to purchase portable pumpout equipment and develop a dump station (these plans are discussed in detail in Section 2.3 of the application).

Island Bay Dock. This marina is located in the northwest portion of Island Bay approximately 0.5 miles off the southern part of the Bayside Channel. Island Bay Dock is the only marina located on the ocean-side of the Bayside Channel. Island Bay is a popular location for vessels to moor, so the marina has operated a mobile pumpout facility (located on a vessel) for the past 5 years which services vessels in Island Bay. The shoreside marina facilities include a dump station for portable toilets.

Tidal Bay Marina. This marina is located at the northern end of Tidal Bay, approximately 0.5 miles from the bay entrance from the southern part of the Bayside Channel. Tidal Bay Marina operates one stationary, marina-wide pumpout facility which is located at the end of the fuel dock. The pumpout facility is also a reception facility for portable toilet sanitary wastes.

Bayside Harbor. As shown in Map 1, this marina is located directly 0.5 miles south of the Tidal Bay Marina in Tidal Bay. In the past, this harbor has referred its customers to the Tidal Bay Marina for pumpout and dump services. Three months ago plans were developed to purchase a portable pumpout system and construct a portable toilet dump station (these plans are discussed in detail in Section 2.3 of the application).

The following table provides the names and addresses for the five facilities described above. For reference, the codes assigned to each facility on Map 1 are presented next to each facility. The table also summarizes the water body on which each facility is located and the number of pumpout facilities or dump stations by system type for each facility.

4.1.3 Description of Pumpout Facilities in Proposed No Discharge Area

No Discharge Area Application Requirement #3 (*40 CFR §140.4(a)(3)*):

"A description of the location of pumpout facilities within waters designated for no discharge."

Essential Information

- **Narrative description of number, type (e.g., portable), and location (e.g., fuel dock) of pumpout facilities**

In addition to the map developed and included under Application Requirement #2, the applicant needs to provide a brief narrative description for each holding tank pumpout facility (both existing and proposed) identified on the map in the proposed No Discharge Area. This discussion may be organized around each waterfront facility (e.g., marina, dock, harbor), instead of each pumpout facility. (The applicant should pay close attention to using the term "facility" to describe both a waterfront facility and a pumpout facility. In the sample application (see **[3a]**), waterfront facility is assigned the synonym "marina" to avoid confusion for the reviewer. Any appropriate synonym may be used by the applicant to refer to the waterfront facilities, but this substitution should be clearly indicated in the application.)

There are three important facts to provide in these descriptions:

1. The number of pumpout facilities at each marina.
2. The type of pumpout system(s) (i.e., portable, mobile, stationary, remote operated multi-station) at each marina.
3. The specific location of each pumpout facility within the marina.

These pieces of information can be collected through several different methods. It is important for the applicant to keep in mind that additional information will be needed about these pumpout facilities to meet the information needs listed under Application Requirements #4 and 5.

1. The information may be included in a recent guide or list of marinas or water recreation facilities (e.g., the "Waterway Guide" published by Communication Channels, Inc. is an annual series of comprehensive guides for the Southern, Mid-Atlantic, Northern, and Great Lakes regions). The applicant may also contact the state department of natural resources or coastal zone management office to potentially obtain a recent inventory of the state's marinas. This method may also require calling each marina listed to update the information provided in the guide.

[3c]

Table 2

Waste Reception Facility Locations by Type

Marina Information	Facility Map Codes	Body of Water	Number of Waste Reception Facilities by Type and Location			
			Portable Pumpout	Mobile Pumpout	Stationary Pumpout	Dump Station
Surf Bay Marina 123 Surf Road Bayside, US 01234	EP1/ ED1	Surf Bay	0	0	1	1
Waterfront Marina 345 Surf Road Bayside, US 01234	PP1/ PD1	Surf Bay	1*	0	0	1*
Island Bay Dock 12 Island Road Bayside, US 01266	EP2/ ED2	Island Bay	0	1	0	1
Tidal Bay Marina 25 Tidal Road Bayside, US 01244	EP3/ ED3	Tidal Bay	0	0	1	1
Bayside Harbor 55 Tidal Road Bayside, US 01244	PP2/ PD2	Tidal Bay	1*	0	0	1*

* Proposed facilities expected to be available by May.

Note: There are no remote operated multi-station systems in this area.

Sources: "Ocean County Boater's Guide" (Ocean County Division of Tourism, 1993); and personal communication with owners/operators of Surf Bay Marina, Waterfront Marina, Island Bay Dock, Tidal Bay Marina, and Bayside Harbor.

5

2. If a recreation facility guide or a similar information source is not readily available and the proposed No Discharge Area is relatively small, the applicant may be able to conduct an inventory of the marinas in the area to collect the necessary pumpout facility information.

After completion of the facility information collection process, the applicant will then be able to write a brief description of each marina, including the relative location of the marina and the type, number, and location of pumpout facilities in the proposed area (see **[3b]**). One option for presentation of this information is for the applicant to develop a table which would help summarize the information provided in these descriptions and provide the reviewers with a useful look-up table. The table presented in the sample application (see **[3c]**) provides the following information for each marina:

- Location and contact information (e.g., marina name, address, phone number);
- Applicable codes used in the pumpout facility map;
- Waterbody in which the marina is located; and
- Number of pumpout facilities by type.

Optional Information

It is suggested that the applicant also include the following information in the application:

- ***Narrative description of number and location of dump stations***

In addition to the essential locational information on pumpout facilities described above, it would be helpful for reviewers to have similar information on the existing and proposed portable toilet dump stations in the proposed No Discharge Area. This information can be easily integrated into the descriptions for each marina (see **[3b]**) and attached to the look-up table by adding an extra column to show the number of dump stations for each marina listed (see **[3c]**). This information should be available from the same source(s) used to obtain pumpout facility information.

2.3 Facility Operation and Maintenance

The following table summarizes the operation information (i.e., hours, fees, and operating capacity) for each pumpout facility and dump station within the proposed No Discharge Area. The information provided for the proposed facilities is subject to change.

[4a]

Table 3

Facility Operation Information

Marina Information	Facility Map Code	Facility Hours of Operation	Facility Fee Schedule	Facility Operating Capacity
Surf Bay Marina William Smith 123 Surf Road Bayside, US 01234 (123) 555-2424 Channel 16 VHF-FM	EP1	April-October: 9am-8pm daily November-March: 10am-4pm daily	For customers: Free For others: $5	10 gallons per minute
	ED1	Same as EP1	Free to public	N/A
Waterfront Marina Ed Johnson 345 Surf Road Bayside, US 01234 (123) 555-2300 Channel 16 VHF-FM	PP1	M-F: 10am-6pm Sat: 7am-7pm Sun: 8am-7pm	Free to customers	5 gallons per minute
	PD1	Same as PP1	Free to public	N/A
Island Bay Dock Joseph Hill 12 Island Road Bayside, US 01266 (123) 555-1300 Channel 12 VHF-FM	EP2	M-F: 10am-8pm Sat: 9am-9pm Sun: 9am-8pm	$10	12 gallons per minute
	ED2	8am-9pm daily	$2	N/A
Tidal Bay Marina Susan Washington 25 Tidal Road Bayside, US 01244 (123) 555-1111 Channel 14 VHF-FM	EP3	M-Th: 10am-5pm F&Sat: 7am-8pm Sun: 8am-9pm	For customers: Free For others: $8	10 gallons per minute
	ED3	Same as EP3	Free to public	N/A
Bayside Harbor John Morrison 55 Tidal Road Bayside, US 01244 (123) 555-2222 Channel 14 VHF-FM	PP2	M-F: 10am-7pm Sat: 8am-8pm Sun: 9am-9pm	Free to customers	5 gallons per minute
	PD2	Same as PP2	Free to public	N/A

Sources: Same sources as Table 2.

4.1.4 Schedule of Operating Hours of the Pumpout Facilities

No Discharge Area Application Requirement #4 (*40 CFR §140.4(a)(4)*):

"The general schedule of operating hours of the pumpout facilities."

Essential Information

- **Schedule of operating hours for each pumpout facility**

The application reviewers will be looking at the availability of the pumpout facilities located in the proposed No Discharge Area, therefore, the hours of operation for each facility is an essential piece of information for the application. These hours may be obtained from the same source(s) as the location and facility type information required under Application Requirement #3.

For ease of presentation, a small table can be developed which provides the name of the marina, the pumpout facility map code, and the hours the pumpout facility is operational (see **[4a]**). In a case where the marina is only open on a seasonal basis or the hours of operation change according to the season, the hours of operation should include the hours and the months. The hours of operation should also reflect any daily changes (e.g., longer hours on weekends).

Optional Information

There are several pieces of information related to the operation of the sanitary waste reception facilities in the proposed No Discharge Area which would be helpful for the application reviewers to know in addition to the hours of operation for each pumpout facility. These facility operation characteristics are:

- ***Schedule of operating hours for each dump station.*** The hours of operation of each dump station in the proposed area need to be provided in a similar manner as described under the Essential Information section for pumpout facilities (i.e., include seasonal hours, days of the week). These hours provide the reviewer with an indication of the availability of the portable toilet dump stations.

- ***Fee schedule for each pumpout facility and dump station.*** It would be helpful for the reviewer to know the fees charged for each of the pumpout facilities and dump stations in the proposed area to determine whether any of the facilities preclude use to boaters on a financial basis. If the fee is less for customers or patrons of the marina (e.g., boaters that moor their vessels at the marina, purchase items in a marine supply store, eat at a restaurant), then the fees for both patrons and the general public should be indicated.

[4b] **2.3.1 Facility Accessibility**

Although the three marinas that currently operate pumpout facilities and dump stations in the proposed No Discharge Area are all privately owned, access is given to all vessels. As shown in the table above, however, reduced facility use prices are given to patrons at two of the marinas.

[4c] **2.3.2 Facility Maintenance Plans**

The stationary pumpout/dump facilities at Surf Bay Marina and Tidal Bay Marina are operated by the customers. Signs are posted with the proper operating procedures, however, marina personnel check on the facility several times a day (especially during periods of heavy use) to prevent major problems (e.g., sewage lines become clogged if not rinsed properly) from occurring. The pumpouts are both inspected and cleaned once a week and thoroughly checked and repaired once a year (usually during the off-season).

The mobile pumpout service provided through a contract with Island Bay Dock is monitored for maintenance or operational problems on a continuous basis because the owner of the pumpout boat is also the operator. Approximately once a year the mobile pumpout is serviced and repaired. The dump station located at Island Bay Dock is cleaned every night after closing the marina office. The dump station does not require much maintenance.

7

- ***List of owner/operator for each pumpout facility and dump station.*** Information on the operation of the pumpout facilities and dump stations should include the name of the owner and/or operator of each facility to help answer the question of whether the marina is publicly or privately owned and operated. Also, in case the reviewer chooses to contact one or two of the facilities for more information or to verify information provided in the application, the phone number and VHF-FM channel should also be provided with the owner/operator name for each facility. This information completes the facility information provided for Application Requirement #3.

- ***Description of operating capacity of each pumpout facility.*** The reviewer needs to determine how many vessels can be accommodated per day by the pumpout facilities located in the proposed No Discharge Area, therefore, the applicant may want to provide the operating capacity, or gallons of sanitary waste the pumpout can pump per minute, for each pumpout facility. This rate is not applicable to dump stations.

For ease of preparation and presentation, the applicant is encouraged to develop a table with the facility operation information for each marina (see **[4a]**).

There are three additional important optional pieces of information related to the operation of the pumpout facilities and dump stations. This information is not easily summarized in a table, so if the applicant wishes to include this additional information in the application, then short descriptions will need to be developed.

- ***Description of accessibility of each pumpout facility and dump station.*** At some marinas only the patrons are allowed to use the marina's sanitary waste reception facilities. This information is important to provide in the application because if an area has only private, patron-only pumpout facilities, then the general public is left without an option for sanitary waste removal from their holding tanks. Only a brief description of the facility accessibility to the general public in the proposed area is needed (see **[4b]**).

- ***Maintenance plans for each pumpout facility and dump station.*** It is important to provide reviewers with any planned maintenance schedules available for the pumpout facilities and dump stations in the proposed No Discharge Area. This information shows the level of effort that the owners/operators of the facilities are expending to keep the facility in good working condition for its customers. A brief description of the process (e.g., weekly inspection, daily cleaning) used to maintain the facilities, which would probably need to be obtained directly from each facility in the proposed area, is needed to include this information in the application (see **[4c]**).

[4d] **2.3.3 Completion of Proposed Facilities**

In Section 2.2 above, there were two pumpout facilities and two dump stations described which are expected to operate within the proposed No Discharge Area. Waterfront Marina and Bayside Harbor are each expected to purchase equipment for a portable pumpout facility and a dedicated portable toilet dump station. Partial funding for this equipment will come from the Clean Vessel Act Pumpout Grant program. Upon receipt of the funds, which are estimated to be dispersed in 2 months, the marinas will purchase the dump stations and portable pumpouts. It is expected that they will be fully operational in time for the beginning of the boating season in May. The anticipated hours of operation, fees, and pumpout operating capacity (gallons per minute) are provided in the table at the beginning of this section.

- ***Description of completion schedule for proposed pumpout facilities and dump stations.*** As previously mentioned, it would be helpful for reviewers to know when the proposed pumpout facilities and dump stations are expected to be operational. A brief description of the state of completion and the expected date of opening for each facility would be useful information to include in the application (see **[4d]**).

2.4 Facility Draught Requirements

The following table provides information related to the physical accessibility of vessels to each pumpout facility and dump station, including the mean low water depth adjacent to each facility, the maximum draught of vessels excluded from each facility, and the estimated percentage of vessels precluded from using each facility based on draught limitations. It is estimated that 5 percent of vessels using the Bayside Channel area have a draught of more than 6 feet, therefore, these vessels can access all the sanitary waste reception facilities in the area except the pumpout facility at Bayside Harbor (upon completion). It is estimated that vessels of this size would have a holding tank (MSD Type III), not a portable toilet, and would require a pumpout facility.

There are no bridges in the proposed No Discharge Area, therefore, no maximum height limitations exist.

[5a]

Table 4

Vessel Draught Limitations for Facilities

Marina Name	Facility Map Code	Mean Low Water Depth	Vessel Draught Limitations	% of Vessels Excluded
Surf Bay Marina	EP1	15 ft.	10 ft.	0%
	ED1	15 ft.	10 ft.	0%
Waterfront Marina	PP1	12 ft.	7 ft.	0%
	PD1	12 ft.	7 ft.	0%
Island Bay Dock	EP2	30 ft.	25 ft.	0%
	ED2	12 ft.	7 ft.	0%
Tidal Bay Marina	EP3	13 ft.	8 ft.	0%
	ED3	13 ft.	8 ft.	0%
Bayside Harbor	PP2	10 ft.	6 ft.	5%
	PD2	10 ft.	6 ft.	5%

Sources: Personal communication with owners/operators of Surf Bay Marina, Waterfront Marina, Island Bay Dock, Tidal Bay Marina, and Bayside Harbor.

4.1.5 Vessel Draught Requirements at Facilities

No Discharge Area Application Requirement #5 (*40 CFR §140.4(a)(5)*):

"The draught requirements on vessels that may be excluded because of insufficient water depth adjacent to the facility."

Essential Information

- **Maximum draught of vessels excluded from each pumpout facility**
- **Mean low water depth adjacent to each pumpout facility**

The application reviewer will need to know the physical accessibility of each pumpout facility in the proposed No Discharge Area for the general boating population. The major restriction for vessel access to a marina is water depth. The regulations require applicants to provide the draught limitations for vessels using the facilities, therefore, the applicant needs to provide the mean low water level adjacent to each pumpout facility in the area and the related draught limitations. This information, if not readily available, can usually be located in a boating almanac or waterway guide (see sources listed under Application Requirement #3). For coastal areas, the applicant may find this information on a U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service (NOS) map or in NOS's "U.S. Coastal Pilot" series. As a last source, the applicant may need to call each facility to obtain the draught limitations at low tide.

If there are only a few (less than five or six) facilities in the area, then a short paragraph describing the mean low water depths and vessel draught limitations adjacent to each pumpout facility could be included in the application to fulfill this requirement. However, if there are more than four or five pumpout facilities in the area, then a small table should be developed for ease of preparation by the applicant and presentation for the reviewer (see **[5a]**).

Optional Information

If a table is being developed for the essential information described above, then the following additional physical accessibility characteristics of each facility could easily be added to the table. If a table is not being considered to present the essential information, the applicant may not want to include the optional information in the application.

This page is intentionally left blank.

- ***Mean low water and draught limitations adjacent to each dump station.*** It is just as important for the reviewer to know the draught limitations at the dump stations as the pumpout facilities. By nature, however, smaller vessels (with less draught) use dump stations more frequently than pumpout facilities. If there is clearly no restriction to vessels using the dump stations, the applicant could write one sentence describing this fact and not include the draught information in the table.

- ***Maximum height of vessels excluded from each pumpout facility and dump station (if bridges exist in the area).*** In addition to depth or draught limitations to certain areas, bridges or other overpasses may exclude vessels of a certain height from access to a facility. If this is the case for the proposed No Discharge Area, then these height restrictions should be included in the application.

- ***Percentage of vessels precluded from using facilities in the area.*** The applicant should show the effect of these draught and/or height limitations on the general boating public. The applicant should estimate how many or what percentage of vessels will be precluded from using each facility in the area. The applicant could estimate this after obtaining statistics on vessel population for Application Requirement #7. If a certain portion of the vessel population would be precluded from using facilities, then the estimated percentage or number of vessels should be indicated on the table described above. If there would be no known effect on the boating population, then this fact should be mentioned in the application.

2.5 Facility Waste Treatment Methods

[6a] The stationary pumpout facilities and dump stations located at Surf Bay Marina and Tidal Bay Marina are linked directly into the Bayside Municipal Sewage Treatment Plant, which is located 15 miles from Surf Bay Marina and 7 miles from Tidal Bay Marina. Bayside Municipal Sewage Treatment Plant has made an agreement with the State Department of Environment Protection (DEP) to accept vessel sewage. Bayside Municipal Sewage Treatment Plant has consistently met or exceeded DEP's and U.S. Environmental Protection Agency's standards.

The mobile pumpout station that services the Island Bay Dock area retains vessel sewage on board in a 300 gallon holding tank. Once a week, or more often when the tank level is near capacity, the mobile pumpout boat travels to Tidal Bay Marina where a licensed septage hauler meets the boat and unloads, or pumps out, the contents of the holding tank into the truck's holding tank. The truck then transports the sanitary waste to the Bayside Municipal Sewage Treatment Plant. The dump station at the Island Bay Dock deposits its contents into the on-site septic system which is also used for the marina's restroom facilities. The restroom wastes are mixed with the dump station wastes before entry into the septic system to help dilute wastes from the portable toilets.

Vessel sewage collected at the proposed dump stations and portable pumpout facilities at Waterfront Marina and Bayside Harbor will be emptied directly into the sewer system linked to the Bayside Municipal Sewage Treatment Plant. The dump stations and portable pumpouts will be emptied every day or when full, whichever comes first.

4.1.6 Waste Treatment Information

No Discharge Area Application Requirement #6 (*40 CFR §140.4(a)(6)*):

"Information indicating that treatment of wastes from such pumpout facilities is in conformance with Federal law."

Essential Information

- **Narrative description of methods that will be used to dispose of sewage collected from vessels at each pumpout facility**

The regulations require applicants for No Discharge Area approval under CWA §312 to briefly describe the sanitary waste treatment process that occurs at each facility after collection of the waste from vessel holding tanks or portable toilets. There are basically four acceptable disposal methods available, although the first two are preferable:

1. Discharge to a public wastewater collection system and treatment facility.
2. Discharge to a holding tank with removal and transport by a licensed septage hauler to a municipal septage receiving/treatment facility.
3. Discharge to a package treatment plant with subsequent discharge back into coastal waters.
4. Discharge to an on-site septic system.[2]

The applicant needs to describe the waste disposal process for each pumpout facility and dump station (see **[6a]**). In most cases, the applicant will need to contact each facility to obtain information on the waste disposal practices. This information can be organized by location, by type of facility, or by disposal method. The applicant should also indicate that these practices comply with current Federal, state, and local regulations and, in some cases, explain how they comply.

Optional Information

If vessel sewage dump stations exist within the proposed No Discharge Area, the following information should be provided in the application to ensure use of proper disposal methods.

- ***Narrative description of methods that will be used to dispose of sewage collected from vessels at each dump station***

The methods of disposal for each dump station can be discussed simultaneously with the pumpout facility disposal methods, as described above (see **[6a]**).

---

[2] "Clean Vessel Act: Pumpout Station and Dump Station Technical Guidelines," Federal Register, Vol. 59, No. 47, March 10, 1994.

This page is intentionally left blank.

4.1.7 Vessel Population and Usage Information

No Discharge Area Application Requirement #7 (*40 CFR §140.4(a)(7)*):

"Information on vessel population and vessel usage of the subject waters."

Essential Information

- **Total number of recreational and commercial vessels that use the proposed area on both a regular and transient basis**

The vessel population within an area is considered to be the number of vessels that are moored in the area during peak periods of usage (i.e., summer holiday weekend). Vessel usage includes both the regular users (vessels originating within the area) and the transient users (vessels originating outside the area). In general, it is easier to determine the number of regular users than the total vessel usage of an area. There are several sources for determining vessel population and usage. Typically, the applicant will need to use more than one source and will often need to make qualified assumptions to derive these estimates. The type of sources to use will depend on the geographic size of the No Discharge Area. For proposed areas that consist of one or two enclosed bays, the applicant may be able to rely on localized data collection results. For proposed areas that are more expansive, the applicant should consult the results from one of two national boating surveys (which are referenced in the following paragraph) and supplement this information with local data.

For smaller proposed No Discharge Areas, the applicant should begin by contacting the public and private marinas in the area, since these facilities often keep visitation and long-term mooring registration records. Facilities can almost always provide information on the number of slips and vessels launched from marinas. Another local source is the state boating law administration office (see Appendix E for contacts). This office may be able to provide boating population statistics by county and length of vessel; however, many states do not keep registration records at this level of detail. The state boating law administrator or the applicant's local Sea Grant College Program may also be able to identify any local site-specific boating studies recently completed. Another potential source for localized information is the state's Comprehensive Outdoor Recreational Plan which is usually prepared by the state Department of Parks and Recreation (or equivalent). If these sources are inadequate, especially for estimating peak boating usage rates, then assumptions may be adapted from national statistics provided in the secondary sources listed below.

1. "National Recreational Boating Survey: Draft Final Report, Volume 1 of 2"; U.S. Fish and Wildlife Service and the U.S. Coast Guard; prepared by Price Waterhouse; March 1992.

3.0 VESSEL POPULATION AND USAGE IN PROPOSED AREA

[7a] The marinas in the Bayside Channel area keep records on the number and size of county-registered and transient vessels. Although not all vessels use these five marinas, these numbers combined with registration records for Ocean County should provide an accurate estimate for vessel use in the Bayside Channel area. This area receives a significant level of transient traffic, typically consisting of larger vessels equipped with MSDs (usually Type III). The estimated number of transient vessels indicated in the table below represents the peak number recorded or observed during Labor Day weekend last year. There are no commercial vessels that currently use the Bayside Channel area.

[7b] **Table 5**

Vessel Population in Proposed No Discharge Area

Vessel Length	Estimated Number of Registered Vessels	Estimated Number of Transient Vessels	Total Estimated Number of Vessels
Over 40 feet	151	174	325
26 to 40 feet	862	715	1,577
16 to 26 feet	3,511	696	4,207
Less than 16 feet	9,053	837	9,890
TOTAL	13,577	2,422	15,999

Sources: Ocean County recreational vessel registration records; and mooring registration records from Surf Bay Marina, Waterfront Marina, Island Bay Dock, Tidal Bay Marina, and Bayside Harbor.

2. "American Red Cross National Boating Survey: A Study of Recreational Boats, Boaters, and Accidents in the United States"; U.S. Coast Guard; prepared by the American Red Cross; 1991.

For applicants with larger proposed No Discharge Areas, marina interviews and site-specific studies are not practical. For large areas, the applicant should start with the two secondary sources listed above which contain vessel population statistics by state and an average usage rate (user days per vessel) for the nation.

Many of the areas being proposed as No Discharge Areas are not used by significant numbers of commercial vessels. When this is the case, applicants should note this fact. However, if the proposed area does have significant commercial traffic, commercial vessel usage statistics can best be obtained from "Waterborne Commerce of the U.S." (U.S. Army Corps of Engineers). Information on commercial traffic to and from major ports is available from "Port Entrances and Clearances" (U.S. Department of Commerce). Information on the number of documented vessels is available from the U.S. Coast Guard Vessel Documentation Branch. However, this information should be used with caution since it reflects the state in which the vessel was documented, not the state where it is currently located.

The applicant should carefully document all sources and explain any assumptions (see **[7a]**). For ease of preparation and presentation, the applicant should construct a small table (see **[7b]**) to present the vessel population numbers. The applicant should provide as much detail in the table of these population numbers (e.g., vessel length, registered vs. transient) as available.

[7c] According to the technical guidelines provided for the Clean Vessel Act (Federal Register, Vol. 59, No. 47, March 10, 1994, pp. 11290-11306), the Bayside Channel area would require approximately three to four pumpout facilities and three dump stations. The pumpout facility estimate of three to four is based on an estimated 845 vessels with holding tanks (or Type III MSDs) with a peak occupancy rate (percent of vessels used on a holiday weekend) of 40 percent and one pumpout facility assumed to service 96 vessels per weekend. The estimate of three dump stations assumes an estimate of 1,094 vessels with a portable toilet at a peak occupancy rate of 40 percent in the area and one dump station able to service 144 vessels per weekend.

As described in other sections of the application, there are currently three operational pumpout facilities and three operational dump stations in the area. In addition, there are two pumpout facilities and two dump stations proposed to be operational in several months which will accommodate for any vessel population growth and conversions from Types I and II MSDs to Type III MSDs.

Optional Information

It is suggested that the applicant also include the following estimate in the application:

- ***Estimated number or percentage of vessels with Type III MSDs***

An estimate of the number of vessels with holding tanks is helpful to determine whether adequate sanitary waste reception facilities are available in the area. If this information has already been calculated or estimated by a survey or other means, then the applicant should provide these results in the application (see **[7c]**).

The technical guidelines for the Clean Vessel Act (see Section 3.2.2) provide formulas for estimating the number of pumpout facilities and dump stations an area demands. The formulas require the following information:

- Number of vessels, categorized by vessel length
- Percent of vessel population with holding tanks and portable toilets
- Peak occupancy rate (e.g., percent of vessels used on a holiday weekend)
- Number of vessels served per hour at pumpout facilities and dump stations
- Number of weekend operating hours at pumpout facilities and dump stations

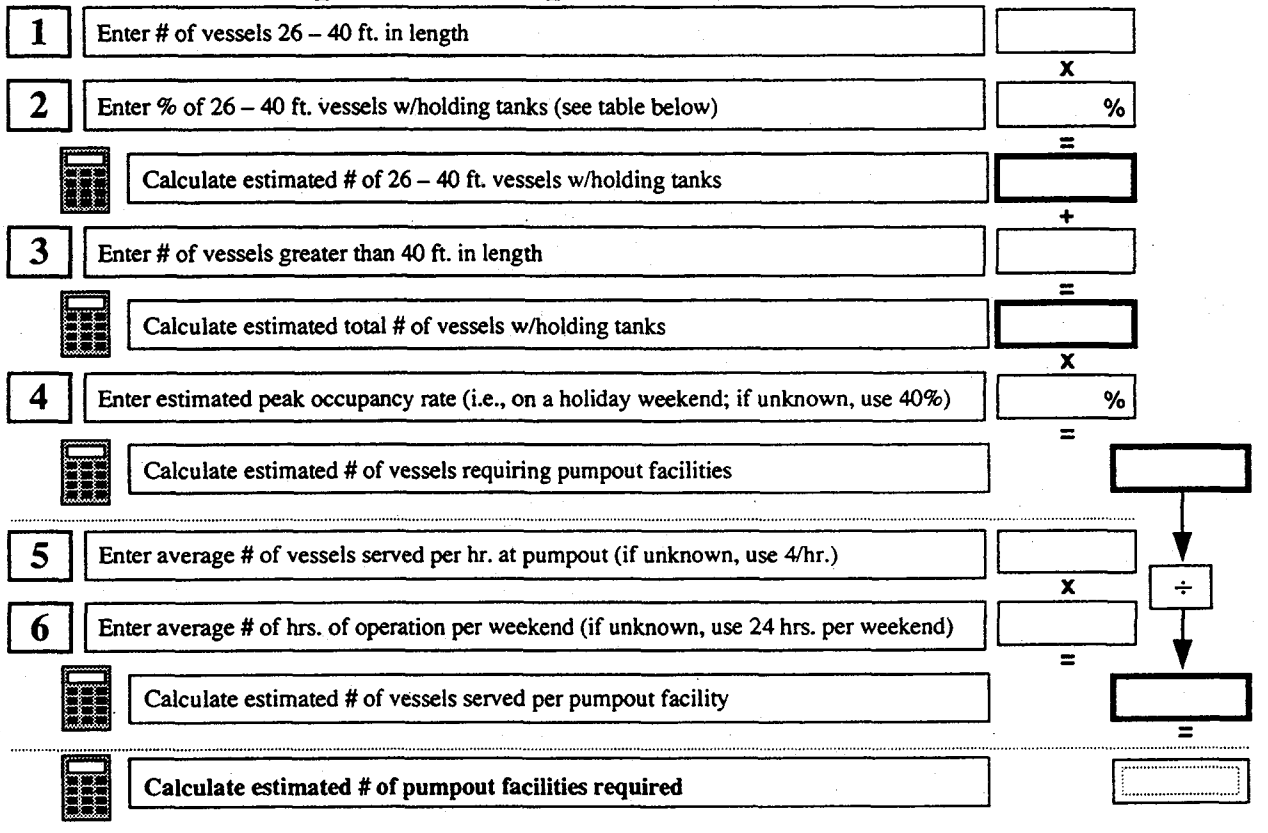
Except for vessel population, general assumptions are provided for those variables of the formula unknown to the user.

A worksheet is provided (see Exhibit 2) for the applicant to calculate the recommended number of pumpout facilities and/or dump stations for an area. The applicant can determine in Step 2 of the worksheet the estimated number of vessels with holding tanks (or Type III MSDs) in the proposed No Discharge Area if the applicant is able to estimate the number of vessels that use the area, categorized by length of vessel. Unless the applicant has a local study which estimates the percent of vessels with holding tanks installed on board in the area, the applicant should use the estimated percentages provided for coastal and Great Lakes states in the bottom part of the worksheet. The calculation after Step 3 on the pumpout facility section of the worksheet estimates the number of vessels in the proposed area with holding tanks. Similar calculations can be completed on the second page of the worksheet to derive the estimated number of vessels with portable toilets. A similar table is provided with the estimated percent of vessels with portable toilets for coastal and Great Lakes states. If enough information is available for the applicant to calculate these estimates, the results should be provided in the application, along with any assumptions used to determine these estimates.

The remainder of the pumpout facility and dump station worksheets could be completed by the applicant to help justify the number of pumpout facilities and dump stations currently available in the proposed area. Again, local data should be used when available. The applicant should include the results of these calculations (and an explanation of any assumptions or sources used to derive these estimates) versus the actual number of pumpout facilities and dump stations available.

Boater Sanitary Waste Reception Facility Requirements Worksheet

Estimate of Required Pumpout Facilities



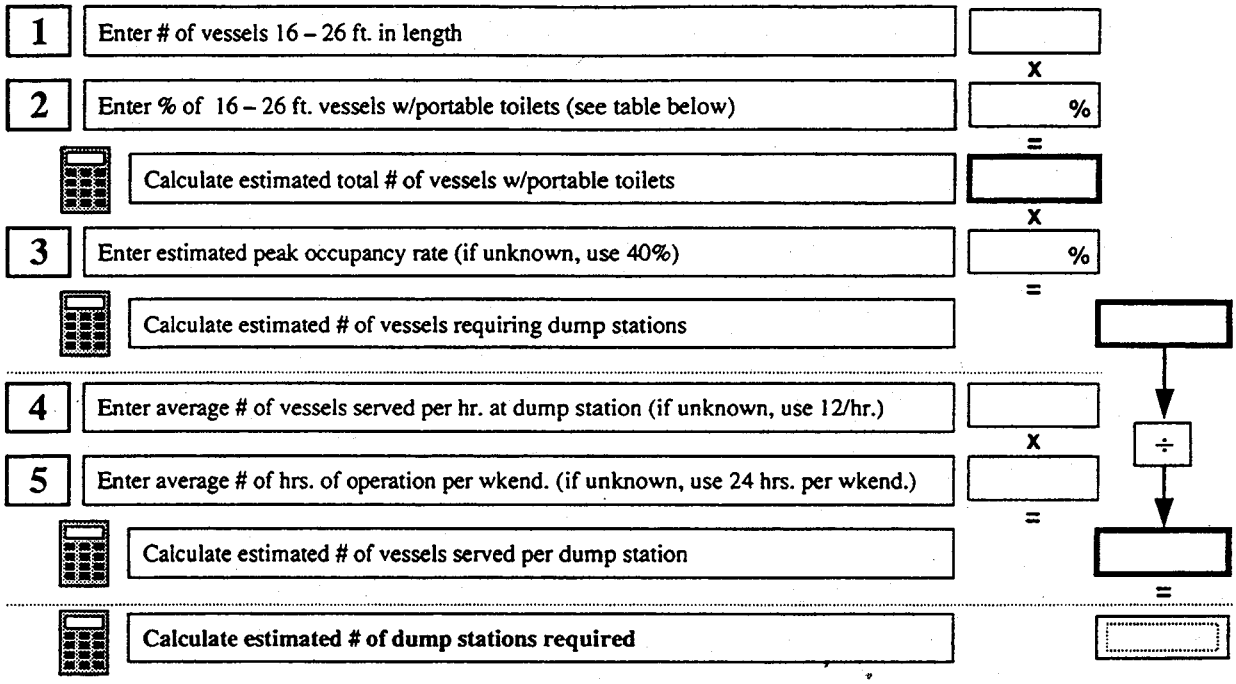
Percent of Vessels with Holding Tanks by Coastal and Great Lakes State (See Step #2)

State	%	State	%	State	%
Alabama	24	Louisiana	17	North Carolina	16
Alaska	34	Maine	40	Ohio	41
California	38	Maryland	45	Oregon	49
Connecticut	52	Massachusetts	45	Pennsylvania	19
Delaware	25	Missouri	50	Rhode Island	43
Florida	33	Minnesota	50	South Carolina	11
Georgia	31	Mississippi	23	Texas	31
Hawaii	17	New Hampshire	37	Virginia	25
Illinois	41	New Jersey	6	Washington	46
Indiana	16	New York	52	Wisconsin	29

Source: "Clean Vessel Act: Pumpout Station and Dump Station Technical Guidelines," Federal Register, Vol. 59, No. 47, March 10, 1994; and "National Recreational Boating Survey: Sanitation Pumpout Questionnaire Tabulations," U.S. Department of Fish and Wildlife Service, January 1992.

Boater Sanitary Waste Reception Facility Requirements Worksheet (Cont'd)

Estimate of Required Dump Stations



Percent of Vessels with Portable Toilets by Coastal and Great Lakes State (See Step #2)

State	%	State	%	State	%
Alabama	16	Louisiana	32	North Carolina	25
Alaska	34	Maine	28	Ohio	28
California	42	Maryland	24	Oregon	29
Connecticut	24	Massachusetts	29	Pennsylvania	30
Delaware	32	Missouri	20	Rhode Island	25
Florida	41	Minnesota	6	South Carolina	23
Georgia	11	Mississippi	32	Texas	30
Hawaii	17	New Hampshire	26	Virginia	37
Illinois	27	New Jersey	25	Washington	35
Indiana	18	New York	26	Wisconsin	18

Source: "Clean Vessel Act: Pumpout Station and Dump Station Technical Guidelines," Federal Register, Vol. 59, No. 47, March 10, 1994; and "National Recreational Boating Survey: Sanitation Pumpout Questionnaire Tabulations," U.S. Department of Fish and Wildlife Service, January 1992.

4.0 OTHER INFORMATION

This section is included to provide additional information on how the No Discharge Area will be enforced after EPA approval (including the local ordinances used to regulate the area), the methods that will be used to educate and inform the boating public of the no discharge status, and identification of other water pollution sources within the Bayside Channel area.

[8a] **4.1 Enforcement Plan**

Both the Boating Division and Division of Shellfish Sanitation of the State Department of Natural Resources will be responsible for enforcement of the No Discharge Area around the Bayside Channel after approval of the area by EPA. The Division of Shellfish Sanitation has authority to regulate and enforce the discharge of vessel sewage within and adjacent to shellfish harvesting areas. Boating Division personnel enforce all other areas, but concentrate their effort on heavy boating areas. Two years ago a Memorandum of Understanding (MOU) between the U.S. Coast Guard and the State Department of Natural Resources was established. This MOU gives the state authority to enforce compliance with the current Federal regulations related to disposal of vessel sewage.

On a local level, harbormasters in the public port areas assist the state personnel in boater enforcement and education. All of the marinas in the proposed area are private waterfront properties, however, the owners and operators have been cooperative in assisting the state in encouraging boaters to properly dispose of their wastes. All vessels mooring at private marinas must check in at the marina office to pay fees. At this time, the boaters are asked to voluntarily sign a statement that they will not discharge any sewage (or other wastes) while in the immediate marina area. This campaign was developed by Ocean County 2 years ago to encourage voluntary boater compliance with the county's no discharge standard for the Bayside Channel area.

Enforcement techniques used by the Division of Shellfish Sanitation and Boating Division include: 1) boarding vessels randomly and placing a dye tablet in the MSD to inspect proper operation (no dye observed in the water after flushing); 2) visual inspection of secured MSD Y-valve; and 3) periodic water quality monitoring during periods of heavy boating.

[8b] **4.2 Local Discharge Ordinances**

The Bayside Channel area lies within the City of Bayside. As mentioned in Section 4.1, the City of Bayside passed an ordinance 2 years ago to prohibit the discharge of sanitary wastes in the area in order to protect natural resources (e.g., shellfish harvesting beds, recreational swimming areas). The ordinance states:

> "**§65.03.** It shall be unlawful for any person to throw, discharge, deposit, or leave, or cause, suffer, or procure to be thrown, discharged, deposited, or left either from or out of any vessel or holding tank, or from the shore, wharf, manufacturing establishment, or mill of any kind, any refuse matter of any description into the navigable waters of Ocean County. Any violation of this ordinance results in a maximum fine of $400.00."

4.1.8 Additional Information

Additional Information that May Enhance the Effectiveness of a No Discharge Area Application

The following pieces of information are not required by 40 CFR §140.4(a), however, they will provide the reviewers with a more complete description of the foundation a state or community has established to prepare for a CWA §312 No Discharge Area approval.

- ***Narrative description of enforcement plan to be used after approval of No Discharge Area.*** The applicant should provide information for the reviewers on how the proposed prohibition on vessel sewage discharge is expected to be enforced in the proposed area (see **[8a]**). The last part of Section 6 (Strategies to Achieve Compliance in the No Discharge Area) of this guidance document discusses the enforcement methods and techniques currently in use.

- ***Summary of existing or proposed local ordinances enacted to enhance regulation of vessel sewage discharges.*** In connection with the enforcement plan for the proposed No Discharge Area, the applicant should provide the related local ordinances which prohibit the discharge of treated and untreated sewage in the No Discharge Area (see **[8b]**). These ordinances can be existing or proposed regulations. Any other relevant regulations (e.g., state) could also be included if the authority affects the proposed area. If these ordinances and regulations are greater than two pages in length, they should be introduced in the application and attached as an appendix.

- ***Narrative description of public education/information program.*** If the proposed No Discharge Area already has a public outreach program to promote proper disposal of vessel sewage, or if a program is in the planning stages, the applicant should describe in the application the components of the program (see **[8c]**). The first part of Section 6 of this guidance document provides more information on the components of public outreach programs. In addition, Appendix F identifies several documents that discuss the education aspect of this issue.

- ***Narrative description of existing point source pollution that impacts the water quality in the proposed area.*** In addition to sewage discharges from vessels, an area is likely to have specific point sources of water pollution which also contribute to the degradation of water quality. If such point sources of pollution exist in the proposed No Discharge Area, the applicant should briefly describe where they occur and the source of the pollution (see **[8d]**). If types and amounts of pollution are known for these sources, these data can also be provided by the applicant.

[8c] **4.3 Public Education/Information Plan**

At the five private marinas within the proposed Bayside Channel No Discharge Area, information is provided to boaters on the accepted sanitary waste handling practices for the area. Marinas are concerned about keeping the waters clean to keep their customers satisfied and to attract more customers to the area. All five marinas voluntarily participate in the following public education and outreach activities:

- **Signs.** The three marinas with operational pumpout facilities and dump stations have signs at the marina entrances and on the facilities that show boaters where the facilities are located. The two marinas with proposed facilities have signs on the fuel dock that refer vessels needing pumpout and dump facilities to the nearest marina providing these services (in both cases the marina is just across the bay). Signs in the restrooms also indicate that portable toilets should not be emptied into the restroom system.

- **Fliers/brochures.** All vessel owners who wish to moor their vessels at the marina are required to register at the marina office. The vessel owner is given information on the marina, including rules and regulations about the prohibition of sanitary waste discharge (both treated and untreated) within the marina area. In some cases, the local ordinance and fine for violation are stated. Boaters are also given a map of the marina which clearly indicates the location, fee, and operating hours of the pumpout facility and dump station.

- **Voluntary compliance agreement.** The marinas also ask boaters to voluntarily sign an agreement to obey all rules for disposing of all types of waste properly while in the marina area.

[8d] **4.4 Existing Point Source Pollution**

The only existing point source of water pollution within or directly adjacent to the proposed No Discharge Area is the Bayside Municipal Sewage Treatment Plant, which is located 8 miles up Long River from Bayside Channel. The discharges from this plant are continually monitored and regularly meet or exceed local, state, and Federal water quality standards.

4.1.9 §312(f)(3) Application Information Checklist

A checklist in Exhibit 3 is provided for the applicant to track the information segments that need to be collected during the preparation of the application. The applicant can use this checklist during the planning and development stage of preparing the application by checking off which optional information segments he/she wants to include in the application and whether the information needs to be collected. As the missing information pieces are collected, the applicant can mark these segments as completed.

After the application is completed and before it is submitted for review, the applicant should thoroughly go through the checklist and compare it to the application to ensure all the components are included and complete, especially the information that is essential. During this process, the applicant should also record in which section of the application the information appears. The suggested section numbers are already filled in, but should be modified if different from the completed application.

4.1.10 §312(f)(3) Application Process

After the application has been checked for completeness and accuracy, the applicant is ready to finalize the application process. The applicant should submit a copy of the application to the appropriate environmental official of the state in which the proposed No Discharge Area is located. This official will review the application and either return it to the applicant with comments and await resubmittal or submit it to the EPA Regional Administrator for the proposed No Discharge Area. The EPA Regional Administrator then reviews the application and "determine[s] within 90 days whether adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels using such waters are reasonably available" (40 CFR §140.4(a)). The applicant will be notified whether he/she needs to clarify or enhance the application or whether the proposed No Discharge Area will be approved by the EPA. The approved No Discharge Area will be noticed in the Federal Register. A copy of the approved application is sent to EPA Headquarters.

4.2 No Discharge Area Application Guidelines for §312(f)(4)(A)

[reserved]

4.3 No Discharge Area Application Guidelines for §312(f)(4)(B)

[reserved]

Checklist For Development Of No Discharge Area Application

Information Segment	Related Application Req. #	Essential	Optional	*To be completed by applicant* — Planning & Development Stage: Include in Application? Yes	No	Need to Collect Info.	Data Collection Completed	Pre-Submittal Stage: Info. Segment Completed	Application Section
Certification of necessity for greater environmental protection	1	✔		✔					1.0
Description of specific resources	1		√						1.0
Fecal coliform and other water quality data	1		√						1.0
Map showing location of existing pumpout facilities	2	✔		✔					2.1
Map showing location of proposed pumpout facilities	2		√						2.1
Map showing location of existing and proposed dump stations	2		√						2.1
Map showing location of existing and proposed restrooms	2		√						2.1
Number, type, and location of pumpout facilities	3	✔		✔					2.2
Number and location of dump stations	3		√						2.2
Schedule of operating hours for pumpout facilities	4	✔		✔					2.3
Schedule of operating hours for dump stations	4		√						2.3
Fees for pumpout facilities and dump stations	4		√						2.3
Owners/operators for pumpout facilities and dump stations	4		√						2.3
Operating capacity of pumpout facilities	4		√						2.3
Accessibility of pumpout facilities and dump stations	4		√						2.3.1
Maintenance plans for pumpout facilities and dump stations	4		√						2.3.2
Completion schedule for proposed pumpout facilities and dump stations	4		√						2.3.3
Maximum draught of vessels excluded from pumpout facilities	5	✔		✔					2.4
Mean low water depth adjacent to pumpout facilities	5	✔		✔					2.4
Mean low water and draught limitations for dump stations	5		√						2.4
Maximum height limitations for pumpout facilities and dump stations	5		√						2.4
Percentage of vessels precluded from using facilities in the area	5		√						2.4
Waste disposal methods for pumpout facilities	6	✔		✔					2.5
Waste disposal methods for dump stations	6		√						2.5
Number of vessels (regular & transient) that use the proposed area	7	✔		✔					3.0
Estimated number or percentage of vessels with Type III MSDs	7		√						3.0
Enforcement plan to be used after approval as No Discharge Area	–		√						4.1
Existing/proposed local ordinances related to vessel sewage discharges	–		√						4.2
Public education/information program related to boater waste disposal	–		√						4.3
Existing point source pollution in proposed area	–		√						4.4

Bold = Information required by regulation

Section 5: Relationship of CWA §312(f)(3) No Discharge Area Application Requirements to Other Federal Programs

How can information developed for the Clean Vessel Act Pumpout Grant Program and Coastal Nonpoint Pollution Control Program be used to apply for approval of a CWA §312(f)(3) No Discharge Area?

Many state and local governments have already prepared and submitted applications to the Clean Vessel Act Pumpout Grant Program to receive grants for pumpout and dump stations from the U.S. Fish and Wildlife Service under provisions of the Clean Vessel Act. The coastal zone management offices of some states with approved coastal zone management plans may have already developed or started developing their Coastal Nonpoint Pollution Control Program and its related management measures and practices. These states potentially have a head start on the information collection process required to fulfill the No Discharge Area application requirements stated in 40 CFR §140.4(a).

Exhibit 4 shows the linkages between each Clean Water Act (CWA) §312(f)(3) No Discharge Area application requirement and elements of the Clean Vessel Act Pumpout Station and Dump Station Technical Guidelines and the Coastal Zone Act Reauthorization Amendment (CZARA) Management Measures for Marinas and Recreational Boating. The relevant sections of the Clean Vessel Act technical guidelines are:

- **Section 1**. Waters most likely to be affected by the discharge of sewage from vessels.
- **Section 2**. Surveys of pumpout stations and dump stations.
- **Section 3**. What constitutes adequate and reasonably available pumpout stations and dump stations in boating areas.
- **Section 4**. Plans for constructing pumpout stations and dump stations.
- **Section 5**. Education/information.
- **Section 6**. Appropriate methods for disposal of vessel sewage from pumpout stations and dump stations.
- **Section 7**. Types of marine boat sewage pumpout stations and dump stations that may be appropriate for construction, renovation, operation, or maintenance, and appropriate location of the stations and facilities within a marina or boatyard.
- **Section 8**. Other information.

The relevant CZARA management measures for marinas and recreational boating[3] are:

- **Management Measure IIB: Water Quality Assessment**. Assess water quality as part of marina siting and design.

- **Management Measure IIC: Habitat Assessment**. Site and design marinas to protect against adverse effects on shellfish resources, wetlands, submerged aquatic vegetation, or other important riparian and aquatic habitat areas as designated by local, state, or Federal governments.

- **Management Measure IIG: Sewage Facility**. Install pumpout, dump station, and restroom facilities where needed at new and expanding marinas to reduce the release of sewage to surface waters. Design these facilities to allow ease of access and post signage to promote use by the boating public.

- **Management Measure IIIF: Public Education**. Public education/outreach/ training programs should be instituted for boaters, as well as marina owners and operators, to prevent improper disposal of polluting material.

- **Management Measure IIIG: Maintenance of Sewage Facilities**. Ensure that sewage pumpout facilities are maintained in operational condition and encourage their use.

Each No Discharge Area application requirement from 40 CFR §140.4(a) is shaded in the exhibit. Below this shaded area, both the essential and optional application information components are listed. In the two columns to the right of each information component, the relevant section of the Clean Vessel Act technical guidelines or the CZARA management measures is listed. If any of these activities have recently been completed, then all or some of the information can be applied to the EPA No Discharge Area application. As stated in the Clean Vessel Act technical guidelines, and noted in a footnote in Exhibit 4:

> States should not consider "adequate and reasonably available" under the Clean Vessel Act to satisfy all requirements for determining "No Discharge Areas" under the Clean Water Act. A separate review and determination would have to be made by the EPA for Clean Water Act designation of a "No Discharge Area."

This statement indicates that a state or local area will not receive approval as a No Discharge Area simply from the information provided during application for funds through the Clean Vessel Act grant. Separate U.S. government agencies determine which states and local areas qualify for the Clean Vessel Act grants and the approval of

---

[3] A copy of CZARA management measures for marinas and recreational boating (Chapter 5 in "Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters") may be obtained from Rod Frederick at EPA, Office of Water, Office of Wetlands, Oceans, and Watersheds, Assessment and Watershed Protection Division.

a No Discharge Area. The U.S. Department of Fish and Wildlife Service reviews applications for the Clean Vessel Act grants and the EPA reviews the applications for No Discharge Area approval. Complete guidelines for the No Discharge Area application process under CWA §312 are provided in Section 4.

Exhibit 4

Linkages Between CWA §312(f)(3) "No Discharge Area" Application Requirements And Elements Of Other Programs

CWA §312(f)(3) "No Discharge Area" Application Requirements [1]	Clean Vessel Act Technical Guidelines [2]	CZARA Management Measures for Marinas and Recreational Boating[3]
(1) "A certification that the protection and enhancement of the waters described in the petition require greater environmental protection than the applicable Federal standard"		
• Certification of necessity for greater environmental protection	• Section 1: Identify waters most likely to be affected by the discharge of sewage from vessels	• N.A.
• Description of specific resources	• Section 1	• Management Measure IIC: Habitat Assessment
• Fecal coliform data and other water quality data	• N.A.	• Management Measure IIB: Water Quality Assessment
(2) "A map showing the location of commercial and recreational pump-out facilities"		
• Location of existing and proposed pumpout facilities, dump stations, and restrooms within and adjacent to the proposed area	• If a coastal state, Section 2: Surveys of pumpout stations and dump stations	• N.A.

N.A. = Not applicable (no corresponding element exists)

Note: According to the Federal Register (Vol. 59, No. 47): "States should not consider 'adequate and reasonably available' under the Clean Vessel Act to satisfy all requirements for determining 'No Discharge Areas' under the Clean Water Act. A separate review and determination would have to be made by the EPA for Clean Water Act designation of a 'No Discharge Area'". Column 1 contains both the essential and optional application elements.

Linkages Between CWA §312(f)(3) "No Discharge Area" Application Requirements And Elements Of Other Programs (Cont'd)

CWA §312(f)(3) "No Discharge Area" Application Requirements [1]	Clean Vessel Act Technical Guidelines [2]	CZARA Management Measures for Marinas and Recreational Boating [3]
(3) "A description of the location of pumpout facilities within waters designated for no discharge"		
• Number, location, and type of facilities	• If a coastal state, Section 2. If an inland state, Section 3: What constitutes adequate and reasonably available pumpout stations and dump stations in boating areas	• N.A.
(4) "The general schedule of operating hours of the pumpout facilities"		
• Schedule of operating hours for each facility	• N.A.	• N.A.
• Fee schedule for each facility	• For facilities proposed for Clean Vessel Act Grant, requirement #6 of the proposal: Fees for use of facility	• N.A.
• Owners/operators of each facility	• If a coastal state, Section 2	• N.A.
• Operating capacity of each facility	• Section 7: Types of marine boat sewage pumpout stations and dump stations that may be appropriate for construction, renovation, operation, or maintenance, and appropriate location of the stations and facilities within a marina or boatyard	• N.A.
• Accessibility of each facility	• If a coastal state, Section 4 (for facilities proposed for Clean Vessel Act Grant): Plans for constructing pumpout stations and dump stations	• N.A.
• Maintenance plans for each pumpout facility	• If a coastal state, Section 4 (for facilities proposed for Clean Vessel Act Grant)	• Management Measure IIIG: Maintenance of Sewage Facilities
• Completion schedule for proposed facilities	• If a coastal state, Section 4	• N.A.

N.A. = Not applicable (no corresponding element exists)

Note: According to the Federal Register (Vol. 59, No. 47): "States should not consider 'adequate and reasonably available' under the Clean Vessel Act to satisfy all requirements for determining 'No Discharge Areas' under the Clean Water Act. A separate review and determination would have to be made by the EPA for Clean Water Act designation of a 'No Discharge Area'". Column 1 contains both the essential and optional application elements.

Exhibit 4

Linkages Between CWA §312(f)(3) "No Discharge Area" Application Requirements And Elements Of Other Programs (Cont'd)

CWA §312(f)(3) "No Discharge Area" Application Requirements [1]	Clean Vessel Act Technical Guidelines [2]	CZARA Management Measures for Marinas and Recreational Boating [3]
(5) "The draught requirements on vessels that may be excluded because of insufficient water depth adjacent to the facility"		
• Maximum draught of vessels excluded from each facility	• Section 3	• Management Measure IIG: Siting and Design of Sewage Facilities
• Mean low water depth adjacent to the facilities	• If coastal state, Section 4 For all states, Section 7	• Management Measure IIG
• Maximum height of vessel excluded from each facility	• N.A.	• Management Measures IIG
• Percentage of vessels precluded from using facilities	• N.A.	• N.A.
(6) "Information indicating that treatment of wastes from such pumpout facilities is in conformance with Federal law"		
• Narrative description of methods that will be used to dispose of sewage collected from vessels	• Section 6 (for facilities proposed for Clean Vessel Act Grant): Appropriate methods for disposal of vessel sewage from pumpout stations and dump stations	• N.A.

N.A. = Not applicable (no corresponding element exists)

Note: According to the Federal Register (Vol. 59, No. 47): "States should not consider 'adequate and reasonably available' under the Clean Vessel Act to satisfy all requirements for determining 'No Discharge Areas' under the Clean Water Act. A separate review and determination would have to be made by the EPA for Clean Water Act designation of a 'No Discharge Area'". Column 1 contains both the essential and optional application elements.

Linkages Between CWA §312(f)(3) "No Discharge Area" Application Requirements And Elements Of Other Programs (Cont'd)

CWA §312(f)(3) "No Discharge Area" Application Requirements [1]	Clean Vessel Act Technical Guidelines [2]	CZARA Management Measures for Marinas and Recreational Boating [3]
(7) "Information on vessel population and vessel usage of the subject waters"		
• Total number of recreational and commercial vessels that use the proposed area regularly and on a transient basis	• If a coastal state, Section 2. If an inland state, Section 3	• N.A.
• Estimated number or percentage of vessels with Type III MSDs	• If a coastal state, Section 2	• N.A.
(8) Additional information		
• Description of enforcement plan after approval of No Discharge Area	• N.A.	• Management Measure IIIG
• Summary of existing or proposed local ordinances enacted to enhance regulation of vessel sewage discharges	• N.A.	• N.A.
• Description of public education/information program	• Section 5: Education/Information	• Management Measure IIIF: Public Education
• Description of existing point source pollution (e.g., sewage treatment plants) that impacts the water quality in the proposed area	• N.A.	• N.A.

[1] 40 CFR §140.4; "Guidance for States and Municipalities Seeking No-Discharge Area Designation for New England Coastal Waters," EPA, Region I, 1991.

[2] Federal Register, Vol. 59, No. 47, March 10, 1994.

[3] "Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters," EPA, 1993.

N.A. = Not applicable (no corresponding element exists)

Note: According to the Federal Register (Vol. 59, No. 47): "States should not consider 'adequate and reasonably available' under the Clean Vessel Act to satisfy all requirements for determining 'No Discharge Areas' under the Clean Water Act. A separate review and determination would have to be made by the EPA for Clean Water Act designation of a 'No Discharge Area'". Column 1 contains both the essential and optional application elements.

Section 6: Strategies to Achieve Compliance in the No Discharge Area

What steps can be taken to achieve compliance in the No Discharge Area after approval by EPA?

Seeking approval of a No Discharge Area is part of a comprehensive approach to protect coastal waters from vessel sewage. Strategies to achieve compliance with the no discharge restrictions should also be viewed as an integral part of the approach. Two strategies to achieve compliance are discussed in this chapter -- public outreach and enforcement.

6.1 Public Outreach

The terms "public outreach" and "public awareness" are sometimes used to describe educational programs, products, and activities geared toward the public on a particular issue or topic. Scarce resources and competing priorities within enforcement agencies increase the importance of achieving voluntary compliance with vessel sewage restrictions. Thus, education (or public awareness) of those affected by these restrictions becomes a keystone in achieving compliance. The discussion which follows focuses on the principle parts of public outreach. A companion document, *Recreational Vessel Sewage Discharge Control: A Primer for State and Local Outreach Campaigns*, shows how the parts can be structured into an outreach campaign.

6.1.1 Public Outreach Campaign versus Public Outreach Product

Before proceeding with a discussion of the parts of public outreach, it is important to understand the distinction between an outreach campaign and an outreach product. Essentially, the campaign is the overall structure and vision under which outreach products (e.g., brochures, pamphlets, press releases etc.) are developed and used. Products are the tools used to get across a particular message to a target audience. In the long run developing and using outreach products within the context of an outreach campaign can be cost effective in terms of time and budget.

6.1.2 Parts of a Public Outreach Campaign

Typically, there are five principle components that must be defined when developing and implementing a successful public outreach campaign:

- Goal of the campaign;
- Target audience;

- Purpose or message of the outreach material;
- Outreach tools; and
- Budget considerations.

Exhibit 5 shows the relationships of these parts. To reach its goal, a successful public outreach campaign combines the message selected for the targeted audience with the appropriate public outreach tool. Budget considerations affect the number of messages and the tools which can be used.

Goal of the Campaign. The goal of a public outreach campaign promoting the protection of coastal waters from vessel sewage discharges is to increase proper disposal of vessel sewage through public and industry awareness and understanding of the:

- Consequences of improper disposal;
- Proper handling and disposal of vessel sewage;
- Need for adequate pumpout facility and dump station capacity at marinas;
- Laws and regulations for handling vessel sewage; and
- Stakeholders' (e.g., boaters, marina owners/operators, Publicly Owned Treatment Works) roles in solving the problem.

Target Audience. There are a number of potential target audiences for state and local public outreach campaigns promoting proper disposal of vessel sewage. Three, however, are recommended as the initial target audiences:

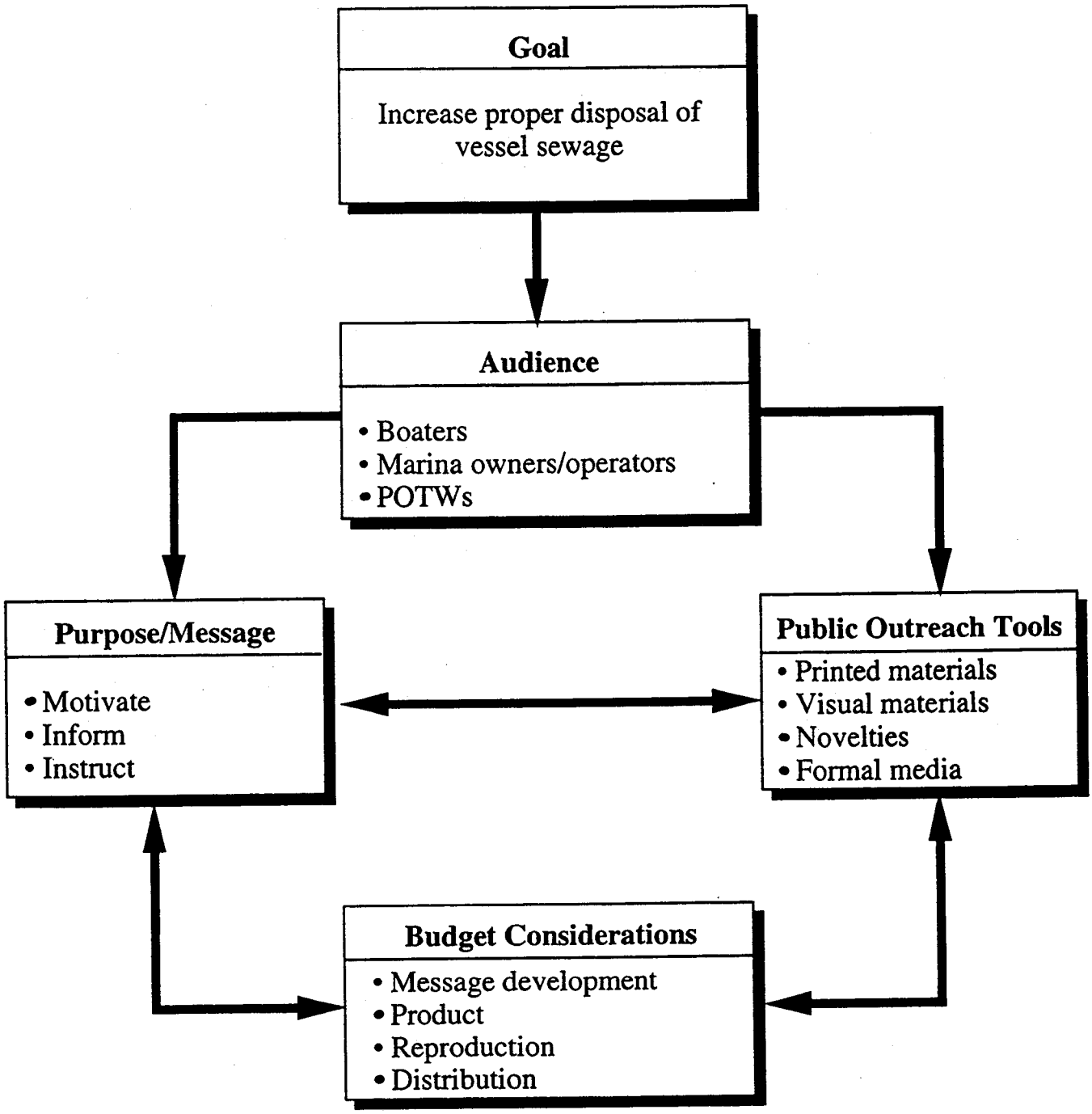
- Boaters;
- Marina owners/operators; and
- Publicly Owned Treatment Works (POTWs).

Many of the concerns with vessel sewage discharges stem from low compliance with No Discharge Area regulations by the boating public, inadequate pumpout facility and dump station capacity and availability at marinas, and reluctance on the part of POTWs to accept vessel sewage. This is a push-pull situation with simultaneous action needed on all three fronts to solve the problem. There are subcategories of potential target audiences within these three groups as well. For example, part of a public outreach campaign could be directed at recreational fishers, or operators of motor boats or sail boats instead of all boaters. Similarly, part of an outreach campaign might be directed at owners/operators of new facilities or at facilities of a certain size as opposed to all marina owners/operators.

Purpose/Message. Public outreach products are developed to accomplish one or more of the following purposes:

- **Motivate.** The purpose here is to generate interest or stimulate action, such as encouraging boaters to assume responsibility for proper sewage handling or

Relationship Of The Parts Of A Public Outreach Campaign



volunteer services to encourage installation of pumpout facilities at marinas. A discussion of the consequences of sewage discharges from vessels is an example of a message whose purpose is to motivate boaters to voluntarily prohibit sewage disposal from their vessels.

- **Inform.** The purpose here is to provide background knowledge or other types of information which will facilitate compliance. Maps of pumpout facilities and copies of regulations on sewage discharges from vessels are examples of informational messages.

- **Instruct.** The purpose here is to provide instruction or to teach so that learning can take place. Tips on how to use pumpout facilities and dump stations or the types of MSD equipment available to boaters are examples of instructional messages.

Since each potential audience has a somewhat different role in solving the problem, the purpose of the public outreach will differ somewhat among these audiences. Exhibit 6 provides examples of the purpose of public outreach activities for boaters, marina owners/operators, and POTWs.

Public Outreach Tools. Public outreach tools typically fall into one of four categories:

- **Printed Materials.** The print category includes manuals, coloring books, pamphlets/brochures, fact sheets, flyers, and thematic folders/packets.

- **Visual Materials.** The visual category includes videotapes, display booths, posters, and placards.

- **Novelties.** The novelties category includes stickers/bumper stickers, magnets, pins, and clothing (e.g., hats).

- **Formal Media.** The formal media category includes industry publications, public service announcements, press releases, and public speaking assignments.

Matching Messages, Target Audiences, and Tools to Meet the Goal. Some public outreach tools, such as pamphlets and thematic folders, are versatile enough to be used to motivate, inform, and/or instruct and for all types of audiences. Others are more limited in the type of message or the target audience for which they work well. For example, stickers would not be used for instructional material nor would coloring books be appropriate for marina operators. Exhibit 7 identifies public outreach tools and matches them with appropriate messages. Exhibit 8 matches examples of public outreach tools with appropriate target audiences.

Target Audiences* And Potential Messages For A Public Outreach Campaign On Sewage Discharges From Vessels

Target Audience	Problem/Role in Issue	Potential Purpose/Message
Boaters	• Low compliance with existing MSD regulations	• Consequences of vessel sewage discharges • Location of pumpout facilities • MSD regulations
Marina Owners/ Operators	• Inadequate pumpout capacity at marinas	• Consequences of vessel sewage discharges • Description of types of pumpout facilities • Need for improved pumpout capacity/availability
POTWs	• Reluctance to accept vessel sewage	• Awareness of issue/solutions • Cooperation in accepting vessel sewage

* Additional audiences may be identified, but for the purposes of this document efforts are concentrated on these three audiences.

Summary Of Public Outreach Tools By Purpose Of Message

Tool	Motivate	Inform	Instruct
Printed Materials			
• Manual			✔
• Coloring book	✔	✔	
• Pamphlet/ brochure	✔	✔	✔
• Fact sheet	✔	✔	✔
• Flyer		✔	
• Thematic folder/ packet	✔	✔	✔
Visual Materials			
•*Videotape	✔	✔	✔
• Display booth	✔	✔	
•*Poster	✔	✔	
•*Placard		✔	
Novelties			
• Sticker/bumper sticker	✔		
• Magnet	✔		
• Pin	✔		
• Clothing	✔		
Formal Media			
• Industry publication	✔	✔	✔
• Public service announcement	✔	✔	
•*Press release	✔	✔	
•*Public speaking	✔	✔	✔

Examples Of Public Outreach Tools Appropriate To Target Audiences

Target Audience	Printed Materials						Visual Materials				Novelties				Formal Media			
	Manual	Coloring book	Pamphlet/ brochure	Fact sheet	Flyer	Thematic folder/packet	Videotape	Display booth	Poster	Placard	Sticker/ Bumper sticker	Magnet	Pin	Clothing	Industry publication	Public service announcement	Press release	Public speaking
Boaters		✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔		✔
Marina Owners/Operators	✔		✔	✔	✔	✔		✔	✔	✔				✔	✔	✔		✔
POTWs			✔	✔		✔									✔			✔

Budget Considerations. In matching target audiences, messages, and public outreach tools, the distribution technique to be used and the cost of the tool need to be considered. Public outreach products can be distributed to the target audience either directly or indirectly. Direct techniques include mailings and distribution at events, conferences, or other gatherings. With indirect distribution, the products are given to an intermediary, such as a trade association, to distribute to the target audience.

Total costs of public outreach products correspond to the four phases of developing and disseminating public outreach materials:

- **Message development.** This is the phase during which the theme of the product is identified and the text copy prepared. For example, for a public awareness brochure for boaters the message development phase could prepare the text and graphics on the consequences of improper sewage discharges. The goal of this phase is to develop the message using a clear design. Costs can be controlled and the outreach materials enhanced if a standard theme is established initially and used as the foundation for all outreach products developed on a particular topic. A theme could be a logo, slogan, colors, character (e.g., Smokey the Bear), or more likely a combination of these techniques. The common thread throughout all the products makes them easily recognizable as part of an outreach campaign. The common theme is essential for maximizing the public's exposure to the issue. Costs are controlled because the design process does not start over with each successive outreach product developed.

- **Product.** This is the phase during which the theme is developed into a public outreach product. For the same public awareness brochure for boaters used as an example above, the text and graphics prepared in the message development phase would be incorporated into a brochure layout and a camera-ready original prepared in the product phase. In this phase, it is important to remember that the number of colors chosen affects ultimate reproduction costs. A maximum of two colors is recommended for the most cost-effective public outreach products.

- **Reproduction.** This is the phase in which the required number of copies of the product is made. For the reproduction phase, it is important to remember that typically the unit price of reproducing the product will decrease as the number of copies to be reproduced increases.

- **Distribution.** In this phase, the product is distributed to the target audience. For the distribution phase, it is important to remember that distribution costs can be minimized by having other groups or organizations absorb some of the distribution costs. In the example of a public awareness brochure for boaters, this could be accomplished by providing quantities of the brochure to appropriate trade associations or vessel registration agencies, and having them distribute the brochure directly to the boaters. When direct mailing of

materials is used for distribution, bulk mailings, using up-to-date and well-targeted mailing lists, can reduce costs. The distribution technique should be factored into the development of public outreach products from the beginning since the materials should be tailored to the method of distribution. For example, materials to be mailed should fit into standard-size envelopes or have the mailing panel incorporated into the layout or design.

Again, a companion document, *Recreational Vessel Sewage Discharge Control: A Primer for State and Local Outreach Campaigns*, focuses on: 1) how the parts of a public outreach strategy discussed -- target audience, purpose/message, and tools -- can be structured into an outreach campaign and 2) the budget considerations which affect the decisions which shape the campaign.

6.2 Enforcement

The second component of a strategy to achieve compliance with no discharge restrictions is enforcement. Section 312(k) of the Clean Water Act, as amended, states:

> "The provisions of this section shall be enforced by the Secretary of the Department in which the Coast Guard is operating and he may utilize by agreement, with or without reimbursement, law enforcement officers or other personnel of the (EPA) Administrator, other Federal agencies, or the states to carry out provisions of this section. The provisions of this section may also be enforced by a State."

This section provides three methods for enforcement:

- States (States may delegate enforcement authority to local enforcement officials, e.g., harbormasters, public health officials, and police);
- Federal and state officials through agreement between the U.S. Coast Guard and Federal and state agencies; and
- U.S. Coast Guard under a MOU with a state can enforce the state provisions of an approved No Discharge Area (technically, the Secretary of the Department in which the Coast Guard is operating, which is currently the Department of Transportation).

Examples of techniques used to enforce No Discharge Areas include the following:

- **Dye Tablets.** Fluorescent dye tablets are sometimes placed in the holding tanks and marine heads of moored vessels in a No Discharge Area. If an illegal discharge occurs within the No Discharge Area, the effluent is easily identifiable.

- **Sealing the Y-Valve.** The Y-valve, which allows direct overboard discharges, is sometimes required to be sealed in a closed position when the vessel is in a No Discharge Area.

- **Condition of Mooring and Slip Rental.** Marinas and other boating facilities located in a No Discharge Area sometimes require the use of pumpout facilities as a condition of mooring or slip rental.

- **Vessel Boardings.** At some marinas in No Discharge Areas, vessels that have been moored for a specified number of days (e.g., more than 4 days) are boarded to check for compliance.

- **Water Quality Monitoring.** In some areas, water quality monitoring is conducted during heavy boating weekends to monitor compliance.

- **Presence of Enforcement Officials.** In some areas, enforcement officials police for violators in No Discharge Areas.

Even with these enforcement techniques, it is generally recognized that an effective public outreach effort is needed to complement and supplement enforcement efforts. Public outreach fosters voluntary compliance. Enforcement techniques, through fines for violators, reinforce the need for behavior modification and also encourage voluntary compliance.

Appendix A:

Overview of Storm Water and Wetlands Programs

Overview of Storm Water and Wetlands Programs

This appendix serves as a starting point for readers interested in marina-generated discharges by providing an overview, including program objective, key contact, fact sheets, and other information, for each of two significant Federal programs that address marina-generated discharges that are not related to vessels. These programs are:

- National Pollutant Discharge Elimination System (NPDES) Storm Water Program; and
- Wetlands Program.

Programs which address both vessel sewage and other marina-generated discharges (e.g., contaminants from vessel-related maintenance and repairs conducted at marinas) are summarized in Appendix B.

Exhibits A-1 and A-2 provide an overview of each program using the following standard categories:

- **Area of Focus/Program Objective.** Intent and purpose of the program.
- **Pertinence to Control of Marina Discharges.** Relevance of program to marina pollution control and prevention.
- **Authorized Agency.** Agency authorized/required by legislation to implement the program.
- **Key Contact.** Agency, office, address, and telephone number to contact for additional program information. (If regional EPA contacts are necessary for more specific information, a map showing the EPA regions of the U.S. is provided at the end of this appendix in Exhibit A-3).
- **Legislative Authority.** Statute authorizing/requiring implementation of the program.
- **Additional Information.** List of significant supplementary sources for additional program information.

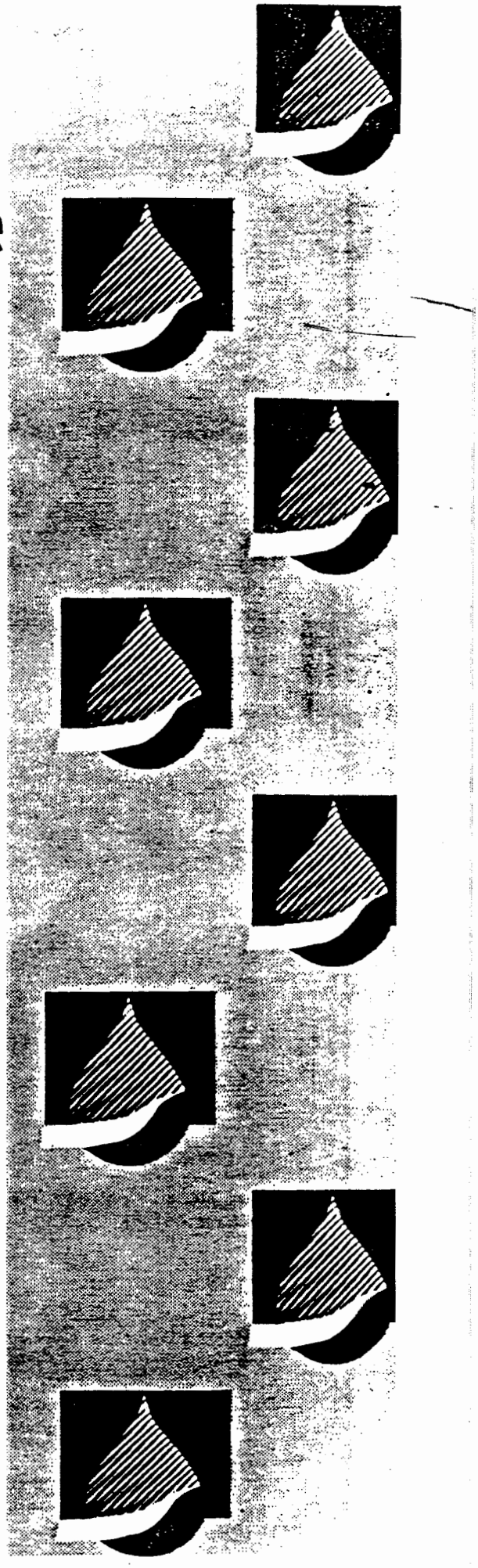
Following each program overview are several fact sheets or excerpts from documents that provide additional information about the program.

This page is intentionally left blank.

National Pollutant Discharge Elimination System (NPDES) Storm Water Program

Area of Focus/Program Objective:	Protection of waters from pollutants contained in storm water discharges associated with industrial activity
Pertinence to Control of Marina Discharges:	• Regulates storm water runoff discharges from marina facilities and grounds (e.g., runoff from parking lot, maintenance/repair areas) • Takes precedence over Coastal Nonpoint Pollution Control Program for project selection and enforcement action
Authorized Agency:	U.S. Environmental Protection Agency, Office of Water
Key Contact:	U.S. Environmental Protection Agency Office of Water Office of Wastewater Enforcement and Compliance Permits Division NPDES Program Branch 401 M Street, S.W. Washington, D.C. 20460 (202)260-9541 or See following page for EPA Regional Storm Water Contact List
Legislative Authorization:	Clean Water Act §402
Additional Information:	• "Overview of the Storm Water Program," October 1993 (full copy attached; also available from Key Contact) • "Storm Water Management for Industrial Activities," September 1992 (excerpt attached; full copy available from Key Contact, #EPA-832-R-92-006) • "Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters," January 1993 (excerpts attached; full copy available from EPA, Office of Water, Nonpoint Source Control Branch, #EPA-840-B-92-002) • "Storm Water Q's and A's," March 1992 (excerpt attached) • "Storm Water Fact Sheet: General Pollution Prevention Plan Requirements" (full copy attached)

Overview of the Storm Water Program



EPA

U.S. Environmental Protection Agency
Office of Wastewater Enforcement and Compliance
Permits Division
401 M Street, SW
Washington, DC 20460

October 1993

EPA Regional Storm Water Contact List

Region I
Water Management Division
Waste Water Management Branch
(617) 565-3560

Region II
Water Management Division
Water Permits and Compliance Branch
(212) 264-9894

Region III
Water Management Division
Permits Enforcement Branch
(215) 597-6510

Region IV
Water Management Division
Water Permits and Enforcement Branch
(404) 347-2019

Region V
Water Division
Water Compliance Branch
(312) 353-2121

Region VI
Water Management Division
Permits Branch
(214) 655-7170

Region VII
Water Management Division
Water Compliance Branch
(913) 551-7034

Region VIII
Water Management Division
NPDES Branch
(303) 293-1623

Region IX
Water Management Division
Permits and Compliance Branch
(415) 744-1877

Region X
Water Division
Wastewater Management and
Enforcement Branch
(206) 553-1728

STORM WATER PROGRAM

BACKGROUND

The 1972 amendments to the Federal Water Pollution Control Act (FWPCA, also referred to as the Clean Water Act or CWA) prohibit the discharge of any pollutant to waters of the United States from a point source unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. Efforts to improve water quality under the NPDES program traditionally have focused on reducing pollutants in discharges of industrial process wastewater and from municipal sewage treatment plants. Efforts to address storm water discharges under the NPDES program have generally been limited to certain industrial categories with effluent limitations for storm water.

In response to the need for comprehensive NPDES requirements for discharges of storm water, Congress amended the CWA in 1987 to require the Environmental Protection Agency (EPA) to establish phased NPDES requirements for storm water discharges. To implement these requirements, EPA published the initial permit application requirements for certain categories of storm water discharges associated with industrial activity, and discharges from municipal separate storm sewer systems located in municipalities with a population of 100,000 or more on November 16, 1990, (55 FR 47990). Storm water discharge permits will provide a mechanism for monitoring the discharge of pollutants to waters of the United States and for establishing appropriate controls.

ENVIRONMENTAL IMPACTS

Pollutants in storm water discharges from many sources are largely uncontrolled. The "National Water Quality Inventory, 1990 Report to Congress" provides a general assessment of water quality based on biennial reports submitted by the States under Section 305(b) of the Clean Water Act. The Report indicates that roughly 30% of identified cases of water quality impairment are attributable to storm water discharges. The States identified a number of major sources of storm water runoff that cause water quality impacts including separate storm sewers, construction, waste disposal, and resource extraction.

INDUSTRIAL FACILITIES COVERED

EPA has defined the term "storm water discharge associated with industrial activity" in a comprehensive manner to address over 100,000 facilities (see Attachment VII for a complete definition). All storm water discharges associated with industrial activity that discharge through municipal separate storm sewer systems or that discharge directly to waters of the U.S., are required to obtain NPDES permit coverage, including those which discharge through systems located in municipalities with a population of less than 100,000. Discharges of storm water to a sanitary sewer system or to a Publicly Owned Treatment Works (POTW) are excluded. Facilities with storm water discharges associated with industrial activity include: manufacturing facilities; construction operations disturbing 5 or more acres; hazardous waste treatment, storage, or disposal facilities; landfills; certain sewage treatment plants; recycling facilities; powerplants; mining operations; some oil and gas operations; airports; and certain other transportation facilities. Operators of industrial facilities that are Federally, State or municipally owned or operated that meet the description of the facilities listed in 40 CFR 122.26(b)(14)(i)-(xi) must also submit applications.

TRANSPORTATION ACT OF 1991

The Transportation Act of 1991 provides an exemption from storm water permitting requirements for certain industrial activities owned or operated by municipalities with a population of less than 100,000. Such municipalities must submit storm water discharge permit applications for only airports, powerplants, and uncontrolled sanitary landfills that they own or operate, unless a permit is otherwise required by the permitting authority. The Transportation Act of 1991 also revises group application deadlines for facilities that are owned or operated by municipalities with a population of less than 250,000. See Attachment II for revised deadlines.

9th CIRCUIT COURT DECISION

The 9th Circuit United States Court of Appeals' opinion in NRDC v. EPA (June 4, 1992) and the opinion in AMC v. EPA (May 27, 1992), affirmed and upheld the basic structure and direction of the national storm water program. In "NRDC", the Court upheld the definition of "municipal separate storm sewer system," the standards for municipal storm water controls, the scope of storm water requirements for oil and gas operations, and EPA's decision not to provide public comment on Part 1 group industrial permit applications. On the question of deadlines, the Court noted that the storm water application deadlines clearly exceeded statutory requirements, but refused to "roll back" the current regulatory deadlines. The Court also emphasized, however, that any further regulatory extension would be illegal. In two other areas the Court invalidated and remanded for further proceedings two regulatory exemptions from the definition of "storm water discharges associated with industrial activity": (1) the exemption for construction sites disturbing less than 5 acres of land (category x), and (2) the exemption of certain "light" manufacturing facilities without exposure of materials and activities to storm water (category xi). In response to these two remands, the Agency intends to conduct further rulemaking proceedings on construction activities under 5 acres and light industry without exposure as ordered by the Court. EPA will not require permit applications for construction sites disturbing less than 5 acres of land and category xi facilities without exposure until this further rulemaking is completed. In "AMC," the Court upheld EPA's regulation of storm water discharges from inactive mines.

INDUSTRIAL APPLICATION OPTIONS

The November 16, 1990, storm water regulation presents three permit application options for storm water discharges associated with industrial activity. The first option is to submit an individual application consisting of Forms 1 and 2F. The second option is to participate in a group application. This option, however, is no longer available as the deadlines have passed. The third option is to file a Notice of Intent (NOI) to be covered under a general permit in accordance with the requirements of an issued general permit. The following overview briefly outlines each of these three options and the subsequent attachments provide a more detailed explanation.

A. INDIVIDUAL APPLICATIONS

Operators of facilities with storm water discharges associated with industrial activity who did not participate in a group application or did not obtain coverage under a general permit, must submit an individual application consisting of Form 1 and Form 2F. The information required in Form 2F includes a site drainage map, a narrative description of the site identifying potential pollutant sources, and quantitative testing data. There are specific requirements for construction activities and oil and gas operations and mining operations. See Attachment I for additional information.

B. GROUP APPLICATIONS

The group application procedure was an option available for facilities that have similar industrial operations, waste streams and other characteristics. Group applications reduced the burden on the regulated community by requiring the submission of quantitative data from only selected members of the group. The group application was submitted in two parts. Part 1 of the application identified all participants, provided facility specific information and proposed a representative sampling subgroup. Part 2 of the application consists of sampling data from each member of the sampling subgroup identified in Part 1 of the application. See Attachment II for additional information.

C. GENERAL PERMIT - NOI REQUIREMENTS

Industrial storm water dischargers that submit an NOI to be covered by the general permit are not required to submit an individual permit application or participate in a group application, provided the discharger is eligible for the permit and an individual permit application is not required by the Director on a case-by-case basis. Submitting an NOI represents a significantly less burden than submitting an individual application or participating in a group application. The NOI requirements for general permits usually address only general information and typically do not require the collection of monitoring data. Submittal of an NOI is only possible where applicable general permits have been issued by the permitting authority. EPA has finalized general permits for construction and industrial activity in the 12 States without NPDES authorization (57 FR 41176, September 9, 1992 and 57 FR 44412, September 25, 1992). As of September 1993, 36 of the 39 authorized NPDES States have general permit authority. See Attachments III, IV and V for additional information.

INDUSTRIAL PERMIT APPLICATION DEADLINES

Type of Application	Deadline	
▲ Individual	October 1, 1992	
▲ Group	Part 1	Part 2
All industrial activities except those owned or operated by a municipality with a population of 100,000 to 250,000.	September 30, 1991	October 1, 1992
Industrial activities owned or operated by a municipality with a population of less than 250,000.	May 18,1992	May 17, 1993
▲ General Permit NOI	October 1, 1992 (for EPA's general permits)	

MUNICIPAL APPLICATIONS

"Municipal separate storm sewer" is defined as any conveyance or system of conveyances that is owned or operated by a State or local government entity designed for collecting and conveying storm water which is not part of a POTW. The application requirements do not apply to discharges from combined sewers (systems designed as both a sanitary sewer and a storm sewer). Municipal separate storm sewer systems that are addressed by the November 16, 1990, regulations include storm sewer systems located in 173 cities with populations of 100,000 or more; located in 47 counties identified by EPA as having populations over 100,000 in unincorporated, urbanized areas; and systems that are designated by the Director based on consideration of the location of the discharge with respect to waters of the United States, the size of the discharge, the quantity and nature of the pollutants discharged to waters of the United States, the interrelationship to other regulated storm sewer systems, and other factors. The operator of a designated system will be notified by the Director. Under the November 16, 1990, storm water rule, those municipal separate storm sewer systems identified must submit a two-part application. The first part requires information regarding existing programs and the means available to the municipality to control pollutants. In addition, part one requires a field screening analysis of major outfalls to detect illicit connections. Building on this information, the second part requires a limited amount of representative quantitative data and a description of a proposed storm water management plan. See Attachment V for a detailed explanation of the two-part application process.

MUNICIPAL APPLICATIONS DEADLINES

	Part 1	Part 2
Large Municipalities (over 250,000)	November 18, 1991	November 16, 1992
Medium Municipalities (100,000 - 250,000)	May 18, 1992	May 17, 1993

ATTACHMENT I

INDIVIDUAL APPLICATION REQUIREMENTS

These requirements address storm water discharges associated with industrial activity that are not authorized by a general permit and that are not included in a group application.

Application Forms

- Applicants for discharges composed entirely of storm water must submit **Forms 1 and 2F**
- Applicants for discharges composed of storm water and process wastewater must submit **Forms 1, 2C, and 2F**
- Applicants for new sources or new discharges composed of storm water and non-storm water must submit **Forms 1, 2D, and 2F**
- Applicants for discharges composed of storm water and nonprocess wastewater must submit **Forms 1, 2E, and 2F**
- Authorized NPDES States may establish their own forms which are at least as stringent as EPA's forms.
- Forms are available from State permitting authorities for facilities located in NPDES authorized States, or from EPA Regional Offices for facilities located in States without NPDES authorization.

Form 2F Requirements

- Site map showing topography and/or drainage areas and site characteristics.
- Estimate of impervious surface area and the total area drained by each outfall.
- Description of significant materials exposed to storm water, including current materials management practices.
- Certification that outfalls have been tested or evaluated for the presence of non-storm water discharges that are not covered by a NPDES permit.
- Information on significant leaks and spills in last 3 years.
- Quantitative testing data for the following parameters:
  - Any pollutants limited in an effluent guideline to which the facility is subject
  - Any pollutant listed in the facility's NPDES permit for process wastewater
  - Oil and grease, pH, BOD_5, COD, TSS, total phosphorus, nitrate plus nitrite nitrogen, and total Kjeldahl nitrogen
  - Certain pollutants known to be in the discharge
  - Flow measurements or estimates
  - Date and duration of storm event.

Individual Application Requirements for Construction Activities

- Provide a narrative description of:
  - Location and nature of construction activity (including a map)
  - Total area of the site and area to be excavated
  - Proposed measures to control pollutants in storm water discharges during and after construction operations
  - Estimate of runoff coefficient and increase in impervious areas after construction
  - Name of receiving water.
- No quantitative sampling.
- Application deadline
  - 90 days prior to date when construction begins.
- EPA has not developed a standard form for these discharges at this time (Form 2F is not required).

Application Requirements for Oil & Gas Operations and Mining Operations

- Operators of oil & gas facilities are not required to submit a permit application unless the facility:
  - Has had a discharge of a reportable quantity for which notice is required under CERCLA or CWA in the past 3 years, or
  - Contributes to a violation of a water quality standard.
- Operators of active and inactive mining sites are not required to submit permit applications unless the discharge has come into contact with any overburden, raw material, intermediate or finished products, byproducts, or waste products located onsite (inactive coal mining operations released from SMCRA performance bonds and non-coal mining operations released from applicable State or Federal reclamation requirements after December 17, 1990, are not required to submit permit applications).

Available Guidance

Guidance Manual For The Preparation of NPDES Permit Applications for Storm Water Discharges Associated with Industrial Activity (Order #PB92199058), available from NTIS, *(703) 487-4650*; *NPDES Storm Water Sampling Guidance Document*, available from the Storm Water Hotline, *(703) 821-4823*.

Deadline

October 1, 1992, or 180 days prior to commencement of a new discharge.

ATTACHMENT II

GROUP APPLICATION REQUIREMENTS

Facilities that discharge storm water associated with industrial activity had until September 30, 1991, to file Part I of the group application in lieu of submitting a complete individual application or an NOI to be covered by a general permit. The Transportation Act of 1991, however, extended the group application deadlines for certain industrial activities owned or operated by a municipality with a population of 100,000 to 250,000. Facilities that are part of the same effluent guideline subcategory or with similar activities and operations were eligible to submit a group application. EPA received 1,243 Part I group applications covering approximately 60,000 facilities.

The group application was submitted in two parts. Part 1 of the application was due by September 30, 1991, and Part 2 of the application was due by October 1, 1992. These deadlines applied to all industrial activities except those owned or operated by a municipality with a population of 100,000 to 250,000. For these facilities, Part 1 of the application was due by May 18, 1992, and Part 2 of the application is due by May 17, 1993. Both parts were submitted directly to U.S. EPA Headquarters, Office of Wastewater Enforcement and Compliance (EN-336), 401 M Street, SW, Washington, DC 20460, regardless of whether or not the included facilities are in a NPDES authorized State. The Transportation Act also addressed municipally owned or operated industrial activities that were denied by EPA from the group application process. Such facilities must submit an individual application or be covered by a general permit within 180 days after the denial was made, or by October 1, 1992, whichever is later.

EPA is currently taking both parts of the application and formulating model permit language. The complete applications and model permit language will then be distributed to every NPDES authorized State or EPA Region (if the State is not NPDES authorized) in which participants are located. The State then reviews the application and model permit language. The State may consider the application and model permit language when issuing permits (either individual or general). The State may ask each or any of the applicants for more information on their facility and/or discharge if the State needs additional information. EPA Regional Offices will follow these same steps for participants located in States without NPDES authorization.

Part 1

- A list of participants by name, location, and precipitation zone
- A summary of each participant's industrial activities
- An explanation of why the participants are sufficiently similar
- A list of significant materials stored outside by each participant and materials management practices
- A list of representative dischargers that will submit test data in Part 2.

Part 2

- Quantitative testing data must be submitted by those facilities identified as "samplers" in Part I of the application.

  - For groups of 4 to 20 members, 50 percent of the facilities must submit data; for groups with 21 to 99, a minimum of 10 dischargers must submit quantitative data; for groups with 100 to 1,000 members, a minimum of 10 percent of the facilities must submit data; for groups with greater than 1,000 members, no more than 100 facilities must submit data; there must be 2 dischargers from each precipitation zone in which 10 or more members of the group are located, or 1 discharger from each precipitation zone in which 9 or fewer members are located. Testing requirements are described under 40 CFR 122.26(c)(1)(i)(E) and 40 CFR 122.21(g)(7).

Additional Information

A model group application accompanied by detailed information on how to complete both Part 1 and Part 2 group applications is available from the Storm Water Hotline, *(703) 821-4823*. Technical support with regard to sampling procedures is also available from the hotline *(NPDES Storm Water Sampling Guidance Document)*.

Deadlines

- All Industrial Activities Except Those Owned Or Operated By A Municipality With A Population of 100,000 to 250,000

  Part 1 - September 30, 1991
  Part 2 - October 1, 1992

- Industrial Activities Owned or Operated By A Municipality With A Population of 100,000 to 250,000

  Part 1 - May 18, 1992
  Part 2 - May 17, 1993

ATTACHMENT III

EPA GENERAL PERMIT REQUIREMENTS (GENERAL INFORMATION)

On September 9 and 25, 1992, EPA issued general permits for construction and industrial activities (57 FR 41176 and 44412) which are intended to initially cover the majority of storm water discharges associated with industrial activity in 12 States and 6 territories without authorized NPDES programs. As of March 1993, 35 of the 39 authorized NPDES States have authority to issue general permits. Facilities in authorized NPDES States should contact their State permitting agencies to determine the status of the general permitting program. The following tables (Attachments III, IV and V) outline conditions in EPA's general permits for industrial activities and construction activities.

Areas of Coverage

- **Region I**— MA, ME, NH; Indian lands in MA, NH, ME. **Region II**—PR and Indian lands in NY. **Region III**—DC, Federal facilities in DE. **Region IV**— FL; Indian lands in FL, MS, NC. **Region VI**—LA, NM, OK, TX. **Region VII**—SD; Indian lands in CO, MT, ND, SD, UT (except Goshute Reservation and Navajo Reservation lands), WY; Federal facilities in CO; Ute Mountain Reservation in CO, and NM. **Region IX**— American Samoa and Guam; AZ; Territories of Johnston Atoll, and Midway and Wake Island; Indian lands in CA, and NV; Goshute Reservations in UT and NV, Navajo Reservations in UT, NM, and AZ, Duck Valley Reservation in NV and ID. **Region X**—AK, and ID; Indian lands in AK, ID (except Duck Valley Reservation lands), and WA; Federal facilities in WA.

Types of Discharges Covered

- EPA's general permits cover the majority of storm water discharges associated with industrial activity. Storm water discharges associated with industrial activity that cannot be authorized by EPA's general permits include those:
  - With an existing effluent limitations guideline for storm water
  - That are mixed with non-storm water, unless the non-storm water discharges are in compliance with a different NPDES permit
  - With an existing NPDES individual or general permit for the storm water discharges
  - That are or may reasonably be expected to be contributing to a violation of a water quality standard
  - That are likely to adversely effect a listed or proposed to be listed endangered or threatened species or its critical habitat
  - From inactive mining, or inactive oil and gas operations or inactive landfills occurring on Federal lands where an operator cannot be identified (industrial permit only).

NOI Requirements

- A facility must submit a Notice of Intent (NOI) to be authorized by the general permit.
- NOI's do not require the collection of discharge sampling data.
- Facilities which discharge to a large or medium municipal separate storm sewer system must also submit signed copies of the NOI to the operator of the municipal system.
- Operators of construction activities must also submit signed copies of the NOI to State or local agencies approving sediment and erosion or storm water management plans under

which the construction activity is operating.

Deadlines for NOI's

- On or before October 1, 1992 for existing industrial activities
- For facilities or construction activities which begin industrial activity after October 1, 1992, an NOI shall be submitted at least 2 days prior to the commencement of the industrial activity.
- NOI's must be sent to the following address:

  Storm Water Notice of Intent
  P.O. Box 1215
  Newington, VA 22122

Special Conditions

- Prohibition on most types of non-storm water discharges as a component of discharges authorized by this permit. (These discharges should already have an NPDES permit.) However, EPA's permits authorize certain types of non-storm water discharges.
- In the event there is a release(s) of a hazardous substance in excess of reportable quantities established under the CWA or CERCLA (see 40 CFR 117.3, 40 CFR 302.4) the discharger must:
  - Notify the National Response Center and the Director, and modify the storm water pollution prevention plan.

Pollution Prevention Plan Requirements

- Operators of all facilities covered by EPA's general permits must prepare and implement a storm water pollution prevention plan.

ATTACHMENT IV

EPA INDUSTRIAL GENERAL PERMIT (SPECIFIC REQUIREMENTS)

Contents of NOI for Industrial Activities

- Street address or latitude/longitude
- SIC Code or identification of industrial activity
- Operator's name, address, telephone number, and status as Federal, State, private, public, or other entity
- Permit number(s) of any existing NPDES permit(s)
- Name of receiving water(s)
- Indication of whether the owner or operator has existing quantitative data describing the concentration of pollutants in storm water discharges
- A certification that a storm water pollution prevention plan has been prepared for the facility (for industrial activities that begin operations after October 1, 1992).

Pollution Prevention Plan Requirements for Industrial Activities

The Pollution Prevention Plan is considered to be the most important requirement of the General Permit. Each industrial facility covered by the general permit must develop a Plan, tailored to the site specific conditions, and designed with the goal to control the amount of pollutants in storm water discharges from the site.

- **Pollution Prevention Team** - Each facility will select a Pollution Prevention Team from its staff, and the Team will be responsible for developing and implementing the Plan.
- **Components of the Plan** - The permit requires that the Plan contain a description of potential pollutant sources, and a description of the measures and controls to prevent or minimize pollution of storm water. The description of potential pollutant sources must include:
  - A map of the facility indicating the areas which drain to each storm water discharge point
  - An indication of the industrial activities which occur in each drainage area
  - A prediction of the pollutants which are likely to be present in the storm water
  - A description the likely source of pollutants from the site
  - An inventory of the materials which may be exposed to storm water
  - The history of spills or leaks of toxic or hazardous materials for the past 3 years.

  The measures and controls to prevent or minimize pollution of storm water must include:

  - Good housekeeping or upkeep of industrial areas exposed to storm water
  - Preventive maintenance of storm water controls and other facility equipment
  - Spill prevention and response procedures to minimize the potential for and the impact of spills
  - Test all outfalls to insure there are no cross connections (only storm water is discharged)

- Training of employees on pollution prevention measures and controls, and record keeping.

The permit also requires that facilities:

- Identify areas with a high potential for erosion and the stabilization measures or structural controls to be used to limit erosion in these areas
- Implement traditional storm water management measures (oil/water separators, vegetative swales, detention ponds, etc) where they are appropriate for the site.

▲ **Inspection/Site Compliance Evaluation** - Facility personnel must inspect the plant equipment and industrial areas on a regular basis. At least once every year a more thorough site compliance evaluation must be performed by facility personnel

- Look for evidence of pollutants entering the drainage system
- Evaluate the performance of pollution prevention measures
- Identify areas where the Plan should be revised to reduce the discharge of pollutants
- Document both the routine inspections and the annual site compliance evaluation in a report.

▲ **Consistency** - The Plan can incorporate other plans which a facility may have already prepared for other permits including Spill Prevention Control and Countermeasure (SPCC) Plans, or Best Management Practices (BMP) Programs.

▲ **Deadlines** - The plan must be prepared on or before April 1, 1993, and the facility must be in compliance with the plan on or before October 1, 1993.

▲ **Signature** - The plan must be signed by a responsible corporate official such as the president, vice president or general partner.

▲ **Plan Review** - The plan is to be kept at the permitted facility at all times. The plan should be submitted for review only when requested by EPA.

<u>Semi-Annual Monitoring/Annual Reporting Requirements</u>

▲ EPCRA Section 313 facilities

▲ Primary metal industries Standard Industrial Classification (SIC) 33

▲ Land disposal units/incinerators/BIF's

▲ Wood treatment facilities

▲ Facilities with coal pile runoff

▲ Battery reclaimers

<u>Annual Monitoring/No Reporting Requirements</u>

▲ Airports with at least 50,000 flight operations per year

▲ Coal-fired steam electric facilities

▲ Animal handling/meat packing facilities

- Additional facilities, including:
  - SIC 30 and 28 with storage piles for solid chemicals used as raw materials that are exposed to precipitation
  - Certain automobile junkyards

    Lime manufacturing facilities where storm water comes into contact with lime storage piles
  - Oil handling sites at oil fired steam electric power generating facilities
  - Cement manufacturing and cement kilns
  - Ready-mix concrete facilities
  - Shipbuilding and repairing facilities

Additional Monitoring Requirements

- Testing parameters for facilities are listed in the general permits.
- At a minimum, all dischargers must conduct an annual site inspection of the facility.

Alternative Certification

- A discharger is not subject to the monitoring requirements for a given outfall if there is no exposure of industrial areas or activities to storm water within the drainage area of that outfall within a given year.
- The discharger must certify, on an annual basis, that there is no exposure to storm water, and such certification must be retained in the storm water pollution prevention plan. Facilities subject to semi-annual monitoring requirements must submit this certification to EPA in lieu of monitoring data..

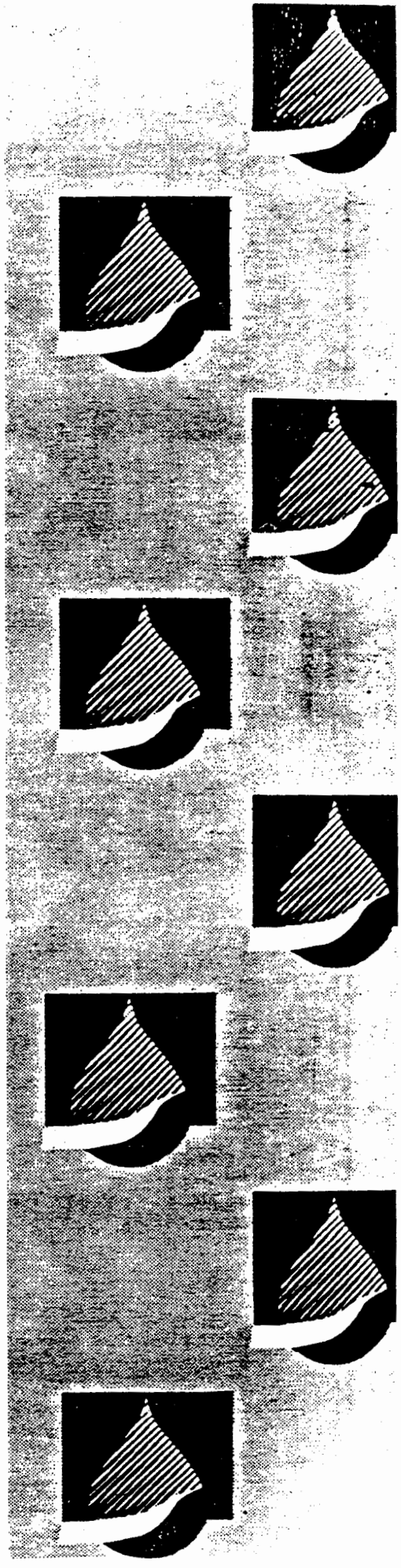
Numeric Effluent Limitations

- Coal pile runoff: 50 mg/l Total Suspended Solids (TSS) and 6-9 pH

Available Guidance

Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices, available from NTIS (703) 487-4650, order number PB 92-235969; *Summary: Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices* (October 1992), available from the Storm Water Hotline, (703) 821-4823.

Overview of the Storm Water Program



EPA

U.S. Environmental Protection Agency
Office of Wastewater Enforcement and Compliance
Permits Division
401 M Street, SW
Washington, DC 20460

October 1993

ATTACHMENT V

EPA CONSTRUCTION GENERAL PERMIT REQUIREMENTS (SPECIFIC REQUIREMENTS)

Coverage

- Storm water discharges from construction sites that are authorized by this permit include those that will result in the disturbance of 5 or more acres of land.

Contents of NOI for Construction Activities

- Street address or latitude/longitude
- The name, address, telephone number of the operator(s) with day to day operational control and operator status as Federal, State, private, public, or other entity
- Permit number(s) of any existing NPDES permit(s)
- Name of receiving water(s)
- Indication of whether the owner or operator has existing quantitative data describing the concentration of pollutants in storm water discharges
- An estimate of the project start date and completion dates and estimates of the number of disturbed acres
- A certification that a storm water pollution prevention plan has been prepared for the facility

Deadlines for Notification

- An NOI shall be submitted at least 2 days prior to the commencement of construction (commencement of construction is defined as the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities) at any site that will result in the disturbance of 5 or more acres total land area.

Pollution Prevention Plan Requirements for Construction Activities

The Pollution Prevention Plan is considered to be the most important requirement of the Genera Permit. Each construction activity covered by the general permit must develop a Plan, tailored to th site specific conditions, and designed with the goal to control the amount of pollutants in storm wate discharges from the site.

- **Components of the Plan** - The permit requires that the Plan contain a site description, and a description of the measures and controls to prevent or minimize pollution of storm water. The site description must include:
  - A description of the nature of the construction activity
  - A sequence of major construction activities
  - An estimate of the total area of the site and of the area to be disturbed
  - An estimate of the runoff coefficient of the site after construction is complete
  - Any existing data on the quality of storm water discharge from the site
  - The name of the receiving water
  - Any information on the type of soils at the site; and
  - A site map indicating drainage patterns and slopes after grading activities are complete, area of soil disturbance, the outline of the area to be disturbed, the location of stabilizatior measures and controls, and surface waters at the discharge points.

- **Measures and Controls** - Measures and controls to prevent or minimize pollution of storm water must include three different types of controls: erosion and sediment controls, storm water management controls and other controls:

  - Erosion and Sediment Controls

    - Stabilization (seeding, mulching, etc.) - Disturbed areas where construction has permanently or temporarily ceased must be stabilized within 14 days of the last disturbance or as soon as practicable in semi-arid and arid areas. (Areas which will be redisturbed within 21 days do not have to be stabilized).

    - Structural Controls - Sites with common drainage locations that serve 10 or more disturbed acres must install a sediment basin where it is attainable (where a basin is not attainable, sediment traps, silt fence or other equivalent measures must be installed. Sediment basins must provide 3,600 cubic feet of storage per acre drained. Drainage locations which serve less than 10 disturbed acres must install either a sediment basin, sediment trap or silt fence along the down slope and side slope perimeter.

- Plan shall be completed prior to submittal of an NOI and updated as appropriate.

- For construction activities that have begun after October 1, 1992, the plan shall provide for compliance with the terms and schedule of the plan beginning with the initiation of construction activities.

Available Guidance

Storm Water Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices, available from NTIS (703) 487-4650, order number PB 92-235951; *Summary: Storm Water Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices* (October 1992), available from the Storm Water Hotline (703) 821-4823.

ATTACHMENT VI

MUNICIPAL APPLICATION REQUIREMENTS

The CWA requires that NPDES permits for discharges from municipal separate storm sewer systems include a requirement to effectively prohibit non-storm water discharges into the storm sewers, and controls to reduce the discharge of pollutants to the maximum extent practicable (including management practices, control techniques and system design and engineering methods, and other provisions appropriate for the control of such pollutants). EPA or authorized NPDES States may issue system-wide or jurisdiction-wide permits covering all discharges from a municipal separate storm sewer system. The November 1990 storm water final rule established requirements for a two-part permit application designed to facilitate development of site specific permit conditions. The permit application requirements provide municipal applicants an opportunity to propose appropriate management programs to control pollutants in discharges from their municipal systems. This increases flexibility to develop appropriate permit conditions and ensures input from municipalities in developing appropriate controls.

Part 1

- General information (name, address, etc.)
- Existing legal authority and any additional authorities needed
- Source identification information
- Discharge characterization including:
  - Monthly mean rain and snow fall estimates
  - Existing quantitative data on volume and quality of storm water discharges
  - A list of receiving water bodies and existing information on the impacts of receiving waters
  - Field screening analysis for illicit connections and illegal dumping.
- Characterization plan identifying representative outfalls for further sampling in Part 2
- Description of existing management programs to control pollutants from the municipal separate storm sewer and to identify illicit connections
- Description of financial budget and resources currently available to complete Part 2.

Part 2

- Demonstration of adequate legal authority to control discharges, prohibit illicit discharges, require compliance, and carry out inspections, surveillance, and monitoring
- Source identification indicating the location of any major outfalls and identifying facilities that discharge storm water associated with industrial activity through the municipal separate storm sewer
- Discharge characterization data including
  - Quantitative data from 5-10 representative locations in approved sampling plans
  - For selected conventional pollutants and heavy metals, estimates of the annual pollutant load and event mean concentration of system discharges

- Proposed schedule to provide estimates of seasonal pollutant loads and the mean concentration for certain detected constituents in a representative storm event
- Proposed monitoring program for representative data collection.

▲ Proposed management program including descriptions of:

- Structural and source control measures that are to be implemented to reduce pollutants in runoff from commercial and residential areas
- Program to detect and remove illicit discharges
- Program to monitor and control pollutants from municipal landfills, hazardous waste treatment, disposal, and recovery facilities; EPCRA Section 313 facilities; and other priority industrial facilities
- Program to control pollutants in construction site runoff.

▲ Estimated reduction in loadings of pollutants as a result of the management program

▲ Fiscal analysis of necessary capital and operation and maintenance expenditures.

Available Guidance

Guidance Manual for the Preparation of Part 1 of the NPDES Permit Application for Discharges from Municipal Separate Storm Sewer Systems and *NPDES Storm Water Sampling Guidance Document*, available from NTIS *(703) 487-4650*, order number PB 92-114578; *Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Seperate Storm Sewers Systems*, available from the Storm Water Hotline, (703) 821-4823.

Deadlines

▲ Large Municipal Systems With A Population Of 250,000 Or More:

(55 FR 48073, Novemer 16, 1990, Appendices F and H)

Part 1 - November 18, 1991
Part 2 - November 16, 1992

▲ Medium Municipal Systems With A Population of 100,000 to 250,000:

(55 FR 48074, November 16, 1990 Appendices G and I)

Part 1 - May 18, 1992
Part 2 - May 17, 1993

ATTACHMENT VII

STORM WATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY

The discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 CFR Part 122. For the categories of industries identified in subparagraphs (i) through (x) of this subsection, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the categories of industries identified in subparagraph (xi), the term includes only storm water discharges from all the areas (except access roads and rail lines) that are listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste material, by-products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally, State, or municipally owned or operated that meet the description of the facilities listed in this paragraph (i)-(xi) include those facilities designated under the provision of 122.26(a)(1)(v). The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection:

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR Subchapter N (except facilities with toxic pollutant effluent standards which are excepted under category (xi) of this paragraph);
(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285) 29, 311, 32 (except 323), 33, 3441, 372;
(iii) Facilities classified as Standard Industrial Classifications 10 though 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(l) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990 and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; (inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator; inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, nor sites where minimal activities are undertaken for the sole purpose of maintaining mining claim);
(iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA;
(v) Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under Subtitle D of RCRA;

(vi) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobiles junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;
(vii) Steam electric power generating facilities, including coal handling sites;
(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (i)-(vii) or (ix)-(xi) of this subsection are associated with industrial activity;
(ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with Section 405 of the CWA;
(x) Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than five acres of total land area which are not part of a larger common plan of development or sale;
(xi) Facilities under Standard Industrial Classification 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25, (and which are not otherwise included within categories (ii)-(x))

Note: The Transportation Act of 1991 provides an exemption from storm water permitting requirements for certain facilities owned or operated by municipalities with a population of less than 100,000. Such municipalities must submit storm water discharge permit applications for only airports, power plants, and uncontrolled sanitary landfills that they own or operate, unless a permit is otherwise required by the permitting authority.

Excerpt from: "Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices." 1992. U.S. Environmental Protection Agency, Office of Water. EPA 832-R-92-006.

1.6 SUMMARY OF THE STORM WATER PROGRAM

Storm water discharges have been increasingly identified as a significant source of water pollution in numerous nationwide studies on water quality. To address this problem, the Clean Water Act Amendments of 1987 required EPA to publish regulations to control storm water discharges under NPDES. EPA published storm water regulations on November 16, 1990, which require certain dischargers of storm water to waters of the United States to apply for NPDES permits. "Waters of the United States" is generally defined as surface waters, including lakes, rivers, streams, wetlands, and coastal waters. NPDES storm water discharge permits will allow the States and EPA to track and monitor sources of storm water pollution. According to the November 16, 1990, final rule, facilities with a "storm water discharge associated with industrial activity" are required to apply for a storm water permit. EPA has defined this phrase in terms of 11 categories of industrial activity that include: (1) facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR Subchapter N; (2) "heavy" manufacturing facilities; (3) mining and oil and gas operations with "contaminated" storm water discharges; (4) hazardous waste treatment, storage, or disposal facilities; (5) landfills, land application sites, and open dumps; (6) recycling facilities; (7) steam electric generating facilities; (8) transportation facilities, including airports; (9) sewage treatment plants; (10) construction operations disturbing 5 or more acres*; and (11) other industrial facilities where materials are exposed to storm water*. Operators of industrial facilities that are Federally, State, or municipally owned or operated that meet the above description must also submit applications. If you have questions about whether or not your facility needs to seek permit coverage, contact the EPA Storm Water Hotline at (703) 821-4823.

Storm water discharges associated with industrial activity that reach waters of the United States through Municipal Separate Storm Sewer Systems (MS4s) are also required to obtain NPDES storm water permit coverage. Discharges of storm water to a combined sewer system or to a Publicly Owned Treatment Works (POTW) are excluded.

The storm water regulation presents three permit application options for storm water discharges associated with industrial activity. The first option is to submit an individual application consisting of Forms 1 and 2F. The second option is to participate in a group application. The third option is to file a Notice of Intent (NOI) to be covered under a general permit in accordance with the

*On June 4, 1992, the United States Court of Appeals for the Ninth Circuit remanded the exemptions for manufacturing facilities which do not have materials or activities exposed to storm water and for construction sites of less than five acres to the EPA for further rulemaking.

requirements of an issued general permit. Regardless of the permit application option a facility selects, the resulting storm water discharge permit will most likely contain a requirement to develop and implement a Storm Water Pollution Prevention Plan.

NPDES permits are issued by the State for States that have been delegated NPDES permitting authority or by EPA for States that have not been delegated NPDES permitting authority. Therefore, the specific EPA General Permit requirements discussed in this guidance manual apply only to facilities located in one of the 12 nondelegated States or Territories (Alaska; Arizona; Idaho; Louisiana; Maine; Massachusetts; New Hampshire; New Mexico; Oklahoma; South Dakota; Texas; the District of Columbia; Puerto Rico; Guam; American Samoa; Northern Mariana Islands; Trust Territory of the Pacific Islands; Indian lands in Alabama, California, Georgia, Kentucky, Michigan, Minnesota, Mississippi, Montana, North Carolina, North Dakota, New York, Nevada, South Carolina, Tennessee, Utah, Wisconsin, Wyoming; located within Federal facilities or Indian lands in Colorado and Washington; and located within Federal facilities in Delaware). EPA expects, however, that the Federal general permit will be used as a model by NPDES-authorized States, tailored to meet State-specific conditions. Even though storm water permit requirements will vary from State to State depending on water quality concerns and permitting priorities for the permitting authority, EPA expects that most NPDES storm water discharge permits will contain Storm Water Pollution Prevention Plan requirements similar to the requirements presented in this manual.

United States Environmental Protection Agency | Office Of Water (EN-336) | EPA 833-F-93-002 March 1992

EPA

NPDES Storm Water Program

Question And Answer Document Volume 1

37. Is a marina required to apply for a storm water permit if it operates a retail fueling operation, but other vehicle maintenance or equipment cleaning activities are not conducted onsite?

Facilities that are "primarily engaged" in operating marinas are best classified as SIC 4493 - marinas. These facilities rent boat slips, store boats, and generally perform a range of other marine services including boat cleaning and incidental boat repair. They frequently sell food, fuel, fishing supplies, and may sell boats. For facilities classified as 4493 that are involved in vehicle (boat) maintenance activities (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication) or equipment cleaning operations, those portions of the facility that are involved in such vehicle maintenance activities are considered to be associated with industrial activity and are covered under the storm water regulations.

Facilities classified as 4493 that are not involved in equipment cleaning or vehicle maintenance activities (including vehicle rehabilitation, mechanical repairs, painting, and lubrication) are not intended to be covered under 40 CFR Section 122.26(b)(14)(viii) of the storm water permit application regulations. The retail sale of fuel alone at marinas, without any other vehicle maintenance or equipment cleaning operations, is not considered to be grounds for coverage under the storm water regulations.

Marine facilities that are "primarily engaged" in the retail sale of fuel and lubricating oils are best classified as SIC code 5541 - marine service stations - and are not covered under 40 CFR Section 122.26(b)(14)(viii) of the storm water permit application regulations. These facilities may also sell other merchandise or perform minor repair work.

Facilities "primarily engaged" in the operation of sports and recreation services such as boat rental, canoe rental, and party fishing, are best classified under SIC code 7999 - miscellaneous recreational facilities - and are not covered under 40 CFR Section 122.26(b)(14)(viii).

Marina & Boat Pollution Sources: EPA Comparison of CZARA Management Measures and NPDES Regulations.

Pollution Source	Covered by CZARA Management Measures	Covered by NPDES Permitting
Siting considerations to minimize NPS impacts	Yes	No
Design considerations to mimimize NPS impacts	Yes	No
Siting/design to minimize habitat impacts	Yes	No
Runoff from boat washing on shore	Yes *	Yes, Stormwater from SIC 4493 ***
Runoff from marina grounds (non-industrial)	Yes	No
Runoff associated with hull maintenance/repair/painting	Yes	Yes, Stormwater from SIC 4493 ***
Nonpoint source impacts from shoreline erosion	Yes	No
Design for ease of fuel spill cleanup	Yes *	May be addressed in marina (SIC 4493) storm water pollution prevention plan (SWPPP)
Improper disposal of sewage	Yes *	Yes, as boat ** discharge if in water and as SIC 4493 if in storm water on shore
Solid waste handling	Yes *	Yes, if storm water runoff is in contact with handling material from industrial activity*** as a SIC 4493 facility
Fish waste disposal	Yes	No (except commercial fish processing facility)
Liquid waste handling	Yes *	Yes, if the storm water runoff contains the handling material from industrial activity*** as a SIC 4493 facility
Petroleum from boats	Yes *	Yes, as boat** discharge if in water and as storm water from SIC 4493 facility for leaks from boats in maintenance yards
In-water cleaning	Yes *	Yes, as boat** discharge. May also be addressed in marinas (SIC 4493) SWPPP
Public education	Yes	Not directly, but could be required as part of marinas (SIC 4493) SWPPP
Boat operation impacts on habitat	Yes	No

* Covered by CZARA until a permit is issued, then no longer covered by CZARA.
** Boat owner, not marina, would be responsible party for point source (process) discharge to surface waters.
*** Industrial activity is defined as equipment cleaning or vehicle (e.g., boat) maintenance including vehicle rehabilitation, mechanical repairs, painting, and lubrication.

Source: "CZARA Coastal Nonpoint Pollution Control Program Workshop; Region III - South Atlantic, May 18-20, 1993, Alexandria, Virginia." 1993. Sponsored by U.S. Environmental Protection Agency, Office of Water and National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management.

2. Relationship Between This Management Measures Guidance for Coastal Nonpoint Sources and NPDES Permit Requirements for Point Sources

a. Urban Runoff

Historically, there have always been ambiguities in and overlaps between programs designed to control urban runoff nonpoint sources and those designed to control urban storm water point sources. For example, runoff may often originate from a nonpoint source but ultimately may be channelized and discharged through a point source. Potential confusion between these two programs has been heightened by Congressional enactment of two important pieces of legislation: section 402(p) of the Clean Water Act, which establishes permit requirements for certain municipal and industrial storm water discharges, and section 6217 of CZARA, which requires EPA to promulgate and States to provide for the implementation of management measures to control nonpoint pollution in coastal waters. The discussion below is intended to clarify the relationship between these two programs and describe the scope of the coastal nonpoint program and its applicability to urban runoff in coastal areas.

b. The Storm Water Permit Program

The storm water permit program is a two-phase program enacted by Congress in 1987 under section 402(p) of the Clean Water Act. Under Phase I, National Pollutant Discharge Elimination System (NPDES) permits are required to be issued for municipal separate storm sewers serving large or medium-sized populations (greater than 250,000 or 100,000 people, respectively) and for storm water discharges associated with industrial activity. Permits are also to be issued, on a case-by-case basis, if EPA or a State determines that a storm water discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. EPA published a rule implementing Phase I on November 16, 1990.

Under Phase II, EPA is to prepare two reports to Congress that assess the remaining storm water discharges; determine, to the maximum extent practicable, the nature and extent of pollutants in such discharges; and establish procedures and methods to control storm water discharges to the extent necessary to mitigate impacts on water quality. Then, EPA is to issue regulations that designate storm water discharges, in addition to those addressed in Phase I, to be regulated to protect water quality, and EPA is to establish a comprehensive program to regulate those designated sources. The program is required to establish (1) priorities, (2) requirements for State storm water management programs, and (3) expeditious deadlines.

These regulations were to have been issued by EPA not later than October 1, 1992. Because of EPA's emphasis on Phase I, however, the Agency has not yet been able to complete the studies and issue appropriate regulations as required under section 402(p).

c. Coastal Nonpoint Pollution Control Programs

As discussed above, Congress enacted section 6217 of CZARA in late 1990 to require that States develop Coastal Nonpoint Pollution Control Programs that are in conformity with this management measures guidance published by EPA.

d. Scope and Coverage of This Guidance with Respect to Storm Water

EPA is excluding from coverage under this section 6217(g) guidance all storm water discharges that are covered by Phase I of the NPDES storm water permit program. Thus EPA is excluding any discharge from a municipal separate storm sewer system serving a population of 100,000 or more; any discharge of storm water associated with industrial activity; any discharge that has already been permitted; and any discharge for which EPA or the State makes a determination that the storm water discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. All of these activities are clearly addressed by the storm water permit program and therefore are excluded from the coastal nonpoint pollution control program.

EPA is adopting a different approach with respect to other (non-Phase I) storm water discharges. At present, EPA has not yet promulgated regulations that would designate additional storm water discharges, beyond those regulated in Phase I, that will be required to be regulated in Phase II. It is thus not possible to determine at this point which additional storm water discharges will be regulated by the NPDES program and which will not. Furthermore, because of the great number of such discharges, it is likely that it would take many years to permit all of these discharges, even if EPA allows for relatively expeditious State permitting approaches such as the use of general permits.

Therefore, to give effect to the Congressional intent that coastal waters receive special and expeditious attention from EPA, NOAA, and the States, storm water runoff that potentially may be ultimately covered by Phase II of the storm water permit program is subject to this management measures guidance and will be addressed by the States' Coastal Nonpoint Pollution Control Programs. Any storm water runoff that ultimately is regulated under an NPDES permit will no longer be subject to this guidance once the permit is issued.

In addition, it should be noted that some other activities are not presently covered by NPDES permit application requirements and thus would be subject to a State's Coastal Nonpoint Pollution Control Program. Most importantly, construction activities on sites that result in the disturbance of less than 5 acres, which are not currently covered by Phase I storm water application requirements[1], are covered by the Coastal Nonpoint Pollution Control Program. Similarly, runoff from wholesale, retail, service, or commercial activities, including gas stations, which are not covered by Phase I of the NPDES storm water program, would be subject instead to a State's Coastal Nonpoint Pollution Control Program. Further, onsite disposal systems, which are generally not covered by the storm water permit program, would be subject to a State's Coastal Nonpoint Pollution Control Program.

Finally, EPA emphasizes that while different legal authorities may apply to different situations, the goals of the NPDES and CZARA programs are complementary. Many of the techniques and practices used to control urban runoff are equally applicable to both programs. Yet, the programs do not work identically. In the interest of consistency and comprehensiveness, States have the option to implement management measures in conformity with this guidance throughout the State's 6217 management area, as long as NPDES storm water requirements continue to be met by Phase I sources in that area. States are encouraged to develop consistent approaches to addressing urban runoff throughout their 6217 management areas.

e. Marinas

Another specific overlap between the storm water program and the coastal nonpoint source programs under CZARA occurs in the case of marinas (addressed in Chapter 5 of this guidance). In this guidance, EPA has attempted to avoid addressing marina activities that are clearly regulated point source discharges. Any storm water runoff at a marina that is ultimately regulated under an NPDES permit will no longer be subject to this guidance once the permit is issued. The introduction to Chapter 5 contains a detailed discussion of the scope of the NPDES program with respect to marinas and of the corresponding coverage of marinas by the CZARA program.

f. Other Point Sources

Overlapping areas between the point source and nonpoint source programs also occur with respect to concentrated animal feeding operations. Operations that meet particular size or other criteria are defined and regulated as point sources under the section 402 permit program, while other confined animal feeding operations are not currently regulated as point sources. Other overlaps may occur with respect to aspects of mining operations, oil and gas extraction, land disposal, and other activities.

---

[1] On May 27, 1992, the United States Court of Appeals for the Ninth Circuit invalidated EPA's exemption of construction sites smaller than 5 acres from the storm water permit program in *Natural Resources Defense Council* v. *EPA*, 965 F.2d 759 (9th Cir. 1992). EPA is conducting further rulemaking proceedings on this issue and will not require permit applications for construction activities under 5 acres until further rulemaking has been completed.

EPA intends that the Coastal Nonpoint Pollution Control Programs to be developed by the States, and the management measures they contain, apply only to sources that are not required under EPA's current regulations to obtain an NPDES permit. For any discharge ultimately covered by Phase II of the storm water permitting program, the management measures will continue to apply until an NPDES permit is issued for that discharge. In this guidance, EPA has attempted to avoid addressing activities that are regulated point source discharges.

G. Other Federal and State Marina and Boating Programs

1. NPDES Storm Water Program

The storm water permit program is a two-phase program enacted by Congress in 1987 under section 402(p) of the Clean Water Act. Under Phase I, National Pollutant Discharge Elimination System (NPDES) permits are required to be issued for municipal separate storm sewers serving large or medium-sized populations (greater than 250,000 or 100,000 people, respectively), and for storm water discharges associated with industrial activity such as certain types of marinas. Permits are also to be issued, on a case-by-case basis, if EPA or a State determines that a storm water discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. EPA published a rule implementing Phase I on November 16, 1990.

a. Which marinas are regulated by the NPDES Storm Water Program?

Under the NPDES Storm Water Program, discharge permits are required for point source discharges of storm water from certain types of marinas. A point source discharge of storm water is a flow of rainfall runoff in some kind of discrete conveyance (a pipe, ditch, channel, swale, etc.).

If a marina is primarily in the business of renting boat slips, storing boats, cleaning boats, and repairing boats, and generally performs a range of other marine services, it is classified under the storm water program (using the Standard Industrial Classification (SIC) system developed by the Office of Management and Budget) as a SIC 4493. Marinas classified as SIC 4493 are the type that may be regulated under the storm water program and may be required to obtain a storm water discharge permit.

A marina that is classified as a SIC 4493 is required to obtain an NPDES storm water discharge permit if vehicle maintenance activities such as vehicle (boat) rehabilitation, mechanical repairs, painting, fueling, and lubrication or equipment cleaning operations are conducted at the marina. The storm water permit will apply only to the point source discharges of storm water from the maintenance areas at the marinas. Operators of these types of marinas should consult the water pollution control agency of the State in which the marina is located to determine how to obtain a storm water discharge permit.

b. Which marinas are not regulated by the NPDES Storm Water Program?

Marinas classified as SIC 4493 that are *not* involved in equipment cleaning or vehicle maintenance activities are not covered under the storm water program. Likewise, a marina, regardless of its classification and the types of activities conducted, that has no point source discharges of storm water, is also not regulated under the NPDES storm water program. In addition, some marinas are classified SIC code 5541 - marine service stations and are also not regulated under the NPDES Storm Water Program. These types of marinas are primarily in the business of selling fuel *without vehicle maintenance or equipment cleaning operations.*

c. What marina activities are covered by this guidance?

EPA has not yet promulgated regulations that would designate additional storm water discharges, beyond those regulated in Phase I, that will be required to be regulated in Phase II. Therefore, marina discharges that are not covered under Phase I, including those discharges that potentially may be ultimately covered by Phase II of the storm water permits program, are covered by this management measures guidance and will be addressed by the Coastal Nonpoint Pollution Control Programs. Any storm water discharge at a marina that ultimately is issued an NPDES permit will become exempt from this guidance and from the Coastal Nonpoint Pollution Control Program at the time that the permit is issued.

Wetlands Program

Area of Focus/Program Objective:	Protection of wetlands from discharge of dredged or fill material
Pertinence to Control of Marina Discharges:	• Regulates marina activities associated with dredged or fill material (e.g., channel dredging, expansion or renovation activities) discharged in wetlands areas
Authorized Agency:	U.S. Environmental Protection Agency, Office of Water and U.S. Army Corps of Engineers
Key Contact:	EPA Wetlands Hotline: (800)832-7828 or See Fact Sheets #31 and #32 (attached) for EPA and Army Corps of Engineers contacts
Legislative Authorization:	Clean Water Act §404
Additional Information:	• "EPA Wetlands Fact Sheets," March 1993 (excerpts attached; full copy available from Key Contact, #EPA-843-F-93-001)

United States Environmental Protection Agency

Office of Water (WH-556F), Office of Wetlands, Oceans, and Watersheds (A-104 F)

EPA843-F-93-001g
March 1993

EPA

WETLANDS FACT SHEET #7
Clean Water Act §404: Overview

Section 404 of the Clean Water Act establishes a program to regulate the discharge of dredged and fill material into waters of the United States, including wetlands. Activities in waters that are typically regulated under Section 404 include fills for development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and airports), and conversion of wetlands to uplands for farming and forestry.

BACKGROUND

Since its enactment by Congress in 1972, Section 404 of the Clean Water Act (33 U.S.C. § 1344) has evolved through a series of statutory amendments, regulatory changes and key court decisions into the primary Federal regulatory program providing protection for the Nation's remaining wetlands. EPA and the Army Corps of Engineers (Corps) jointly administer the Section 404 program. In addition, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and State resource agencies have important advisory roles.

AGENCIES' RESPONSIBILITIES

ARMY CORPS OF ENGINEERS:

- day-to-day program administration (e.g. including individual permit decisions and jurisdictional determinations)
- development of policy and guidance
- enforcement

ENVIRONMENTAL PROTECTION AGENCY

- develop and interpret the environmental criteria used in evaluating permit applications (i.e., the Section 404(b)(1) Guidelines)
- determine the scope of geographic jurisdiction
- approve and oversee State assumption of the program's administrative responsibilities
- identify activities that are exempt under §404(f)
- review and comment on individual permit applications
- §404(c) authority to veto Corps' permit decisions
- §404(q) case specific elevation
- enforcement

PROGRAM REQUIREMENTS

The basic premise of the Section 404 program is that no discharge of dredged or fill material can be permitted if there is a practicable alternative that is less damaging to the aquatic environment or if the discharge would result in significant degradation of our Nation's waters.

An applicant must demonstrate that steps have been taken to avoid wetland impacts where it is practicable.

In addition, applicants are required to minimize potential impacts to wetlands, and finally to provide compensation for any remaining unavoidable impacts through wetland restoration or creation activities.

For projects involving potentially significant impacts, authorization must usually be sought through an "individual permit" review process. However, for the great majority of discharges, i.e., those activities that will have only minimal adverse environmental effects, authorization is often granted up-front through "general permits." General permits may be issued by the Corps on a nationwide, regional or State basis for particular categories of activities (e.g., minor road crossings, utility line backfill, and bedding) as a means of expediting the permitting process. Moreover, Section 404(f) exempts other activities from regulation under Section 404, including many on-going farming, ranching and silviculture practices.

ADDITIONAL MATERIAL:

- "Highlights of Section 404," EPA Office of Wetlands Protection, October, 1989.

FOR MORE INFORMATION: call the EPA Wetlands Hotline* at 1-800-832-7828

*contractor operated

United States Environmental Protection Agency

Office of Water (WH-556F), Office of Wetlands, Oceans, and Watersheds (A-104 F)

EPA843-F-93-001h
March 1993

EPA

WETLANDS FACT SHEET #8
Clean Water Act §404: Permits

THE §404 INDIVIDUAL PERMIT PROCESS

Permit required for discharges of dredged or fill material to wetlands and other waters of the United States
Permit application filed with the U.S. Army Corps of Engineers

Corps Issues Public Notice

Within 15 days of receiving all permit information, the Corps will issue a public notice that gives a brief description of the proposed activity, its location, potential environmental impacts, a deadline for receiving written comments, and the address for the agency receiving those comments.

Comment Period

The application is reviewed by the Corps and other interested Federal and State agencies, organizations, and individuals. The comment period can take 15 to 30 days depending upon the nature of the activity. The necessity to gather information and prepare an Environmental Impact Statement (EIS) may further extend the comment period.

Public Hearing

Normally, the Corps does not hold a public hearing on a permit; however, citizens may request that one be held. The Corps will use the testimony presented at the hearing in its permit review.

Corps Evaluation

The Corps evaluates the permit application based on its regulations (the Public Interest Review), and the §404 (b)(1) Guidelines.

Environmental Assessment and Statement of Finding

For every permit decision, the Corps prepares a statement of finding that explains how the permit decision was made. This document is public information and can provide data to assist in monitoring permit compliance or re-evaluating a permit.

Permit Issued | **Permit Denied**

Modified from Kathleen Rude, "Conservation: You Can Make a Difference," *Ducks Unlimited*, September/October 1990, 26-28.

TYPES OF §404 PERMITS

SECTION 404(a) INDIVIDUAL PERMITS
Case-by-case review

■ Public interest review and compliance with the Section 404(b)(1) Guidelines, which are regulations issued by EPA, with the Corps.

Guidelines requirements include:
- Mitigation sequence
  (1) avoidance of impacts through practicable alternatives,
  (2) minimization of impacts, and
  (3) compensation of unavoidable impacts through creation or restoration.
- No significant degradation.
- Compliance with other laws.

SECTION 404(e) GENERAL PERMITS

The Corps of Engineers has the authority to issue general permits for those categories of activities in wetlands and other aquatic areas that will have only minimal adverse environmental effects--individually or cumulatively.

■ General permits are widely used and speed up the §404 permitting process because they do not require a detailed, case-specific review.

■ General permits are issued on a nationwide, regional, and State basis.

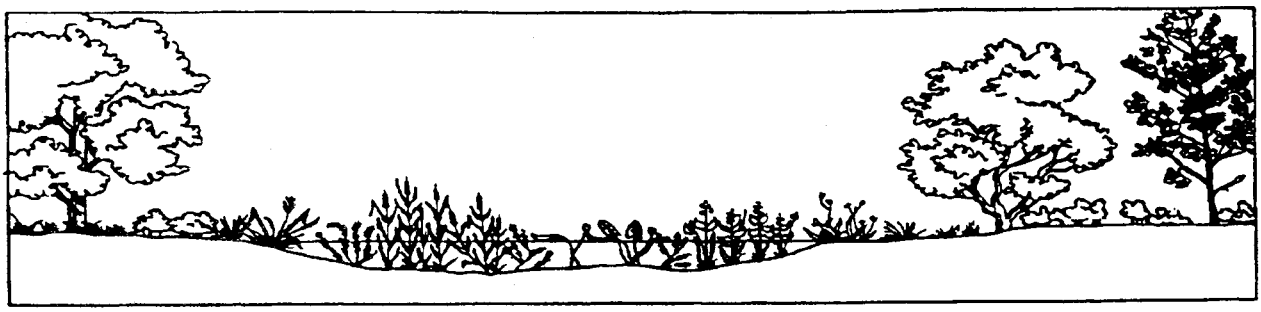
If an activity falls under a nationwide permit, a discharger generally (but not always) can proceed with the activity without first applying for an individual permit. Individuals should contact their local Corps Districts for applicability of general permits.

FOR MORE INFORMATION: call the EPA Wetlands Hotline* at 1-800-832-7828

*contractor operated

United States Environmental Protection Agency | Office of Water (WH-556F), Office of Wetlands, Oceans, and Watersheds (A-104 F) | EPA843-F-93-001i March 1993

EPA WETLANDS FACT SHEET # 9
Definition and Delineation



Definition

Since the 1970's, the U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency (EPA) have used the same definition of wetlands for regulatory purposes:

Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

Basically, wetlands are areas where the frequent and prolonged presence of water at or near the soil surface drives the natural system - the kind of soils that form and the plants that grow, and the fish and/or wildlife communities that use the habitat. Swamps, marshes and bogs are well-recognized types of wetlands, but there are many important specific wetland types, such as vernal pools, playas and prairie potholes, that have drier or more variable water regimes than those well-recognized by the general public.

Field Indicators

When the upper part of the soil is saturated with water at growing season temperatures, soil organisms consume the oxygen in the soil, and conditions unsuitable for most plants quickly develop. Such conditions also cause the development of soil characteristics (e.g., color and texture) that are diagnostic of so called "hydric soils". The plants that can grow in such conditions are called "hydrophytes" (e.g., marsh grasses). Together, hydric soils and hydrophytes are useful field indicators of the presence of wetlands and are essential for field identification of wetlands.

The actual presence or absence of water itself (i.e., by ponding, flooding, or soil saturation), however, is a less reliable indicator of the presence of wetlands. Except for wetlands flooded by ocean tides, the hydrology of wetlands fluctuates as a result of rainfall patterns, snowmelt, dry seasons and droughts. Some of the most well-known wetlands, such as the Everglades and Mississippi bottomland hardwood swamps, are often dry. Conversely, many upland areas are very wet during and shortly after wet weather. Such natural fluctuations must be taken into account when identifying areas subject to federal wetlands jurisdiction. Similarly, the effects of upstream dams, drainage ditches, dikes, irrigation and other modifications must also be considered.

Delineation Manual

EPA and the Corps are currently using the 1987 Corps of Engineers Wetlands Delineation Manual to delineate wetlands for the Clean Water Act Section 404 permit program. Section 404 requires a permit from the Corps or authorized State for the discharge of dredged or fill material into the waters of the United States, including wetlands. The 1987 Manual will remain in use pending review of public comments on the 1991 proposed Manual and the ongoing National Academy of Sciences study of wetlands delineation.

The 1987 manual organizes field indicators into three categories- soils, vegetation, and hydrology- and has evidence thresholds, or criteria, for each category. With this approach, an area that meets all three criteria is considered a wetland.

FOR MORE INFORMATION: Call the EPA Wetlands Hotline* at 1-800-832-7828

*contractor operated

United States Environmental Protection Agency

Office of Water (WH-556F), Office of Wetlands, Oceans, and Watersheds (A-104 F)

EPA843-F-93-001m
March 1993

EPA WETLANDS FACT SHEET #13
Wetlands Enforcement

In addition to jointly implementing the Clean Water Act Section 404 program, EPA and the U.S. Army Corps of Engineers (Corps) share Section 404 enforcement authority. There are two broad categories of Section 404 violations:

- failure to comply with the terms or conditions of a Section 404 permit
- discharging dredged or fill material to waters of the U.S. without first obtaining a permit

In 1989, EPA and the Corps entered into a Memorandum of Agreement (MOA) on enforcement to ensure efficient and effective implementation of this shared authority. Under the MOA, the Corps, as the Federal permitting agency, has the lead on Corps-issued permit violation cases. For unpermitted discharge cases, EPA and the Corps determine the appropriate lead agency based on criteria in the MOA.

ENFORCEMENT GOALS & TOOLS

The goals of EPA's Section 404 enforcement are three-fold: environmental protection; deterrence; and fair and equitable treatment of the regulated community. In addition to voluntary compliance, which plays an important role in the Section 404 enforcement program, Sections 309 and 404 of the Clean Water Act provide the agencies with several formal enforcement mechanisms to use in achieving these goals.

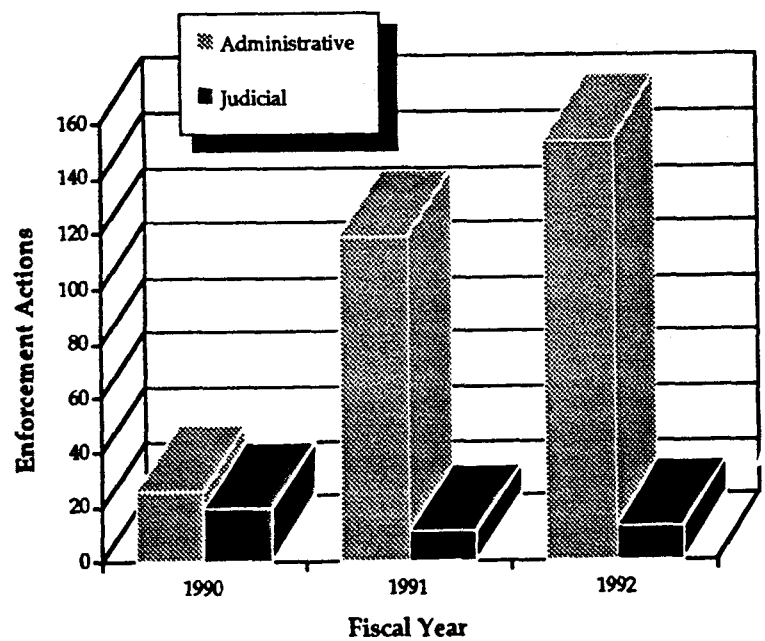
In the administrative arena, under Section 309(a), EPA can issue administrative compliance orders requiring a violator to stop any ongoing illegal discharge activity and, where appropriate, to remove the illegal discharge and otherwise restore the site. Section 309(g) authorizes EPA and the Corps to assess administrative civil penalties of no more than $125,000 per violation.

Turning to judicial enforcement, Sections 309(b) and (d) and 404(s) give EPA and the Corps the authority to pursue civil judicial enforcement actions seeking restoration and other types of injunctive relief, as well as civil penalties. The agencies also have authority under Section 309(c) to bring criminal judicial enforcement actions for knowing or negligent violations of Section 404.

CASE SELECTION

EPA and the Corps consider a wide variety of factors when deciding whether to exercise our enforcement discretion and, if so, what type of enforcement action to initiate. These factors include: the amount of fill; the size of the waterbody, including acres of wetlands filled and their environmental significance; the discharger's previous experience with Section 404 requirements and the discharger's compliance history.

In general, EPA and the Corps prefer to resolve Section 404 violations through voluntary compliance or administrative enforcement.



EPA Section 404 enforcement actions (initiated)

FOR MORE INFORMATION: call the EPA Wetlands Hotline* at 1-800-832-7828

*contractor operated

Printed on Recycled Paper

Wetlands Criminal Enforcement

Since enactment of the Clean Water Act, EPA and the Corps have taken fewer than 20 criminal enforcement actions in response to Section 404 violations. Moreover, of those found guilty of criminal Section 404 violations, fewer than 10 of these violators have actually been sentenced to jail time. As demonstrated by the following examples, EPA and the Corps reserve their criminal enforcement authority for only the most flagrant and egregious Section 404 violations.

United States v. Pozsgai

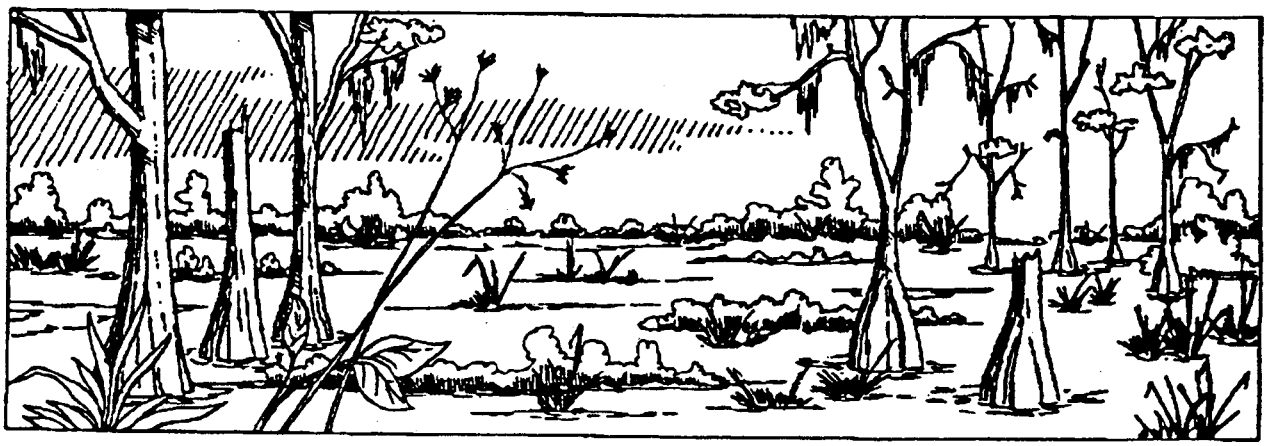
In December 1989, a Philadelphia jury convicted John Pozsgai on 40 counts of knowingly filling wetlands in Bucks County, Pennsylvania, without a Section 404 permit. Mr. Pozsgai was sentenced to three years in jail, ordered to restore the site upon his release, and assessed a fine. His conviction and sentence have been affirmed by the U.S. Supreme Court.

Even prior to purchasing the 14-acre tract in 1987, Mr. Pozsgai was told by private consultants that the site contained wetlands subject to the permitting requirements of Section 404. He purchased the property at a reduced price due to the presence of wetlands, and then proceeded to ignore no less than 10 warnings from EPA and Corps field staff to stop filling the wetlands without first getting a Section 404 permit. He also defied a temporary restraining order (TRO) issued by a Federal court judge. In fact, the government documented violations of the TRO on videotape, thanks to the cooperation of neighbors whose homes were being flooded as a result of Mr. Pozsgai's filling in his wetlands.

United States v. Ellen

In January 1991, William Ellen was found guilty by a Maryland jury of knowingly filling 86 acres of wetlands without a Section 404 permit. He was sentenced to six months in jail and one year supervised release. The U.S. Supreme Court denied review of the conviction and sentence.

Mr. Ellen is a consultant who was hired by Paul Tudor Jones to assist in the location and creation of a private hunting club and wildlife preserve on Maryland's Eastern Shore. With Mr. Ellen's assistance, Jones selected a 3,000-acre site in Dorchester County that bordered Chesapeake Bay tributaries and consisted largely of forested wetlands and tidal marshes. As project manager, Mr. Ellen was responsible for acquiring environmental permits and complying with all applicable environmental rules and regulations. His own consulting engineers repeatedly told him that a Section 404 permit would be required. Nevertheless, he supervised extensive excavation and construction work destroying wetlands at the site without first obtaining a Section 404 permit. Despite repeated warnings to Mr. Ellen from the Corps, this unpermitted activity did not stop until the Corps contacted the subcontractors directly.



For more information: contact the EPA Wetlands Hotline* at 1-800-832-7828

*contractor operated

United States Environmental Protection Agency

Office of Water (WH-556F), Office of Wetlands, Oceans, and Watersheds (A-104 F)

EPA843-F-93-001y
March 1993

EPA

WETLANDS FACT SHEET #25
Wetlands and Runoff

Since wetlands are typically the lowest points on the landscape, they often receive runoff from surrounding land. Runoff can be collected, conveyed or discharged from conduits, pipes, animal feedlots, waste treatment plants or floating crafts. In addition, precipitation, atmospheric deposition, seepage, or hydrologic modifications can result in runoff that moves over and through the ground picking up natural or anthropogenic pollutants, which then become deposited directly into surface or groundwater. In either case, as runoff move across the land, water picks up and carries with it pollutants which ultimately end up in rivers, lakes, groundwater, and wetlands.

TO USE OR NOT TO USE?

Because wetlands have a natural water quality improvement function, there has been a tremendous amount of interest in using wetlands to treat runoff from urban areas, agricultural lands, and other pollutant sources. There are significant opportunities to protect and restore wetlands and riparian areas as one part of programs addressing runoff. However, the critical question is: **"What can wetlands safely handle before they are contaminated or their functions degraded?"** While wetlands do provide valuable water quality protection for downstream rivers, lakes, and estuaries, the quality of the wetlands, as waters of the United States, should also be protected. Decisions that route runoff into wetlands, either inadvertently or by design, should be carefully evaluated and adequate wetlands protection should be provided, including use of best management practices (BMPs) and monitoring how well they work.

EPA PROGRAMS

Clean Water Act §402(p)
Section 402(p) requires stormwater permits for four major classes of stormwater discharges: (1) a discharge with respect to which a permit has been issued under Section 402 before the date of the enactment of this subsection, (2) a discharge associated with industrial activity, (3) a discharge from a municipal separate stormwater sewer system serving an incorporated or unincorporated, urbanized population greater than 100,000, and (4) a discharge that contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. This program has issued guidance for preparation of permit applications for regulated municipal and industrial stormwater discharges. In addition, it stresses the use of best management practices (BMPs) to minimize or eliminate the contribution of pollutants to stormwater discharges to waters of the United States, including wetlands.

Clean Water Act §319
EPA supports a national program to control nonpoint sources of pollution. EPA stresses a watershed based approach to nonpoint source management which can include protection or restoration of wetlands and riparian areas to reduce nonpoint source pollution. EPA has funded a number of these projects under Section 319(h).

Coastal Zone Act Reauthorization Amendments (CZARA) of 1990 §6217
EPA and the National Oceanic and Atmospheric Administration have developed guidance specifying management measures for nonpoint source pollution affecting coastal waters. Included in the guidance (released January 1993) is a chapter on protection and restoration of wetlands and riparian areas, and use of vegetated treatment systems for nonpoint source control.

FOR MORE INFORMATION: call the EPA Wetlands Hotline* at 1-800-832-7828

*contractor operated

UNTREATED RUNOFF: IMPACTS TO WETLANDS

Untreated runoff from agricultural land, urban areas, and other sources is a leading cause of water quality impairment. Siltation, excess nutrients, changes to water flows such as, more frequent inundation, and increased turbidity are responsible for most of the impacts to wetlands from runoff.

Impacts to wetlands have resulted in consequences such as changed species composition, increased pollutant loadings (e.g., heavy metals), and replacing complex wetland systems with less desired open water. Modifications of wetlands associated with some stormwater management practices have resulted in significant impacts to wetlands.

Some impacts have been particularly tragic, such as in Kesterson and Stillwater Wildlife Refuges, where untreated, contaminated runoff resulted in mortality and deformities of wildlife populations, particularly fish and migratory birds.

CURRENT STATUS

EPA is developing technical information that landowners can use to protect the many functions of wetlands, including water quality improvement. An issue paper highlighting the impacts of stormwater on wetlands entitled, *Natural Wetlands and Urban Stormwater: Potential Impacts and Management*, is available through the EPA Wetlands Hotline. A guide describing best management practices to pretreat stormwater runoff before it enters a natural wetland is also being developed. Additional materials on wetlands protection and restoration for nonpoint source benefits will be developed to assist in implementation of the wetlands and riparian areas chapter in the CZARA Management Measures Guidance. EPA will continue to work to address potential opportunities and conflicts regarding wetlands and programs addressing runoff.

ADDITIONAL INFORMATION:

- For additional information regarding the Section 319 program or the CZARA guidance, contact the EPA Nonpoint Source Control Branch at (202) 260-7100.
- For additional information about the Section 402 stormwater program, contact the Stormwater Hotline at (703) 821-4823.

FOR MORE INFORMATION: call the EPA Wetlands Hotline* at 1-800-832-7828

*contractor operated

United States Environmental Protection Agency | Office of Water (WH-556F), Office of Wetlands, Oceans, and Watersheds (A-104 F) | EPA843-F-93-001ee March 1993

EPA

WETLANDS FACT SHEET #31
Environmental Protection Agency: Directory

OFFICE OF WATER • OFFICE OF WETLANDS, OCEANS, AND WATERSHEDS

Robert Wayland, III, Director
David Davis, Deputy Director
Tel: (202) 260-7166
Fax: (202) 260-6294

U.S. EPA
WETLANDS DIVISION (A-104F)
401 M Street, SW
Washington, DC 20460

John Meagher, Director
Suzanne Schwartz, Deputy Director
Tel: (202) 260-7791
Fax: (202) 260-2356

WETLANDS AND AQUATIC RESOURCES REGULATORY BRANCH
Tel: (202) 260-1799
Fax: (202) 260-7546

Gregory Peck, Chief

Enforcement and Regulatory Policy Section
Cliff Rader, Chief

Elevated Cases Section
Will Garvey, Chief

WETLANDS STRATEGIES AND STATE PROGRAMS BRANCH
Tel: (202) 260-9043
Fax: (202) 260-8000

Glenn Eugster, Chief

Outreach and State Programs Section
Jeanne Melanson, Chief

Wetlands Strategies and Initiatives Section
Dianne Fish, Chief

REGIONAL WETLANDS CONTACTS

Region I: CT, MA, ME, MH, RI, VT
Douglas Thompson, Chief
Wetlands Protection Section (WWP-1900)
U.S. EPA-Region I
John F. Kennedy Federal Building
Boston, MA 02203-1911
Tel: (617) 565-4421
Fax: (617) 565-4940

Region II: NJ, NY, PR, VI
Daniel Montella, Chief
Wetlands Section (2WM-MWP)
U.S. EPA-Region II
26 Federal Plaza, Room 837
New York, NY 10278
Tel: (212) 264-5170
Fax: (212) 264-4690

Region III: DE, MD, PA, VA, WV
Barbara D'Angelo, Chief
Wetlands Protection Section (3ES42)
U.S. EPA-Region III
841 Chestnut Street
Philadelphia, PA 19107
Tel: (215) 597-9301
Fax: (215) 597-1850

Region IV: AL, FL, GA, KY, MS, NC, SC, TN
Tom Welborn, Chief
Wetlands Regulatory Section
U.S. EPA-Region IV
345 Courtland Street, N.E
Atlanta, GA 30365
Tel: (404) 347-4015
Fax: (404) 347-3269

Region V: IL, IN, MI, MN, OH, WI
Douglas Ehorn, Chief
Wetlands and Watersheds Section (WQW-16J)
U.S. EPA-Region V
77 West Jackson Boulevard
Chicago, IL 60604
Tel: (312) 886-0243
Fax: (312) 886-7804

Region VI: AR, LA, NM, OK, TX
Beverly Ethridge, Chief
Wetlands Protection Section (6E-FT)
U.S. EPA-Region VI
1445 Ross Avenue, Suite 900
Dallas, TX 75202
Tel: (214) 655-2263
Fax: (214) 655-7446

Region VII: IA, KS, MO, NE
Diane Hershberger, Chief
Wetlands Protection Section (ENRV)
U.S. EPA-Region VII
726 Minnesota Avenue
Kansas City, KS 66101
Tel: (913) 551-7573
Fax: (913) 551-7863

Region VIII: CO, MT, ND, SD, UT, WY
Gene Reetz, Chief
Wetlands Protection Section (8WM-WQ)
U.S. EPA-Region VIII
999 18th Street
500 Denver Place
Denver, CO 80202-2405
Tel: (303) 293-1570
Fax: (303) 391-6957

Region IX: AZ, CA, HI, NV, Pacific Islands
Philip Oshida, Chief
Wetlands and Coastal Planning Section (W-7-4)
U.S. EPA-Region IX
75 Hawthorne Street
San Francisco, CA 94105
Tel: (415) 744-1971
Fax: (415) 744-1078

Region X: AK, ID, OR, WA
William Riley, Chief
Wetlands Section (WD-128)
U.S. EPA-Region X
1200 Sixth Avenue
Seattle, WA 98101
Tel: (206) 553-1412
Fax: (206) 553-1775

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

FOR MORE INFORMATION: call the EPA Wetlands Hotline* at 1-800-832-7828

*contractor operated

United States Environmental Protection Agency | Office of Water (WH-556F), Office of Wetlands, Oceans, and Watersheds (A-104 F) | EPA843-F-93-001ff March 1993

EPA

WETLANDS FACT SHEET #32
Corps of Engineers Regulatory Program Directory

Michael L. Davis
Assistant for Regulatory Affairs
Office of the Assistant Sec. of Army (CW)
Room 2E569 The Pentagon
Washington, D.C. 20310-0108
Tel: (703) 695-1376
Fax: (703) 697-3366

John F. Studt
U.S. Army Corps of Engineers
Regulatory Branch (CECW-OR)
20 Massachusetts Avenue, NW
Washington, DC 20314-1000
Tel: (202) 272-0199
Fax: (202) 504-5069

LOWER MISSISSIPPI VALLEY DIVISION

Leo Max Reed
U.S. Army Corps of Engineers
Lower Mississippi Valley Division (CELMV-CO-R)
P.O. Box 80
Vicksburg, MS 39180-0080
(601) 634-5818

Memphis District

Larry D. Watson
U.S. Army Corps of Engineers
Memphis District (CELMM-CO-R)
B-202 Clifford Davis Federal Building
Memphis, TN 38103-1894
(901) 544-3471

New Orleans

Ronald J. Ventola
U.S. Army Corps of Engineers
New Orleans District (CELMN-OD-R)
P.O. Box 60267
New Orleans, LA 70160-0267
(504) 862-2270

St. Louis District

Michael Brazier
U.S. Army Corps of Engineers
St. Louis District (CELMS-OD-R)
1222 Spruce Street
St. Louis, MO 63103-2833
(314) 331-8575

Vicksburg District

E. Guynes
U.S. Army Corps of Engineers
Vicksburg District (CELMK-OD-F)
3515 I-20 Frontage Road
Vicksburg, MS 39180-5191
(601) 631-5276

MISSOURI RIVER DIVISION

Mores V. Bergman
U.S. Army Corps of Engineers
Missouri River Division (CEMRD-CO-R)
P.O. Box 103, Downtown Station
Omaha, NE 68101-0103
(402) 221-7290

Kansas City District

Mel Jewett
U.S. Army Corps of Engineers
Kansas City District (CEMRK-OD-R)
700 Federal Building
Kansas City, MO 64106-2896
(816) 426-3645

Omaha District

John Morton
U.S. Army Corps of Engineers
Omaha District (CEMRO-OP-N)
215 North 17th Street
Omaha, NE 68102-4978
(402) 221-4133

NEW ENGLAND DIVISION

William R. Lawless
U.S. Army Corps of Engineers
New England Division (CNEED-OD-P)
424 Trapelo Road
Waltham, MA 02254-9149
(617) 647-8057

NORTH ATLANTIC DIVISION

Lenny Kotkiewicz
U.S. Army Corps of Engineers
North Atlantic Division (CENAD-CO-OP)
90 Church Street
New York, NY 10007-9998
(212) 264-7535

Baltimore District

Donald W. Roeseke
U.S. Army Corps of Engineers
Baltimore District (CENAB-OP-PN)
P.O. Box 1715
Baltimore, MD 31203-1715
(301) 962-3670

New York District

Joseph Seebode
U.S. Army Corps of Engineers
New York District (CENAN-PL-E)
26 Federal Plaza
New York, NY 10278-0090
(212) 264-3996

Norfolk District

William H. Poore, Jr.
U.S. Army Corps of Engineers
Norfolk District (CENAO-OP-N)
803 Front Street
Norfolk, VA 23510-1096
(804) 441-7068

continued...

US Army Corps of Engineers

Directory Continued

Philadelphia District

Frank Cianfrani
U.S. Army Corps of Engineers
Philadelphia District (CENAP-OP-N)
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390
(215) 656-6725

NORTH CENTRAL DIVISION

Mitchell A. Isoe
U.S. Army Corps of Engineers
North Central Division (CENCD-CO-MO)
536 S. Clark Street
Chicago, IL 60605-1592
(312) 353-6379

Buffalo District

Paul G. Leuchner
U.S. Army Corps of Engineers
Buffalo District
1776 Niagara Street
Buffalo, NY 14207-3199
(716) 879-4313

Chicago District

Jim Evans
U.S. Army Corps of Engineers
Chicago District (CENCC-CO)
219 S. Dearborn Street
Chicago, IL 60604-1797
(312) 353-6428

Detroit District

Gary R. Mannesto
U.S. Army Corps of Engineers
Detroit District (CENCE-CO-OR)
P.O. Box 1027
Detroit, MI 48231-1027
(313) 226-2432

Rock Island District

Steven J. Vander Horn
U.S. Army Corps of Engineers
Rock Island District (CENCR-OD-R)
P.O. Box 2004
Clock Tower Building
Rock Island, IL 61204-2004
(309) 788-6361

St. Paul District

Ben Wopat
U.S. Army Corps of Engineers
St. Paul District (CENCS-SO-PO)
1421 USPO & Custom House
180 East Kellog Boulevard
St. Paul, MN 55101-1479
(612) 220-0375

NORTH PACIFIC DIVISION

John Zammit
U.S. Army Corps of Engineers
North Pacific Division (CENPD-CO-R)
P.O. Box 2870
Portland, OR 97208-2870
(503) 326-3780

Alaska District

Robert K. Oja
U.S. Army Corps of Engineers
Alaska District (CENPA-CO-NF)
P.O. Box 898
Anchorage, AK 99506-0898
(907) 753-2712

Portland District

Burt Paynter
U.S. Army Corps of Engineers
Portland District (CENPP-OP-PN)
P.O. Box 2946
Portland, OR 97208-2946
(503) 326-6995

Seattle District

Tom Mueller
U.S. Army Corps of Engineers
Seattle District (CENPS-OP-PO)
P.O. Box C-3755
Seattle, WA 98124-2255
(206) 764-3495

Walla Walla District

Dean Hilliard
U.S. Army Corps of Engineers
Walla Walla District (CENPW-OP-RM)
City-County Airport
Walla Walla, WA 99362-9265
(509) 522-6720 or (509) 522-6724

OHIO RIVER DIVISION

Roger D. Graham
U.S. Army Corps of Engineers
Ohio River Division (CEORD-CO-OR)
P.O. Box 1159
Cincinnati, OH 45201-1159
(513) 684-3972

Huntington District

Mike Gheen
U.S. Army Corps of Engineers
Huntington District (CEORH-OR-R)
502 8th Street
Huntington, WV 25701-2070
(304) 529-5487

Louisville District

Don Purvis
U.S. Army Corps of Engineers
(CEORH-OR-R)
P.O. Box 59
Louisville, KY 40201-0059
(502) 582-6461

Nashville District

Joseph R. Castleman
U.S. Army Corps of Engineers
Nashville District (CEORN-OR-R)
P.O. Box 1070
Nashville, TN 37202-1070
(615) 736-5181

Pittsburgh District

E. Raymond Beringer
U.S. Army Corps of Engineers
Pittsburgh District (CEORP-OR-R)
1000 Liberty Avenue
Pittsburgh, PA 15222-4186
(412) 644-6872

PACIFIC OCEAN DIVISION

Mike Lee
U.S. Army Corps of Engineers
Pacific Ocean Division (CEPOD-CO-O)
Building 230
Fort Shafter, HI 96858-5440
(808) 438-9258

continued...

US Army Corps of Engineers

Directory Continued

SOUTH ATLANTIC DIVISION

James M. Kelly
U.S. Army Corps of Engineers
South Atlantic Division (CESAD-CO-R)
Room 313
77 Forsythe Street, SW
Atlanta, GA 30335-6801
(404) 331-2778

Charleston District

Clarence H. Ham
U.S. Army Corps of Engineers
Charleston District (CESAC-CO-M)
P.O. Box 919
Charleston, SC 29402-0919
(803) 724-4330

Jacksonville District

John Hall
U.S. Army Corps of Engineers
Jacksonville District (CESAJ-CO-OR)
P.O. Box 4970
400 West Ray Street
Jacksonville, FL 32232-0019
(904) 791-1666

Mobile District

Ron Krizman
U.S. Army Corps of Engineers
Mobile District (CESAM-OP-R)
109 St. Josevph Street
P.O. Box 2288
Mobile, AL 36628-0001
(205) 690-2658

Savannah District

Nick Ogden
U.S. Army Corps of Engineers
Savannah District (CESAS-OP-R)
P.O. Box 889
Savannah, GA 31402-0889
(912) 944-5347

Wilmington District

G. Wayne Wright
U.S. Army Corps of Engineers
Wilmington District (CESAW-CO-R)
P.O. Box 1890
Wilmington, NC 28402-1890
(919) 251-4629

SOUTH PACIFIC DIVISION

Theodore E. Durst
U.S Army Corps of Engineers
S. Pacific Division (CESPD-CO-O)
630 Sansome Street, Room 1216
San Francisco, CA 94111-2206
(415) 705-1443

Los Angeles District

John Gill
U.S. Army Corps of Engineers
Los Angeles District (CESPL-CO-O)
P.O. Box 2711
Los Angeles, CA 90053-2325
(213) 894-5606

Sacramento District

Art Champ
U.S. Army Corps of Engineers
Sacramento District (CESPK-CO-O)
650 Capitol Mall
Sacramento, CA 95814-4794
(916) 551-2275

San Francisco District

Calvin C. Fong
U.S. Army Corps of Engineers
San Francisco District
(CESPN-CO-O)
211 Main Street
San Francisco, CA 94105-1905
(415) 744-3036

SOUTHWESTERN DIVISION

Ken Waldie
U.S. Army Corps of Engineers
Southwestern Division (CESWD-CO-R)
1114 Commerce Street
Dallas, TX 75242-0216
(214) 767-2432 or (214) 767-2436

Albuquerque District

Andrew J. Rosenau
U.S. Army Corps of Engineers
Albuquerque District (CESWA-CO-O)
P.O. Box 1580
Albuquerque, NM 87103-1508
(505) 766-2776

Fort Worth District

Wayne A. Lea
U.S. Army Corps of Engineers
Fort Worth District (CESWF-OD-M)
P.O. Box 17300
Fort Worth, TX 76102-0300
(817) 334-2681

Galveston District

Curt Batey
U.S. Army Corps of Engineers
Galveston District (CESWG-CO-MO)
P.O. Box 1229
Galveston, TX 77553-1229
(409) 766-3930

Little Rock District

Louie C. Cockmon, Jr.
U.S. Army Corps of Engineers
Little Rock District (CESWL-CO-L)
P.O. Box 867
Little Rock, AR 72203-0867
(501) 324-5296

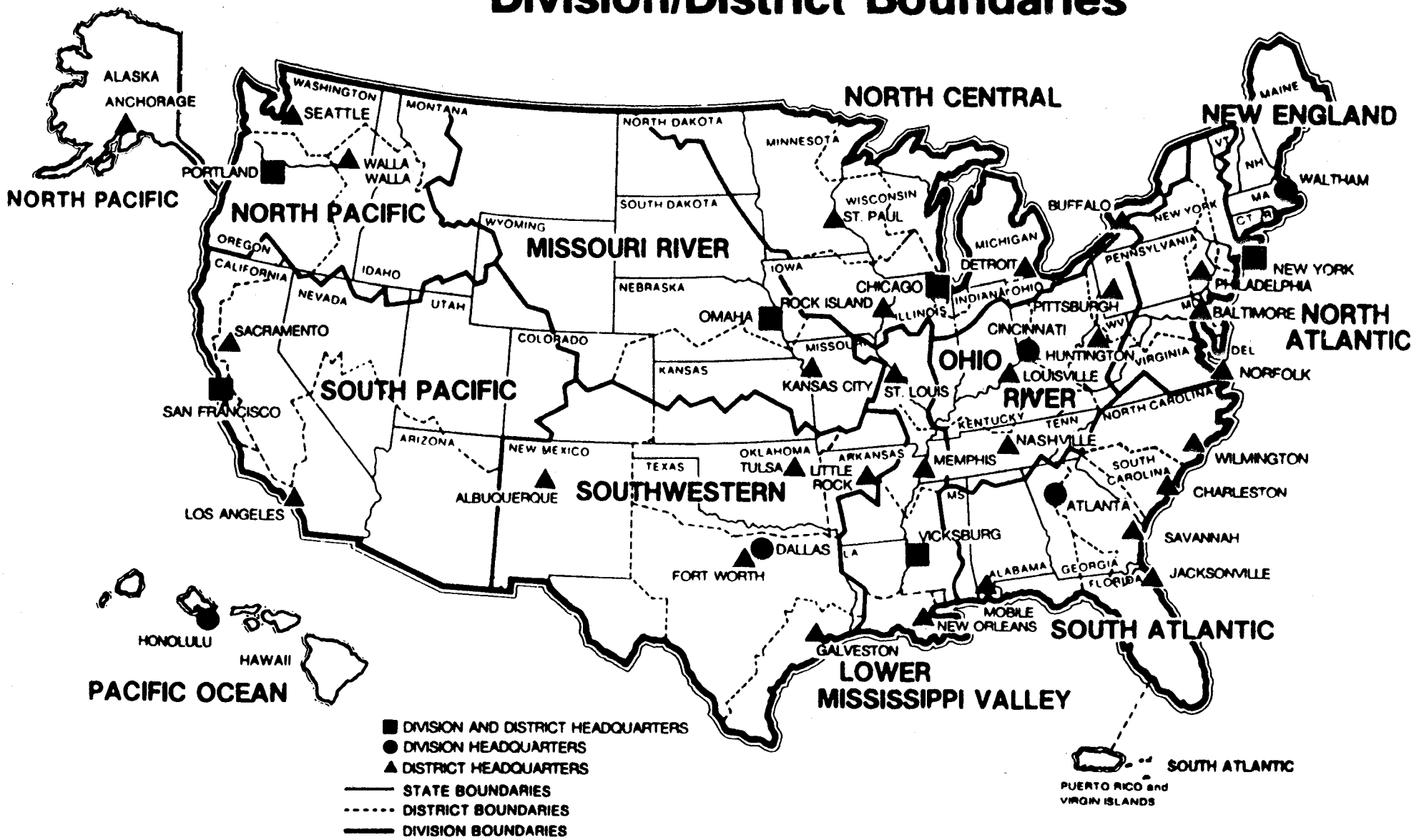
Tulsa District

Dave Manning
U.S. Army Corps of Engineers
Tulsa District (CESWT-OD-R)
P.O. Box 61
Tulsa, OK 74121-0061
(918) 581-7261

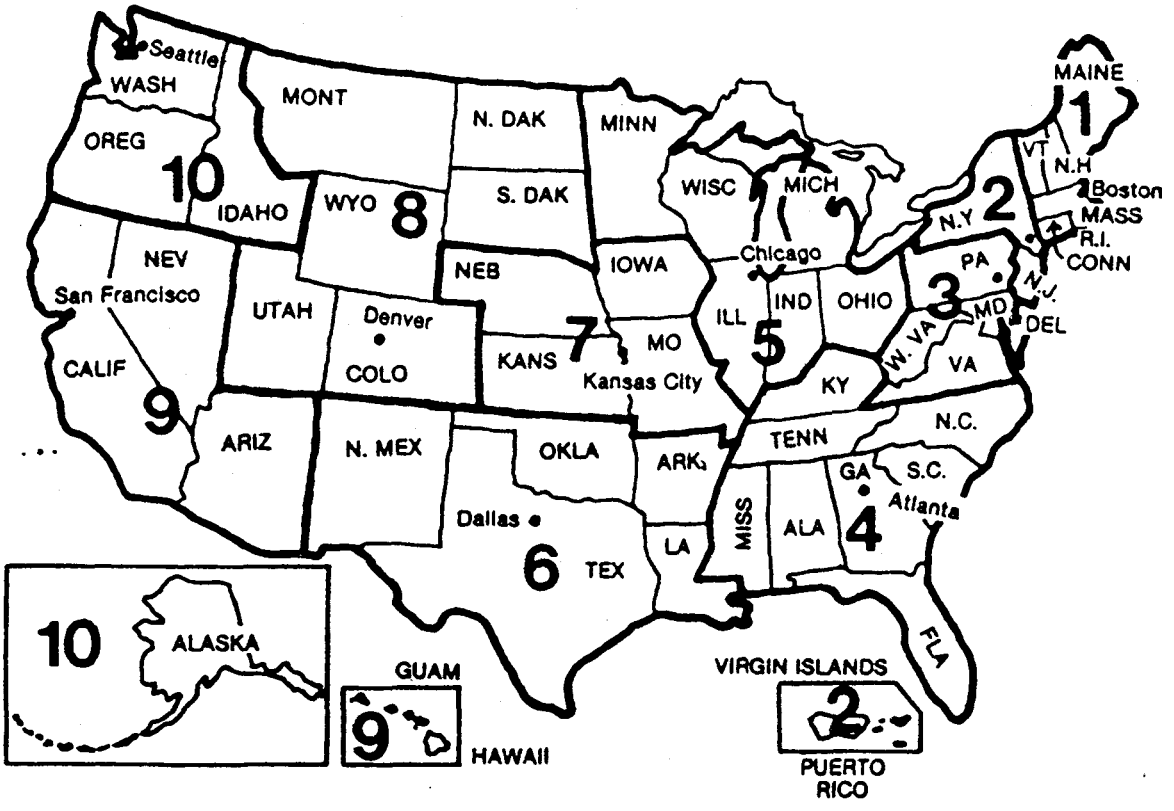
WATERWAYS EXPERIMENT STATION

Russell F. Theriot, Manager
Wetlands Research Program
U.S. Army Corps of Engineers
Waterways Experiment Station
Environmental Laboratory
(CEWES-EL-W)
3909 Halls Ferry Road
Vicksburg, MS 39180-6199
(601) 634-2733
(601) 634-3528 (fax)

Civil Works
Division/District Boundaries



EPA Regional Offices



Regions	Regions	Regions
4 — Alabama	1 — Maine	3 — Pennsylvania
10 — Alaska	3 — Maryland	1 — Rhode Island
9 — Arizona	1 — Massachusetts	4 — South Carolina
6 — Arkansas	5 — Michigan	8 — South Dakota
9 — California	5 — Minnesota	4 — Tennessee
8 — Colorado	4 — Mississippi	6 — Texas
1 — Connecticut	7 — Missouri	8 — Utah
3 — Delaware	8 — Montana	1 — Vermont
3 — D.C.	7 — Nebraska	3 — Virginia
4 — Florida	9 — Nevada	10 — Washington
4 — Georgia	1 — New Hampshire	3 — West Virginia
9 — Hawaii	2 — New Jersey	5 — Wisconsin
10 — Idaho	6 — New Mexico	8 — Wyoming
5 — Illinois	2 — New York	9 — American Samoa
5 — Indiana	4 — North Carolina	9 — Guam
7 — Iowa	8 — North Dakota	2 — Puerto Rico
7 — Kansas	5 — Ohio	2 — Virgin Islands
4 — Kentucky	6 — Oklahoma	
6 — Louisiana	10 — Oregon	

Appendix B:

Summary of Federal Programs and Tools Related to the Discharge of Vessel Sewage

Summary of Federal Programs and Tools Related to the Discharge of Vessel Sewage

There are nine key Federal programs that have influenced current thinking on the discharge of sanitary waste from vessels, a common source of nonpoint pollution. Programs, as used in this section, are restricted to Federal programs which provide financial, technical, and/or policy support to organizations and governments on the subject of vessel sewage discharges. These programs, and their related tools, were developed by direction of five key Federal statutes (and their subsequent amendments), including the:

- Federal Water Pollution Control Act of 1956 (subsequently called the Clean Water Act)
- Clean Vessel Act of 1992
- Coastal Zone Management Act of 1972
- Sea Grant College Program Act of 1966
- Public Health Service Act of 1944

A timeline of these statutes and their major amendments or reauthorizations is shown in Exhibit B-1.

The nine Federal programs or activities derived from the five pieces of key legislation are:

- No Discharge Area Approval
- Nonpoint Source Implementation Grants (319 Program)
- Capitalization Grants for State Revolving Funds
- National Estuaries Program
- Clean Vessel Act Grant
- Coastal Zone Management Administration Awards
- Coastal Nonpoint Pollution Control Program
- Sea Grant Support
- National Shellfish Sanitation Program

Exhibit B-2 illustrates the relationship of the five statutes to these nine programs. The designated administrator of the legislation is indicated along with any regulations developed for these programs.

A detailed summary of each program follows. An overview of these nine Federal programs is provided in Exhibit B-3. This exhibit summarizes the authorized agency (e.g., U.S. Environmental Protection Agency), participant eligibility requirements (e.g., coastal states only), and the type of support the program provides (i.e., grant, supplementary protection designation, guidelines/guidance, information, or certification) for each of the programs.

Exhibits B-4 through B-12, organized by agency, provide a summary for each Federal program using the following standard categories:

- **Area of Focus.** Intent and purpose of the program.

- **Pertinence to Control of Vessel Discharges.** Relevance of program to vessel pollution control and prevention.

- **Type.** Categorizes the program into: grant, supplemental protection designation, guidelines/guidance, information, and/or certification.

- **Authorized Agency.** Agency authorized/required by legislation to implement the program.

- **Key Contact.** Agency, office, address, and telephone number to contact for additional program information.

- **Legislative Authority.** Statute authorizing/requiring implementation of the program.

- **Program Objective.** Key purpose of the program.

- **Eligible Applicants.** Government entities and individuals eligible for program support.

- **Application Deadlines.** Fixed deadlines for grant applications.

- **Funding Requirements.** Program requirements to fulfill prior to consideration for funding.

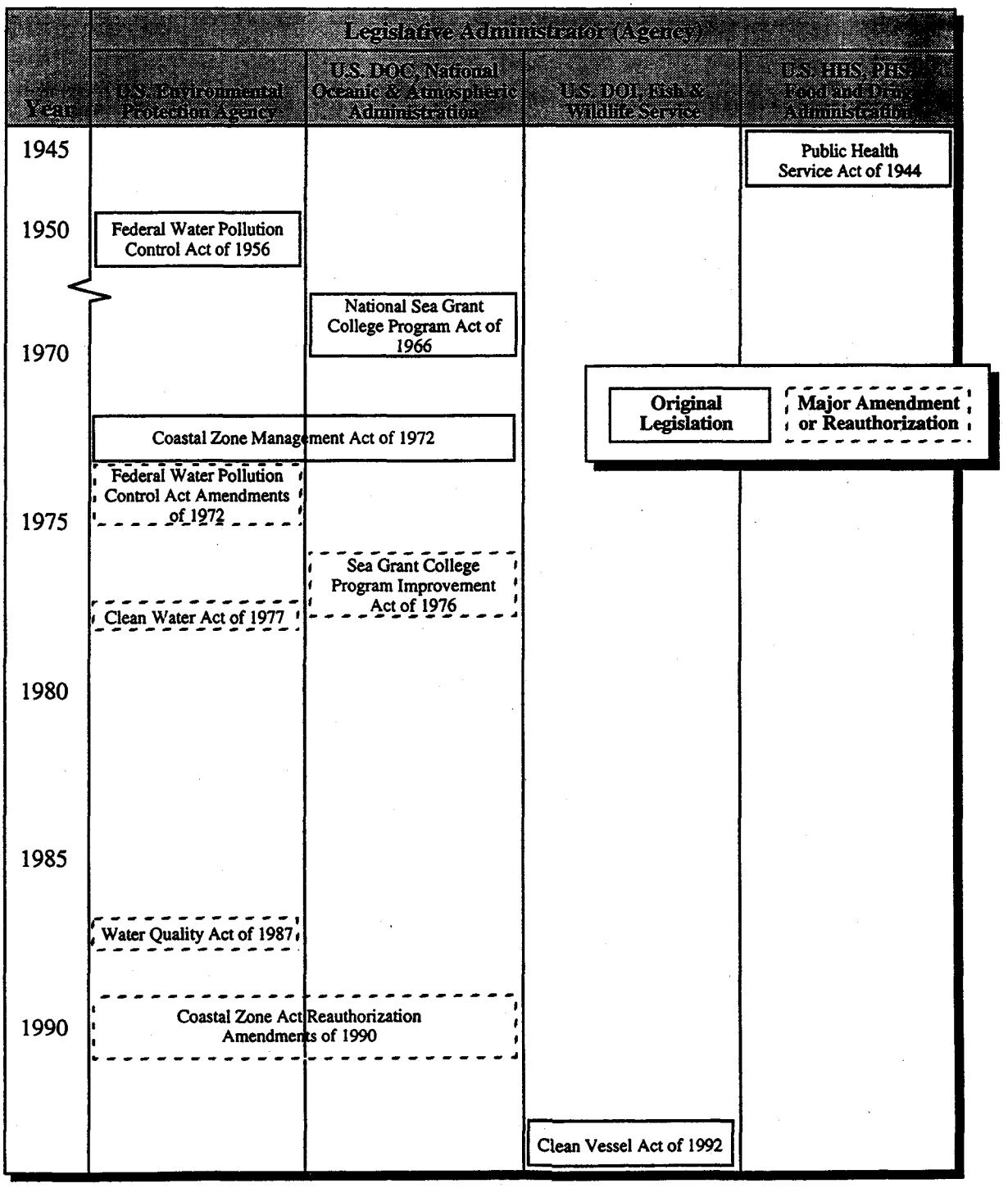
- **Program Restrictions.** Any restrictions on the use of program support.

- **Additional Information.** List of significant supplementary sources for additional program information.

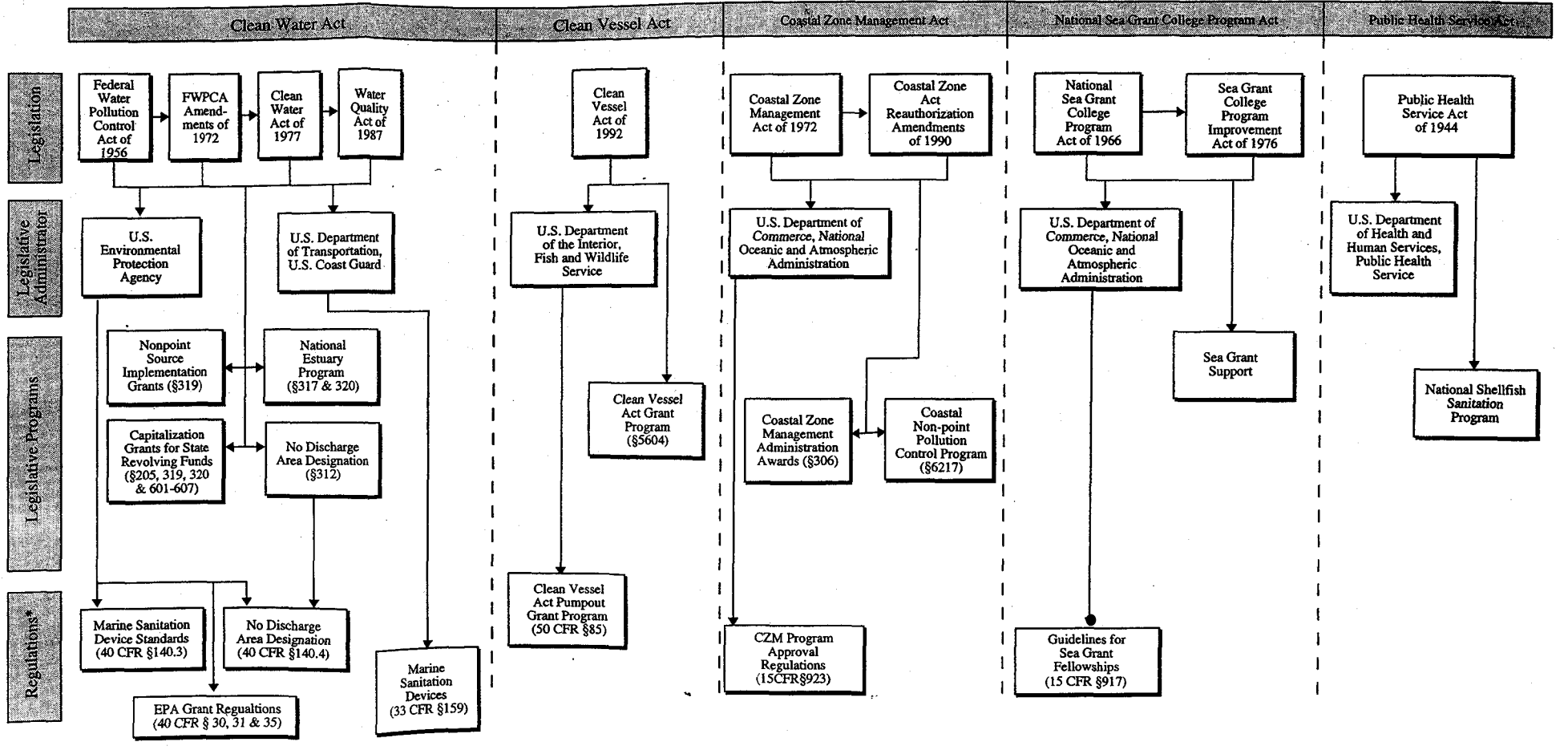
A map showing the areas approved as No Discharge Areas by the U.S. Environmental Protection Agency as of late May 1994 is presented in Exhibit B-4 as an appendix to the No Discharge Area approval program description.

Although the five key Federal statutes are all related to coastal and inland water bodies and coastal areas, there are minor differences and often ambiguities in the exact definitions of these water bodies and areas, which have an effect on the interpretation of the legislation. Exhibit B-13 presents example coastal ocean and Great Lakes areas to depict the coastal area definitions. Exhibit B-14 summarizes the applicability of the states and territories to the definitions of "coastal State," "Great Lakes State," "United States," and "State" used in the relevant legislation.

Chronology Of Legislation Related To Vessel Sewage Discharge And Management



Relationship Of Federal Legislation And Programs



*Includes only those regulations related to the indicated programs/activities

Overview Of Federal Programs

Program Name	Authorized Agency				Eligibility			Program Type									
								Grants									
	EPA	DOI, F&WS	DOC, NOAA	DHHS, PHS, FDA	Coastal States	Inland States	Other Entities	Facility Development/ Construction	Coastal Program Development/ Admin.	Education Program	Nonpoint Source Control Program Dev./Implementation	Research/Training	Water Quality Assessment	Supplementary Protection Designation	Guidelines/ Guidance	Information	Certification
No Discharge Area Approval	√				√	√	√							√			
Nonpoint Source Implementation Grants (319 Program)	√				√	√	√*				√				√		
Capitalization Grants for State Revolving Funds	√				√	√		√**	√**		√**						
National Estuary Program	√				√		√		√	√	√		√	√	√	√	
Clean Vessel Act Grant Program		√			√	√		√		√					√		
Coastal Zone Management Admin. Awards			√		√				√								
Coastal Nonpoint Pollution Control Program			√		√				√		√				√	√	
Sea Grant Support			√		√	√	√			√		√			√	√	
National Shellfish Sanitation Program				√	√	√	√								√	√	√

**Eligible through designated state agency*
***Loans and other financial assistance from a State Revolving Fund may be used for these activities*

"No Discharge Area" Approval

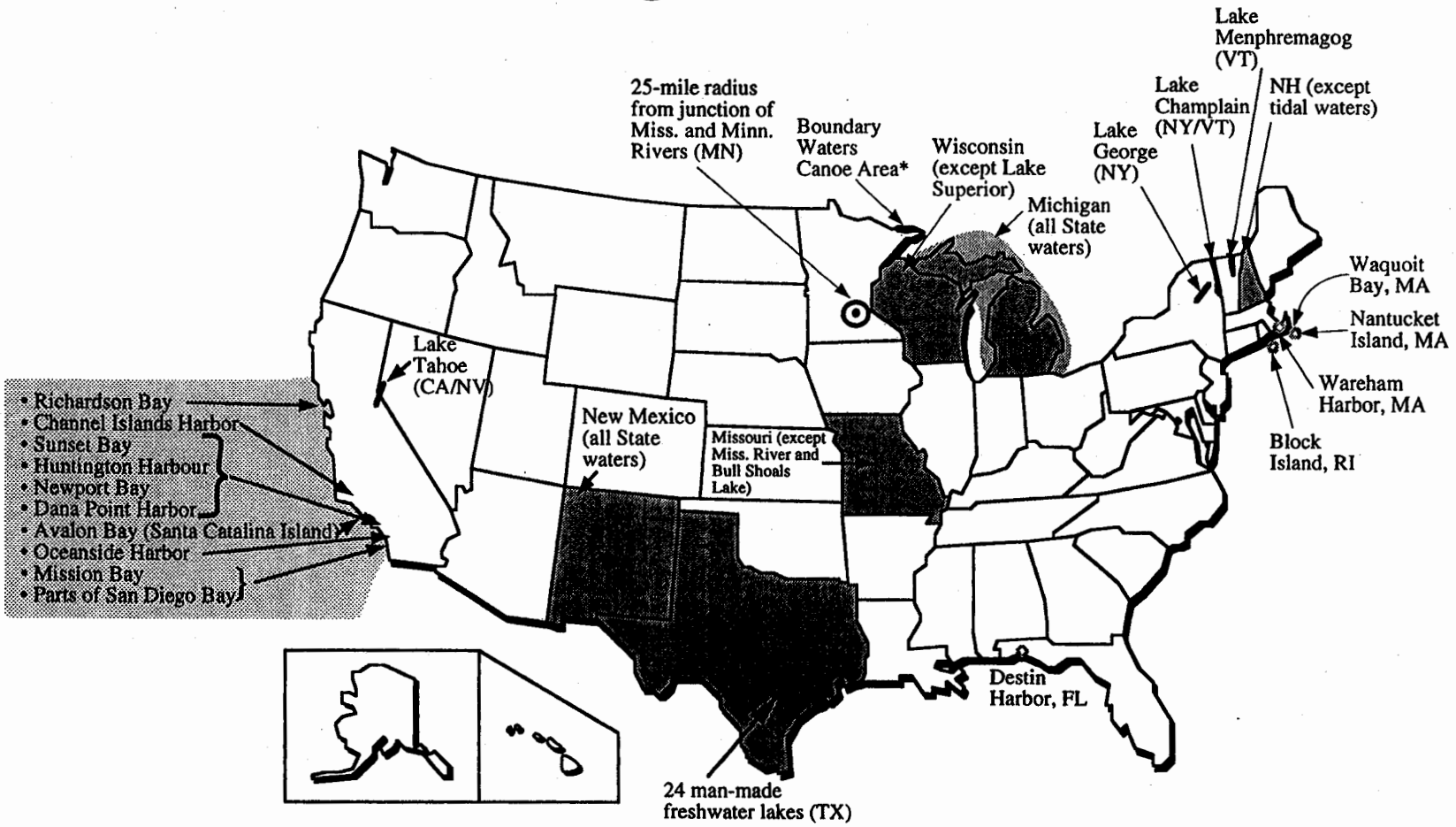
Area of Focus:	Protection of waters through prohibition of all vessel sewage discharges
Pertinence to Control of Vessel Discharges:	• Restricts boaters from discharging treated/untreated sewage in approved protection areas • Typically requires adequate boater pumpout facilities and dump stations in No Discharge Area • Enhances environmental quality of boating, swimming, and shellfish harvesting areas
Type:	Supplemental protection designation
Authorized Agency:	U.S. Environmental Protection Agency, Office of Water
Key Contact:	U.S. Environmental Protection Agency Office of Water Office of Wetlands, Oceans, and Watersheds Oceans and Coastal Protection Division 401 M Street, S.W. Washington, D.C. 20460 (202) 260-1952
Legislative Authorization:	Clean Water Act §312
Program Objective:	To provide additional protection and enhancement of all or some of the waters within a state that require greater environmental protection
Eligible Applicants:	Any interested party (i.e., local government, harbor master) with a request from the state's chief environmental officer or the Governor
Application Deadlines:	None
Funding Requirements:	N/A
Program Restrictions:	Applicant generally must demonstrate that the proposed No Discharge Area is necessary for environmental purposes and that adequate dump stations and pumpout facilities exist
Additional Information:	• 40 CFR §140 • "Guidance for States and Municipalities Seeking No-Discharge Area Designation for New England Coastal Waters" (1991; EPA Region I)

N/A = Not applicable.

Note: See following page for areas approved by EPA as "No Discharge Areas."

Source: EPA, 1993b; EPA, 1991; and 40 CFR §140.4.

EPA – Approved No Discharge Areas



Note: All freshwater lakes, freshwater reservoirs, or other freshwater impoundments whose inlets or outlets prevent the ingress or egress by vessel subject to CWA §312, or in rivers not capable of navigation by interstate vessel traffic subject to CWA §312 are No Discharge Areas under 40 CFR Part 140.3(a)(1). Current as of June 1994. This list will be updated periodically.

** A No Discharge Area under CWA §312(f)(4)(A).*

Source: EPA, 1991; EPA, 1993b

Nonpoint Source Implementation Grants (319 Program)

Area of Focus:	Implementation of EPA-approved state nonpoint source management programs
Pertinence to Control of Vessel Discharges:	• Supports and provides guidance on implementation of state nonpoint source management programs • Identifies vessel sewage discharges as nonpoint source pollution
Type:	Grants; guidance
Authorized Agency:	U.S. Environmental Protection Agency, Office of Water
Key Contact:	U.S. Environmental Protection Agency Office of Water Office of Wetlands, Oceans, and Watersheds Assessment and Watershed Protection Division Nonpoint Source Control Branch 401 M Street, S.W. Washington, D.C. 20460 (202) 260-7100
Legislative Authorization:	Clean Water Act §319(h)
Program Objective:	To assist states in implementing EPA-approved Section 319 nonpoint source management programs
Eligible Applicants:	Lead nonpoint source agency in the states, the District of Columbia, American Samoa, Guam, Northern Marianas, Puerto Rico, Pacific Trust Territories, Virgin Islands, and Indian Tribes (funds can be distributed to other agencies or organizations through the nonpoint source agency)
Application Deadlines:	Set by the EPA Regional Offices
Funding Requirements:	At least 40 percent of project or program costs must be provided by non-Federal sources; state must meet maintenance of effort requirements (contained in Clean Water Act)
Program Restrictions:	Grants may be used only to support implementation of EPA-approved state nonpoint source management programs, and not to develop new programs or plans
Additional Information:	• "EPA's Final Nonpoint Source Guidance" (February 1991) • "EPA Assistance Administration Manual" (available from the National Technical Information Service) • "General Regulation for Assistance Programs" (available from EPA)

Source: Clean Water Act §319; NOAA & EPA, 1993; and EOP & GSA, 1993.

Capitalization Grants For State Revolving Funds

Area of Focus:	Construction of publicly-owned wastewater treatment works; implementation of a nonpoint source management program (under §319 of the Clean Water Act); development and implementation of an estuary conservation and management plan (under §320 of Clean Water Act)
Pertinence to Control of Vessel Discharges:	• Supports construction of public marina on-site wastewater treatment facility • Supports upgrade of municipal facilities to handle vessel sewage • Supports implementation of nonpoint source control programs
Type:	Grants
Authorized Agency:	U.S. Environmental Protection Agency, Office of Water
Key Contact:	U.S. Environmental Protection Agency Office of Water Office of Wastewater Enforcement and Compliance Municipal Support Division, State Revolving Fund Branch 401 M Street, S.W. Washington, D.C. 20460 (202) 260-7366
Legislative Authorization:	Clean Water Act §319
Program Objective:	To assist state and local governments with financing of municipal wastewater treatment facilities
Eligible Applicants:	States, territories, and possessions of the United States (including the District of Columbia)
Application Deadlines:	July 3 of the year following the year of appropriation
Funding Requirements:	Grants are placed into a State Revolving Fund, which is used to provide loans and other types of financial assistance (not grants) to local communities and intermunicipal and interstate agencies; not more than 4 percent of the capitalization grant can be used for the administration costs of the State Revolving Fund; the state is required to match 20 percent of the grant
Program Restrictions:	Indian tribes are not eligible to receive capitalization grants
Additional Information:	• "State Revolving Fund Management Manual" (available from Key Contact) • "EPA Assistance GAD Administrative Manual" (available from the National Technical Information Service) • 40 CFR §31 and §35, Subpart K

Source: Clean Water Act §319, 601-607; and EOP & GSA, 1993.

National Estuary Program

Area of Focus:	Reduction of point and nonpoint sources of pollution in estuaries of national significance (through public awareness programs and water quality baseline assessments, monitoring, and field surveys)
Pertinence to Control of Vessel Discharges:	• Provides support and guidance on development/implementation of estuary water quality public awareness programs • Provides funding and guidance on baseline water quality data collection in support of other programs or enforcement actions
Type:	Grants; supplemental protection designation; guidelines; information
Authorized Agency:	U.S. Environmental Protection Agency, Office of Water
Key Contact:	U.S. Environmental Protection Agency Office of Water Office of Wetlands, Oceans, and Watersheds Oceans and Coastal Protection Division 401 M Street, S.W. Washington, D.C. 20460 (202) 260-6502
Legislative Authorization:	Clean Water Act §320
Program Objective:	To protect and restore coastal resources in estuaries of national significance and to develop a Comprehensive Conservation and Management Plan for each estuary designated by the EPA Administrator
Eligible Applicants:	State water pollution control agencies; interstate and intrastate agencies; other public or nonprofit private agencies; nonprofit institutions and individuals within the geographic area of a priority estuary for study under this program
Application Deadlines:	June 1 for the following fiscal year
Funding Requirements:	At least 25 percent of the aggregate project costs must be provided by non-Federal sources
Program Restrictions:	Proposed project must fit within scope of program (e.g., within an estuary of national significance)
Additional Information:	• "Financial Assistance for the National Estuary Program" (40 CFR, subpart P; Federal Register, Vol. 54, October 1989) • "Saving Bays and Estuaries, a Primer for Establishing and Managing Estuary Projects" (available from Key Contact) • "EPA Assistance Administration Manual" (available from the National Technical Information Service)

Source: NOAA & EPA, 1993; and EOP & GSA, 1993.

Clean Vessel Act Grant Program

Area of Focus:	Dump station and pumpout station construction, renovation, operation, and maintenance; facility and station development and planning (coastal states only); related education/information programs; surveys of the status of existing facilities and need for additional facilities (coastal states only)
Pertinence to Control of Vessel Discharges:	• Supports development, planning, construction, renovation, operation, and maintenance of boater pumpout stations and dump stations • Provides support and guidance on grant application process • Supports vessel discharge-related public awareness programs
Type:	Grants; guidelines
Authorized Agency:	U.S. Department of the Interior, Fish and Wildlife Service
Key Contact:	U.S. Department of the Interior Fish and Wildlife Service, Division of Federal Aid Arlington Square, 4401 N. Fairfax Drive Arlington, VA 22203 (703) 358-1845
Legislative Authorization:	Clean Vessel Act of 1992
Program Objective:	To provide funds to states for the construction, renovation, operation, and maintenance of pumpout stations and dump stations to improve water quality
Eligible Applicants:	An agency of the state designated by the Governor
Application Deadlines:	May 1, 1994 (for FY 1995); May 1, 1995 (for FY 1996); and May 1, 1996 (for FY 1997)
Funding Requirements:	At least 25 percent of the cost of the proposed activities must be funded by other sources
Program Restrictions:	Grants cannot be used for: activities that do not provide public benefits; enforcement activities; construction/renovation of "upland" restroom facilities; or construction, renovation, operation, and maintenance of on-site sewage treatment plants and of municipal sewage treatment plants
Additional Information:	• Federal Register, Vol. 59, No. 47 (March 10, 1994, pp. 11204-11209) • Federal Register, Vol. 59, No. 47 (March 10, 1994, pp. 11290-11306)

Sources: DOI, 1993; Clean Vessel Act of 1992; Federal Register, Vol. 59, No. 47, pp. 11204-11209; and Federal Register, Vol. 59, No. 47, pp. 11290-11306.

Coastal Zone Management Administration Awards

Area of Focus:	Coastal zone management administration funding (program includes coastal wetlands management and protection, public access improvements, reduction of marine debris, and special area management planning)
Pertinence to Control of Vessel Discharges:	• Provides funding for the administration of state coastal zone management programs (which potentially include pollution controls on nonpoint sources, such as sewage from vessels)
Type:	Grants
Authorized Agency:	U.S. Department of Commerce, National Oceanic and Atmospheric Administration
Key Contact:	U.S. Department of Commerce National Oceanic and Atmospheric Administration National Ocean Service Office of Ocean and Coastal Resource Management Coastal Programs Division 1825 Connecticut Ave., N.W. Washington, D.C. 20235 (202) 606-4158
Legislative Authorization:	Coastal Zone Management Act of 1972
Program Objective:	To assist states in implementing and enhancing Coastal Zone Management programs
Eligible Applicants:	Any coastal state (including Puerto Rico, Virgin Islands, Guam, American Samoa, Northern Marianas, and the Trust Territory of the Pacific), whose Coastal Zone Management program has been approved by the Secretary of Commerce
Application Deadlines:	Submit application 180 days prior to the beginning date of the grant
Funding Requirements:	A percentage of the total project cost (which varies by fiscal year) must be provided by non-Federal sources. Awards are primarily allocated by formula based on coastal county population and miles of shoreline
Program Restrictions:	Cooperative Agreements can be used only to implement and enhance the states' approved Coastal Zone Management programs
Additional Information:	• 15 CFR §923

Source: DOC, 1993a; CZMA §306 (as amended by CZARA); and EOP & GSA, 1993.

Coastal Nonpoint Pollution Control Program

Area of Focus:	Guidance for the development of marina best management measures and practices
Pertinence to Control of Vessel Discharges:	• Provides support and guidance on the development of marina and recreational boating-related best management measures and practices (e.g., sewage facility management measure/practices) • Provides tool for initial standardization of marina sewage handling and other practices
Type:	Grants; guidance; information
Authorized Agency:	U.S. Department of Commerce, National Oceanic and Atmospheric Administration
Key Contact:	U.S. Department of Commerce National Oceanic and Atmospheric Administration National Ocean Service Office of Ocean and Coastal Resource Management Coastal Programs Division 1825 Connecticut Ave., N.W. Washington, D.C. 20235 (202) 606-4158
Legislative Authorization:	Coastal Zone Act Reauthorization Amendments of 1990
Program Objective:	To assist states in the development of best management measures and practices for marinas and other nonpoint pollution sources
Eligible Applicants:	Any coastal state (including Puerto Rico, Virgin Islands, Guam, American Samoa, Northern Marianas, and the Trust Territory of the Pacific), whose Coastal Zone Management program has been approved by the Secretary of Commerce
Application Deadlines:	Within 30 months of the publication of final management measures guidance (i.e., July 1995)
Funding Requirements:	At least 50 percent of program development costs must be provided by non-Federal sources
Program Restrictions:	Coastal Zone Management program approval under §306 of the Coastal Zone Management Act of 1972
Additional Information:	• "Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance" (1993; available from NOAA or EPA) • "Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters" (1993; available from EPA)

Source: CZARA §6217; DOC, 1993a; NOAA & EPA, 1993; and EPA, 1993a.

Sea Grant Support

Area of Focus:	General marine resources-related research, education, and training
Pertinence to Control of Vessel Discharges:	• Supports marine-related public awareness programs (e.g., regional public pumpout guide) • Provides research opportunities (e.g., water quality improvement demonstration project) • Maintains commercial and recreational boater advocacy • Provides information resources on marine-related topics
Type:	Grants; guidance; information
Authorized Agency:	U.S. Department of Commerce, National Oceanic and Atmospheric Administration
Key Contact:	U.S. Department of Commerce National Oceanic and Atmospheric Administration National Sea Grant College Program 1335 East-West Hwy. Silver Spring, MD 20910 (301) 713-2448
Legislative Authorization:	Sea Grant College Program Improvement Act of 1976
Program Objective:	To support the establishment and operation of major university centers for marine resources research, education, and training. Some individual efforts in these same areas also receive funding
Eligible Applicants:	Schools; state agencies; companies; organizations; individuals
Application Deadlines:	None
Funding Requirements:	One-third or more of the total cost must be from non-Federal sources
Program Restrictions:	Grants cannot go toward the construction or purchase of ships or facilities
Additional Information:	• Guidelines for Sea Grant Fellowships (15 CFR §917) • "Suggestions for Submission of Proposals and Administration of Grants" (National Sea Grant Program) • Federal Register, Vol. 43, No. 70 (April 1978) • Federal Register, Vol. 43, No. 153 (August 1978)

Source: DOC, 1993b; and EOP & GSA, 1993.

National Shellfish Sanitation Program

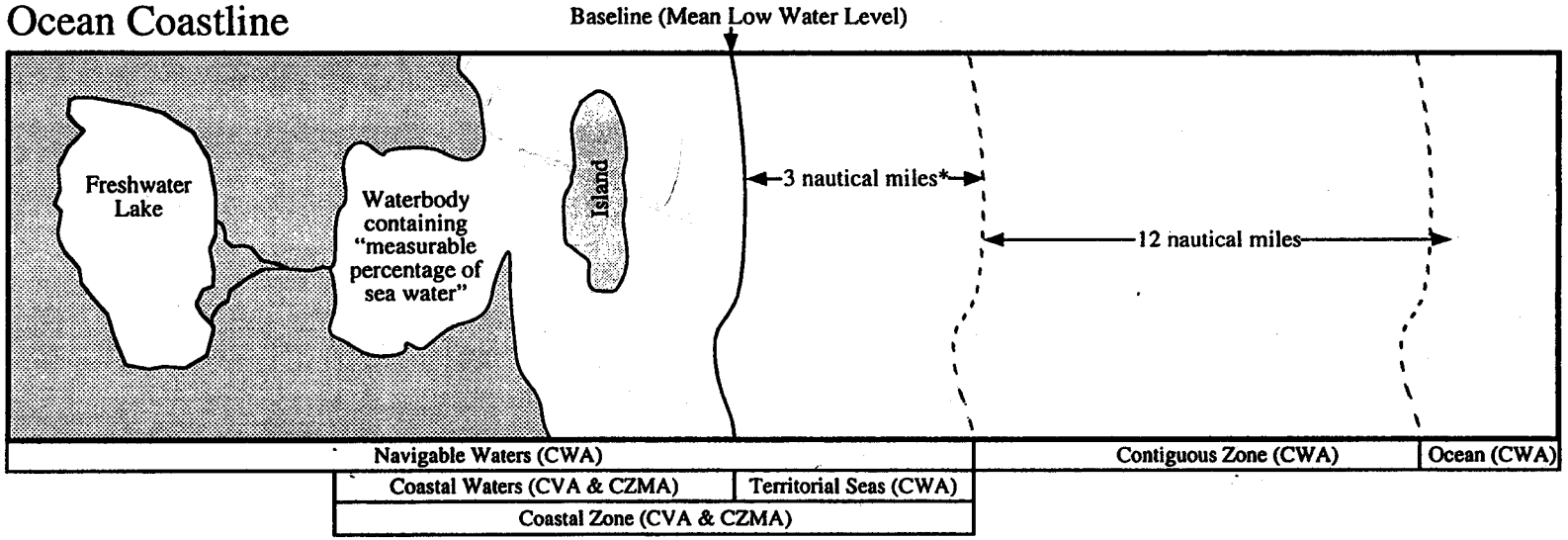
Area of Focus:	Sanitary conditions of shellfish harvesting areas; seafood quality; public health
Pertinence to Control of Vessel Discharges:	• Provides guidance on shellfish harvesting closure area determinations around marinas (based on vessel discharge rates), which assists in determination of current pollution level
Type:	Supplemental protection designation; guidelines; certification
Authorized Agency:	U.S. Department of Health and Human Services, Public Health Services, Food and Drug Administration
Key Contact:	U.S. Food and Drug Administration Office of Seafood Shellfish Sanitation Branch 200 C Street, S.W., HFF-513 Washington, D.C. 20204 (202) 254-3982
Legislative Authorization:	Public Health Service Act of 1944
Program Objective:	To develop general guidelines for and cooperative agreements between the FDA, state agencies, and the shellfish industry to ensure sanitary shellfish for safe public consumption.
Eligible Applicants:	N/A
Application Deadlines:	N/A
Funding Requirements:	N/A
Program Restrictions:	Program is implemented through regulations at state level. Information at the Federal level is available upon request; no funding is available.
Additional Information:	• "National Shellfish Sanitation Program Manual of Operations (Part I: Sanitation of Shellfish Growing Areas; and Part II: Sanitation of the Harvesting, Processing and Distribution of Shellfish)" (1992; available from Key Contact) • "Evaluation of Marinas by State Shellfish Sanitation Control Officials" (FDA Guideline; available from Key Contact) • Federal Register, Vol. 50 (February 1985)

N/A = Not applicable.

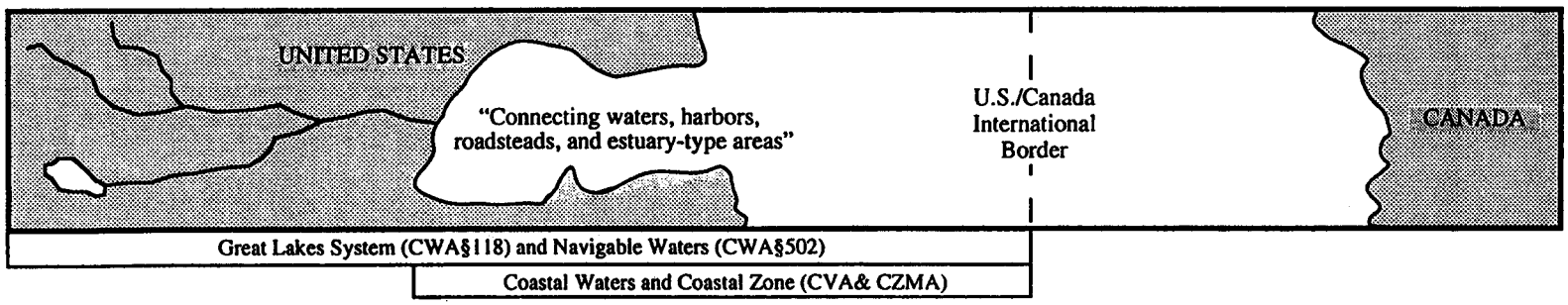
Source: DHHS, 1992; and DHHS, 1993.

Coastal Area Definitions Under Major Legislation

Ocean Coastline



Great Lake Coastline



**For Texas and the Florida coastline adjacent to the Gulf of Mexico, the territorial seas are three leagues from the baseline*

Note: CWA=Clean Water Act, CVA=Clean Vessel Act, and CZMA=Coastal Zone Management Act and Coastal Zone Act Reauthorization Amendments

Legislative Geographical Definitions

State or Territory	"Coastal State"		"Great Lakes State"	"United States"	"State"
	Clean Vessel Act	Coastal Zone Management Act	Clean Water Act §118	Clean Water Act §312	Clean Water Act §502
Alabama	√	√		√	√
Alaska		√		√	√
Arizona				√	√
Arkansas				√	√
California	√	√		√	√
Colorado				√	√
Connecticut	√	√		√	√
Delaware	√	√		√	√
District of Columbia				√	√
Florida	√	√		√	√
Georgia	√	√		√	√
Hawaii	√	√		√	√
Idaho				√	√
Illinois	√	√	√	√	√
Indiana	√	√	√	√	√
Iowa				√	√
Kansas				√	√
Kentucky				√	√
Louisiana	√	√		√	√
Maine	√	√		√	√
Maryland	√	√		√	√
Massachusetts	√	√		√	√
Michigan	√	√		√	√
Minnesota	√	√	√	√	√
Mississippi	√	√	√	√	√
Missouri				√	√
Montana				√	√
Nebraska				√	√
Nevada				√	√
New Hampshire	√	√		√	√

Legislative Geographical Definitions (Cont'd)

State or Territory	"Coastal State"		"Great Lakes State"	"United States"	"State"
	Clean Vessel Act	Coastal Zone Management Act	Clean Water Act §118	Clean Water Act §312	Clean Water Act §502
New Jersey	√	√		√	√
New Mexico				√	√
New York	√	√	√	√	√
North Carolina	√	√		√	√
North Dakota				√	√
Ohio	√	√	√	√	√
Oklahoma				√	√
Oregon	√	√		√	√
Pennsylvania	√	√	√	√	√
Rhode Island	√	√		√	√
South Carolina	√	√		√	√
South Dakota				√	√
Tennessee				√	√
Texas	√	√		√	√
Utah				√	√
Vermont				√	√
Virginia	√	√		√	√
Washington	√	√		√	√
West Virginia				√	√
Wisconsin	√	√	√	√	√
Wyoming				√	√
American Samoa		√		√	√
Commonwealth of the Northern Marina Islands	√	√			√
Commonwealth of Puerto Rico	√	√		√	√
Guam	√	√		√	√
Panama Canal Zone				√	
Trust Territory of the Pacific Islands		√		√	√
Virgin Islands	√	√		√	√

List of References

Executive Office of the President and U.S. General Services Administration. 1993. 1993 Catalog of Federal Domestic Assistance. Office of Management and Budget. June. Washington, DC.

U.S. Department of Commerce. 1993a. Personal communication, P. Robertson. National Oceanic and Atmospheric Administration, Coastal Programs Division. Washington, DC.

U.S. Department of Commerce. 1993b. Personal communication, J. West. National Oceanic and Atmospheric Administration, Grants Management Division. Washington, DC.

U.S. Department of Commerce and U.S. Environmental Protection Agency. 1993. Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance. National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management; Office of Water, Office of Wetlands, Oceans, and Watersheds. Washington, DC.

U.S. Department of Health and Human Services. 1992. National Shellfish Sanitation Program Manual of Operations: Part I, Sanitation of Shellfish Growing Areas. Public Health Service, Food and Drug Administration. Washington, DC.

U.S. Department of Health and Human Services. 1993. Personal communication, R. Varsaci. Public Health Service, Food and Drug Administration, Shellfish Sanitation Branch. Washington, DC.

U.S. Department of the Interior. 1993. Personal communication, B. Pacific. Fish and Wildlife Service, Division of Federal Aid. Washington, DC.

U.S. Environmental Protection Agency. 1991. Guidance for States and Municipalities Seeking No-Discharge Area Designation for New England Coastal Waters. EPA Region I. Boston, MA.

U.S. Environmental Protection Agency. 1993a. Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters. Office of Water. Washington, DC.

U.S. Environmental Protection Agency. 1993b. Personal communication, J. Amson. Office of Water, Office of Wetlands, Oceans, and Watersheds. Washington, DC.

Appendix C:

Relevant Federal Regulations on Vessel Sewage

40 CFR Part 140: EPA Marine Sanitation Device Standard Regulations

C=True Value for the Concentration, μg/L
X=Mean Recovery, μg/L
S=Multi-laboratory Standard Deviation, μg/L
SR=Single-analyst Standard Deviation, μg/L

Method 279.2

For Thallium, Method 279.2 (Atomic Absorption, Furnace Technique) replace the Precision and Accuracy Section statement with the following:

Precision and Accuracy

An interlaboratory study on metal analyses by this method was conducted by the Quality Assurance Branch (QAB) of the Environmental Monitoring Systems Laboratory-Cincinnati (EMSL-CI). Synthetic concentrates containing various levels of this element were added to reagent water, surface water, drinking water and three effluents. These samples were digested by the total digestion procedure, 4.1.3 in this manual. Results for the reagent water are given below. Results for other water types and study details are found in "EPA Method Study 31, Trace Metals by Atomic Absorption (Furnace Techniques)," National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 Order No. PB 86-121 704/AS, by Copeland, F.R. and Maney, J.P., January 1986.

For a concentration range of 10.00-252 μg/L.
X=0.8781(C)−0.715
S=0.1112(X)+0.669
SR=0.1005(X)+0.241

Where:

C=True Value for the Concentration, μg/L
X=Mean Recovery, μg/L
S=Multi-laboratory Standard Deviation, μg/L
SR=Single-analyst Standard Deviation, μg/L

Method 286.2

For Vanadium, Method 286.2 (Atomic Absorption, Furnace Technique) replace the Precision and Accuracy Section statement with the following:

Precision and Accuracy

An interlaboratory study on metal analyses by this method was conducted by the Quality Assurance Branch (QAB) of the Environmental Monitoring Systems Laboratory-Cincinnati (EMSL-CI). Synthetic concentrates containing various levels of this element were added to reagent water, surface water, drinking water and three effluents. These samples were digested by the total digestion procedure, 4.1.3 in this manual. Results for the reagent water are given below. Results for other water types and study details are found in "EPA Method Study 31, Trace Metals by Atomic Absorption (Furnace Techniques)," National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 Order No. PB 86-121 704/AS, by Copeland, F.R. and Maney, J.P., January 1986.

For a concentration range of 1.36-982 μg/L.
X=0.8486(C)+0.252
S=0.3323(X)−0.428
SR=0.1195(X)−0.121

Where:

C=True Value for the Concentration, μg/L
X=Mean Recovery, μg/L
S=Multi-laboratory Standard Deviation, μg/L
SR=Single-analyst Standard Deviation, μg/L

Method 289.2

For Zinc, Method 289.2 (Atomic Absorption, Furnace Technique) replace the Precision and Accuracy Section statement with the following:

Precision and Accuracy

An interlaboratory study on metal analyses by this method was conducted by the Quality Assurance Branch (QAB) of the Environmental Monitoring Systems Laboratory-Cincinnati (EMSL-CI). Synthetic concentrates containing various levels of this element were added to reagent water, surface water, drinking water and three effluents. These samples were digested by the total digestion procedure, 4.1.3 in this manual. Results for the reagent water are given below. Results for other water types and study details are found in "EPA Method Study 31, Trace Metals by Atomic Absorption (Furnace Techniques)," National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161 Order No. PB 86-121 704/AS, by Copeland, F.R. and Maney, J.P., January 1986.

For a concentration range of 0.51-189 μg/L.
X=1.6710(C)+1.485
S=0.6740(X)−0.342
SR=0.3895(X)−0.384

Where:

C=True Value for the Concentration, μg/L
X=Mean Recovery, μg/L
S=Multi-laboratory Standard Deviation, μg/L
SR=Single-analyst Standard Deviation, μg/L

[55 FR 33442, Aug. 15, 1990]

PART 140—MARINE SANITATION DEVICE STANDARD

AUTHORITY: Sec. 312, as added Oct. 18, 1972, Pub. L. 92-500, sec. 2, 86 Stat. 871. Interpret or apply sec. 312(b)(1), 33 U.S.C. 1322 (b)(1).

SOURCE: 41 FR 4453, Jan. 29, 1976, unless otherwise noted.

§ 140.1 Definitions.

For the purpose of these standards the following definitions shall apply:

(a) *Sewage* means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes;

(b) *Discharge* includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping;

(c) *Marine sanitation device* includes any equipment for installation onboard a vessel and which is designed to receive, retain, treat, or discharge sewage and any process to treat such sewage;

(d) *Vessel* includes every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on waters of the United States;

(e) *New vessel* refers to any vessel on which construction was initiated on or after January 30, 1975;

(f) *Existing vessel* refers to any vessel on which construction was initiated before January 30, 1975;

(g) *Fecal coliform bacteria* are those organisms associated with the intestines of warm-blooded animals that are commonly used to indicate the presence of fecal material and the potential presence of organisms capable of causing human disease.

§ 140.2 Scope of standard.

The standard adopted herein applies only to vessels on which a marine sanitation device has been installed. The standard does not require the installation of a marine sanitation device on any vessel that is not so equipped. The standard applies to vessels owned and operated by the United States unless the Secretary of Defense finds that compliance would not be in the interest of national security.

§ 140.3 Standard.

(a) (1) In 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 subject to this regulation, marine sanitation devices certified by the U.S. Coast Guard (see 33 CFR part 159, published in 40 FR 4622, January 30, 1975), installed on all vessels shall be designed and operated to prevent the overboard discharge of sewage, treated or untreated, or of any waste derived from sewage. This shall not be construed to prohibit the carriage of Coast Guard-certified flow-through treatment devices which have been secured so as to prevent such discharges.

(2) In all other waters, Coast Guard-certified marine sanitation devices installed on all vessels shall be designed and operated to either retain, dispose of, or discharge sewage. If the device has a discharge, subject to paragraph (d) of this section, the effluent shall not have a fecal coliform bacterial count of greater than 1,000 per 100 milliliters nor visible floating solids. Waters where a Coast Guard-certified marine sanitation device permitting discharge is allowed include coastal waters and estuaries, the Great Lakes and inter-connected waterways, freshwater lakes and impoundments accessible through locks, and other flowing waters that are navigable interstate by vessels subject to this regulation.

(b) This standard shall become effective on January 30, 1977 for new vessels and on January 30, 1980 for existing vessels (or, in the case of vessels owned and operated by the Department of Defense, two years and five years, for new and existing vessels, respectively, after promulgation of implementing regulations by the Secretary of Defense under section 312(d) of the Act).

33 CFR Part 159 (Subpart A): U.S. Coast Guard Marine Sanitation Device Regulations

(c) Any vessel which is equipped as of the date of promulgation of this regulation with a Coast Guard-certified flow-through marine sanitation device meeting the requirements of paragraph (a)(2) of this section, shall not be required to comply with the provisions designed to prevent the overboard discharge of sewage, treated or untreated, in paragraph (a)(1) of this section, for the operable life of that device.

(d) After January 30, 1980, subject to paragraphs (e) and (f) of this section, marine sanitation devices on all vessels on waters that are not subject to a prohibition of the overboard discharge of sewage, treated or untreated, as specified in paragraph (a)(1) of this section, shall be designed and operated to either retain, dispose of, or discharge sewage, and shall be certified by the U.S. Coast Guard. If the device has a discharge, the effluent shall not have a fecal coliform bacterial count of greater than 200 per 100 milliliters, nor suspended solids greater than 150 mg/1.

(e) Any existing vessel on waters not subject to a prohibition of the overboard discharge of sewage in paragraph (a)(1) of this section, and which is equipped with a certified device on or before January 30, 1978, shall not be required to comply with paragraph (d) of this section, for the operable life of that device.

(f) Any new vessel on waters not subject to the prohibition of the overboard discharge of sewage in paragraph (a)(1) of this section, and on which construction is initiated before January 31, 1980, which is equipped with a marine sanitation device before January 31, 1980, certified under paragraph (a)(2) of this section, shall not be required to comply with paragraph (d) of this section, for the operable life of that device.

(g) The degrees of treatment described in paragraphs (a) and (d) of this section are "appropriate standards" for purposes of Coast Guard and Department of Defense certification pursuant to section 312(g)(2) of the Act.

(h) This section is not to be construed to accelerate the effective date of the standards and regulations promulgated under section 312 as such date affects the sales regulations for marine sanitation devices specified in section 312(g)(1): January 30, 1977, and January 30, 1980, for new and existing vessels, respectively.

§ 140.4 Complete prohibition.

(a) A State may completely prohibit the discharge from all vessels of any sewage, whether treated or not, into some or all of the waters within such State by making a written application to the Administrator, Environmental Protection Agency, and by receiving the Administrator's affirmative determination pursuant to section 312(f)(3) of the Act. Upon receipt of an application under section 312(f)(3) of the Act, the Administrator will determine within 90 days whether adequate facilities for the safe and sanitary removal and treatment of sewage from all vessels using such waters are reasonably available. Applications made by States pursuant to section 312(f)(3) of the Act shall include:

(1) A certification that the protection and enhancement of the waters described in the petition require greater environmental protection than the applicable Federal standard;

(2) A map showing the location of commercial and recreational pump-out facilities;

(3) A description of the location of pump-out facilities within waters designated for no discharge;

(4) The general schedule of operating hours of the pump-out facilities;

(5) The draught requirements on vessels that may be excluded because of insufficient water depth adjacent to the facility;

(6) Information indicating that treatment of wastes from such pump-out facilities is in conformance with Federal law; and

(7) Information on vessel population and vessel usage of the subject waters.

(b) A State may make a written application to the Administrator, Environmental Protection Agency, under section 312(f)(4) of the Act, for the issuance of a regulation completely prohibiting discharge from a vessel of any sewage, whether treated or not, into particular waters of the United States or specified portions thereof, which waters are located within the boundaries of such State. Such application shall specify with particularity the waters, or portions thereof, for which a complete prohibition is desired. The application shall include identification of water recreational areas, drinking water intakes, aquatic sanctuaries, identifiable fish-spawning and nursery areas, and areas of intensive boating activities. If, on the basis of the State's application and any other information available to him, the Administrator is unable to make a finding that the waters listed in the application require a complete prohibition of any discharge in the waters or portions thereof covered by the application, he shall state the reasons why he cannot make such a finding, and shall deny the application. If the Administrator makes a finding that the waters listed in the application require a complete prohibition of any discharge in all or any part of the waters or portions thereof covered by the State's application, he shall publish notice of such findings together with a notice of proposed rule making, and then shall proceed in accordance with 5 U.S.C. 553. If the Administrator's finding is that applicable water quality standards require a complete prohibition covering a more restricted or more expanded area than that applied for by the State, he shall state the reasons why his finding differs in scope from that requested in the State's application.

(1) For the following waters the discharge from a vessel of any sewage (whether treated or not) is completely prohibited:

Boundary Waters Canoe Area, formerly designated as the Superior, Little Indian Sioux, and Caribou Roadless Areas, in the Superior National Forest, Minnesota, as described in 16 U.S.C. 577-577d1.

[41 FR 4453, Jan. 29, 1976, as amended at 42 FR 43837, Aug. 31, 1977]

§ 140.5 Analytical procedures.

In determining the composition and quality of effluent discharge from marine sanitation devices, the procedures contained in 40 CFR part 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants,"

or subsequent revisions or amendments thereto, shall be employed.

PART 141—NATIONAL PRIMARY DRINKING WATER REGULATIONS

Subpart A—General

Subpart B—Maximum Contaminant Levels

Subpart C—Monitoring and Analytical Requirements

The instruction manual may be made part of the operations manual that is required under § 154.300 of this chapter.

Subpart D—Criteria for Adequacy of Reception Facilities: Garbage

SOURCE: CGD 88-002, 54 FR 18409, Apr. 28, 1989, unless otherwise noted.

§ 158.400 Purpose.

The purpose of this subpart is to supply the criteria for determining the adequacy of reception facilities for garbage at ports and terminals that receive ships and to comply with the Act and Regulation 7 of Annex V to MARPOL 73/78.

§ 158.410 Reception facilities: General.

(a) Except as allowed in paragraph (b) of this section, the person in charge of a port or terminal shall ensure that each port or terminal's reception facility.—

(1) Is capable after August 28, 1989 of receiving APHIS regulated garbage at a port or terminal no later than 24 hours after notice under § 151.65 of this chapter is given to the port or terminal, unless it only receives ships that—

(i) Operate exclusively within the navigable waters of the United States;

(ii) Operate exclusively between ports or terminals in the continental United States; or

(iii) Operate exclusively between continental United States ports or terminals and Canadian ports or terminals.

(2) Is capable of receiving medical wastes or hazardous wastes defined in 40 CFR 261.3, unless the port or terminal operator can provide to the master, operator, or person in charge of a ship, a list of persons authorized by federal, state, or local law or regulation to transport and treat such wastes;

(3) Is arranged so that it does not interfere with port or terminal operations;

(4) Is conveniently located so that mariners unfamiliar with the port or terminal can find it easily and so that it's use will not be discouraged;

(5) Is situated so that garbage from ships which has been placed in it cannot readily enter the water; and

(6) Holds each federal, state, and local permit or license required by environmental and public health laws and regulations concerning garbage handling.

(b) A reception facility for a ship repair yard does not have to meet the requirements of paragraph (a)(1) of this section if it is capable of handling the transfer of garbage from a ship before the ship departs from the yard.

NOTE: The U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) requires victual wastes or garbage contaminated by victual wastes, except from vessels that operate only between the continental United States and Canadian ports, to be incinerated or sterilized in accordance with their regulations in 7 CFR 330.400 and 9 CFR 94.5.

§ 158.420 Reception facilities: Capacity and exceptions.

Each day a port or terminal is in operation, the person in charge of a port or terminal must provide, or ensure the availability of, a reception facility that is capable of receiving all garbage that the master or person who is in charge of a ship desires to discharge, except—

(a) Large quantities of spoiled or damaged cargoes not usually discharged by a ship; or

(b) Garbage from ships not having commercial transactions with that port or terminal.

Subpart E—Port and Terminal Operations

SOURCE: CGD 85-010, 52 FR 7765, Mar. 12, 1987, unless otherwise noted. Redesignated by CGD 88-002, 54 FR 18409, Apr. 28, 1989.

§ 158.500 Draining cargo area and piping systems.

The person in charge shall ensure that each cargo hose and each piping system containing NLS received from each oceangoing ship carrying NLS cargo is not drained back into the ship.

§ 158.520 Following the instruction manual.

The person in charge shall ensure that the instruction manual under § 158.330(b) is followed during the transfer of any NLS.

PART 159—MARINE SANITATION DEVICES

Subpart A—General

Subpart B—Certification Procedures

Subpart C—Design, Construction, and Testing

Subpart D—Recognition of Facilities

AUTHORITY: Sec. 312(b)(1), 86 Stat. 871 (33 U.S.C. 1322(b)(1)); 49 CFR 1.45(b) and 1.46(l) and (m).

SOURCE: CGD 73-83, 40 FR 4624, Jan. 30, 1975, unless otherwise noted.

Subpart A—General

§ 159.1 Purpose.

This part prescribes regulations governing the design and construction of marine sanitation devices and procedures for certifying that marine sanitation devices meet the regulations and the standards of the Environmental Protection Agency promulgated under section 312 of the Federal Water Pollution Control Act (33 U.S.C. 1322), to eliminate the discharge of untreated sewage from vessels into the waters of the United States, including the territorial seas. Subpart A of this part contains regulations governing the manufacture and operation of vessels equipped with marine sanitation devices.

§ 159.3 Definitions.

In this part:

(a) *Coast Guard* means the Commandant or his authorized representative.

(b) *Discharge* includes, but is not limited to, any spilling, leaking, pouring, pumping, emitting, emptying, or dumping.

(c) *Existing vessel* includes any vessel, the construction of which was initiated before January 30, 1975.

(d) *Inspected vessel* means any vessel that is required to be inspected under 46 CFR Chapter I.

(e) *Manufacturer* means any person engaged in manufacturing, assembling, or importing of marine sanitation devices or of vessels subject to the standards and regulations promulgated under section 312 of the Federal Water Pollution Control Act.

(f) *Marine sanitation device* and *device* includes any equipment for installation on board a vessel which is designed to receive, retain, treat, or discharge sewage, and any process to treat such sewage.

(g) *New vessel* includes any vessel, the construction of which is initiated on or after January 30, 1975.

(h) *Person* means an individual, partnership, firm, corporation, or association, but does not include an individual on board a public vessel.

(i) *Public vessel* means a vessel owned or bare-boat chartered and 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.

(j) *Recognized facility* means any laboratory or facility listed by the Coast Guard as a recognized facility under this part.

(k) *Sewage* means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body waste.

(l) *Territorial seas* means 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 3 miles.

(m) *Uninspected vessel* means any vessel that is not required to be inspected under 46 CFR Chapter I.

(n) *United States* includes the States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Canal Zone, and the Trust Territory of the Pacific Islands.

(o) *Vessel* includes every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on the waters of the United States.

(p) *Fecal coliform bacteria* are those organisms associated with the intestine of warm-blooded animals that are commonly used to indicate the presence of fecal material and the potential presence of organisms capable of causing human disease.

(q) *Type I marine sanitation device* means a device that, under the test conditions described in §§ 159.123 and 159.125, produces an effluent having a fecal coliform bacteria count not greater than 1,000 per 100 milliliters and no visible floating solids.

(r) *Type II marine sanitation device* means a device that, under the test conditions described in §§ 159.126 and 159.126a, produces an effluent having a fecal coliform bacteria count not greater than 200 per 100 milliliters and suspended solids not greater than 150 milligrams per liter.

(s) *Type III marine sanitation device* means a device that is designed to prevent the overboard discharge of treated or untreated sewage or any waste derived from sewage.

[CGD 73-83, 40 FR 4624, Jan. 30, 1975, as amended by CGD 75-213, 41 FR 15325, Apr. 12, 1976]

§ 159.5 Requirements for vessel manufacturers.

(a) On and after January 30, 1977, no manufacturer may manufacture for sale, offer for sale, or distribute for sale or resale any new vessel equipped with installed toilet facilities unless it is equipped with an operable Type I, II, or III device that has a label placed on it under § 159.16, or that is certified under § 159.12 or § 159.12a.

(b) After January 30, 1980, no manufacturer may manufacture for sale, or offer for sale, or distribute for sale or resale any new vessel equipped with installed toilet facilities unless it is equipped with:

(1) An operable Type II or III device that has a label placed on it under § 159.16 or that is certified under § 159.12 or § 159.12a; or

(2) An operable Type I device installed on the vessel before January 31, 1980, that has a label placed on it under § 159.16 or that is certified under § 159.12.

(c) After January 30, 1980, no manufacturer may sell, offer for sale, or distribute for sale or resale any existing vessel equipped with installed toilet facilities unless it is equipped with:

(1) An operable Type II or III device that has a label placed on it under § 159.16 or that is certified under § 159.12 or § 159.12a; or

(2) An operable Type I device installed on the vessel before January 31, 1978, that has a label placed on it under § 159.16 or that is certified under § 159.12.

[CGD 75-213, 41 FR 15326, Apr. 12, 1976, as amended by CGD 76-145, 42 FR 11, Jan. 3, 1977]

§ 159.7 Requirements for vessel operators.

(a) On and after January 30, 1977, no person may operate any new vessel equipped with installed toilet facilities, unless it is equipped with an operable Type I, II or III device that has a label placed on it under § 159.16, or that is certified under § 159.12 or § 159.12a.

(b) After January 30, 1980, no person may operate any new vessel equipped with installed toilet facilities unless it is equipped with:

(1) An operable Type II or III device that has a label placed on it under § 159.16 or that is certified under § 159.12 or § 159.12a; or

(2) An operable Type I device installed on the vessel before January 31, 1980, that has a label placed on it under § 159.16 or that is certified under § 159.12;

(c) After January 30, 1980, no person may operate any existing vessel equipped with installed toilet facilities unless it is equipped with:

(1) An operable Type II or III device that has a label placed on it under § 159.16 or that is certified under § 159.12 or § 159.12a; or

(2) An operable Type I device installed on the vessel before January 31, 1978, that has a label placed on it under § 159.16 or that is certified under § 159.12.

NOTE: The EPA standards state that in 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 subject to this regulation, marine sanitation devices certified by the U.S. Coast Guard installed on all vessels shall be designed and operated to prevent the overboard discharge of sewage, treated or untreated, or of any waste derived from sewage. The EPA standards further state that this shall not be construed to prohibit the carriage of Coast Guard-certified flow-through treatment devices which have been secured so as to prevent such discharges. They also state that waters where a Coast Guard-certified marine sanitation device permitting discharge is allowed include coastal waters and estuaries, the Great Lakes and interconnected waterways, freshwater lakes and impoundments accessible through locks, and other flowing waters that are navigable interstate by vessels subject to this regulation (40 CFR 140.3).

[CGD 75-213, 41 FR 15325, Apr. 12, 1976, as amended by CGD 76-145, 42 FR 11, Jan. 3, 1977]

Subpart B—Certification Procedures

§ 159.11 Purpose.

This subpart prescribes procedures for certification of marine sanitation devices and authorization for labels on certified devices.

§ 159.12 Regulations for certification of existing devices.

(a) The purpose of this section is to provide regulations for certification of existing devices until manufacturers can design and manufacture devices that comply with this part and recognized facilities are prepared to perform the testing required by this part.

(b) Any Type III device that was installed on an existing vessel before January 30, 1975, is considered certified.

(c) Any person may apply to the Commandant (G-MVI), U.S. Coast Guard, Washington, D.C. 20593-0001 for certification of a marine sanitation device manufactured before January 30, 1976. The Coast Guard will issue a letter certifying the device if the applicant shows that the device meets § 159.53 by:

(1) Evidence that the device meets State standards at least equal to the standards in § 159.53, or

50 CFR Part 85: Clean Vessel Act Pumpout Grant Program

(Federal Register, Vol. 59, No. 47, March 10, 1994, pp. 11204-11209)

falconry regulations of the States of Kansas, New Hampshire and Rhode Island meet or exceed the Federal standards.

On March 11, 1992, the Missouri Department of Conservation notified the Service that the cooperative Federal-State permit application program was no longer in effect. Effective March 10, 1994, the practice of falconry in Kansas, New Hampshire, and Rhode Island will be governed by provisions found in 50 CFR 21.28 and 21.29 and the asterisk following Missouri in 50 CFR 21.29(k) will be removed thereby removing Missouri from the cooperative Federal-State permit application program.

The notice requirements of 5 U.S.C. § 553(b) are not applicable because public comments were solicited by the Service in a proposed rule for falconry permit regulations published in the Federal Register on December 20, 1987, (52 CFR 48948) and on September 14, 1989, (54 FR 38142) the final rule was published in the Federal Register. Also, the Kansas, New Hampshire, and Rhode Island regulatory programs allowed for reasonable public input. On November 17, 1987, the Kansas Department of Wildlife and Parks Commission held public hearings that were attended by falconers and concerned wildlife conservation organizations. Similar provisions for public hearing or comments were provided in New Hampshire on December 24, 1987, and November 20, 1992, and in Rhode Island on August 27, 1992. The Proposed Rule, Migratory Bird Permits; Determination That Kansas Meets Federal Falconry Standards, was published in the Federal Register on November 14, 1990, (55 FR 47498). Public comments were solicited at that time and none were received. As the rules relating too New Hampshire and Rhode Island are similar to those enacted by Kansas; and because of similar public hearings held in the respective states, as well as no comments having been received regarding the Kansas falconry rules, the falconry regulations adopted by New Hampshire and Rhode Island are also being added to this final rule.

This rule relieves a restriction prohibiting Kansas, New Hampshire and Rhode Island from the practice of falconry; therefore, it is effective upon publication in accordance with 5 U.S.C. 553(d)(1).

Need for Rulemaking

The need for changes to Title 50 CFR Part 21, has arisen from the expressed needs of those States (Kansas, New Hampshire, and Rhode Island) that have instituted falconry programs for the benefit of citizens interested in the sport of falconry and have constructed regulations that meet or exceed Federal requirements protecting migratory birds. Missouri has determined that its needs are best met by no longer participating in a cooperative Federal-State permit application program. However, Missouri remains a State in which falconry is practiced. The changes to 50 CFR 21.29 regulations are necessary to accommodate the needs of the States affected and those who wish to practice falconry in these States.

Required Determinations

This rule was not subject to the Office of Management and Budget review under Executive Order 12866. The Department of Interior has determined that this final rule will not have a significant effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et. seq.*). It has no potential takings implications for private property as defined in Executive Order 12630. The only effect of this rule will be to allow falconers in the States of Kansas, New Hampshire, and Rhode Island to apply for falconry permits. It is estimated that approximately 25 people or less would apply for falconry permits in each of these States. The removal of Missouri from the cooperative Federal-State permit application program does not affect the ability of individuals to either apply for or receive falconry permits in Missouri. Missouri Falconry regulations meet or exceed Federal falconry standards. Permits for falconry in Missouri will be issued separately by Federal and State authorities. This rule does not contain any information collection requirements that require approval by the Office of Management and Budget under the Paperwork Reduction Act, 44 U.S.C. 3501 *et. seq.* These final changes in the regulations in 50 CFR part 21 are regulatory and enforcement actions that are covered by a categorical exclusion from National Environmental Policy Act procedures under 516 of the Department Manual.

Author

The primary author of this final rule is Marcia Cronan, Senior Special Agent, Division of Law Enforcement, U.S. Fish and Wildlife, Service, Washington, DC 20240.

List of Subjects in 50 CFR Part 21

Exports, Hunting, Imports, Reporting and recordkeeping requirements, Transportation and Wildlife.

Regulation Promulgation

For the reasons set out in the preamble, part 21, subchapter B, chapter I of title 50, Code of Federal Regulations, is amended as follows:

PART 21—MIGRATORY BIRD PERMITS

1. The authority citation for Part 21 continues to read as follows:

Authority: Pub. L. 95–616, 92 Stat. 3112 (16 U.S.C. 712(2)).

§ 21.29 [Amended]

2. Amend § 21.29(k) by adding to the list of States in alphabetical order the names "Kansas" preceded by an asterisk, "New Hampshire" preceded by an asterisk, "Rhode Island" preceded by an asterisk and removing the asterisk preceding "Missouri."

Dated: February 28, 1994.

George T. Frampton, Jr.,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 94–5579 Filed 3–9–94; 8:45 am]

BILLING CODE 4310–55–M

---

50 CFR Part 85

RIN: 1018–AB95

Clean Vessel Act Pumpout Grant Program

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: This rule provides the requirements for participation in the Clean Vessel Act Grant Program authorized by Section 5604 of the Clean Vessel Act of 1992. This rule provides for the uniform administration of this new grant program.

DATES: This rules becomes effective April 11, 1994.

Proposals will be accepted for FY 1995 funds ($7.05 million) between the effective date and April 29, 1994. For FY 1996 and FY 1997, proposals will be due by May 1 of the year preceding that fiscal year (e.g., May 1, 1995 for FY 1996).

ADDRESSES: Copies may be obtained by mailing a request to the Division of Federal Aid, Fish and Wildlife Service, U.S. Department of the Interior, 1849 C Street, NW, MS 140 ARLSQ, Washington, DC 20240, or obtained from the Division of Federal Aid, Fish and Wildlife Service, U.S. Department of the Interior, room 140, 4401 North Fairfax Drive, Arlington, Virginia 22203.

FOR FURTHER INFORMATION CONTACT: Columbus Brown, Chief, Division of Federal Aid, (703) 358–2156.

SUPPLEMENTARY INFORMATION:

Background

Sweage discharged by recreational boaters is a substantial contributor to localized degradation of water quality in the United States. The discharge of untreated sewage by boaters is prohibited under Federal law in all areas within the navigable waters of the United States. Many boaters have Type III marine sanitation devices (holding tanks), or portable toilets for sewage. However, there is currently an inadequate number of pumpout stations and dump stations for boaters to dispose of their sewage. The purpose of the Act, therefore, is to provide funds to States for the construction, renovation, operation, and maintenance of pumpout and dump stations to improve water quality.

Section 5604 of the Clean Vessel Act (Pub. L. 102–587, Subtitle F) authorizes the Director of the U.S. Fish and Wildlife Service (Director) to make grants to coastal States for conducting surveys of the status of existing facilities and need for additional facilities, and developing plans for the provision of facilities; and to all States for constructing/renovating pumpout and dump stations and for implementing associated education programs. Funds will be available on a competitive basis to ensure that grants address the highest national priorities. Amounts made available to the Service in a fiscal year are available for obligating to the States for two years. Funds obligated to the States by the Service are normally spent within the year that these funds are obligated, but are available until expended on that grant.

Summary of Comments and Recommendations

In the July 8, 1993, Interim Rule for the Clean Vessel Act Pumpout grant Program, all interested parties were requested to submit comments that might contribute to the development of a final rule for a 45 day period ending August 23, 1993. Appropriate State and Federal agencies, local governments, boaters and boating organizations, marina owners/operators, marine equipment manufacturers and retailers, conservation organizations, and other interested parties were contacted and requested to comment.

A total of 2 written comment letters on the guidelines were received by the Service from 2 marine equipment manufacturers. Both comment letters made suggestions to clarify and recommendations to modify some of the language and guidance. In addition, 1 letter opposed the direction of the Clean Vessel Act to install pumpout and dump stations, recommending on-board treatment instead.

In addition to the comments received, ten changes were made. The first change is in the Summary, Other Dates, and in § 85.21(b): The next application period will end April 29, 1994, with $7.05 million available. The second change is in the Background, second paragraph, last sentence: language was added to clarify that the funds available to the Service each year are available for obligation to the States for two years. If not obligated in that two-year period, the funds are turned over to the U.S. Coast Guard for boat safety. Once obligated to the States, however, the funds are normally spent in the year obligated, but are available until expended.

The third change is in the information collection requirements section, last two sentences: The collection of survey information has been approved by OMB, and the Service may now fund the State surveys. The fourth change is in § 85.20(b)(2), first sentence, and 85.20 (c)(3): Floating restrooms have been added as eligible for federal aid funding. This addition makes these guidelines in agreement with the technical guidelines, in which the Oregon State Marine Board commented that these restrooms should be eligible because they meet the intent of the Act to reduce vessel sewage pollution, are used solely by boaters, and provide the only means to reasonably accommodate human waste from boaters using smaller recreational watercraft 12–18 ft that do not carry portable toilets or do not have holding tanks.

The fifth change is in § 85.22(d), Grant proposals, after innovative approaches: public/private partnerships, education, sensitive waters, and public access were added. The sixth change is in § 85.30 Grant selection criteria, at end of section: Points have been added to each of the criteria for both coastal and inland States. The seventh change is in Section 85.31 Grant selection, first sentence: Regional Offices have been deleted from the ranking panel and NOAA, EPA and USCG have been added, along with the Service's Washington office Division of Federal Aid personnel.

The eighth change is in § 85.31 Grant selection., second sentence: The date for the Director to make the selection has been changed to August 1, annually. The ninth change is in § 85.44, last sentence: the phrase, "for the useful life", was deleted, and the phrase, "as long as the facility is needed and it serves its intended purpose", was added. This better reflects how long proceeds should be used for operation and maintenance. An additional sentence was also added, "Maximum fee shall be evaluated for inflation, etc., each year." This sentence was added because conditions may change through time which may require changes in the maximum fee that should be charged. The tenth change is in § 85.48, after (b): This guidance was added because some States have a question on how they should receive payment for funds expended under this grant program.

A total of 6 issues were identified by the commenters. The Service considered all suggestions and recommendations. This final guideline revises the proposed guidelines based on the issues raised by the commenters and makes other changes to clarify the requirements in the interim guidelines. Those comments adopted are included in the final guidelines in the appropriate sections. The following is a discussion of the issues raised by the commenters, the Service's responses to those issues, and a summary of changes made to the proposed guidelines.

Issue 1. Raritan Engineering Co., Inc.: Regarding the Clean Vessel Act: Low density of pumpout stations is not the problem. Pumpout stations have not been installed or used because they are messy, problematic and distasteful. The primary problems with marine sanitation today are: (1) Less than desirable compliance of existing legislation; (2) difficulty enforcing existing legislation; (3) the absence of systems appropriate for all types of boats, boaters, and boating; (4) unfair allowances for treated waste water discharge from municipal waste water plants while treated waste water from boating sources is restricted; and (5) the specter of additional no discharge zone approvals. The Clean Vessel Act attempts to solve the first problem. It will not be successful, however, because the cause has been misidentified. Additionally, it does not address problems 2 and 3, and will heighten problems 4 and 5. The Clean Vessel Act contains no provision to provide funds to improve or enhance on-board treatment of boat generated sewage, which is the future of marine sanitation. The Act should be amended to provide 50% of the Wallop-Breaux funds made available to be spent on the documentation of on-board treatment systems successes, and to fund research and development programs for improved on-board treatment systems to make them more feasible for the vast numbers of small recreational boats.

Response: The Clean Vessel Act addresses Type III marine sanitation devices, or holding tanks, only. Types I

and II, as discussed by the commenter, are not addressed in the current legislation. Suggestions made by the commenter would need additional legislation, as the Service is not authorized to make such changes.

Issue 2. Raritan Engineering Co., Inc.: Background, first sentence: The word "may be" does not correspond to the wording in the Act, which states that "Sewage discharged * * * is a substantial contributor * * *"

Response: The words "may be" have been deleted, and the word "is" has been substituted.

Issue 3. Raritan Engineering Co., Inc.: Subpart C, Part 85.30 Grant selection criteria, subpart (d): after pumpout and dump stations add "and treatment".

Response: As mentioned above in response to issue 1, treatment is not within the scope of the Act.

Issue 4. Raritan Engineering Co., Inc.: Subpart C, Part 85.30 Grant selection criteria: after (g), add "(h) Proposals for innovative ways to develop on-board treatment systems (Type I and/or II) that would be more appropriate for smaller boats (boats under 30')."

Response: As mentioned above in response to issue 1, treatment is not within the scope of the Act.

Issue 5. Raritan Engineering Co., Inc.: Subpart C, Part 85.30 Grant selection criteria: after proposed (h) add "(i) Proposals to survey coastal boaters to establish the needs of smaller boaters such that on-board treatment systems may be developed to meet the needs more precisely."

Response: As mentioned above in response to issue 1, treatment is not within the scope of the Act.

Issue 6. Sealand Technology, Inc.: Section 85.44 Fee charges, first sentence: The maximum fee of $5.00 may deter pumpout station installation for two reasons: waste disposal costs may warrant a higher fee, and a provision should be made for very large holding tanks (50 gallons plus).

Response: The Service agrees that there may be situations in which a higher fee may be needed, and a statement that higher fees should be justified has been added.

Environmental Effects

The effects on the physical, biological and sociological environment are too broad, speculative, and conjectural to be analyzed meaningfully. Therefore, the action is categorically excluded from any National Environmental Policy Act documentation pursuant to 516 DM 2.3 A(2). However, construction/renovation of pumpout and dump stations will require separate environmental consideration.

All actions that may be funded by this national grant program will comply with requirements of the National Environmental Policy Act (Appendix 1 of 516 Department Manual 6) prior to the funding. Compliance with the National Environmental Policy Act and other environmental laws related to the Endangered Species Act, Coastal Barriers Resources Act as amended by the Coastal Barrier Improvement Act, Coastal Zone Management Act, Executive Orders on Floodplains (E.O. 11988) and Wetlands (E.O. 11990), historic/cultural resources, prime and unique farmlands, and the Clean Water Act shall be completed before grant agreements are approved by the Fish and Wildlife Service.

Information Collection Requirements

The information collection requirements contained in this rule, except for surveys, are only those necessary to fulfill applicable requirements of 43 CFR Part 12, and have been approved by the Office of Management and Budget under the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*). The collection of survey information contained in this rule was approved by the Office of Management and Budget as required by 44 U.S.C. 3501 *et seq.*, October 18, 1993, OMB No. 1018–0086, expiration date September 30, 1996. Burden is expected to be 176,665 responses and 30,033 reporting hours.

Statement of Effects

This rule was not subject to Office of Management and Budget review under E.O. 12866. The grant program does not involve "taking" as described in Executive Order 12630. The rule allows eligible States to make decisions regarding the development and submission of proposed grants for surveys, plans, construction/renovation and education. Therefore, it is consistent with Executive Order 12612 on Federalism. The Department certifies that this document will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) The effects of these rules occur to agencies in the States, Puerto Rico, Guam, the Virgin Islands, American Samoa, the District of Columbia and the Northern Mariana Islands. These are not small entities under the Regulatory Flexibility Act. Some small entities, mainly marina operators, may be the recipients of grants.

Intergovernmental Review of Federal Programs

This Clean Vessel Act Grant Program is covered under Executive Order 12372 "Intergovernmental Review of Federal Programs" and 43 CFR part 9 "Intergovernmental Review of Department of the Interior Programs and Activities." Under the Order, States may design their own processes for reviewing and commenting on proposed Federal assistance under covered programs.

States and Territories that participate in the Executive Order process have established Single Points of Contact (SPOCs). Applicants should alert their SPOCs to the prospective applications and receive any necessary instructions to provide material as required by the SPOC. It is imperative that the applicant submit all required materials, if any, to the SPOC and indicate the date of this submittal (or the date of contact if no submittal is required) on the narrative. Applicants from States that choose to exempt the grants need take no action regarding E.O. 12372.

Author

The primary author of these rules is Robert D. Pacific, U.S. Fish and Wildlife Service.

List of Subjects in 50 CFR Part 85

Grant program, Grant procedures, Program policy, Project selection criteria, Natural resources, Coastal waters, Pumpout station, Dump station, Recreational vessel, Coastal zone management, Information collection, Recordkeeping and reporting requirements.

Regulation Promulgation

For the reasons set out in the preamble, Subchapter F of Chapter I, Title 50 of the Code of Federal Regulations is amended by revising Part 85.

PART 85—CLEAN VESSEL ACT GRANT PROGRAM

Subpart A—General

Sec.

Subpart B—Application for Grants

Subpart C—Grant Selection

Authority: Public Law 102–587, Subtitle F.

Subpart A—General

§ 85.10 Purpose and scope.

The purpose of this Part is to establish requirements for state participation in the Clean Vessel Act Grant Program authorized by Section 5604 of the Clean Vessel Act (Public Law 102–587, Subtitle F).

§ 85.11 Definitions.

Terms used in this Part shall have the following meaning:

(a) *Clean Vessel Act or Act.* The Clean Vessel Act (Pub. L. 102–587, subtitle F).

(b) *Coastal State.* A State of the United States in, or bordering on, the Atlantic, Pacific, or Arctic Ocean, the Gulf of Mexico, Long Island Sound, or one or more of the Great Lakes. The term also includes Puerto Rico, the Virgin Islands, Guam, and the Commonwealth of the Northern Mariana Islands. The term excludes Alaska and American Samoa because these States have a ratio of the number of recreational vessels in the State numbered under chapter 123 of title 46, United States Code, to number of miles of shoreline (as that term is defined in § 926.2(d) of title 15, Code of Federal Regulations, as in effect on January 1, 1991), of less than one.

(c) *Costal waters.* In the Great Lakes area, the waters within the territorial jurisdiction of the United States consisting of the Great lakes, their connecting waters, harbors, roadsteads, and estuary-type areas such as bays, shallows, and marshes. In other areas, those waters, adjacent to the shorelines, which contain a measurable percentage of sea water, including sounds, bays, lagoons, bayous, ponds, and estuaries.

(d) *Coastal zone.* Coastal zone has the same meaning that the term has in section 304(1) of the Coastal Zone Management Act of 1992 (16 U.S.C. 1453(1)). The coastal zone consists of coastal waters (including the lands therein and thereunder) and the adjacent shorelands, including islands, transitional and intertidal areas, salt marshes, wetlands, and beaches. The zone extends, in Great Lakes waters, to the international boundary between the United States and Canada and, in other areas, seaward to the outer limit of the United States territorial sea. The zone extends inland from the shorelines only to the extent necessary to control shorelands and protect coastal waters.

(e) *Construction.* Activities which produce new capital improvements and increase the value of usefulness of existing property.

(f) *Dump station.* A facility specifically designed to receive sewage from portable toilets carried on vessels. Dump stations do not include lavatories or restrooms.

(g) *Education/information.* The education/information program, as identified in the technical guidelines as published in the **Federal Register**, designed to make recreational boaters aware of the environmental pollution problem resulting from sewage discharges from vessels and inform them of the location of pumpout and dump stations.

(h) *Eligible applicant.* An agency of a State designated by the Governor.

(i) *Facility.* A pumpout station or dump station.

(j) *Grant.* An award of financial assistance, including cooperative agreements, in the form of money, or property in lieu of money, by the Federal Government to an eligible grantee.

(k) *Inland State.* A State which is not a coastal State. The District of Columbia, American Samoa and Alaska are included as inland States (Rationale for Samoa and Alaska being inland States can be found in § 85.11(b) above).

(l) *Maintenance.* Those activities necessary for upkeep of a facility. These are activities that allow the facility to function and include routine recurring custodial maintenance such as housekeeping and minor repairs as well as the supplies, materials, and tools necessary to carry out the work. Also included is non-routine cyclical maintenance to keep facilities fully functional.

(m) *Operation.* Those activities necessary for the functioning of a facility to produce desired results. These are activities that make the facility work.

(n) *Plans.* Those plans identified in the technical guidelines as published in the **Federal Register**, for construction or renovation of pumpout and dump stations necessary to ensure that there are adequate and reasonably available stations to meet the needs of recreational vessels using the coastal waters of the State.

(o) *Pumpout station.* A facility that pumps or receives sewage from a type III marine sanitation device (holding tank) installed on board vessels.

(p) *Recreational vessel.* Watercraft manufactured for operation, or operated, primarily for pleasure. This term includes any watercraft leased, rented, or chartered to another for the latter's pleasure.

(q) *Renovation.* Major rehabilitation of a facility to restore it to its original intended purpose.

(r) *Surveys.* Those surveys identified in the technical guidelines as published in the **Federal Register**. Surveys are designed to determine the number and location of all operational pumpout and dump stations at public and private marinas, mooring areas, docks, and other boating access facilities within the coastal zone. Surveys also are designed to determine the number of recreational vessels in coastal waters with holding tanks or portable toilets, and the areas of coastal waters where those vessels congregate.

(s) *Type III marine sanitation device (holding tank).* Any equipment for installation on board a vessel which is specifically designed to receive, retain, and discharge sewage.

§ 85.12 Information collection, record keeping, and reporting requirements.

(a) The information collection requirements for this grant program, except for surveys, are those necessary to comply with 43 CFR 12 which include a narrative statement as identified in 85.22 Grant Proposals. The collection of survey information contained in this rule was approved by the Office of Management and Budget as required by 44 U.S.C. 3501 *et seq.*, October 18, 1993, OMB No. 1018–0086, expiration date September 30, 1996.

(b) Record keeping requirements include the tracking of costs and accomplishments related to the grant as required by 43 CFR 12.60, monitoring and reporting program performance (43 CFR 12.80), and financial reporting (43 CFR 12.81).

(c) Reporting requirements include retention and access requirements as required by 43 CFR 12.82.

Subpart B—Application for Grants

§ 85.20 Eligible activities.

(a) Eligible grant activities—coastal States:

(1) Eligible activities include identification in the coastal zone of all operational pumpout and dump stations, and surveys of recreational vessels in coastal waters with holding tanks or portable toilets, and the areas where those vessels congregate. Also eligible are costs of developing a list,

including chart coordinates, of all operational pumpout and dump stations in the coastal zone of the State, for submission to the Fish and Wildlife Service.

(2) Plans for construction and renovation of pumpout and dump stations in the coastal zone of the State necessary to ensure that these stations are adequate and reasonably available to meet the needs of recreational vessels using the coastal waters of the State. Completed Stated-funded plans may be submitted after the technical guidelines appear in the Federal Register.

(b) Eligible grant activities—all States:

(1) Eligible grant activities include education/information program to educate/inform recreational boaters about the environmental pollution problems resulting from sewage discharges from vessels and to inform them of the location of pumpout and dump stations.

(2) Eligible grant activities include the construction, renovation, operation and maintenance of pumpout and dump stations, including floating restrooms in the water, not connected to land or structures connected to the land, used solely by boaters. Eligible grant activities also include any activity necessary to hold and transport sewage to sewage treatment plants, such as holding tanks, piping, haulage costs, and any activity necessary to get sewage treatment plants to accept sewage, such as installing bleed-in facilities.

(c) Ineligible activities:

(1) Activities that do not provide public benefits.

(2) Enforcement activities.

(3) Construction/renovation of upland restroom facilities.

(4) Construction, renovation, operation and maintenance of on-site sewage treatment plants, such as package treatment plants and septic systems, and of municipal sewage treatment plants for primary and secondary treatment.

§ 85.21 Application procedures.

(a) Eligible applicants will submit their proposals to the appropriate Regional Office of the U.S. Fish and Wildlife Service.

Region 1 States Include—American Samoa, California, Commonwealth of the Northern Mariana Islands, Guam, Hawaii, Idaho, Nevada, Oregon, and Washington

Division of Federal Aid, U.S. Fish and Wildlife Service, Eastside Federal Complex, 911 NE 11th Avenue, Portland, Oregon 97232–4181, (503) 231–6128

Region 2 States Include—Arizona, New Mexico, Oklahoma, and Texas

Division of Federal Aid, U.S. Fish and Wildlife Service, P.O. Box 1306, 500 Gold Avenue SW., Albuquerque, New Mexico 87103, (505) 766–2095

Region 3 States Include—Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin

Division of Federal Aid, U.S. Fish and Wildlife Service, Bishop Henry Whipple Federal Building, 1 Federal Drive, Fort Snelling, Minnesota 55111–4056, (612) 725–3596

Region 4 States Include—Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee, and the Virgin Islands

Division of Federal Aid, U.S. Fish and Wildlife Service, 1875 Century Boulevard, Suite 324, Atlanta, Georgia 30345, (404) 679–4159

Region 5 States Include—Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia

Division of Federal Aid, U.S. Fish and Wildlife Service, 300 Westgate Center Drive, Hadley, Massachusetts 01035–9589, (413) 253–8501

Region 6 States Include—Colorado, Kansas, Montana, North Dakota, Nebraska, South Dakota, Utah, and Wyoming

Division of Federal Aid, U.S. Fish and Wildlife Service, 134 Federal Building, P.O. Box 25486, Denver, Colorado 80225 134 Union Boulevard, third floor, Lakewood, Colorado 80225, (303) 236–7392

Region 7 State Includes—Alaska

Division of Federal Aid, U.S. Fish and Wildlife Service, 1011 East Tudor Road, Anchorage, Alaska 99503, (907) 786–3435

(b) Proposals will be accepted for FY 1995 funds ($7.05 million) between the effective date and April 29, 1994. For FY 1996 and FY 1997, proposals will be due by May 1 of the year preceding that fiscal year (e.g., May 1, 1995 for FY 1996).

§ 85.22 Grant proposals.

Grant proposals will consist of a narrative which identifies and describes the following:

(a) The need within the purposes of the Act (Coastal States with approved plans should indicate how the activities contained in the proposal implements the plan);

(b) Discrete objective(s) to be accomplished during a specified time period that address the need(s);

(c) Expected results or benefits from accomplishing the objectives, including the numbers of recreational vessels and people served;

(d) The approach to be used in meeting the objectives, including specific procedures, schedules, key personnel, cooperators, grant location, innovative approaches, public/private partnerships, education, sensitive waters, public access, and estimated costs;

(e) Amount and source of matching funds; and,

(f) Fees for use of facility.

Subpart C—Grant Selection

§ 85.30 Grant selection criteria.

The Director shall give priority consideration to grant proposals that meet the criteria listed in Subsections a–h and in the accompanying chart:

(a) In coastal States that have no survey or plan, proposals to complete such survey and plan;

(b) Proposals for constructing and renovating pumpout and dump stations without an approved plan;

(c) In coastal States, proposals for constructing and renovating pumpout and dump stations in accordance with a coastal State's plan approved under section 5603(c) of the Clean Vessel Act, and for inland States, proposals for constructing and renovating pumpout and dump stations in accordance with an inland State's plan;

(d) Proposals that provide for public/private partnership efforts to develop and operate pumpout and dump stations;

(e) Proposals for innovative ways to increase the availability and use of pumpout and dump stations, e.g., where private parties put in more than the minimum amount;

(f) Proposals that include an education/information component;

(g) Proposals that benefit the waters most likely to be affected by the discharge of sewage from vessels, including the waters as defined in the technical guidelines as published in the Federal Register; and,

(h) Proposals in areas with high vessel/pumpout or dump station ratios.

Criteria	Points	
	Coastal state	Inland state
a. Do a survey/plan	50	
b. Construct w/no plan	10	5
c. Construct with plan	20	10
d. Partnership	10	5
e. Innovative approach	5	2
f. Education	5	2
g. Sensitive area	5	2
h. Low pumpout ratio	5	2
Total		

§ 85.31 Grant selection.

The Fish and Wildlife Service, Division of Federal Aid, will convene a ranking panel of Federal employees, to include representatives from the Service's Washington Office of the Division of Federal Aid, the National

Oceanic and Atmospheric Administration, the Environmental Protection Agency, and the U.S. Coast Guard, to review, rank, and make funding recommendations to the Director of the Fish and Wildlife Service. The Director will make the selection of eligible grants by August 1, annually. Upon selection of a proposal the appropriate Regional Office will advise the successful applicant of additional documentation requirements.

Subpart D—Conditions on Use/ Acceptance of Funds

§ 85.40 Cost sharing.

(a) The Federal share shall not exceed 75% of total costs approved in the grant agreement.

(b) The provisions of 43 CFR 12.64 apply to cost sharing or matching requirements. Third party in-kind contributions must be necessary and reasonable to accomplish grant objectives and represent the current market value of noncash contributions furnished as part of the grant by another public agency, private organization, or individual.

§ 85.41 Allowable costs.

(a) Allowable grant costs are limited to those costs that are necessary and reasonable for accomplishment of approved grant objectives and meet the applicable Federal cost principles in 43 CFR 12.60(b). Purchase of informational signs, program signs, and symbols designating pumpout and dump stations, are allowable costs.

(b) Grants or facilities designed to include purposes other than those eligible under the Act shall have the costs prorated equitably among the various purposes. Grant funds shall only be used for the part of the activity related to the Clean Vessel Act.

(c) Costs incurred prior to the effective date of the grant agreement are not allowable with the exception that preliminary costs are allowed only with the approval of the appropriate Regional Director. Preliminary costs may include such items as feasibility surveys, engineering design, biological reconnaissance, appraisals, or preparation of grant documents such as environmental assessments for compliance with the National Environmental Policy Act.

§ 85.42 Real and personal property.

(a) Applicable regulations regarding acquisition, property records, maintenance, and disposal of real property and equipment are found in 43 CFR 12.71 and 12.72. If questions arise regarding applicability, the appropriate Regional Office should be contacted.

(b) A State shall ensure that design and installation of the facilities are in accordance with the technical standards identified in the technical guidelines as published in the Federal Register.

(c) The State must ensure that facilities are operated and maintained, and that structures or related assets are used for the stated grant purpose.

§ 85.43 Signs and symbols.

A national symbol, to be developed, should be installed to be clearly visible to direct boaters entering the facility to pumpout and dump stations. Appropriate information signs should be installed at pumpout and dump stations. Such information could indicate fees, restrictions, hours of operation, operating instructions, and a contact name and telephone number if the facility is inoperable.

§ 85.44 Fee charges for use of facilities.

A maximum of a $5.00 fee may be charged, with no justification, for use of pumpout facilities constructed, operated or maintained with grant funds. If higher fees are charged, they must be justified before the proposal can be approved. Such proceeds shall be retained, accounted for, and used by the operator to defray operation and maintenance costs as long as the facility is needed and it serves its intended purpose. The maximum fee shall be evaluated for inflation, etc., each year.

§ 85.45 Public access to facilities and maintenance.

All recreational vessels must have access to pumpout and dump stations funded under this grant program. Facilities shall be operated, maintained, and continue to be reasonably accessible to all recreational vessels for the full period of their useful life.

§ 85.46 Survey and plan standards.

(a) *Survey standards.* (1) Surveys should be conducted according to the technical guidelines as published in the Federal Register.

(2) Surveys may be conducted Statewide, if necessary, to obtain information on boats using the coastal zone.

(b) *Plan standards.* Plans should be developed according to the technical guidelines as published in the Federal Register.

§ 85.47 Program crediting.

Signs should acknowledge that the facility was constructed or improved with funds from the Clean Vessel Act. Following is suggested language: "This facility was built (or improved) using Federal Aid matching funds authorized by the Clean Vessel Act."

§ 85.48 Compliance with federal laws, regulations, and policies.

(a) In accepting Federal funds, State representatives must agree to and certify compliance with all applicable Federal laws, regulations, and policies. This is done by submitting an assurances statement that describes the compliance requirements for Federal grants.

(b) Compliance with environmental and other laws, as defined in Service Manual 523 FW Chapter 1, may require additional documentation. Consult with Regional Offices for specific applicability.

(c) For method of payment, refer to 43 CFR part 12, 31 CFR part 205, and any other regulations referenced in these parts.

Dated: February 11, 1994.

George T. Frampton, Jr.,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 94–5529 Filed 3–9–94; 8:45 am]

BILLING CODE 4310–55–M

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 672

[Docket No. 931199–4042; I.D. 030794A]

Groundfish of the Gulf of Alaska

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Closure.

SUMMARY: NMFS is closing the directed fishery for Pacific cod by vessels catching Pacific cod for processing by the inshore component in the Western Regulatory Area of the Gulf of Alaska (GOA). This action is necessary to prevent exceeding the allocation of Pacific cod for the inshore component in this area.

EFFECTIVE DATE: 12 noon, Alaska local time (A.l.t.), March 8, 1994, through 12 midnight, A.l.t., December 31, 1994.

FOR FURTHER INFORMATION CONTACT: Andrew N. Smoker, Fishery Biologist, Fisheries Management Division, NMFS, (907) 586–7228.

SUPPLEMENTARY INFORMATION: The groundfish fishery in the GOA exclusive economic zone is managed by the Secretary of Commerce according to the Fishery Management Plan for Groundfish of the GOA (FMP) prepared by the North Pacific Fishery Management Council under authority of the Magnuson Fishery Conservation and

Clean Vessel Act: Pumpout Station and Dump Station Technical Guidelines

(Federal Register, Vol. 59, No. 47, March 10, 1994, pp. 11290-11306)

for up to 2 years from location and entry under the United States mining laws. The lands will remain open to all other uses which may be made of National Forest System lands.

DATES: Comments or requests for a meeting should be received on or before June 8, 1994.

ADDRESSES: Comments and meeting requests should be sent to the Idaho State Director, BLM, 3380 Americana Terrace, Boise, Idaho 83706–2500.

FOR FURTHER INFORMATION CONTACT: Larry Lievsay, BLM, Idaho State Office, (208) 384–3166.

SUPPLEMENTARY INFORMATION: On February 17, 1994, the United States Department of Agriculture, Forest Service filed an application to withdraw the following described National Forest System lands from location and entry under the United States mining laws, subject to valid existing rights:

Boise Meridian

Boise National Forest

T. 5 N., R. 11 E.,
Sec. 5, lot 8.

The area described contains 40 acres in Elmore County.

For a period of 90 days from the date of publication of this notice, all persons who wish to submit comments, suggestions, or objections in connection with the proposed withdrawal may present their views in writing to the Idaho State Director of the Bureau of Land Management.

Notice is hereby given that an opportunity for a public meeting is afforded in connection with the proposed withdrawal. All interested persons who desire a public meeting for the purpose of being heard on the proposed withdrawal must submit a written request to the Idaho State Director within 90 days from the date of publication of this notice. Upon determination by the authorized officer that a public meeting will be held, a notice of time and place will be published in the **Federal Register** at least 30 days before the scheduled date of the meeting.

The application will be processed in accordance with the regulations set forth in 43 CFR part 2300.

For a period of 2 years from the date of publication of this notice in the **Federal Register**, the lands will be segregated as specified above unless the application is denied or canceled or the withdrawal is approved prior to that date. The temporary uses which will be permitted during this segregative period are presently authorized leases, licenses, permits, rights-of-way, etc.

Dated: March 1, 1994.

William E. Ireland,

Chief, Realty Operations Section.

[FR Doc. 94–5580 Filed 3–9–94; 8:45 am]

BILLING CODE 4310–GG–M

Bureau of Reclamation

Privacy Act of 1974—Deletion of System of Records

Pursuant to the provisions of the Privacy Act of 1974, as amended (5 U.S.C. 552a), notice is hereby given that the Department of the Interior is deleting from its inventory of Privacy Act systems of records six notices describing records maintained by the Bureau of Reclamation. The systems of records notices being abolished are entitled "Accounts Receivable—Interior, Reclamation-2," which was previously published in the **Federal Register** on December 21, 1988 (53 FR 51324), "Collection Contracts—Interior, Reclamation-6," which was previously published in the **Federal Register** on November 16, 1984 (49 FR 45492), "Publication Sales—Interior, Reclamation-27," which was previously published in the **Federal Register** on April 11, 1977 (42 FR 19103), "Travel Approval Authorizations and Reports—Interior, Reclamation-35," which was previously published in the **Federal Register** on April 11, 1977 (42 FR 19106), "Travel Vouchers—Interior, Reclamation-36," which was previously published in the **Federal Register** on September 27, 1984 (49 FR 38196), and "Vendor Payment Records—Interior, Reclamation-44," which was previously published in the **Federal Register** on April 11, 1977 (42 FR 19108). These systems of records are no longer being maintained in the Department of the Interior.

Prior to October 14, 1992, the Bureau of Reclamation maintained a separate record of individuals who owed money to the Bureau for the purpose of accounting for payments received (Reclamation-2); a record of individuals who rent, lease or buy from the Bureau under a collection contract or agreement for the purpose of collecting funds due (Reclamation-6); a record of individuals purchasing Bureau publications for the purpose of accounting for funds received from the sale of publications (Reclamation-27); a record of travel authorizations for the purpose of authorizing employees to travel on official business (Reclamation-35); a record of travel vouchers for the purpose of paying the travel and transportation expenses of employees who travel on official business (Reclamation-36); and a record of individuals furnishing services or supplies for the purpose of documenting the disbursement of funds to these individuals (Reclamation-44).

With the establishment of the Departmentwide system of records "Federal Financial System—Interior, DOI-90" (57 FR 47118), these systems became obsolete. On December 14, 1992, the records maintained in these systems were incorporated into the Federal Financial System.

These changes shall be effective on publication in the **Federal Register** (March 10, 1994). Additional information regarding this action may be obtained from the Departmental Privacy Act Officer, Office of the Secretary, Office of Administrative Services, 1849 "C" Street NW., Mail Stop 5412 MIB, Washington, DC 20240, telephone (202) 208–6045.

Dated: March 3, 1994.

Albert C. Camacho,

Director, Office of Administrative Services.

[FR Doc. 94–5589 Filed 3–9–94; 8:45 am]

BILLING CODE 4310–84–M

Fish and Wildlife Service

RIN 1018–AC06

Clean Vessel Act: Pumpout Station and Dump Station Technical Guidelines

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of final guidelines.

SUMMARY: These final technical Guidelines are being published in response to section 5605, Guidance and Notification, of the Clean Vessel Act of 1992, which requires the issuance of draft technical guidelines for public comment within 3 months after the date of the enactment of this Act, and the issuance of final technical guidelines within 6 months after the date of enactment. The technical guidelines should be used by States to conduct surveys and develop plans for pumpout stations and dump stations, to develop education/information programs, and to construct pumpout stations and dump stations.

DATES: These final technical guidelines are effective April 11, 1994.

ADDRESSES: Copies of the final guidelines may be obtained by mailing a request to the Division of Federal Aid, Fish and Wildlife Service, U.S. Department of the Interior, 1849 C Street, NW. (Mailstop 140 ARLSQ), Washington, DC 20240, or by picking it up at the Division of Federal Aid, Fish

and Wildlife Service, room 140, 4401 North Fairfax Drive, Arlington, Virginia 22203.

FOR FURTHER INFORMATION CONTACT: Columbus Brown, Chief, Division of Federal Aid, (703) 358–2156.

SUPPLEMENTARY INFORMATION:

Background

Findings

The Congress found that there is currently an inadequate number of pumpout stations for Type III marine sanitation devices (MSD) (holding tanks) where recreational vessels normally operate; and, sewage discharged by recreational vessels, because of an inadequate number of pumpout stations, is a substantial contributor to localized degradation of water quality in the United States.

Purpose of the Act

The purpose of the Clean Vessel Act (Act) Pub. L. 102–587, subtitle F)" is to provide funds to States for the construction, renovation, operation, and maintenance of pumpout stations and dump stations."

Purpose of the Technical Guidelines

The purpose of these guidelines is to provide States with technical information on adequacy of and appropriate types and location of pumpout stations and dump stations; disposal of sewage from these facilities, and waters most likely to be affected by the discharge of sewage from vessels. They also provide information to the States in completing the surveys, developing plans, and developing an education/information program. The guidelines will let States know what options are available and provide them with basic information upon which to base their choices. Environmental Protection Agency (EPA) regional offices, regulatory agencies, equipment suppliers and marina operators are another valuable source of information. The guidelines, however, are not to be used as a design manual or a substitute for the preparation of a design for a specific facility.

Consultation

As required in section 5605 of the Act, the Secretary of the Interior (Interior) has consulted with the Administrator of the EPA, the Under Secretary of Commerce for Oceans and Atmosphere (NOAA), and the Commandant of the Coast Guard (USCG), in the development of these guidelines. In addition, Interior has consulted with coastal States, local municipalities, boat users, manufacturers of pumpout equipment, marina operators, conservation groups, and others in obtaining information necessary to develop these guidelines. Three scoping meetings were held in January 1993, with various constituents. A scoping document was sent to nearly 100 people, and 45 comment letters were received. Draft guidelines were published in the **Federal Register** June 17, 1993, Vol. 58, No. 115, pages 33447–33457, and comment letters were received. EPA, NOAA, and USCG assisted in the review of these comments and finalization of these guidelines.

Relationship to the Grant Process

The technical guidelines are interim guidelines that will be later codified. They should be used by coastal States in conducting surveys, developing plans and education/information programs, and constructing pumpout/dump stations. However, grant guidelines will be needed for States to properly apply for funds under this grant program. The grant guidelines will provide criteria for the Fish and Wildlife Service (Service) to use in prioritizing grant proposals for funding. Such information as priorities, national pumpout symbols, other signs, fee restrictions, and monitoring success of projects, will be placed in the grant guidelines. Grant guidelines are being developed separately, and were published in the **Federal Register** July 8, 1993, Vol. 58, No. 129, pages 36619–36623. Funds are made available through a competitive process to coastal States to complete the surveys and develop plans, and, for all States, to apply for construction grants and education funds.

Statement of Effects

These guidelines have been reviewed under EO 12866. The guidelines do not involve "taking" as described in Executive Order 12630. The guidelines allow eligible States to make decisions regarding the development and submission of proposed grants for surveys, plans, construction/renovation and education. Therefore, they are consistent with Executive Order 12612 on Federalism. The Department certifies that this document will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) The effects of these guidelines occur to agencies in the States, Puerto Rico, Guam, the Virgin Islands, American Samoa, the District of Columbia and the Northern Mariana Islands. Some small entities, mainly marina operators, may be the recipient of grants.

Summary of Comments and Recommendations

In the June 17, 1993, Notice of Public Review of Technical Guidelines, all interested parties were requested to submit comments that might contribute to the development of a final rule for a 45 day period ending August 2, 1993. Appropriate State and Federal agencies, local governments, boaters and boating organizations, marina owners/operators, marine equipment manufacturers and retailers, conservation organizations, and other interested parties were contacted and requested to comment.

A total of 8 written comment letters on the proposed guidelines were received by the Service, 4 from State agencies, 1 from a boating organization, 1 from a marina organization, 1 from a conservation organization, and 1 from a marine equipment manufacturer. All comment letters made suggestions to clarify and recommendations to modify some of the language and guidance. One verbal comment suggesting clarification was recorded from a State official. In addition to the comments received, four changes were made. The first change is in the Backgrounds. Definitions were relocated to the Technical Guidelines portion, just ahead of section 1. The second change is in the Technical Guidelines portion, section 2., first paragraph, and the Technical Guidelines portion, section 4., first paragraph, third sentence. Surveys and Plans should be submitted to the appropriate Regional Office. Addresses are provided. The third change, Technical Guidelines, section 2., is an addition to the second paragraph, first sentence, to indicate that all marinas should be surveyed. The fourth change is an addition of two paragraphs in the Information Packet, section 6., Off-Site Treatment, between the first and second paragraphs. These two paragraphs were inadvertently left out of the draft guidelines.

A total of 44 issues were identified by the commenters. The Service considered all suggestions and recommendations. This final guideline revises the proposed guidelines based on the issues raised by the commenters and makes other changes to clarify the requirements in the proposed guidelines. Those comments adopted are included in the final guidelines in the appropriate Sections. The following is a discussion of the issues raised by the commenters, the Service's responses to those issues, and a summary of changes made to the proposed guidelines.

Issue 1. Raritan Engineering Co., Inc.: Background, Findings, Raritan

Engineering said the word "may be" does not correspond to the wording in the Act, which states that "sewage discharged * * * is a substantial contributor * * *."

Response: The words "may be" have been deleted, and the word "is" has been substituted.

Issue 2. International Marina Institute (IMI): Other issues, Technical Guidelines, first paragraph, first sentence: The IMI states that the program should be handled by State administrators who know, and are known by, the marina industry. Inappropriate State program managers may not work as aggressively or successfully to facilitate pumpout installations. According to the IMI, some of the official State contacts have little or nothing to do with marinas or boat sewage controls. These contracts must move beyond traditional turf and foster inter- and intra-agency cooperation, planning and management.

Response: The Service agrees that the State should select the most appropriate State administrators to ensure the highest interest in the program, and encourages them to do so. The Service has been working closely with each State administrator identified. However, the actual selection process, according to statute, is up to the Governor of each State.

Issue 3. International Marina Institute (IMI): Technical Guidelines, first paragraph, second sentence: The IMI states that, unless the prohibition by a number of State laws to grant funds to private marinas is overcome, the intent of Congress will not be achieved. Guidelines need to be strengthened requiring grants be available to private facilities as well. The IMI said that States must identify restrictions on giving grants to private marinas in their application and what will be done to overcome this problem. States must explain in their plan how they will seek private applications and what proportion of the slip/mooring capacity is in public vs. private marinas. The IMI states that the Service should caution that inability of any State to give grants to private marinas will significantly lower that State's priority for funds. Funds should go to public and private marinas in approximate ratio to the public/private ratio in each State. Should the private marinas choose to not apply for grants during the first four years, then the IMI states that the funds should be released for use by the public sector in the fifth year of the program. Similarly, in the Information Packet, section 8. Other Information That is Considered: The IMI states that this Section should include language that such States with legal roadblocks to this public/private partnership must be required, as a condition of receiving any program funds, to change their law, and/or seek legal ways to bypass the serious impediment. IMI is very worried about this issue, and asks the Service to take affirmative action to keep private business a full partner in this program.

Response: The Service agrees that it is very important for States to overcome any prohibition of States to fund private marinas, and has added language in the Technical Guidelines portion, first paragraph, fourth sentence, and in the Technical Guidelines portion, section 4. Plans, (4)(e). States are already required to identify any restrictions to funding private marinas in the technical guidelines portion, section 4. Plans, (4)(e). The priority system identified in the final grant guidelines gives higher priority to those projects with public/private partnerships. Regarding the comment that funds should go to public and private marinas in approximate ratio to the public/private ratio and the comment that funds be released to the public sector in the fifth year if private marinas do not apply, priority will be given by the Service to those facilities that solve resource problems identified in the State's Plan rather than public/private ratios, which may not match resource problems. Regarding the suggestion that States with legal roadblocks to funding private marinas should be required to change their laws before funds will be granted to them, the Service has no legal authority to require States to change their laws.

Issue 4. Center for Marine Conservation and States Organization of Boating Access, Technical Guidelines, first paragraph, second and third sentences, "Both public and private marinas are eligible to participate in this program and should conform to these technical guidelines. Other marinas would not have to conform.": Both groups asked what other types of marinas there are other than public and private?

Response: This statement has been corrected to read that public and private marinas that participate must conform to these guidelines. Marinas that do not participate do not have to conform.

Issue 5. Center for Marine Conservation (Center): Technical Guidelines, Definitions (4) Waste reception facility: In the Center's work with vessel-generated garbage and the Marine Plastic Pollution Research and Control Act, "reception facility" refers to garbage cans, dumpsters, and recycling containers at ports and marinas. "Adequate reception facilities" are required under MPPRCA, and are referred to quite often. The Center wants to make sure that the phrase "waste reception facilities" referred to in the Clean Vessel Act guidelines is not going to confuse boaters or marina operators who are also exposed to provisions of the garbage laws dealing with garbage reception facilities. The Center suggests using another term, such as "portable toilet dump station" or "sewage reception facility".

Response: The Service agrees and has changed the term to agree with the term used in the grant guidelines: Dump stations.

Issue 6. Oregon State Marine Board (Marine Board): Technical Guidelines, Definitions (4) Dump Station: The Marine Board states that floating restrooms should be eligible for federal aid. They suggest that they are an eligible "dump station" which meets the intent of the Act to reduce vessel sewage pollution. Although landside restrooms should be ineligible, floating restrooms are not upland facilities and are used solely by boaters as dump stations. The Marine Board states that floating restrooms provide the only means to reasonably accommodate human waste from boaters using smaller recreational watercraft 12–18 ft. that do not carry portable toilets or do not have holding tanks.

Response: The Service agrees, and has added language in the guidelines to incorporate this suggestion, provided the facility is in the water, not connected to the shore.

Issue 7. International Marina Institute (IMI): Technical Guidelines, Definitions, (9) Coastal zone: the IMI suggests Printing out the full definition for coastal zone as given in the CZM Act of 1972 under Definitions.

Response: The Service agrees, and has printed it in full in the final guidelines.

Issue 8. International Marina Institute (IMI): Technical Guidelines, section 2. Surveys, Facility Survey, second paragraph, first sentence: The IMI states that survey of marinas for pumpout stations/dump stations should indicate whether the facility is public or private.

Response: The Service agrees and has added this survey question to the text.

Issue 9. Michigan Department of Natural Resources (Michigan DNR): Technical Guidelines, section 2. Surveys, second paragraph, first sentence, discussion of survey by specific coordinates: The Michigan DNR states that the Clean Vessel Act does not require the States to identify marinas by North American Datum Standard, nautical charts, etc. According to the law, section 5603 entitled "Charts (1) In General—the Under Secretary of Commerce for Oceans and Atmosphere

shall indicate, on charts published by the National Oceanic and Atmospheric Administration (NOAA) for the use of operators of recreational vessels, the locations of pumpout stations and dump stations." The Michigan DNR asks that this portion of the technical guidelines be taken out and be replaced by the specifications of the Act.

Response: The Service agrees and has rephrased this portion to agree with the Act. The Service suggests that obtaining specific coordinates for marinas may be helpful to determine location of marinas for development of plans.

Issue 10. International Marina Institute (IMI): Technical Guidelines, section 2. Boat Survey, third paragraph: The IMI states that most States do not have the ability to quickly determine which boats have toilets and what type MSD they are. The IMI states that the Service should request that the USCG require States to ask all boat owners if they have a MSD and what type, and include the data in their annual boating statistics reports. According to the IMI, States should list MSD use as part of their annual reports to the USCG and the USCG needs to correlate its own Federal documentation program (assume all documented vessels have toilets).

Response: The Service recognizes that this information may not be readily available, and has advised States in section 2. of the technical guidelines and Information Packet portion of these guidelines that reasonable estimates are acceptable. The Packet also advises States of alternative means of obtaining this information. The USCG would require legislative authority to require States to ask all boat owners if they have a MSD and include the data in their annual boating statistics report, since the purpose of the report is now boat safety. Regarding the comment that the USCG correlate its own Federal documentation, this would not result in obtaining a sufficient number of boats for the States to adequately complete their survey.

Issue 11. Oregon State Marine Board (Marine Board): Technical Guidelines, section 3., first paragraph, first sentence: The Marine Board requests the Service to add "/or". The sentence should read: "As a general guide, at least one pumpout station and '/or' dump station should be provided for every 300 to 600 boats (not considering length or toilets)." In Oregon, according to the Marine Board, the number of boats under 26 ft. is over 90% of the registered boats in the State. Therefore, the requirement of one pumpout as the sole means for vessel waste reception and not including dump stations or other means of waste disposal for every 300 to 600 boats, regardless of boat length, would be impracticable to meet in Oregon, according to the Marine Board.

Response: This formula is guidance only, not a requirement. States should use their judgment as to when this formula should be modified, or even used.

Issue 12. International Marina Institute (IMI): Technical Guidelines, section 3. Adequate Pumpouts, first paragraph, first sentence: According to the IMI, this section must be directly linked to the number and location of boat toilets. Otherwise, States may count all boats whether or not capable of holding a MSD toilet. Boat count guide for the number of pumpout stations now includes all canoes, dinghies, rowboats, etc., and all other boats without toilets, which distorts boat toilet use patterns and location of pumpout needs. The IMI states that the word "not" in the following sentence should be deleted: "As a general guide, . . . 300 to 600 boats (not considering length or toilets)." The IMI requests adding the following: "The number and location of pumpouts be based on counts of boats with toilets and/or boats 22 feet in length and larger capable of having installed MSDs."

Response: The Service agrees that canoes, dinghies, etc., should not be included in the assessment of need, and has added language to that effect. The amended method now suggested in the guidelines is a general guide only, and can be further amended by adding the language suggested by the commenter, or by any of the factors listed in that Section.

Issue 13. Oregon State Marine Board (Marine Board): Technical Guidelines, Section 3., first paragraph, second sentence: The Marine Board states that there needs to be a better breakdown of the requirement for vessel dump stations and pumpouts for marinas accommodating over 50 boats. The Marine Board suggests the following language: "Marina with 50 slips or more that are capable of mooring 26 ft. + boats install at least one pumpout station. Marinas with 50 slips or more that are capable of mooring 16–26 ft. boats install at least one pumpout or portable toilet dump station."

Response: This Section has been rewritten to incorporate the suggested language. Because the guideline is not a requirement, but guidance, which States should use or modify as needed, additional language has been added which clarifies this point. States should assess each particular situation to determine the pumpout stations and dump stations needed.

Issue 14. Oregon State Marine Board (Marine Board): Technical Guidelines, Section 3., second paragraph: The Marine Board requests adding the following to better clarify where to install waste reception facilities: "Waste reception facilities should be sited in conjunction with marinas, parking lot harbor or where vessels congregate or are used, such as transient harbors or launching ramps."

Response: The statement has been amended to better clarify where dump stations should be installed.

Issue 15. International Marina Institute (IMI): Technical Guidelines, section 4. (3) Expected Results or Benefits: To the end of that sentence the IMI requests adding "* * * and how results will be monitored and benefits will be measured."

Response: Although States have the option to monitor and measure benefits, and are encouraged to do so when necessary, requiring this step of the States goes beyond the intent of the Act and conveys an unnecessary burden to the States. There may be so many other factors, such as municipal sources of pollution, that it may be extremely difficult and expensive to measure the specific benefit of installing pumpouts. Pumpouts should be viewed as a Best Management Practice which, when installed, will help clean up the water by preventing one source of pollution.

Issue 16. International Marina Institute (IMI): Technical Guidelines, section 4. (4) (c), Approach/Strategy: The IMI suggests mentioning here or in section 8. that grants should not go for endless repairs of existing pumpouts which have proven to be located in inappropriate sites, under failed government control, or which has a history of unreasonably low use and performance. The IMI states that the State strategy must address the question of whether or not an existing pumpout station is worth upgrading, and how demonstrated problem pumpout services will be upgraded or eliminated.

Response: The Service agrees and has added language in section 4. (4) (c).

Issue 17. International Marina Institute (IMI): Technical Guidelines, section 4. (4) (d): To the list following "How States will ensure that * * *" the IMI requests adding "(iii) facilitate speedy permits for pumpout station construction or improvement." The IMI states that Federal and State agencies must facilitate, speed, and make less expensive the process of granting permits for pumpout stations. The IMI requests that the guidelines ask States to tell the Service how the permit process

will be expedited, and to document the average time it takes for a pumpout permit. The IMI believes the Service should give high priority to those States who speed the process.

Response: The Service encourages States to expedite the permit processes required by State and local governments, so that facilities will be installed as soon as possible. However, requiring the requested information is beyond the scope of the Act and the authority of the Service.

Issue 18. International Marina Institute (IMI): Technical Guidelines, section 4. (4) Approach: The IMI requests adding "(i) Describe methods to be used to measure program costs and benefits to the boating public; and (j) How the State will evaluate and monitor the program effectiveness and make changes to approaches as weaknesses and/or unanticipated opportunities become apparent." The IMI believes that program evaluation needs to be given greater emphasis, to assure quality products.

Response: Section "(i) Describe methods to measure costs and benefits * * *" is beyond the scope of the Act. Section (j) is included in the grant guidelines, § 85.42(c), which requires States to ensure that facilities are operated and maintained and used for the stated grant purpose. A paragraph at the end of section 3. of the Technical Guidelines has been added to give program evaluation greater emphasis.

Issue 19. Center for marine Conservation (Center): Technical Guidelines, section 5. Education/ Information: The Center considers education as a critical component in the ability of the Clean Vessel Act to keep boater's sewage out of the water. They are concerned that all education efforts will be done State by State, and that there is no plan for national development of model education programs or materials which can then be used by the States. With the Center's marine debris work, they have seen the effective use of a national information office, and have seen that it minimizes duplication at the State level, and enhances coordination and communication between educators. The Center believes something similar for the Clean Vessel Act would enhance the ability of the Act and reduce costly duplication.

Response: The Service is planning a workshop with Federal, State and local agencies, the marine industry, boaters, conservation organizations, and interested parties, early in 1994, to identify gaps in the education program, and responsibilities for filling those gaps. The Service encourages any organization interested to attend. Notice of the date, time, and place will be published in the **Federal Register**. In addition, the EPA is developing two reports on the subject, both still in draft: (1) Framework for a Public Outreach Strategy on Sewage Discharges from Boats and Marinas; and, (2) INTERIM REPORT: Summary of Federal Programs and Tools; Summary of State and Local Programs and Tools; Identification of Missing and Needed Information for Guidance Development on Boat and Marina Pollution Control; List of Contacts.

Issue 20. Oregon State Marine Board (Marine Board): Technical Guidelines, section 6. (1) (a) and (b), discharge of wastewater to treatment facilities and transport by licensed septage haulers: The Marine Board has found that time and again with Oregon there has been non-acceptance of vessel wastes by many small municipal wastewater treatment facilities. Therefore, the Marine Board recommends that USFWS or others conduct a detailed study on the effects of vessel waste treated by municipal wastewater systems and provide States technical guidance on this matter.

Response: When developing the State Plan, States are asked to identify any problems with municipal treatment plant operators accepting marine sewage. When the extent of the problem is ascertained, the Service will then consider solutions to the problem. At this time, a number of studies have been done to show that vessel sewage should not be a problem to waste treatment plants. Education may be the best tool for overcoming this perceived problem.

Issue 21. International Marine Institute (IMI): Technical Guidelines, section 7., third paragraph, after first sentence: The IMI requests adding a sentence: "When pumpouts are installed on or near boat fueling areas, explosion proof motors and switches must be used."

Response: The Service agrees and has added language to that effect.

Issue 22. International Marina Institute (IMI): Information Packet, section 1. (5) Nursery Areas: The IMI states that this section is misleading, unsupported, and subject to regulatory abuse, and should be deleted. New York State Department of Environmental Conservation (DEC): The DEC requests expanding "Nursery areas of indigenous aquatic life" in section 1., item (5) to make reference to State and Federally designated significant habitats such as are designated in Coastal Zone programs.

Response: The Service agrees that the definition is too broad and has deleted it, substituting the definition suggested by New York State DEC in the Information Packet and section 1. (5) of the technical guidelines.

Issue 23. International Marina Institute (IMI): Information Packet, section 1., Discussion of the effects of vessel sewage on these waters, first paragraph, third sentence: The IMI requests changing the word from "several" to "many." in the sentence "While vessel sewage discharges represent only one of 'several' sources * * *"

Response: The Service agrees and has made the change.

Issue 24. International Marina Institute (IMI): Information Packet, Section 1., Discussion of the effects of vessel sewage * * * second paragraph, second sentence: The IMI requests adding the word "uncooked" to text: "Humans are put at risk by eating 'uncooked' contaminated shellfish. * * *" According to the IMI, cooking kills the pathogens.

Response: Although the discussion is primarily about pathogens, cooking does not destroy all forms of contaminants. Therefore, the conservative approach is taken.

Issue 25. International Marina Institute (IMI): Information Packet, Section 1., Discussion of the effects of vessel sewage * * * second paragraph, last sentence: The IMI requests deleting "and swimming beaches" from text. According to the IMI, the statement is not true for most beaches.

Response: The Service agrees that the statement is not true for most beaches, and has modified the statement accordingly.

Issue 26. International Marina Institute (IMI): Information Packet, Section 1., Discussion of the effects of vessel sewage * * * third paragraph, last 2 sentences: The IMI requests deleting the last two sentences: "Sewage discharged from holding tanks will thus increase the biological oxygen demand (BOD) in the vicinity of boats. When this occurs in poorly flushed waterbodies, the dissolved oxygen concentration of the water may decrease (Milliken and Lee, 1990." According to the IMI, this is misleading and faulty logic. If kept, the IMI requests fully qualifying this statement as to the number of holding tanks which must be dumped to make it significant.

Response: The sentences are general, informational statements. The statements have been qualified to ensure that they are not misleading.

Issue 27. North Carolina Department of Environment, Health & Natural Resources (DEHNR): Information Packet, section 1., last paragraph, first, fourth

and fifth sentences, and Information Packet, Section 6., second paragraph, last sentence: It is the DEHNR's understanding that zinc sulphate was voluntarily taken off the market 10 years ago when its degrading effects on waste treatment were discovered. According to the DEHNR, plant operators and regulators should not be given the implication that heavy metals or other severe, lingering toxics can be expected. The holding tank chemicals in use today are generally biodegradable and if even marginally diluted, have little effect on treatment systems. The DEHNR requests that the Information Packet be written to describe why the waste can be treated in existing systems rather than helping to panic regulatory agencies that are not familiar with the research, or the rate and volumes of present demands.

Response: Zinc sulphate has been deleted from the discussion, and the discussion modified in both places to indicate the lack of real problems noted from use of these chemicals.

Issue 28. International Marina Institute (IMI): The IMI requests that the Service credit IMI for its contributions in the guidelines. Information Packet, section 3., first and second paragraphs: The IMI requests the following be appended to these paragraphs: "(Ross & Amaral, 1992)", to give credit for this text to the IMI survey of New England pumpout stations mentioned previously. Information Packet, section 7., third paragraph, "Equipment failure * * *": The IMI requests the following be appended to this paragraph: "(Ross & Amaral, 1992)". Also, Information Packet, section 8., first paragraph, Public/private partnerships: IMI totally agrees with the importance of private involvement, and requests that the record show that the 80% is based on the 1986–87 National Boating Facilities Survey IMI/URI conducted for NMMA.

Response: Credits have been added for each of the sources.

Issue 29. International Marina Institute (IMI): Information Packet, section 3., fourth paragraph, next to last sentence: The IMI requests deleting the sentence "Some States require installation of pumpouts for all new marinas.", because it may encourage regulators to mandate pumpouts everywhere without consideration of other factors, or add "* * * regardless of any measured need or lack of potential use." at the end of that sentence.

Response: The Service agrees, and has deleted the sentence.

Issue 30. International Marina Institute (IMI): Information Packet, section 3. (2): The IMI requests changing the "45%" peak occupancy rate to "40%" in the sentence "It is assumed every boat which is occupied * * * the occupancy rate during peak periods is 45%." Also, Information Packet, section 3. (3) Calculation for Estimating Need for Dump Stations, and, Calculation for Estimating Need for Pumpout Stations: The IMI recommends changing the peak occupancy rate from "45%" to "40%", to match the sentence above in section 3. (2). According to the IMI, the 45% comes from the 1989 IMI national auto parking and boat use study of 142 public and private marinas in 24 States. The highest use day (July 4th weekend) was 46% of all boats in use, but quickly dropped to 33% on non-holiday weekends. (Reference: Ross, N. Auto Parking in Marinas. International Marina Institute, Wickford, RI. 1989. 13 pp. According to the IMI, holding tanks are often pumped during the week. National engineering standards for parking lot size for theaters, restaurants, and shopping malls call for using the 5th highest use day. The IMI states that it would be more reasonable to use the 33% to be high weekend use rate. The IMI suggests using the difference between the 46% and 33% or 40%, which is the most reasonable national number in the formula calculations.

Response: The Service agrees and has made the changes in the sentence and in both calculation formulas, giving credit to the source.

Issue 31. International Marina Institute (IMI): Information Packet, section 3. (3): Hours of operation: The IMI requests adding "peak boating season" to "* * * assumes facilities will be in operation for twelve hours per day during 'peak boating season' weekends and * * *".

Response: The statement has been added to the sentence.

Issue 32. Massachusetts Department of Fish, Wildlife and Environmental Law Enforcement (DFWELE): Information Packet, section 3., Calculation for Estimating Need for Pumpout Stations: The DFWELE suggests adding open brackets and open parentheses before "No. of Boats 26' 40'"; close parentheses after "No. With Holding Tanks (50%)", and close brackets after "No. of Boats 40'+", to clarify the calculation.

Response: The Service agrees and has added the brackets and parentheses.

Issue 33. North Carolina Department of Environment, Health & Natural Resources: Information Packet, section 6.: The DEHNR is concerned with the discussion of waste treatment alternatives. According to the DEHNR, relatively few marinas are in a stage of construction where major waste treatment system modifications are readily feasible. It is likely, according to the DEHNR, that a marina waste disposal system is already in place. The best use of the grants, according to the DEHNR, will be to install as many dockside pumpout units as possible. The DEHNR states that, under certain circumstances, funding new or replacement waste treatment systems may be appropriate. But in most cases, research indicates that existing systems should be able to handle anticipated loads.

Response: The Service agrees with this assessment, and encourages States to install as many pumpout stations and dump stations as are needed as the highest priority. The discussion of waste treatment alternatives is informational, and not meant to imply a priority for new or upgraded waste treatment systems.

Issue 34. International Marina Institute (IMI): Information Packet, section 6., Vessel Sewage Characterization, second paragraph, first sentence, Effects of holdings tank additives: The IMI asks the following: What are the harmful additives? What chemicals should be regulated? Where is the list of products which can be used? Is there a government sanctioned list? Who is doing testing on products for holding tanks? If no government list exists, can the Service encourage the States to regulate them? If the list exists, publish it.

Response: This paragraph is an information paragraph which characterizes chemical holding tank additives. No statement is made that they are harmful or that they should be regulated. The Service has no list of products which can be used, and there is no government sanctioned list.

Issue 35. North Carolina Department of Environment, Health & Natural Resources (DEHNR): Information Packet, section 6. On-Site Treatment: According to the DEHNR, North Carolina law does not allow holding tanks as an acceptable sewage treatment and disposal system.

Response: A statement has been added to this section cautioning that marinas should consult State law before installing any of these measures.

Issue 36. Center for Marine Conservation (Center): Information Packet, section 7., first paragraph, sixth sentence: "Stationary or portable dockside pumps cost in the range of $2,000 to $10,000, and typical complete installations may be as high as $20,000." The Center believes these numbers sound high, and requests that the Service clarify what is covered here, and separate out costs for live aboard permanent installations.

Response: This information was obtained from the marine industry. Average costs, including sewage connection and other accessories, for the first application period, were close to $20,000 per unit. Some costs were in the range of $60,000.

Issue 37. International Marina Institute (IMI): Information Packet, section 7. (1) The IMI states that stationary units can also be discharged into septic systems if the State allows. According to the IMI, their advantages also include "speed of use".

Response: Although it may be true that the unit contents may be discharged into septic systems, this type of connection is not encouraged. Speed of use has been added as an advantage.

Issue 38: International Marina Institute (IMI): Information Packet, section 7. (2) Portable units on wheels, fourth sentence: While moving about the marina requires more time, the IMI believes that also is an advantage for pumping out boats during slow weekdays, especially after a busy weekend.

Response: This advantage has been added.

Issue 39: International Marina Institute (IMI): Information Packet, section 7. (3) Portable units on a vessel, last sentence. Range of operation is not a problem, according to the IMI, since one vessel can service an entire harbor of several marinas, etc.

Response: The Service agrees. This statement has been deleted.

Issue 40: International Marina Institute (IMI): Information Packet, section 7. (4) Remote operated multi-station systems, last sentence: According to the IMI, the last sentence talks about he problems of winter freezing. Freezing affects every pumpout in northern climates, but is less of a problem for multi-station systems because they generally depend on a vacuum tank system which keeps the lines free of all standing water. The IMI recommends dropping the issue, or making a general statement such as: "All pumpout systems in northern States subject to freezing may need winterization.".

Response: The Service agrees. The statement has been deleted.

Issue 41: International Marina Institute (IMI): Information Packet, section 7., next to last paragraph, fourth sentence, under Other Factors to Consider for Pumpout Stations, "* * * and disinfect suction connection.": The IMI states that this sounds like a good idea, but how do you do it? Would not the disinfectant used, e.g., chlorine, pose a more significant threat to aquatic life than sewage bacteria inside the hose connector? Recommend dropping the words.

Response: The Service agrees. The statement has been deleted, and a suggestion added to use a dedicated system for flushing and rinsing hoses.

Issue 42: International Marina Institute (IMI): Information Packet, section 7., last paragraph, third sentence under Other Factors to Consider for Pumpout Stations: The IMI states that the statements "EPA has found * * *" the need for "maintenance contracts * * *" and "dedicated funds * * *", are misquoted from the final Nonpoint Pollution Marinas Chapter 5, boat sewage section pp 5–42 to 5–46. The IMI states that the statements are based on a preliminary practices draft which was discarded in the final text. If maintenance contracts were necessary anywhere, according to the IMI, they would be needed at the public marinas do not need such government required contracts or dedicated funds since they will fix the problem themselves or hire someone. The IMI recommends deleting the entire last sentence beginning "EPA has found * * *", or specify that this "only applies to public marinas which are unable to do their own maintenance.".

Response: The reference to EPA has been dropped. The paragraph has been kept as a suggestion.

Issue 43: International Marina Institute (IMI): Information Packet, section 8., fifth paragraph, Rental Contracts: The IMI recommends adding "waters" to the text of "(1) prohibit boat sewage discharge into the marina 'waters' to keep the water clean." to otherwise allow discharge into a pumpout or sanitary waste system.

Response: The word has been added.

Issue 44: International Marina Institute (IMI): Information Packet, section 8., fifth paragraph, Rental Contracts: The IMI is not sure marinas can legally force boat owners to covert to holding tanks (2) without new legislation since Federal law allows use of all three types of MSDs. The IMI does not feel the Service can issue (2) in the Guideline at this time without a change in Federal law.

Response: The Service agrees. The statement has been deleted.

Technical Guidelines

The Fish and Wildlife Service will administer the Clean Vessel Act grant program through State agencies only. Both public and private marinas are eligible to participate in this program and should conform to these technical guidelines if they do participate. Marinas that do not participate in this program would not have to conform to these guidelines. The Service believes that public/private partnerships are a very important part of the success of this program, and will give higher priority to those projects that provide such partnership. Inability of a State to give grants to private marinas will result in a lowering of that State's priority for funds. Those States that have legal/administrative roadblocks are strongly encouraged to overcome them through changes in their law or procedures.

These technical guidelines should be followed when doing surveys, developing a plan and education program, and constructing pumpout stations and dump stations. Technical guidelines are presented here by section. At the end of these guidelines, an information packet is presented, which contains a general discussion of each section and provides greater detail.

Definitions

For the purposes of these technical guidelines the term: (1) *Type III marine sanitation device (holding tank)* means any equipment for installation on board a vessel which is specifically designed to receive, retain, and discharge human body wastes; (2) *pumpout station* means a facility that pumps or receives human body wastes out of Type III marine sanitation devices installed on board vessels; (3) *recreational vessel* means a vessel (a) manufactured for operation, or operated, primarily for pleasure; or (b) leased, rented, or chartered to another for the latter's pleasure; (4) *dump station* means an upland or floating *waste reception facility* specifically designed to receive wastes from portable toilets carried on vessels, or floating restrooms in the water, not connected to land or structures connected to the land, used solely by boaters, and does not include upland restroom facilities; (5) *marina* means a facility with ten or more wet slips and/or dry land storage; (6) *Parking lot harbor* means a harbor which is home port to many boats kept on swing moorings or in marina docks. Most of the time, most of the boats are unoccupied and unused; (7) *Transient harbor* means "destination" harbor where boaters go during day trips or berth overnight; (8) *Portable toilet* means toilets that are not installed toilets. They are designed to be removed from a vessel and their contents emptied into shoreside receptacles; (9) *Coastal zone* has the same meaning that term has in section 304(1) of the Coastal Zone Management Act of 1972 (16 U.S.C. 1453 (1). Section 1453 defines "coastal zone" as follows: "The term 'coastal zone' means the coastal waters (including the lands therein and thereunder) and the adjacent shorelands

(including the waters therein and thereunder), strongly influenced by each other and in proximity to the shorelines of the several coastal states, and includes islands, transitional and intertidal areas, salt marshes, wetlands, and beaches. The zone extends, in Great Lakes waters, to the international boundary between the United States and Canada and, in other areas, seaward to the outer limit of the United States territorial sea. The zone extends inland from the shorelines only to the extend necessary to control shorelands, the uses of which have a direct and significant impact on the coastal waters. Excluded from the coastal zone are lands the use of which is by law subject solely to the discretion of or which is held in trust by the Federal Government, its officers or agents."

Section 1. Waters Most Likely To Be Affected by the Discharge of Sewage From Vessels

Guidelines for States to use in identifying waters most likely to be affected by the discharge of sewage from vessels are those waters frequented by large numbers of boaters and include: (1) Sheltered waters that are generally poorly flushed systems; (2) Waters identified to be of National Significance; (3) Waters of significant recreational value; (4) Waters supporting designated shellfish harvest areas; (5) State and federally designated Nursery areas of indigenous aquatic life; (6) Waters designated by the EPA as "No Discharge Areas" under section 312(f)(3) and (4) (A) & (B) of the Clean water Act, and (7) Waters that do not meet State designated usage.

Section 2. Surveys of Pumpout Stations and Dump Stations

Only coastal States are required to do a survey. Coastal States should submit surveys to the Federal Air official at the appropriate Fish and Wildlife Service Regional Office, as follows:

(1) Region 1 coastal States include California, Commonwealth of the Northern Mariana Islands, Guam, Hawaii, Oregon, and Washington: Deputy Assistant Regional Director, Division of Federal Aid, U.S. Fish and Wildlife Service, Eastside Federal Complex, 911 NE 11th Avenue, Portland, Oregon 97232–4181, (503) 231–6128.

(2) Region 2 coastal State includes Texas: Deputy Assistant Regional Director, Division of Federal Aid, U.S. Fish and Wildlife Service, P.O. Box 1306, 500 Gold Avenue, SW., Albuquerque, New Mexico 87103, (505) 766–2095.

(3) Region 3 coastal States include Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin: Deputy Assistant Regional Director, Division of Federal Aid, U.S. Fish and Wildlife Service, Bishop Henry Whipple Federal Building, 1 Federal Drive, Fort Snelling, Minnesota 55111–4056, (612) 725–3596.

(4) Region 4 coastal States include Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, Puerto Rico, South Carolina, and the Virgin Islands: Deputy Assistant Regional Director, Division of Federal Aid, U.S. Fish and Wildlife Service, 1875 Century Boulevard, suite 324, Atlanta, Georgia 30345, 404/679–4159.

(5) Region 5 coastal States include Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Virginia: Deputy Assistant Regional Director, Division of Federal Aid, U.S. Fish and Wildlife Service, 300 Westgate Center Drive, Hadley, Massachusetts 01035–9589, (413) 253–8501.

Pumpout station/dump station survey: All marinas, moorages, docks, etc., should be surveyed. The survey should include whether the marina has pumpout stations, dump stations, or both; how many pumpout and dump stations; which ones are operational; and, the specific coordinates of each operational pumpout and dump station. For pumpout and dump stations not located in the above marinas, moorages, etc., such as at ramps, the specific coordinates should be obtained for these facilities also. Specific coordinates, i.e., latitude and longitude, should be reported in North American Datum 1983 (NAD 83) standard. Other alternatives include (a) State Plane Coordinate Values, and (b) A portion of a NOAA nautical chart identified by chart number, edition, and edition date that marks clearly the pumpout station/ dump station. Specific coordinates for all pumpout and dump stations should be submitted to the appropriate Regional Office of the Fish and Wildlife Service for inclusion on NOAA charts. Suggested survey questions include the following for each facility: (1) Name and address of marina, moorage, dock, etc.; (2) whether the marina is public or private; (3) telephone number; (4) location of marina, etc., by county, water body and specific coordinates; (5) whether the marina has pumpout stations, dump stations, or both; (6) how many pumpout and dump stations; and, (7) whether the pumpout and dump stations are operational.

Boat survey: The survey should include the following: (1) Total number of boats by water body and county; (2) How many boats have Type III MSD holding tanks; (3) How many boats have portable toilets.

A complete survey of all boaters is not necessary. States should obtain only as much information as is necessary to determine, within reasonable confidence limits, numbers of boats, how many boats have Type III MSD holding tanks or portable toilets, and where boaters are most likely to congregate by water body and county. Sample surveys are acceptable. Recent surveys are acceptable if they answer all the questions needed.

Section 3. What Constitutes Adequate and Reasonably Available Pumpout Stations and Dump Stations in Boating Areas

As a general guide, at least one pumpout station and dump station should be provided for every 300 to 600 boats over 16 feet length overall. This is not a requirement, but guidance only, and should be modified depending on the situation. For instance, if most boats in an area are under 26 feet, many more dump stations would be required than pumpout stations. Another question is the minimum number of boats that should have pumpout stations and dump stations. Again, there is no one answer. it is suggested that marinas with 50 slips or more that are capable of mooring 26 feet + boats have access to at least one pumpout station, and marinas with 50 slips or more that are capable of mooring 16–26 feet boats have access to at least one dump station. This does not mean that every marina with 50 + slips should have a pumpout station or dump station. Where marinas are adjacent (within two miles of each other), pumpout stations can be shared. Other factors should be considered, such as whether the marina is a parking lot or transient harbor, or the amount of fuel dock use. In determining the installation of any pumpout station or dump station, such factors as boat size, boating use patterns, coastal water characteristics, sensitive areas, flushing capacity, etc., should play a large role in establishing needs for facilities. Due to the variability in each State, States must have the flexibility to provide criteria that addresses their specific needs. See the discussion in the Information Packet, section 3, for alternative approaches to determining need.

Dump stations should be sited in conjunction with pumpout stations, but should also be located where there are no pumpout stations but where boats with portable toilets congregate or are used, such as launching ramps.

Program evaluation should be given great emphasis to assure quality products. States should evaluate and monitor the program effectiveness to determine that facilities are operated and maintained, and used for their intended purpose. Changes to approaches should be made as weaknesses and/or opportunities become apparent.

Section 4. Plans for Construction Pumpout Stations and Dump Stations

Only coastal States are required to develop a plan. Coastal States should work with the recreational marina industry and others in developing the plan. Coastal States should submit the plan to the appropriate Fish and Wildlife Service Regional Office, same address as in section 2 above. Following is an outline which should be used by States when developing the plan:

(1) *Need.* This section should establish the justification for the proposed work based on (a) the results of the surveys of existing pumpout stations and dump stations and the number of recreational vessels; (b) that part of the guidance relating to determining the adequacy and reasonable availability of pumpout stations and dump stations and, (c) that part of the guidance describing the waters most likely to be affected by the discharge of sewage from vessels.

(2) *Goals and objectives.* The purpose of the plan should be to ensure the availability of adequate and reasonably available pumpout stations and dump stations to the boating public throughout the coastal zone of a State.

(3) *Expected results or benefits.* This section should describe in general how water will be improved by making pumpout and dump stations available.

(4) *Approach.* In this section, describe the following: (a) How the plan addresses all coastal zone waters of the State, and gives priority to waters most likely affected; (b) How the plan complements plans of adjacent States for shared waters; (c) The strategy for locating and constructing, renovating and maintaining pumpout and dump stations. Address the question of whether or not an existing pumpout or dump station is worth upgrading, and how demonstrated problem facilities will be upgraded or eliminated. Include the general location and priority of projects; (d) How States will ensure that (i) waste will be disposed of properly, and (ii) that municipal waste treatment plants will accept waste; (e) What proportion of the slip/mooring capacity is in public vs. private marinas, how States will seek public/private partnerships for siting, constructing and operating pumpout stations and dump stations, any issues/problems, such as legislative/regulatory barriers, and what will be done to overcome these barriers; (f) Innovative techniques to increase the availability and use of pumpout stations/dump stations; (g) Approaches to educate and inform the public and the boating industry on the sue of, and need for, disposal of vessel waste; and, (h) Total estimated cost of the Statewide plan.

Section 5. Education/Information

Guidelines for States to consider when developing an education/information plan include:

(1) *Audience:* Consider six audiences when developing your education/information program regarding vessel sewage disposal, handling, and treatment, as follows: (a) Boat owners and operators; (b) Marina owners and operators; (c) Sewage treatment plan owners and operators; (d) Federal (where applicable), State and local governmental authorities and organizations; (e) Boating supply and retailers; (f) The general public.

(2) *Communication media:* There are a variety of media that States may use for disseminating this information. Common methods to consider are: brochures, workshops/symposiums, educational videos, TV/radio, signs, boat shows, etc. Innovative methods are encouraged.

(3) *Distribution:* States have options for distribution of educational information related to boating and pumpout issues. Options include magazines, radio public interest spots, environmental groups, association and federation newsletters, National Estuary Program forums, State and local education programs, local citizens groups, and student groups. New and innovative ways of educating the boating community and the general public are encouraged.

Section 6. Appropriate Methods for Disposal of Vessel Sewage From Pumpout Stations and Dump Stations

Disposal methods will vary among States depending on a number of factors, including: State and local sanitation codes; the number of recreational vessels and where the vessels are concentrated; the availability and geographic proximity of existing treatment facilities to boating centers; and hydrogeologic characteristics, including soil types and groundwater flows towards drinking water sources and these coastal waters. Depending on these factors, States may consider the following methods: (1) Off-site treatment: (a) Discharge to a public wastewater collection system and treatment facility; (b) discharge to a holding tank with removal and transport by a person licensed to haul septage waste to a municipal septage receiving/treatment facility; (2) On-site treatment at marinas: (a) Discharge to a package treatment plant; (b) discharge to a septic system.

Section 7. Types of Marine Boat Sewage Pumpout Stations and Dump Stations That May Be Appropriate for Construction, Renovation, Operation, or Maintenance, and Appropriate Location of the Stations and Facilities Within a Marina or Boatyard

Pumpout stations and dump stations should provide an efficient means of removing sewage from boats and a means of disposing of that sewage in a safe and sanitary manner. These facilities should include all the equipment, structures, and disposal facilities necessary to ultimately discharge or dispose of boat sewage in an efficient, safe and sanitary manner without causing an actual or potential public health hazard. Pumpout stations should include equipment for rinsing boat holding tanks. Pumpout stations and dump stations should be adequate to meet the peak use demand for such services. Facilities should be operated and maintained to provide adequate service, and to be maintained to function as intended.

Pumpout stations and dump stations should be reliable, corrosion resistant, easy to use, neat and tidy to clean and use, conveniently located, with low maintenance. Pumps should be specifically designed for handling sewage. Land-based restrooms are not an acceptable option for emptying portable toilets.

All pumps should be safe, functional and efficient. Motors and switches should be ignition protected. Pumps should be able to pump against the maximum head developed by elevation change and line losses. In addition, the suction connection to the boat should be a tight fit and adjustable by adapters to service boat discharge connections. Pumps should be able to transport flows out of the holding tank. Pumps exceeding 45 gallons per minute may cause tanks to collapse.

Factors in determining pumpout station holding tank capacity include boat size and use patterns. Sizing should be done on a case-by-case basis using documented demand, if possible. Holding tanks should be designed and installed to meet local regulations.

For all vessels manufactured after December 31, 1994, a standard deck fitting for removal of sewage should be

constructed to the "International standard ISO 4567 Shipbuilding—Yachets—Waste water fittings" for holding tanks, which is a female 38.1 mm (1½") pipe size with 11 threads per 25.4 mm (inch). These threads could utilize a quick-disconnect or cam lock fitting. For existing vessels, an adapter, such as a tapered cone, should be used for non-standard deck fittings. All pumpout connectors should fit the standard deck fitting.

For all vessels manufactured after December 31, 1994, because of possible confusion between waste, fuel and water deck fittings, the deck fittings should be identified with the words "WASTE", "GAS", "DIESEL", and "WATER", and color code the fittings with black caps for waste, red caps for gas and diesel, and blue caps for water.

The ultimate location for the station should be based on the unique conditions of the marina, boatyard, mooring field or other anchorage. Stationary pumpout stations should be located for the convenience of, and to encourage boaters to use the facility. Mobile pumpout stations should have reasonable access to boaters.

Section 8. Other Information (No Technical Guidelines)

Information Packet

This information packet is not technical guidelines. It has been recommended to provide additional information to States, and to marinas and others who participate in this program. The information packet presents general information on surveys, plans, education/information, pumpout facilities and other information helpful in promoting establishment of facilities. It provides a more detailed discussion of the technical guidelines, with examples and explanations. This information packet is also by Section, which corresponds to the sections in the technical guidelines.

Section 1. Waters Most Likely To Be Affected by the Discharge of Sewage From Vessels

The following coastal waters, including the Territorial Seas, estuaries, bays, and sounds, and then U.S. lakes and rivers as defined below, are considered waters most likely to be affected by the discharge of sewage from vessels. These definitions are not ranked in priority order.

(1) Sheltered waters that are generally poorly flushed systems.

(2) *Waters of National significance:* Waters identified by the Environmental Protection Agency under the National Estuary Program, waters identified by the NOAA under the Estuarine Reserve program, and Marine Sanctuaries program where appropriate.

(3) *Waters of significant recreational value:* A water body with unusual value as a resource for outdoor recreation activities, e.g., fishing, boating, canoeing, water skiing, swimming, scuba diving, or nature observation. The significance may be in the intensity of present usage, in an unusual quality of recreational experience, or in the potential for unusual future recreational use or experience.

(4) *Shellfish harvest waters:* Waters designated as shellfish producing and harvesting areas.

(5) *Nursery areas of indigenous aquatic life:* State and federally designated significant habitats such as are designated in Coastal Zone programs.

(6) Waters designated by the EPA as "No Discharge Areas" under Section 312(f)(3) and (4)(A) & (B) of the Clean Water Act.

(7) Waters that do not meet State designated usage.

Discussion of the Effects of Vessel Sewage on These Waters

Waters previously designated by the EPA under the Clean Water Act as "No Discharge Areas" are eligible for renovation, maintenance and further construction funds under this program. The discharge of sewage from boats may degrade water quality by (1) introducing microbial pathogens into the environment and (2) locally increasing biological oxygen demand (U.S. EPA, 1985). While vessel sewage discharges represent only one of many sources of point and non-point pollution, the number of boats using coastal waters has increased substantially during the past decade. The contribution of boat sewage to total pathogen loadings and local BOD has grown proportionately.

A potentially serious problem resulting from vessel sewage discharges is the introduction of disease-carrying microorganisms from fecal matter into the coastal aquatic environment. Humans are put at risk by eating contaminated shellfish and by swimming in contaminated waters. The major disease-carrying agents are bacteria and viruses, and the most common serious ailment is acute gastroenteritis. Other waterborne diseases include hepatitis, typhoid, and cholera (Milliken and Lee, 1990). The indicators used to detect sewage pollution are not the pathogens themselves, but, rather, coliform bacteria. These bacteria are always present in the human intestinal tract and are thus considered reliable indicators of the presence of human waste (U.S. EPA, 1985). Studies conducted in Puget Sound, Long Island Sound, Narragansett Bay, and Chesapeake Bay have demonstrated that boats can be a significant source of fecal coliform bacteria in coastal waters, particularly in areas with high boat densities and low hydrologic flushing (Milliken and Lee, 1990; JRB Associates, 1980). If coliform levels exceed allowable thresholds, shellfish beds and swimming beaches may be closed to minimize the threat of public health problems. In addition, shellfish beds and some swimming beaches in the immediate vicinity of marinas are often closed because of the potential of contamination from vessel sewage discharges.

These organic-rich wastes also have the potential to depress oxygen levels as they decay in the marine environment. Biological oxygen demand is a measure of the dissolved oxygen required to decompose the organic matter in the water by aerobic processes. When the loading of organic matter increases, the BOD increases, and there is a consequent reduction in the dissolved oxygen available for respiration by aquatic organisms (U.S. EPA, 1985). Although the volume of wastewater discharged from boats is relatively small, the organics in the wastewater are concentrated, and therefore the BOD (1700–3500 mg/l) is much higher than that of raw municipal sewage (110–400 mg/l) or treated municipal sewage (5–100 mg/l) (JRB Associates, 1981). Sewage discharged from holding tanks will thus increase the BOD in the vicinity of boats. When this occurs in poorly flushed waterbodies, the dissolved oxygen concentrations of the water may decrease (Milliken and Lee, 1990). The amount of the decrease in dissolved oxygen concentrations, and therefore the significance to the water, depends on the amount of sewage discharged into the system.

Chemical additives such as chlorine and formaldehyde are used to disinfect or control odors of on-board sewage. There is little indication that these chemicals have any harmful effects on the environment. The holding tank chemicals in use today are generally biodegradable and, if even marginally diluted, have little effect on treatment systems. No heavy metals or other severe, lingering toxics can be expected. However, some discussion of possible problems should be mentioned here. Of the two major disinfectant chemicals used—chlorine and formaldehyde—only chlorine has been shown to be toxic in the aquatic environment. While formaldehyde is considered a toxic

substance, it is completely miscible in water and is readily degradable. While a direct link between MSD holding tank disinfectants and effects on the environment has not been documented, the presence of these chemicals in sufficient concentrations may be of concern (JRB Associates, 1981). Use of these chemicals as directed by the manufacturer should not result in problems. However, since the amounts of chemicals added are controlled by the boat owner or operator, excess use may occur.

Section 2. Surveys of Pumpout Stations and Dump Stations

The Clean Vessel Act of 1992 calls for surveys by coastal States within three months of notification to the States of the final technical guidelines to determine: (1) The number and location of all operational pumpout stations and dump stations at public and private marinas, mooring areas, docks, and other boating facilities within the coastal zone of a State; and (2) the number of recreational vessels in the coastal waters of the State with Type III marine sanitation devices (holding tanks) or portable toilets and the areas where those vessels congregate.

Survey information may be obtainable from the boat registration process or files; contacts with trade associations or boating organizations; from national surveys if available; or from mail or telephone surveys of boaters or marina/mooring field facility operators. Some States have surveyed boaters at marinas on high concentration days. The U.S. Coast Guard, telephone 202/267–1497, can provide the following information regarding Documented Vessels (5 net tons and larger): The vessel's port of documentation, vessel length, beam, net tonnage, and whether or not the vessel is equipped with mechanical propulsion.

Section 3. What Constitutes Adequate and Reasonably Available Pumpout Stations and Dump Stations in Boating Areas

Factors affecting pumpout use: Potential demand for pumpouts and/or dump stations is a function of several variables. First is the number of boats of a size that use sewage holding tanks or portable toilets and where they are stored. Second, accessibility of pumpouts and dump stations affects their use. Distance from routes of travel or from the home port as well as the likely waiting time once at the facility can affect the willingness of boaters to use pumpouts and dump stations. A third factor to consider is boat use. High use at moorages is related to transient versus "parking lot" customers, year-round versus seasonal users, and the frequency of overnight use of boats. High boat use is seasonal, correlated with good weather, weekends and holidays. Fourth is the fee charged, with higher use related to lower fees (Ross & Amaral, 1992).

High use of pumpouts and dump stations has also been related to aggressive management practices, active enforcement of "No Discharge Areas", perception of need by the public (related to the environmental sensitivity of the area and educational efforts), and good maintenance (Ross & Amaral, 1992).

Determining adequate and reasonably available station/facility needs: Boat numbers, boat size, boating use patterns, numbers and distribution of existing facilities, and where boats are kept during boating season (i.e., in a marina, yacht club, private dock, mooring, home on a trailer, etc.), determine the need for pumpout stations and dump stations. Moorages that receive high transient use, have mooring fields for large boats, are visited by large numbers of boats for refueling, and/or have a large number of people sleeping overnight or living on their boats should have high priority. Yacht clubs, boatyards and large capacity private docks should also be considered for priority installation of pumpouts and dump stations. Other situations that might be considered for the installation of facilities include marinas that provide fuel or service vessels equipped with MSD holding tanks. In addition to distributing stations/facilities in the above types of boating moorages, additional stations/facilities may be warranted where boat use impacts poorly flushed bays, coves, or sloughs and environmentally sensitive sites. After new facilities have been installed, subsequent patterns of use will indicate where and if additional pumpouts are needed. Periodic surveys should be conducted to ensure adequate numbers of pumpout stations and dump stations exist for boaters in the future.

Requirements for pumpout and dump stations vary by State and harbor. Some examples are as follows: Delaware requires a pumpout for marinas harboring 100 or more boats with marinas of 25–100 sharing a pumpout and those with less than 25 not required to install facilities. For New England, EPA Region I guidelines suggest a pumpout for 300–600 boats with toilets. A minimum of one pumpout per 300 boats with toilets is recommended in transient harbors with a high percentage of large vessels, while one pumpout per 600 boats with toilets should be provided in "parking lot" harbors where most boats are less than 25 feet long. In California's Richardson Bay, the pumpout guidelines is one station for every 300 boats. Launching ramps, marinas, etc., that cater to small craft (under 26 feet) or are too shallow for larger vessels may not need pumpouts, but may still require dump stations to receive portable toilet waste.

EPA's assessment (EPA, 1981) estimated that 20% of the boats between 16 and 26 feet, 50% of the boats between 26 and 40 feet, and all of the vessels over 40 feet had installed toilets with some type of MSD. So, if exact data are not available, an estimate could be calculated. The following is a method for estimating Statewide need for pumpout stations and dump stations (McKiernan, pers. comm.). It is not intended as a guide for determining requirements for a specific marina or harbor. The following assumptions underlie this method and can be adjusted where statistically valid information is available relating to a State's unique boating population characteristics.

(1) Given the availability of boat length information gathered during boat registration, assumptions can be made regarding the type of on-board sanitation equipment.

Boat length	Number with toilets (percent)	Type of system
16'–26	20	Portable toilets.
26'–40	50	Holding tanks.
40'+	100	Holding tanks.

(2) It is assumed every boat which is occupied will require service once a weekend and that the occupancy rate during peak periods is 40% (Ross, N. Auto Parking in Marinas, IMI, Wickford, RI, 1989).

(3) This method also assumes facilities will be in operation for twelve hours per day during peak boating season weekends and that the average time to service a boat's system will be 15 minutes for holding tanks and 5 minutes for portable toilets. Therefore:

Calculation for Estimating Need for Dump Stations

$$\frac{\text{No. of Boats 16'-26'} \times \text{No. With Portable Toilets (20\%)} \times \text{Peak Occupancy Rate (40\%)} = \text{BOATS REQUIRING DUMP STATIONS}}{\text{Boats Served Per Hour} \times \text{No. of Hours Of Operation Per Weekend} = \text{BOATS SERVED PER FACILITY}} = \text{Dump Stations Required}$$

(12) (24) (288)

Calculation for Estimating Need for Pumpout Stations

$$\frac{\text{No. of [(Boats 26'-40'} \times \text{No. With Holding Tanks (50\%)} + \text{No. of Boats] 40'+} \times \text{Peak Occupancy Rate (40\%)} = \text{Boats Requiring Pumpout Facilities}}{\text{Boats Served Per Hour} \times \text{Number of Hours Of Operation Per Weekend} = \text{Boats Served per Pumpout}} = \text{Pumpout Stations Required}$$

(4) (24) (96)

Section 4. Plans for Constructing Pumpout Stations and Dump Stations

The Clean Vessel Act calls for coastal States, within six months after notification of the final technical guidelines, to develop a plan for any construction or renovation of pumpout stations and dump stations. For efficiency of review and approval by the Fish and Wildlife Service, coastal States should complete the plan in the standardized format identified in the technical guidelines.

Section 5. Education/Information

A clearly defined education/information program that will support the timely implementation of a State plan should be presented by the State as a part of that plan. This guidance provides States with some ideas and information useful in developing an education/information program effective at informing the public, the boating community, the boating industry, local government officials, public interest groups, and other audiences the State identifies. Ultimately, the State education/information program should provide information and understanding that will encourage the use of and installation of pumpout and dump stations.

Education of the boating, marina owner, and vessel sewage handling and treatment communities is important to the potential success of this program. An effective education/information program will help to realize both short term and long term goals of the Act. The goals of education are as broad as the audiences they should be targeted to reach, yet, these goals can be achieved with increased dialogue between and information to these groups.

Six audiences should be considered when developing an education/information program regarding vessel sewage disposal, handling, and treatment, as follows: (1) Boat owners and operators; (2) Marina owners and operators; (3) Sewage treatment plant owners and operators; (4) Federal (where applicable), State and local governmental authorities and organizations; (5) Boating supply and retailers; (6) The general public.

There are a variety of media that States may have available for disseminating this information. Common methods to consider are; brochures, workshops/symposiums, educational videos, TV/radio, signs, boat shows, etc. Innovative methods are encouraged.

Issues to consider when developing education/information material targeted to a specific audience:

Issues on which education/information programs for boat owners and operators, as well as, boating supply and retailers, might focus would include: (1) Environmental impacts of boater sewage and the benefits of pumping out at a pumpout station and using a dump station; (2) How a pumpout station operates; (3) Pumpout hose connections/adapters; (4) Pumpout locations and fees; (5) "Green" boat toilet chemicals, i.e., short term biodegradable or less environmentally-damaging treatment chemicals. Encourage manufacturers through demand to market only environmentally responsible products; (6) Proper operation and maintenance of boat toilets; (7) The value of responding to boater surveys and requests for information.

Marina owners and operators are important participants in the implementation of this program. This group is making a commitment for the long term by agreeing to install, maintain, and operate pumpout and dump stations. Issues States should consider (where applicable) when developing education/information programs for marina owner and operators include: (1) Benefits to marinas under this program; (2) The application process for receiving funds to construct, renovate, maintain, and operate pumpout and dump stations; (3) What are adequate and reasonably available pumpout facilities; (4) Reasonable fees; (5) Environmental benefits of providing pumpout stations and dump stations; (6) How to obtain a permit for a municipal hookup and options for disposal of pumpout waste; (7) Where to locate pumpout and dump stations; (8) Methods of encouraging boater compliance with pumpout requirements; (9) Types of pumpouts and dump stations currently on the market; (10) Encourage manufacturers to provide demonstrations for and training of marina personnel responsible for operating these devices; (11) Highlighting Those marinas that have done an excellent job in installing and maintaining facilities.

Wastewater collected from pumpout facilities must be discharged from the

marina to an appropriate treatment facility. Waste treatment plant owners and operators should be made aware of the options available to them for receiving and treating waste from boat holding tanks and portable toilets. Issues for States to consider when developing education/information programs for wastewater treatment facility owners and operators include: (1) Effects of this waste stream on waste treatment plant's normal operations and how to mitigate any negative effects; (2) Volume of waste from boats in proportion to normal "household" loading standard; (3) Experience of waste system operators in areas designated "No Discharge".

States may find it necessary to develop education/information programs that address issues related to Federal, State and local government agencies. Issues to consider for education/information programs for this audience include: (1) Awareness of environmental requirements and enforcement options for vessel sewage disposal and treatment (particularly for incoming harbor masters); (2) Encouraging the development of technical guidelines for design, installation, and use of pumpout facilities; (3) Encouraging the appropriate Federal agencies to support a national standard on pumpout and boat fittings; (4) Environmental benefits of reducing the amount of waste water discharged from boats in localized areas, e.g., shellfish beds; (5) Encouraging vessel manufacturers to include procedures for proper operation of vessel holding tanks and shoreside pumpout facilities in new owners' manuals; (6) The value of enforcement in implementing this program; (7) Value of educating the public; (8) Informing Federal and local governments on how to access Federal informational sources, and encouraging them to do so; (9) Working with local governments to mandate, after a reasonable period of time, the installation of pumpout facilities at marinas, as a condition of marina licensure or operation.

Education of the general public has an important role to play. Issues to consider for education/information of this audience include: (1) The environmental impacts of boater waste; (2) Importance of the coastal resource; (3) Efforts by the boating community to reduce waste discharges.

States have options for distribution of educational information related to boating and pumpout issues. Options include magazines, radio public interest spots, environmental groups, association and federation newsletters, National Estuary Program forums, State and local education programs, local citizens groups, and student groups. New and innovative ways of educating the boating community and the general public are encouraged.

Representatives of the various groups could meet together at the State/local level to determine what information and education materials and strategies are needed to accomplish the objective. Private conservation and education groups could provide suggestions and materials once the needs are defined.

Section 6. Appropriate Methods for Disposal of Vessel Sewage From Pumpout Stations and Dump Stations

Introduction: The safe and sanitary disposal of vessel sewage waste must be provided for when constructing and operating pumpout stations and dump stations. Boaters will not want to spend time and money pumping out unless they can be assured that their efforts will help improve water quality.

Vessel Sewage Characterization

Vessel sewage is more concentrated than domestic sewage for almost all the standard parameters used to measure the quality of wastewater, including suspended solids, BOD, and total nitrogen. For example, the typical concentration of BOD in vessels is between 1700–3500 mg/l, while typical sanitary wastewater ranges from 110–400 mg/l for raw sewage and 5–100 mg/l for treated sewage. Raw municipal sewage has a lower concentration because people on land use more water for sanitary purposes than do people on boats. In addition, the proportion of gray water (defined as water from baths, showers and kitchens) is greater in municipal sewage, and municipal collection systems are subject to inflow and infiltration of storm water.

Another characteristic of vessel holding tank waste is the presence of chemical additives used to disinfect and deodorize the waste. These same additives are used to treat sanitary wastes in recreational vehicles (RVs), trains, and aircraft. Ideally, the odor-control chemicals should be biodegradable when diluted. These chemical additives commonly contain an active disinfectant along with dyes and perfumes. Some of the more common disinfectants include formaldehyde, paraformaldehyde, and quaternary ammonium chloride; formaldehyde is the most popular because of its effectiveness.

There is some concern from operators of small municipal and package sewage treatment plants and some marina operators with septic systems that vessel sewage holding tank waste may adversely affect performance of their sewage treatment systems by destroying the bacterial population, thereby reducing plant efficiency. A second concern, particularly of operators of municipal treatment plants operating at or near capacity, is that the additional volume of waste will cause the plant to exceed its capacity to treat wastewater effectively.

Research into the effects of chemical additives on sewage treatment processes indicates that these problems have been greatly overstated, and that, in general, most municipal sewage treatment plants can handle vessel holding tank waste without difficulty. In addition to relatively low volumes generated by sewage pumpout stations, the weekly and seasonal usage of marina facilities protects treatment systems from failing or exceeding capacity. Marinas receive their largest pumpout volumes on weekends and, in many parts of the country, only during the summer season. Therefore, treatment plants generally are able to assimilate such intermittent waste loading and no serious operational problem occurs.

Despite the negligible effects of holding tank additives on sewage treatment processes, general concern about toxic contaminants in the environment has led to the development of non-toxic, environmentally benign holding tank deodorants and disinfectants such as quarternary ammonium compounds, enzymes and adamantane. Holding tank chemicals in use today are generally biodegradable and if even marginally diluted, have little effect on treatment systems. No heavy metals or other severe, lingering toxics can be expected. States should encourage the use of these biodegradable products through education and, if necessary, regulation.

Disposal Methods

Disposal methods will vary depending on a number of factors, including: State and local sanitation codes; the number of recreational vessels and where the vessels are concentrated; the availability and geographic proximity of existing treatment facilities to boating centers; and hydrogeologic characteristics, including soil types and groundwater flows. Depending on these factors, States may consider the following methods: (1) Off-site treatment: (a) Discharge to a public wastewater collection system and treatment facility; (b) discharge to a holding tank with removal and transport by a licensed septage hauler to a municipal septage receiving/treatment facility.

(2) On-site treatment at marinas: (a) Discharge to a package treatment plant with subsequent discharge back into coastal waters (a National Pollutant Discharge Elimination System permit would be required); (b) discharge to a septic system, where no other alternative is available.

The following is a description of the relative merits of each of these methods. It should be noted that each State has its own regulations and policies regarding what it considers "appropriate" disposal methods. What one State considers appropriate or even desirable, another may prohibit.

Off-Site Treatment

There are hundreds of existing municipal wastewater treatment facilities serving coastal areas throughout the country. Most provide at least secondary treatment utilizing an activated sludge process, but they vary greatly in size and details of treatment structures, sludge handling capability, and success in meeting current permit terms and conditions. In addition, many also incorporate septage receiving and treatment facilities into the overall treatment system.

Public Wastewater Collection Systems: The best option for the safe and sanitary disposal of vessel sewage is through a direct connection to an approved wastewater treatment facility. Most municipal treatment plants should have no problem accepting vessel holding tank waste. The relatively small volume of holding tank waste, bled into the sanitary waste stream, is effectively diluted by municipal sewage. The relatively large volume of wastewater routinely handled by these plants also mitigates against plant upset, and the treatment process can also break down or volatilize certain of the trace organic chemicals. Sewage treatment plants with a long history of accepting holding tank waste have reported no problems with this practice. However, States should exercise caution in designating sewage treatment plants that are over-capacity, have operational problems, or violate permit conditions on a regular basis.

Shoreside Holding Tanks/Septage Treatment Facilities: Many boating facilities are located where connection to a wastewater collection system is difficult or infeasible. In these cases, connection of the pumpout or dump station to a shoreside holding tank is the next best option. Holding (or tight) tanks provide a means for sanitary storage of vessel sewage until it can be transported by a licensed septage hauler to an approved septic waste receiving/treatment facility. The holding tank may be above or below ground, depending on State or local requirements, but should be located on solid land and secured to minimize potential storm damage or vandalism.

Septage receiving/treatment facilities are designed specifically to pretreat these wastes before introducing them to the wastewater treatment system. Because vessel holding tank and portable toilet waste is similar in nature to domestic septage, although more concentrated with variable amounts of organic chemicals, a properly operating municipal treatment plant with septage receiving/treatment facilities should not be adversely affected by the introduction of holding tank waste.

Modifications to Wastewater/Septage Treatment Facilities: Some wastewater treatment plants and septage receiving/treatment facilities may require modification to accommodate vessel sewage. These modifications may include increased capacity, construction of adequate septage receiving/treatment facilities, holding and bleed-in facilities, pretreatment facilities, and additional analytical capability. To determine which plants have the capability to effectively process holding tank waste, and whether additional facilities (or modifications to existing ones) are required, States may need to conduct a survey of the existing capabilities and limitations of their existing sewage treatment plants. A matrix to determine these capabilities might include the following elements, for which many States have available data as file information: (1) List all sewage treatment plants; (2) Eliminate plants that are over capacity, have operational problems, or violate permit conditions regularly; (3) Evaluate the balance for existing capacity and treatment methodology; (4) Estimate the available capacity; (5) Develop a short list of candidates for vessel sewage treatment; (6) Develop list of potential needs for modifications to those plants, including: (a) Receiving stations; (b) holding/bleed-in tanks, and associated piping; (c) pretreatment needs; (d) associated sludge handling needs; and, (e) additional staff and analytical capabilities.

On-Site Treatment

On-site treatment at a marina may be a viable alternative when the marina is not located near sewer lines, when transport of waste is prohibitively expensive, when the local sewage treatment plant is unable to accept additional discharges, and when groundwater and coastal waters can be protected. Prior to installing these systems, State law should be reviewed for legality. On-site treatment eliminates the need to transport waste. However, the proliferation of small, potentially troublesome treatment systems often creates more water quality problems than the collection of vessel sewage is intended to solve, including coastal and groundwater contamination.

Package Treatment Plants

Package treatment plants offer an alternative for the treatment of both vessel sewage and waste generated by marina restrooms and other shoreside sanitary facilities. Package treatment plants are usually small, prefabricated sewage treatment plants that provide secondary treatment, generally utilizing the extended air mode of operation. In this process, treatment is accomplished by introducing air into the wastewater to encourage the growth of aerobic bacteria which digest the sewage, providing a high degree of treatment.

Discharging vessel sewage to a package treatment plant should only be considered by boating facilities with large treatment systems that can handle the increased shock loading and chemical additives present in this type of waste. The typical problems with such systems are exacerbated by the nature of holding tank waste. Like septic systems, package plants are designed to deal with sewage with a low solids content, and the treatment process itself is highly dependent on an environment that is not toxic to the treatment bacteria. Holding tank waste is concentrated, which may raise treatment and sludge handling issues. Normal difficulties with treatment variability would be worsened by the slug flow nature of the discharges to a package treatment plant, though they can be eliminated by "bleeding" the influent into the plant. In addition, the waste may contain metals and hydrocarbons which can destroy the treatment process in a small plant.

Based on these concerns, States may not want to encourage the development of a multiplicity of small sewage treatment plants, due to the variability of effluent quality as well as substantial difficulty in ensuring proper operation and maintenance of the mechanical components of such systems.

Septic Systems

Septic systems are the conventional on-site sewage treatment systems throughout the United States. They consist of a septic tank where primary treatment (physical operations) predominate. These operations are floatation, settling, and the digestion of the sludge that accumulates in the bottom of the tank. Effluent from the

tank is directed to a subsurface leaching system which provides additional treatment by establishment of a biological crust; its resultant permeability is a direct function of the BOD and suspended solids in the effluent stream. Once effluent leaves the crust zone it enters a soil environment where, if the septic system has been properly sited, a number of treatment processes will result in a high quality final effluent. The size and location of the leaching system (or drainfield) is extremely important because of the quality of the final treatment is highly dependent on the type and quantity of the soil through which the effluent will pass.

In general, septic systems are not a favorable option for the disposal of vessel sewage, because they are not designed to treat the high solids content, high strength, and possibly toxic content of these wastes. They are not very effective at removing trace organic chemicals, and are ineffective at removing nutrients. The chemical additives used to disinfect and deodorize holding tank waste may kill the bacteria that aerobically digest the sewage, allowing solids to pass through the septic tank and causing the drainfield to clog and overflow. Nutrients leaching from the drainfield may stimulate algal growth in receiving waters, which can reduce the amount of sunlight necessary for submerged aquatic vegetation to grow and use up oxygen needed for fish and other aquatic life. In marine waters nitrogen is the nutrient most likely to cause these adverse effects, while phosphorous is the problem in fresh water.

Vessel sewage should be discharged to a septic system only if no other options exist and the system is specifically designed and sited to receive such waste. This design includes: Using large tanks to manage and "bleed" in increased flows from pumpout stations; combining flows from ordinary bathroom facilities on-shore and the pumpout stations to dilute pumpout wastes; providing two septic tanks in series to help segregate solids in the first tank and increase retention time in the system; a large single drainfield or use of alternating drainfields, and proper siting to assure the leach field does not drain into the coastal waters or contaminate groundwater. In addition to following specific design criteria, septic systems should be inspected regularly and properly maintained.

Section 7. Types of Marine Boat Sewage Pumpout Stations and Dump Stations That may be Appropriate for Construction, Renovation, Operation, or Maintenance, and Appropriate Location of the Stations and Facilities Within a Marina or Boatyard

There are four basic types of pumpout stations on the market. Each one has its advantages and disadvantages. Since every marina is unique, there is no one solution that will work in all cases. Therefore, each case should be examined individually, and the pumpout that will work best in any particular situation should be selected. Costs for equipment and installation can vary greatly, depending on need for sewage lift stations to accommodate widely fluctuating tides, need for special onshore holding tanks to hold concentrated waste, cost of connection to a sewer system, and other factors. Stationary or portable dockside pumps cost in the range of $2,000 to $10,000, and typical complete installations may be as high as $20,000. Following is a list of pumpout station types with a discussion of advantages and disadvantages.

(1) *Stationary pumpout unit:* Stationary units include a connector hose and pump, and are connected directly to a local or municipal sewage treatment facility or a holding tank. The unit is usually located at the end of a pier or floating dock, often near the fueling facilities. Vessels access the pumpout station by approaching and securing to the dock or pier. Advantages are convenience, efficiency and speed of use. Principal disadvantage is that the unit restricts pumpout service to a single area of the marina, which may cause congestion.

(2) *Portable pumpout unit on wheels:* This unit may be a wheeled device, consisting of a holding tank, hose and mechanical or hand pump, that is pushed along a dock to the vessel's location to pump out vessel sewage. The advantage is the unit is brought to the boat rather than the boat to the station. When full of sewage, however, the unit can be heavy and cumbersome. Since it must be moved from boat to boat, the time required to complete the pumpout operation can be somewhat greater than that of fixed units. Being able to move the unit can also be an advantage for pumping out boats during slow weekdays, especially after a busy weekend. The unit is also limited by its storage capacity.

(3) *Portable pumpout unit on vessel:* This unit is a boat with pumpout station on board, consisting of a pump and holding tank, that may be radio-dispatched or respond to a signal flag, to pump vessel holding tanks. The advantage is the convenience of having the pumpout station come directly to the boat.

(4) *Remote operated multi-station system:* This system has a pump which transports wastes via a main sewer to central collection and treatment. This unit can provide pumpout capabilities at any number of locations throughout the marina. This system, which provides wastewater collection anytime, combines the convenience and efficiency of fixed units with the versatility offered by portables. This system must be specifically designed to individual project requirements.

There are five basic types of pumps used in pumpout systems. Following is a description of each.

(1) *Centrifugal pump (rotary or impeller types):* This pump works when sewage in its impeller is spun to the outside of the impeller by centrifugal force, which creates a low pressure area at the impeller as it pumps. Most centrifugal pumps require priming. This pump is usually employed in lift station situations.

(2) *Reciprocating pump (diaphragm and piston types):* This pump, mechanical or hand operated, creates suction by mechanically lifting a diaphragm up and pushing it down in a pump body. The diaphragm works in conjunction with two or four check valves. As the diaphragm lifts, the low pressure area under it causes sewage to be sucked into the body through the inlet check valve; when it is pushed down the pressure under the diaphragm closes the inlet check valve and forces sewage out the outlet check valve. This pump is self-priming.

(3) *Vacuum pump:* This pump does not directly contact sewage, but draws air out of a tank which creates the necessary low pressure area or vacuum to cause the sewage to flow in. When the accumulator tank is full, pressurized air enters the accumulator tank and the pressure pushes the sewage out to a sewer or holding tank. This pump allows pumping over longer distances.

(4) *Flexible vein impeller pump:* This pump has suction lift. It is easy to repair and needs no priming. A switch device is needed to prevent the pump from running dry and damaging the impeller.

(5) *Progressive cavity pump:* This pump consists of stainless steel rotor or screw surrounded by a tight fitting rubber sleeve. As the rotor turns the sewage is progressively moved to the discharge line. This pump is self-priming.

Equipment failure can occur with any of the above equipment. Most common

causes are mechanical failure, followed by clogging of hose and/or pump, loss of hose prime, and hose failure (Ross & Amaral, 1992).

In addition to pumpout stations, there are facilities to receive sewage waste from portable toilets. A dump station consists of a receiving receptacle for sewage from portable toilets, and includes associated equipment and storage tank or sewer line connection. This facility is not a land-based or floating restroom, but can be made a part of such. Floating dump stations should be considered at mooring fields and other strategic locations. The device typically includes a receiving basin, which should be a minimum of 12 inches in diameter, and with a lid that completely covers the receiving unit (to control odors and insect access), with provisions for rinsing the portable toilet following emptying of the contents. If the unit is designed to drain, the drain should be a minimum of 3 inches in diameter and equipped with an insect-tight cover. Dump stations should be equipped with a washdown system to allow cleaning of the portable toilet. The washdown system should be clearly marked as unfit for drinking water. Wand attachments may be connected to a pumpout station to empty portable toilets, rather than building a separate facility.

Following is a description of other equipment that is part of the pumpout station.

Pumpout station holding tanks: Holding tanks should be sized appropriately for the volume of sewage generated and the frequency of removal of material from the holding tank. State and local requirements may govern the size of holding tanks. Generally, a 1,500-gallon holding tank can serve up to 100 boats with holding tanks. In terms of the number of boats serviced with a normal removal schedule, the following minimum sizes are suggested:

Total number of boats serviced with holding tanks	Recommended holding tank volume (gallons)
1–20	300
21–40	600
41–60	900
61–80	1200
81–100	1500
100+	2000

Pipes/hoses: Discharge piping should be rigid or noncollapsing flexible, with locking connections. Corrugated or ribbed hoses are not recommended. The line should be watertight and appropriately fastened or secured to the dock or pier. Local building codes should be checked for specific piping requirements, but the following materials are generally accepted for pumpout station service: Polyvinyl chloride (pvc), and polyethylene. Expansion joints should be included where appropriate. Force main systems may require "thrust blocks" and other security fastenings.

Fittings: A deck fitting (sewage removal fitting) is a flanged fitting permanently mounted on the vessel and connecting to the onboard holding tank. A connector is a nozzle or coupling permanently attached to the suction hose of a pumpout station. An adapter is a fitting designed to facilitate adapting a pumpout connector to a vessel deck fitting.

When the requirement for vessels with an installed toilet to have a certified marine sanitation device went into effect under 33 CFR 159 on January 30, 1975, there was a requirement for sewage removal fittings or adapters to be 1.5 inch for boats less than 65 feet in length. The expected types of acceptable fittings included threaded, flanged, or quick disconnect fittings. However, 33 CFR 159 was amended on January 3, 1977 to allow holding tanks to be certified by definition if they store sewage and flushwater only at ambient air pressure and temperature. As a result, boats have been put on the market with many sizes of sewage removal connector fittings, requiring the use of adapters in order to assure a clean, tight connection when a pumpout occurs.

There are several adapters on the market today. A black rubber nozzle is used by most boaters. Another adapter, the fuel hose fitting or cam-activated connector, consists of a male portion which fits into the connector, and a female portion which locks onto the male portion.

A suction nozzle or fitting such as a friction nozzle (right angle preferred) or cam-activated quick connector positive locking attachment should be provided on the end of the suction hose. Adapters should be provided to fit the 1.5 inch discharge connector. A valve should be provided on the suction hose at the nozzle. A valve should be provided on the pump end of the suction line if the line is to be installed in a manner such that sewage would discharge from the line when the pump is removed for service. Positive locking connections on the end of the discharge line should be provided to prevent it from coming loose during discharge. The discharge line should be protected from freezing, and prevented from leaking into the water. Suction hoses should be equipped with a clear tubing or a sight glass on the suction end of the hose to allow the pumpout station operator to determine when the pumping is complete.

Other factors that should be considered when installing pumpout stations/dump stations include the following.

Convenient location enhances use. Stationary pumpout stations should generally be located as close to a boat off-loading point as possible and/or where boats need to maneuver the least. The end of a dock is a good location because it is accessible. Many facilities are located at the fuel dock, so boaters only have to go to one location for both of these activities. Water level changes should be considered when installing pumpout stations.

Operation and maintenance: Proper operation and maintenance of pumpout stations and dump stations are critical to provide adequate and reasonable service. An individual should be assigned responsibility for operation and maintenance of pumpout and dump stations. Consider appropriate protective clothing, such as gloves, and hand washing, to protect the operator. Washing facilities should be readily available.

Convenience for boaters and operators is a major factor. Hours of operation for pumpout stations should be keyed to general operating hours for vessels in the area. Specific maintenance and winter storage requirements depend on the system and the location. However, the following minimum maintenance is suggested to maintain sanitary conditions: Use dedicated system for flushing and rinsing hoses; flush hoses; pump clean water through the system, and empty into disposal area, never onto the ground or into the water.

An event or hour meter could be installed on the pump to monitor its use. Monitoring of pumpouts should be an integral part of a marina management program to ensure that the facilities are operating effectively. The following practices can be applied successfully to maintain pumpout facilities: arrange maintenance contracts with contractors competent in the repair and servicing of pumpout facilities; develop regular inspection schedules; maintain a dedicated fund for the repair and maintenance of facilities.

Section 8. Other Information That is Considered Necessary to Promote the Establishment of Pumpout Facilities to Reduce Sewage Discharges From Vessels and to Protect United States Waters

Public/private partnerships: Since approximately 80 per cent (based on the

1986–87 National Boating Facilities Survey, IMI/URI conducted for NMMA) of the marinas in the United States are privately owned, States are encouraged to develop partnerships, within State laws and regulations, with private marinas to construct pumpout stations at these facilities.

"No Discharge Areas": Sections 312(f)(3) and (4) (A) and (B) of the Clean Water Act of 1987 enable States to apply to the EPA for designation of certain water bodies as "No Discharge Areas". In doing so, States must meet specific criteria outlined in 40 CFR 140.4 including demonstrating to the EPA Administrator that adequate and reasonably available facilities exist for the safe and sanitary removal of boat sewage. States should not consider "adequate and reasonably available" under the Clean Vessel Act to satisfy all requirements for determining "No Discharge Areas" under the Clean Water Act. A separate review and determination would have to be made by the EPA for Clean Water Act designation of a "No Discharge Area".

Holding tank bypass: Discharge of raw sewage from a vessel in U.S. Territorial Seas (within the three mile limit) is illegal. Holding tanks are frequently bypassed with the use of valves, commonly called Y-valves. A valve may be installed on any marine sanitation device holding tank to provide for the direct discharge of raw sewage when the vessel is beyond the baseline of the Territorial Seas, which is more than three miles from shore. The valve must be secured in the closed position while operating in Territorial Seas. Use of a padlock, non-releasable wire-tie, or removal of the valve handle would be considered adequate securing of the device. The method chosen must be one that presents a physical barrier to the use of the valve or the toilet. All Y-valves should be standardized, so that the handle points in the direction that the sewage flows and/or indicates the open and closed position. The Y-valve should be place after the holding tank rather than between the toilet and holding tank.

Upland and floating restrooms: Clean, well-maintained restrooms are very desirable for boaters. Many boaters would rather use these when available than use holding tanks. Restrooms should be constructed at marinas and other strategic locations.

Rental Contracts: Marinas could add language in rental contracts to prohibit discharge of sewage into the marina waters.

Disinfectants, perfumes: Industry should produce only products which will not harm waste treatment plants or septic tanks. A symbol should be placed on the label of these products indicating they may be discharged into treatment plants or septic tanks if correctly used in a properly designed treatment system.

Additional information: For additional information on pumpout stations, refer to: (1) "A Guidebook For Marina Owners and Operators On the Installation and Operation of Sewage Pumpout Stations", Maryland Department of Natural Resources Boating Administration, Coastal Technology, Inc., February 1990; (2) "Commonwealth of Virginia Sanitary Regulations for Marinas and Boat Moorings", State Department of Health, Richmond, VA, 1990; (3) "Guidance for States and Municipalities Seeking "No Discharge Area" Designation for New England Coastal Waters", Rev. 4/92, U.S. Environmental Protection Agency, Region 1, Boston, MA; (4) "State of the Art Assessment of Boat Sewage Pumpout Program in Washington State", 12/91, Howard Edde, Inc., Bellevue, WA, for Washington State Parks and Recreation Commission, Olympia, WA. For further information on pumpout stations and dump stations, consult "Marina Pump Out Facilities", Joseph Wettemann, 1/89, and "Types of Pump Out Facilities", Natchex, 7/92.

Dated: February 11, 1994.

George T. Frampton, Jr.,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 94–5530 Filed 3–9–94; 8:45 am]

BILLING CODE 4310–55–M

Receipt of Applications for Permit

The following applicants have applied for a permit to conduct certain activities with endangered species. This notice is provided pursuant to Section 10(c) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531, *et seq.*):

PRT–783902

Applicant: Dallas Zoo, Dallas, TX

The applicant requests a permit to export two captive-born female Round Island boas (*Casarea dussumieri*) to the Jersey Wildlife Preservation Trust, United Kingdom, for breeding to enhance the survival of the species.

PRT–787726

Applicant: Cincinnati Zoo, Cincinnati, OH

The applicant requests a permit to import one female captive-born great Indian rhinoceros (*Rhinoceros unicornis*) from the Metropolitan Toronto Zoo, Canada, for breeding to enhance the survival of the species.

PRT–787646

Applicant: Northland Animal Exchange, Abbotsford, British Columbia, Canada

The applicant requests a permit to import two captive-born tigers (*Panthera tigris*) from Wild Kingdom Zoo, Manitoba, Canada, to Steve Martin's Working Wildlife, Frazer Park, California, for breeding to enhance the survival of the species.

Written data or comments should be submitted to the Director, U.S. Fish and Wildlife Service, Office of Management Authority, 4401 North Fairfax Drive, room 432, Arlington, Virginia 22203 and must be received by the Director within 30 days of the date of this publication.

Documents and other information submitted with these applications are available for review, subject to the requirements of the Privacy Act and Freedom of Information Act, by any party who submits a written request for a copy of such documents to the following office within 30 days of the date of publication of this notice: U.S. Fish and Wildlife Service, Office of Management Authority, 4401 North Fairfax Drive, Room 420(c), Arlington, Virginia 22203. Phone: (703/358–2104); FAX: (703/358–2281).

Dated: March 4, 1994.

Susan Jacobsen,

Acting Chief, Branch of Permits, Office of Management Authority.

[FR Doc. 94–5460 Filed 3–9–94; 8:45 am]

BILLING CODE 4310–55–P

Geological Survey

Abandonment of the USGS 15-Minute Topographic Quadrangle Map Series; [1:62,500-Scale]

AGENCY: Geological Survey, Interior.

ACTION: Notice.

SUMMARY: The U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle map series is the official replacement for the USGS 15-minute series. The 7.5-minute (1:24,000-scale) series, which provides grater detail than the 15-minute series, has been completed for all States (except Alaska, which is covered by maps at 1:63,360-scale) The USGS has not revised or reprinted the maps for many years and can longer support both the 7.5-minute and the 15-minute map series. Consequently, the 15-minute series has been officially abandoned and will no longer be available for sale after June 1, 1994.

DATES: March 1–31, 1994—USGS map dealers may exchange USGS 15-minute topographic maps that they have in stock either for credit at the discounted

Appendix D:

Sample §312(f)(3) No Discharge Area Application

Table of Contents

Exhibits

Tables

1.0 Greater Protection and Enhancement Certification

The Bayside Channel area is located just to the north of the City of Bayside. It is approximately 25 miles long and varies in width from 5 to 10 miles. Bayside Channel and its tributaries, Long River, Surf Bay, Tidal Bay, and Island Bay, discharge to the Atlantic Ocean.

The surface waters associated with the Bayside Channel and its tributaries are important economic and recreational resources. Specifically, the Channel and associated tributaries are used in shellfish propagation or harvesting. Shellfish harvesting accounts for 200 total full-time jobs during the spring and summer months (State Sea Grant Study). In addition, the Bayside Channel includes approximately 1,000 acres of public and private beaches which are used for recreational activities that account for 35,000 visitor-days during the spring and summer months (State Comprehensive Outdoor Recreation Plan).

Over the past 10 years, recreational boating in the Channel has significantly increased. As indicated in Table 1, fecal coliform levels in the Bayside Channel have increased during the summer months when recreational vessels are on the Channel in great numbers. Based on the increasing trends, it can be assumed that discharges from recreational vessels are impacting the water quality. Due to these conditions, the surface waters are currently patrolled during the summer months to control discharges of sanitary wastes from recreational vessels. Since 1987, several beaches and over 1,500 acres of shellfish harvesting areas have been closed due to high levels of fecal coliform in the surface water. Therefore, greater protection of the surface water is required than the applicable Federal standards to protect the degrading water quality and stop the decline in the local economy which has been impacted by beach and shellfish harvesting closures.

Table 1

Marine Fisheries Fecal Coliform Data (per 100ml)

Monitoring Site	3/91	6/91	8/91	4/92	6/92	8/92
Island Bay Dock	1.1	8.6	8.4	N/A	6.4	6.7
Long River	0.8	3.2	4.2	0.6	5.1	4.8
Tidal Bay Marina	0.4	1.2	3.2	N/A	4.0	3.2
Surf Bay Marina	1.0	4.0	4.4	0.5	3.2	4.2

Source: "Ocean State 305(b) Water Quality Assessment Report," Ocean State Environmental Protection Agency, Division of Water, 1993, pp. 211-215.

For the protection and enhancement of waters used by the general public (for various commercial and recreational marine activities), shellfish resources, and other marine life and habitat, it is respectfully requested that a No Discharge Area be approved for the coastal waters in the City of Bayside in Ocean County. This request is made in accordance with 40 CFR §140.4(a).

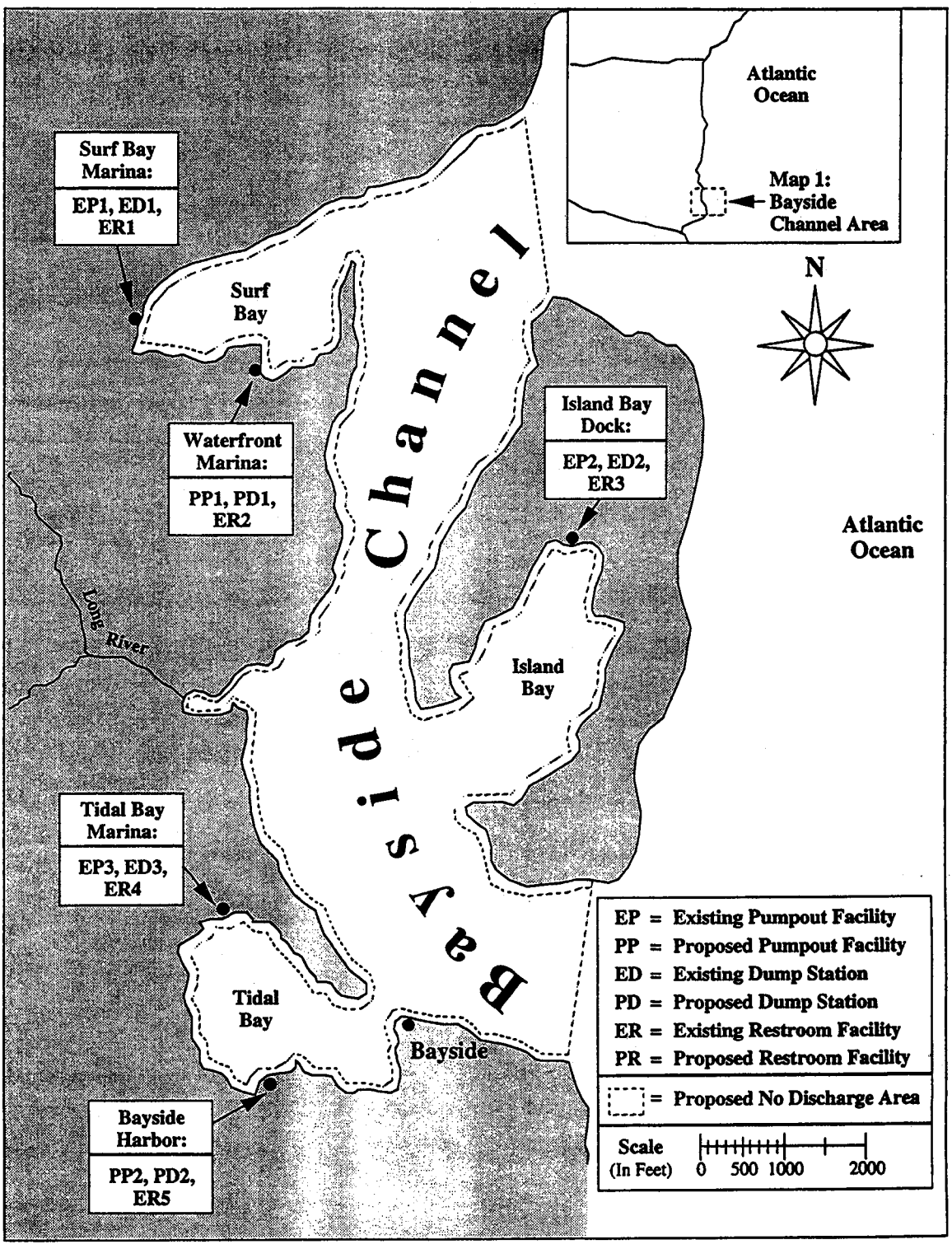
2.0 FACILITY INFORMATION

2.1 Map of Sanitary Waste Reception Facilities

The following map shows the geographic location of holding tank pumpout facilities, portable toilet dump stations, and shoreside restrooms within the proposed Bayside Channel No Discharge Area.

The three existing pumpout facilities in the area are identified on the map by an "EP" followed by the number assigned for reference purposes (i.e., EP1, EP2, and EP3). The location of the two proposed pumpout facilities are indicated on the map as PP1 and PP2. The two existing dump stations are designated on the map by ED1, ED2, and ED3, while the two proposed dump stations are shown as PD1 and PD2. The five existing shoreside restroom facilities are labeled on the map as ER1, ER2, ER3, ER4, and ER5. There are no proposed restroom facilities at this time.

Map 1: Bayside Channel Area



2.2 Description of Facility Locations and Types

There are five waterfront facilities (e.g., docks, harbors, marinas), which will be subsequently called marinas in this application, that operate pumpout facilities and/or dump stations in the proposed Bayside Channel No Discharge Area. Map 1 in Section 2.1 of this application provided an overview of the geographic distribution of the marinas in the area, however, a more specific description of the location and type of each marina's sanitary waste reception facilities is provided below:

Surf Bay Marina. This marina is located at the west end of Surf Bay about 0.75 miles from the bay entrance off the northern end of the Bayside Channel. The marina currently operates one stationary, marina-wide pumpout facility, which is located directly to the right of the fuel dock at the end of the middle pier. The pumpout facility also accommodates sanitary wastes from portable toilets.

Waterfront Marina. Due to the close proximity (approximately 0.5 miles) of this marina to Surf Bay Marina, it does not currently operate either a pumpout facility or dump station. The Waterfront Marina is closer to the bay entrance off the Bayside Channel than the Surf Bay Marina, so Waterfront Marina has plans to purchase portable pumpout equipment and develop a dump station (these plans are discussed in detail in Section 2.3 of the application).

Island Bay Dock. This marina is located in the northwest portion of Island Bay approximately 0.5 miles off the southern part of the Bayside Channel. Island Bay Dock is the only marina located on the ocean-side of the Bayside Channel. Island Bay is a popular location for vessels to moor, so the marina has operated a mobile pumpout facility (located on a vessel) for the past 5 years which services vessels in Island Bay. The shoreside marina facilities include a dump station for portable toilets.

Tidal Bay Marina. This marina is located at the northern end of Tidal Bay, approximately 0.5 miles from the bay entrance from the southern part of the Bayside Channel. Tidal Bay Marina operates one stationary, marina-wide pumpout facility which is located at the end of the fuel dock. The pumpout facility is also a reception facility for portable toilet sanitary wastes.

Bayside Harbor. As shown in Map 1, this marina is located directly 0.5 miles south of the Tidal Bay Marina in Tidal Bay. In the past, this harbor has referred its customers to the Tidal Bay Marina for pumpout and dump services. Three months ago plans were developed to purchase a portable pumpout system and construct a portable toilet dump station (these plans are discussed in detail in Section 2.3 of the application).

The following table provides the names and addresses for the five facilities described above. For reference, the codes assigned to each facility on Map 1 are presented next to each facility. The table also summarizes the water body on which each facility is located and the number of pumpout facilities or dump stations by system type for each facility.

Table 2

Waste Reception Facility Locations by Type

Marina Information	Facility Map Codes	Body of Water	Number of Waste Reception Facilities by Type and Location			
			Portable Pumpout	Mobile Pumpout	Stationary Pumpout	Dump Station
Surf Bay Marina 123 Surf Road Bayside, US 01234	EP1/ ED1	Surf Bay	0	0	1	1
Waterfront Marina 345 Surf Road Bayside, US 01234	PP1/ PD1	Surf Bay	1*	0	0	1*
Island Bay Dock 12 Island Road Bayside, US 01266	EP2/ ED2	Island Bay	0	1	0	1
Tidal Bay Marina 25 Tidal Road Bayside, US 01244	EP3/ ED3	Tidal Bay	0	0	1	1
Bayside Harbor 55 Tidal Road Bayside, US 01244	PP2/ PD2	Tidal Bay	1*	0	0	1*

* Proposed facilities expected to be available by May.

Note: There are no remote operated multi-station systems in this area.

Sources: "Ocean County Boater's Guide" (Ocean County Division of Tourism, 1993); and personal communication with owners/operators of Surf Bay Marina, Waterfront Marina, Island Bay Dock, Tidal Bay Marina, and Bayside Harbor.

2.3 Facility Operation and Maintenance

The following table summarizes the operation information (i.e., hours, fees, and operating capacity) for each pumpout facility and dump station within the proposed No Discharge Area. The information provided for the proposed facilities is subject to change.

Table 3

Facility Operation Information

Marina Information	Facility Map Code	Facility Hours of Operation	Facility Fee Schedule	Facility Operating Capacity
Surf Bay Marina William Smith 123 Surf Road Bayside, US 01234 (123) 555-2424 Channel 16 VHF-FM	EP1	April-October: M-F: 8am-8pm S&S: 7am-10pm November-March: 10am-4pm daily	For customers: Free For others: $5	10 gallons per minute
	ED1	Same as EP1	Free to public	N/A
Waterfront Marina Ed Johnson 345 Surf Road Bayside, US 01234 (123) 555-2300 Channel 16 VHF-FM	PP1	M-F: 8am-8pm Sat: 7am-11pm Sun: 7am-10pm	Free to customers	5 gallons per minute
	PD1	Same as PP1	Free to customers	N/A
Island Bay Dock Joseph Hill 12 Island Road Bayside, US 01266 (123) 555-1300 Channel 12 VHF-FM	EP2	M-F: 10am-10pm Sat: 8am-11pm Sun: 7am-10pm	$10	12 gallons per minute
	ED2	7am-11pm daily	$2	N/A
Tidal Bay Marina Susan Washington 25 Tidal Road Bayside, US 01244 (123) 555-1111 Channel 14 VHF-FM	EP3	M-Th: 10am-5pm F&Sat: 7am-10pm Sun: 7am-9pm	For customers: Free For others: $8	10 gallons per minute
	ED3	Same as EP3	Free to public	N/A
Bayside Harbor John Morrison 55 Tidal Road Bayside, US 01244 (123) 555-2222 Channel 14 VHF-FM	PP2	M-F: 10am-7pm Sat: 8am-10pm Sun: 8am-9pm	Free to customers	5 gallons per minute
	PD2	Same as PP2	Free to public	N/A

Sources: Same sources as Table 2.

2.3.1 Facility Accessibility

Although the three marinas that currently operate pumpout facilities and dump stations in the proposed No Discharge Area are all privately owned, access is given to all vessels. As shown in the table above, however, reduced facility use prices are given to patrons at two of the marinas.

2.3.2 Facility Maintenance Plans

The stationary pumpout/dump facilities at Surf Bay Marina and Tidal Bay Marina are operated by the customers. Signs are posted with the proper operating procedures, however, marina personnel check on the facility several times a day (especially during periods of heavy use) to prevent major problems (e.g., sewage lines become clogged if not rinsed properly) from occurring. The pumpouts are both inspected and cleaned once a week and thoroughly checked and repaired once a year (usually during the off-season).

The mobile pumpout service provided through a contract with Island Bay Dock is monitored for maintenance or operational problems on a continuous basis because the owner of the pumpout vessel is also the operator. Approximately once a year the mobile pumpout is serviced and repaired. The dump station located at Island Bay Dock is cleaned every night after closing the marina office. The dump station does not require much maintenance.

2.3.3 Completion of Proposed Facilities

In Section 2.2 above, there were two pumpout facilities and two dump stations described which are expected to operate within the proposed No Discharge Area. Waterfront Marina and Bayside Harbor are each expected to purchase equipment for a portable pumpout facility and a dedicated portable toilet dump station. Partial funding for this equipment will come from the Clean Vessel Act Pumpout Grant program. Upon receipt of the funds, which are estimated to be dispersed in 2 months, the marinas will purchase the dump stations and portable pumpouts. It is expected that they will be fully operational in time for the beginning of the boating season in May. The anticipated hours of operation, fees, and pumpout operating capacity (gallons per minute) are provided in the table at the beginning of this section.

2.4 Facility Draught Requirements

The following table provides information related to the physical accessibility of vessels to each pumpout facility and dump station, including the mean low water depth adjacent to each facility, the maximum draught of vessels excluded from each facility, and the estimated percentage of vessels precluded from using each facility based on draught limitations. It is estimated that 5 percent of vessels using the Bayside Channel area have a draught of more than 6 feet, therefore, these vessels can access all the sanitary waste reception facilities in the area except the pumpout facility at Bayside Harbor (upon completion). It is estimated that vessels of this size would have a holding tank (MSD Type III), not a portable toilet, and would require a pumpout facility.

There are no bridges in the proposed No Discharge Area, therefore, no maximum height limitations exist.

Table 4

Vessel Draught Limitations for Facilities

Marina Name	Facility Map Code	Mean Low Water Depth	Vessel Draught Limitations	% of Vessels Excluded
Surf Bay Marina	EP1	15 ft.	10 ft.	0%
	ED1	15 ft.	10 ft.	0%
Waterfront Marina	PP1	12 ft.	7 ft.	0%
	PD1	12 ft.	7 ft.	0%
Island Bay Dock	EP2	30 ft.	25 ft.	0%
	ED2	12 ft.	7 ft.	0%
Tidal Bay Marina	EP3	13 ft.	8 ft.	0%
	ED3	13 ft.	8 ft.	0%
Bayside Harbor	PP2	10 ft.	6 ft.	5%
	PD2	10 ft.	6 ft.	5%

Sources: Personal communication with owners/operators of Surf Bay Marina, Waterfront Marina, Island Bay Dock, Tidal Bay Marina, and Bayside Harbor.

2.5 Facility Waste Treatment Methods

The stationary pumpout facilities and dump stations located at Surf Bay Marina and Tidal Bay Marina are linked directly into the Bayside Municipal Sewage Treatment Plant, which is located 15 miles from Surf Bay Marina and 7 miles from Tidal Bay Marina. Bayside Municipal Sewage Treatment Plant has made an agreement with the State Department of Environment Protection (DEP) to accept vessel sewage. Bayside Municipal Sewage Treatment Plant has consistently met or exceeded DEP's and U.S. Environmental Protection Agency's standards.

The mobile pumpout station that services the Island Bay Dock area retains vessel sewage on board in a 300 gallon holding tank. Once a week, or more often when the tank level is near capacity, the mobile pumpout vessel travels to Tidal Bay Marina where a licensed septage hauler meets the vessel and unloads, or pumps out, the contents of the holding tank into the truck's holding tank. The truck then transports the sanitary waste to the Bayside Municipal Sewage Treatment Plant. The dump station at the Island Bay Dock deposits its contents into the on-site septic system which is also used for the marina's restroom facilities. The restroom wastes are mixed with the dump station wastes before entry into the septic system to help dilute wastes from the portable toilets.

Vessel sewage collected at the proposed dump stations and portable pumpout facilities at Waterfront Marina and Bayside Harbor will be emptied directly into the sewer system linked to the Bayside Municipal Sewage Treatment Plant. The dump stations and portable pumpouts will be emptied every day or when full, whichever comes first.

3.0 VESSEL POPULATION AND USAGE IN PROPOSED AREA

The marinas in the Bayside Channel area keep records on the number and size of county-registered and transient vessels. Although not all vessels use these five marinas, these numbers combined with registration records for Ocean County should provide an accurate estimate for vessel use in the Bayside Channel area. This area receives a significant level of transient traffic, typically consisting of larger vessels equipped with MSDs (usually Type III). The estimated number of transient vessels indicated in the table below represents the peak number recorded or observed during Labor Day weekend last year. There are no commercial vessels that currently use the Bayside Channel area.

Table 5

Vessel Population in Proposed No Discharge Area

Vessel Length	Estimated Number of Registered Vessels	Estimated Number of Transient Vessels	Total Estimated Number of Vessels
Over 40 feet	151	174	325
26 to 40 feet	862	715	1,577
16 to 26 feet	3,511	696	4,207
Less than 16 feet	9,053	837	9,890
TOTAL	13,577	2,422	15,999

Sources: Ocean County recreational vessel registration records; and mooring registration records from Surf Bay Marina, Waterfront Marina, Island Bay Dock, Tidal Bay Marina, and Bayside Harbor.

According to the technical guidelines provided for the Clean Vessel Act (Federal Register, Vol. 59, No. 47, March 10, 1994, pp. 11290-11306), the Bayside Channel area would require approximately three to four pumpout facilities and three dump stations. The pumpout facility estimate of three to four is based on an estimated 845 vessels with holding tanks (or Type III MSDs) with a peak occupancy rate (percent of vessels used on a holiday weekend) of 40 percent and one pumpout facility assumed to service 96 vessels per weekend. The estimate of three dump stations assumes an estimate of 1,094 vessels with a portable toilet at a peak occupancy rate of 40 percent in the area and one dump station able to service 144 vessels per weekend.

As described in other sections of the application, there are currently three operational pumpout facilities and three operational dump stations in the area. In addition, there are two pumpout facilities and two dump stations proposed to be operational in several months which will accommodate for any vessel population growth and conversions from Types I and II MSDs to Type III MSDs.

4.0 OTHER INFORMATION

This section is included to provide additional information on how the No Discharge Area will be enforced after EPA approval (including the local ordinances used to regulate the area), the methods that will be used to educate and inform the boating public of the no discharge status, and identification of other water pollution sources within the Bayside Channel area.

4.1 Enforcement Plan

Both the Boating Division and Division of Shellfish Sanitation of the State Department of Natural Resources will be responsible for enforcement of the No Discharge Area around the Bayside Channel after approval of the area by EPA. The Division of Shellfish Sanitation has authority to regulate and enforce the discharge of vessel sewage within and adjacent to shellfish harvesting areas. Boating Division personnel enforce all other areas, but concentrate their effort on heavy boating areas. Two years ago a Memorandum of Understanding (MOU) between the U.S. Coast Guard and the State Department of Natural Resources was established. This MOU gives the state authority to enforce compliance with the current Federal regulations related to disposal of vessel sewage.

On a local level, harbormasters in the public port areas assist the state personnel in boater enforcement and education. All of the marinas in the proposed area are private waterfront properties, however, the owners and operators have been cooperative in assisting the state in encouraging boaters to properly dispose of their wastes. All vessels mooring at private marinas must check in at the marina office to pay fees. At this time, the boaters are asked to voluntarily sign a statement that they will not discharge any sewage (or other wastes) while in the immediate marina area. This campaign was developed by Ocean County 2 years ago to encourage voluntary boater compliance with the county's no discharge standard for the Bayside Channel area.

Enforcement techniques used by the Division of Shellfish Sanitation and Boating Division include: 1) boarding vessels randomly and placing a dye tablet in the MSD to inspect proper operation (no dye observed in the water after flushing); 2) visual inspection of secured MSD Y-valve; and 3) periodic water quality monitoring during periods of heavy boating.

4.2 Local Discharge Ordinances

The Bayside Channel area lies within the City of Bayside. As mentioned in Section 4.1, the City of Bayside passed an ordinance 2 years ago to prohibit the discharge of sanitary wastes in the area in order to protect natural resources (e.g., shellfish harvesting beds, recreational swimming areas). The ordinance states:

> "**§65.03.** It shall be unlawful for any person to throw, discharge, deposit, or leave, or cause, suffer, or procure to be thrown, discharged, deposited, or left either from or out of any vessel or holding tank, or from the shore, wharf, manufacturing establishment, or mill of any kind, any refuse matter of any description into the navigable waters of Ocean County. Any violation of this ordinance results in a maximum fine of $400.00."

4.3 Public Education/Information Plan

At the five private marinas within the proposed Bayside Channel No Discharge Area, information is provided to boaters on the accepted sanitary waste handling practices for the area. Marinas are concerned about keeping the waters clean to keep their customers satisfied and to attract more customers to the area. All five marinas voluntarily participate in the following public education and outreach activities:

- **Signs.** The three marinas with operational pumpout facilities and dump stations have signs at the marina entrances and on the facilities that show boaters where the facilities are located. The two marinas with proposed facilities have signs on the fuel dock that refer vessels needing pumpout and dump facilities to the nearest marina providing these services (in both cases the marina is just across the bay). Signs in the restrooms also indicate that portable toilets should not be emptied into the restroom system.

- **Fliers/brochures.** All vessel owners who wish to moor their vessels at the marina are required to register at the marina office. The vessel owner is given information on the marina, including rules and regulations about the prohibition of sanitary waste discharge (both treated and untreated) within the marina area. In some cases, the local ordinance and fine for violation are stated. Boaters are also given a map of the marina which clearly indicates the location, fee, and operating hours of the pumpout facility and dump station.

- **Voluntary compliance agreement.** The marinas also ask boaters to voluntarily sign an agreement to obey all rules for disposing of all types of waste properly while in the marina area.

4.4 Existing Point Source Pollution

The only existing point source of water pollution within or directly adjacent to the proposed No Discharge Area is the Bayside Municipal Sewage Treatment Plant, which is located 8 miles up Long River from Bayside Channel. The discharges from this plant are continually monitored and regularly meet or exceed local, state, and Federal water quality standards.

Appendix E:

List of Contacts

List of Contacts

The following list of contacts (including contact name, agency/organization, address, and telephone number) consists of the offices and individuals contacted to obtain information on the Federal, state, and local programs related to the discharge of sewage from vessels. The contacts are arranged in the following order:

- Federal Contacts (by Federal agency)
- Regional Contacts
- State and Local Contacts
  - State Boating Law Administration Offices (by state)
  - State Coastal Zone Management Offices (by state)
  - Other State and Local Contacts (by state)

List of Federal Contacts

Federal Contacts

U.S. Environmental Protection Agency
Office of Water
Office of Wetlands, Oceans and Watersheds
Marine Pollution Control Branch
Marine Discharge Section
401 M Street, S.W.
Washington, DC 20460
(202) 260-8484
Contact: Joel Salter

U.S. Department of Transportation
United States Coast Guard
Marine Safety, Security and Environmental Protection
Marine Environmental Protection Division
Prevention and Enforcement Branch
2100 2nd Street, S.W.
Washington, DC 20593
(202) 267-6716
Contact: Cdr. Lewis Beach

United States Coast Guard
Marine Safety, Security and Environmental Protection
Merchant Vessel Inspection and Documentation Division
Survival System Branch
2100 2nd Street, S.W.
Washington, DC 20593
(202) 267-1444
Contact: Brian Berringer

United States Coast Guard
Navigation Safety and Waterway Services
Auxiliary Boating and Consumer Affairs Division
Boating Education Branch
2100 2nd Street, S.W.
Washington, DC 20593
(202) 267-0992
Contact: Hunt Anderson

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
Administration Office
Procurement, Grants and Administrative Services
Grants Management Division
Grants Operations Branch
1325 East-West Highway
Silver Spring, MD 20910
(301) 713-0926
Contact: Jean West

National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coastal Resource Management
Coastal Programs Division
1825 Connecticut Avenue, N.W.
Washington, DC 20235
(301) 713-3102
Contact: Peyton Robertson

U.S. Department of Defense
Department of the Army
Chief of Staff
Chief of Engineers
Civil Works
Operations, Construction and Readiness
Regulatory Branch
20 Massachusetts Avenue, N.W.
Washington, DC 20314
(202) 272-1785
Contact: John Studt

Department of the Navy
Logistics
Environmental Protection and Occupational Safety & Health
The Pentagon
Washington, DC 20350-2000
(703) 602-9432
Contact: Lt. Cdr. Chris Kazmarik

U.S. Department of Health and Human Services
Food and Drug Administration
Office of Seafood
Shellfish Sanitation Branch
200 C Street, S.W., HFF-513
Washington, DC 20204
(202) 254-3971
Contact: Ron Varsaci

U.S. Department of the Interior
Fish, Wildlife and Parks
Fish and Wildlife Service
Federal Aid Division
Arlington Square
4401 N. Fairfax Drive
Arlington, VA 22203
(703) 358-1845
Contact: Robert Pacific

Fish, Wildlife and Parks
National Park Service
Planning and Development
Recreation Grants Division
1849 C Street, N.W.
Washington, DC 20240
(202) 343-3700
Contact: Sam Hall

Other
National Sea Grant Depository
University of Rhode Island
Pell Library Bldg./Bay Campus
Narragansett, RI 02882
(401) 792-6114
Contact: Cynthia Murray

List of Regional Contacts

Regional Program Contacts

EPA Region I
JFK Federal Building - WQE 425
Boston, MA 02203
(617) 565-4424
Contact: Ann Rodney

EPA Region II
Jacob K. Javits Building
26 Federal Plaza
New York, NY 10278
(212) 264-7674
Contact: Anne Reynolds

EPA Region III
841 Chestnut Building
Philadelphia, PA 19107
(215) 597-3697
Contact: Ed Ambrogio

EPA Region IV
345 Courtland St. N.E.
Atlanta, GA 30365
(404) 347-1740
Contact: Rol Ferry or Patrick Ewing

EPA Region VI
First Interstate Bank Tower at Fountain Place
1445 Ross Avenue, 12th Floor, Suite 1200
Dallas, TX 75202
(214) 655-6697 or 655-6696
Contact: Mike Wagner or Wanda Boyd

EPA Region IX
75 Hawthorn Street
San Francisco, CA 94105
(415) 744-1962
Contact: Jeff Roseblum

EPA Region X
1200 Sixth Avenue
Seattle, WA 98101
(206) 553-0966 or 553-2581
Contact: Jack Gakstatter or Jerry Larrance

List of State and Local Contacts

- State Boating Law Administrations
- Coastal Zone Management Offices
- Other State/Local Contacts

State Boating Law Administration Contacts

Alabama
Department of Conservation & Natural Resources
Marine Police Division
Folsom Administrative Bldg.
Montgomery, AL 36130
(205) 242-3673
Contact: Bill Gardner

Alaska
U.S. Coast Guard
Federal Building
P.O. Box 3-5000
Juneau, AK 99802-1217
(907) 463-2065
Contact: Dennis O'Mara

Arizona
Game & Fish Department
2222 W. Greenway Road
Phoenix, AZ 85023
(602) 942-3000
Contact: Randall Fricke

Arkansas
Game & Fish Commission
Boating Safety Section
2 Natural Resources Drive
Little Rock, AR 72205
(501) 223-6377
Contact: Butch Potts

California
Department of Boating & Waterways
1629 S Street
Sacramento, CA 95814
(916) 445-6281
Contact: Bill Curry

Colorado
Division of Parks & Outdoor Recreation
13787 S. Highway 85
Littleton, CO 80125
(303) 791-1957
Contact: Dennis George

Connecticut
Dept. of Environmental Protection
Office of Boating Safety
P.O. Box 280, 333 Ferry Road
Old Lyme, CT 06371
(203) 434-8638
Contact: Richard Potter

Delaware
Division of Fish & Wildlife
Richardson & Robbins Bldg.
Dover, DE 19903
(302) 739-3440
Contact: Lynn Herman

District of Columbia
Metropolitan Police Department
Harbor Patrol
550 Water Street, S.W.
Washington, D.C. 20024
(202) 727-4582
Contact: Ronnie Thompson

Florida
Department of Natural Resources
Florida Marine Police
3900 Commonwealth Blvd.
Tallahassee, FL 32399-3000
(904) 488-5600
Contact: Lt. Radford

Georgia
Department of Natural Resources
Game & Fish Division
Law Enforcement Section
Boating Safety Office
2109-A U.S. Hwy. 278, SE
Social Circle, GA 30279
(404) 932-4641
Contact: Cpl. Edwards

State Boating Law Administration Contacts (Cont'd)

Hawaii
Department of Transportation
Harbors Division
79 S. Nimitz Highway
Honolulu, HI 96813
(808) 587-1963
Contact: Pat Torres

Idaho
Department of Parks & Recreation
Statehouse Hall
Boise, ID 83720
(208) 327-7444
Contact: Mark Brandt

Illinois
Department of Conservation
Division of Law Enforcement
524 S. Second Street
Springfield, IL 62701-1787
(217) 782-2138
Contact: Richard Lutz

Indiana
Department of Natural Resources
Law Enforcement Division
402 W. Washington Street
Indianapolis, IN 46204
(317) 232-4010
Contact: Lt. Charles Shannon

Iowa
Department of Natural Resources
State Conservation Commission
Wallace State Office Bldg.
Des Moines, IA 50319-0034
(515) 281-5145
Contact: Wilma Carpenter and Wayne Farrand

Kansas
Department of Wildlife & Parks
Route 2, Box 54A
Pratt, KS 67124
(316) 672-5911
Contact: Jeff Gayer

Kentucky
Department of Natural Resources
Water Patrol
107 Metro Street
Frankfort, KY 40601
(502) 564-3074
Contact: Donovan Smith

Louisiana
Department of Wildlife & Fisheries
2000 Quail Drive
Baton Rouge, LA 70898-9000
(504) 765-2988

Maine
Department of Inland Fisheries & Wildlife
284 State Street
Augusta, ME 04333
(207) 289-2766
Contact: Bill Vernon

Maryland
Department of Natural Resources
Boating Administration
Tawes State Office Building
Annapolis, MD 21401
(410) 974-2918
Contact: Don O'Neill

Massachusetts
Division of Law Enforcement
100 Nashua Street
Boston, MA 02114
(617) 727-3900

State Boating Law Administration Contacts (Cont'd)

Michigan
Department of Natural Resources
Law Enforcement Division
Steven T. Mason Bldg.
Lansing, MI 48909
(517) 335-3414
Contact: Sgt. Lyle Belknap

Minnesota
Department of Natural Resources
Boat & Water Safety Section
500 Lafayette Road
St. Paul, MN 55155
(619) 296-3336

Mississippi
Department of Wildlife Conservation
P.O. Box 451
Jackson, MS 39205
(601) 364-2187

Missouri
Department of Public Safety
State Water Patrol
2728 Plaza Drive
Jefferson City, MO 65109
(314) 751-3333
Contact: Larry Whitten

Montana
Department of Fish, Wildlife & Parks
Boating Safety Division
1420 E. 6th Street
Helena, MT 59620
(406) 444-2615
Contact: Dale Graff

Nebraska
Game & Parks Commission
2200 N. 33rd Street
Lincoln, NE 68503
(402) 471-0641
Contact: Leroy Orvis

Nevada
Department of Wildlife
Division of Law Enforcement
P.O. Box 10678
Reno, NV 89520-0022
(702) 688-1500
Contact: Fred Messmen

New Hampshire
Department of Safety Marine Patrol
RFD 8, Box 31
Guilford, NH 03246
(603) 293-2037

New Jersey
State Police
Marine Law Enforcement Bureau
Box 7068
West Trenton, NJ 08628-0068
(609) 882-2000

New Mexico
Natural Resources Department
Boating Safety Section
P.O. Box 1147
Santa Fe, NM 87504-1147
(505) 827-1147
Contact: David Skasik

New York
Office of Parks, Recreation & Historic Preservation
Marine & Recreational Vehicles
Agency Bldg. 1
Empire State Plaza
Albany, NY 12238
(518) 474-0445

North Carolina
Wildlife Resources Commission
Archdale Bldg.
Raleigh, NC 27604-1188
(919) 733-7191

State Boating Law Administration Contacts (Cont'd)

North Dakota
Game & Fish Department
100 N. Bismarck Expressway
Bismarck, ND 58501-5095
(701) 221-6300
Contact: Wilma Pich

Ohio
Department of Natural Resources
Division of Watercraft
Fountain Square C-2
Columbus, OH 43224-1387
(614) 265-6420
Contact: John Wargo

Oklahoma
Department of Public Safety
3600 N. Martin Luther King
Oklahoma City, OK 73111
(405) 425-2143
Contact: Bob Sanders

Oregon
State Marine Board
Boating Facilities Program
435 Commercial St. N.E.
Salem, OR 97310
(503) 373-1405
Contact: Valerie Hoy

Pennsylvania
Fish and Boat Commission
P.O. Box 67000
Harrisburg, PA 17106-7000
(717) 657-4538
Contact: John Simmons

Rhode Island
Department of Environmental Management
Boat Registration Office
22 Hayes Street
Providence, RI 02908
(401) 277-6647
Contact: David Chopy

South Carolina
Wildlife & Marine Resources Department
Division of Boating
P.O. Box 12559
Charleston, SC 29412-2559
(803) 795-6350
Contact: Rob Dunlap

South Dakota
Department of Game Fish & Parks
523 E. Capitol Street
Pierre, SD 57501-3182
(605) 773-3630
Contact: Bill Shattuck

Tennessee
Wildlife Resources Agency
P.O. Box 40747
Ellington Agricultural Center
Nashville, TN 37204
(615) 781-6500
Contact: Ed Carter

Texas
Parks & Wildlife Department
4200 Smith School Road
Austin, TX 78744
(512) 389-4850
Contact: Dexter Harris

U.S. Virgin Islands
Department of Planning & Natural Resources
Nisky Center Suite 231
45A Estate Nisky
Charlotte Amalie
St. Thomas, VI 00802
(809) 774-3320
Contact: Joseph Sutton

State Boating Law Administration Contacts (Cont'd)

Utah
Division of Parks & Recreation
1636 W. North Temple Street
Salt Lake City, UT 84116
(801) 538-3000
Contact: Ted Woolley

Vermont
Vermont State Police Headquarters
103 S. Main Street
Waterbury, Vermont 05671
(802) 244-8778
Contact: Sgt. Allen Buck

Virginia
Commission of Game & Inland Fisheries
4010 W. Broad Street
Richmond, VA 23230
(804) 367-1000
Contact: Al Golding

Washington
State Parks & Recreation Commission
7150 Cleanwater Lane
Olympia, WA 98505
(206) 586-8592
Contact: Doug Strong

West Virginia
Department of Natural Resources
Law Enforcement Division
Capitol Complex, Bldg. 3
Charleston, WV 25305
(304) 558-2783
Contact: Richard M. Hall

Wisconsin
Department of Natural Resources
Bureau of Law Enforcement
101 S. Webster Street
P.O. Box 7921
Madison, WI 53707
(608) 266-0859
Contact: Bill Engfer

Wyoming
Department of Game & Fish
5400 Bishop Blvd.
Cheyenne, WY 82006
(307) 777-8683

State Coastal Zone Management Office Contacts

Alabama
Alabama Department of Economic & Community Affairs
P.O. Box 5690
401 Adams Avenue
Montgomery, AL 36203-5690
(205) 242-5502
Contact: Clyde Chapman

Alaska
Office of Management & Budget
Division of Governmental Coordination
Box AW-0165
Juneau, AK 99811-0165
(907) 465-3562
Contact: Gretchen Keiser

American Samoa
Government of American Samoa
Development Planning Office
Pago Pago, American Samoa 96799
(684) 633-5155
Contact: Pete Galea'i

California
45 Fremont Street
Suite 2000
San Francisco, CA 94105-2219
(415) 904-5200
Contact: Gabriela Goldfarb

Connecticut
Department of Environmental Protection
Long Island Sound Programs
79 Elm Street
Hartford, CT 06102-5066
(203) 566-7404
Contacts: Art J. Rocque, Jr. and Laurie Rardin

Delaware
Department of Natural Resources and Environmental Control
89 Kings Highway
Dover, DE 19903
(302) 739-3451
Contact: Sarah Cooksey

Florida
Department of Community Affairs
Rhyne Building
2740 Centerview Drive
Tallahassee, FL 32399-2100
(904) 922-5438
Contact: Rosalyn Kilcollins

Georgia
Georgia Department of Natural Resources
Coastal Resources Division
1200 Glynn Avenue
One Conservation Way
Brunswick, GA 31523-8600
(912) 264-7218
Contact: Ron Michaels

Guam
Government of Guam
Bureau of Planning
P.O. Box 2950
Agana, Guam 96910
(671) 472-4201
Contact: Mike Ham

Hawaii
Office of State Planning
Coastal Zone Management Division
P.O. Box 3540
Honolulu, HI 96811-3540
(808) 587-2875
Contact: Douglas Tom

State Coastal Zone Management Office Contacts (Cont'd)

Indiana
Department of Natural Resources
Division of Water
100 W. Water Street
Michigan City, IN 46360
(219) 874-8316
Contact: Stephen Davis

Louisiana
Department of Natural Resources
Coastal Management Division
P.O. Box 44487
625 North Fourth Street
Baton Rouge, LA 70802
(504) 342-7591
Contact: Dr. Terry Howey

Maine
Executive Department
State Planning Office
State House Station #38
Augusta, ME 04333
(207) 287-3261
Contact: William Ferdinand, Jr.

Maryland
Department of Natural Resources
Coastal & Watershed Resources Division
Tawes State Office Building
500 Taylor Avenue
Annapolis, MD 21401
(410) 974-2784
Contact: Bruce Gilmore

Massachusetts
Executive Office of Environmental Affairs
Coastal Management Program
100 Cambridge Street
Boston, MA 02202
(617) 727-9530
Contacts: Jeff Benoit and Rick Zeroka

Michigan
Department of Natural Resources
Land & Water Management Division
Great Lakes Shorelands Section
530 W. Allegan Street, 6th Floor
Steven T. Mason Building
Lansing, MI 48933
(517) 373-1950
Contact: Chris Shafer

Minnesota
Department of Natural Resources
Division of Waters
1201 E. Highway 2
Grand Rapids, MN 55744
(218) 327-4416
Contact: Daniel Retka

Mississippi
Mississippi Department of Wildlife,
Fisheries, and Parks
Coastal Management Division
Bureau of Marine Resources
2620 West Beach Boulevard
Biloxi, MS 39531
(601) 385-5860
Contact: Sandra Fioranelli and Gary Quavis

New Hampshire
Office of State Planning
Coastal Program
2½ Beacon Street
Concord, NH 03301
(603) 271-2155
Contact: Chris Nash

New Jersey
Department of Environmental Protection &
Energy
Office of Land & Water Planning
CN 423
Trenton, NJ 08625-0423
(609) 292-1875
Contact: Steve Whitney

State Coastal Zone Management Office Contacts (Cont'd)

New York
Department of State
Division of Coastal Resources & Waterfront Revitalization
162 Washington Street
Albany, NY 12231
(518) 474-3643
Contact: George Stafford

North Carolina
Division of Coastal Management
P.O. Box 27687
225 N. McDowell Street, Room 6048
Cooper Building, 6th Floor
Raleigh, NC 27611
(919) 733-2293
Contact: Roger Schecter

Northern Marianas
Commonwealth of the Northern Mariana Islands
Office of the Governor
Coastal Resources Management
2nd Floor Morgen Building
San Jose Saipan, Mariana Islands 96950
(670) 234-6623
Contact: Joaquin Villagomez

Ohio
Office of Real Estate & Land Management
Building C-4, Fountain Square
1952 Belcher Drive
Columbus, OH 43224-1387
(614) 265-6413
Contact: Mike Colvin

Oregon
Department of Land Conservation & Development
Coastal & Ocean Program Management
800 N.E. Oregon Street, #18
Portland, OR 97232
(614) 265-6413
Contact: Eldon Hout

Pennsylvania
Department of Environmental Resources
Bureau of Land & Water Conservation
Division of Coastal Programs
P.O. Box 8555
400 Market Street, 11th Floor
Harrisburg, PA 17105-8555
(717) 787-2529
Contact: E. James Tabor

Puerto Rico
Department of Natural Resources
Coastal Management Office
P.O. Box 5887
Puerta de Tierra, PR 00906
(809) 724-5516
Contact: Jose Gonzlez Liboy

Rhode Island
Coastal Resources Management Council
Policy Division
Stedman Office Building
Tower Hill Road
Wakefield, RI 02879
(401) 277-2476
Contact: Jeff Willis

South Carolina
South Carolina Coastal Council
Ashley Corporate Center
4130 Faber Place, Suite 300
Charleston, SC 29405
(803) 744-5838
Contact: Richard Chinnis

Texas
Texas General Land Office
Coastal Division
Stephen F. Austin Building
1700 No. Congress Street
Austin, TX 78701
(512) 463-5193
Contact: Diana Ramirez

U.S. Virgin Islands
Department of Planning & Natural Resources
Division of Environmental Protection
Nisky Shopping Center, Suite 45
Charlotte Amalie
St. Thomas, Virgin Islands 00802
(809) 774-3320
Contact: Joan Harrigan-Farrelly and Leonard Reed

Virginia
Department of Environmental Quality
Public and Intergovernmental Affairs Coastal Program
202 North Ninth Street
Suite 900
Richmond, VA 23219
(804) 786-4500
Contact: Ann Brooks

Washington
Department of Ecology
Shorelands & Coastal Zone Management Program
State of Washington
P.O. Box 47600
Olympia, WA 98504-7600
(206) 459-6777
Contact: D. Rodney Mack

Wisconsin
Department of Administration
Division of Energy & Intergovernmental Relations
Wisconsin Coastal Management Program
P.O. Box 7868
101 East Wilson Street, 6th Floor
Madison, WI 53707-7868
(608) 266-8269
Contact: Oscar Herrera and Gary Schultz

Other State and Local Contacts

Alaska
Department of Environmental Conservation
Water Quality Division
Juneau, AK
(907) 465-5276
Contact: Dave Sturdevant

California
City of Avalon
Santa Catalina Island
P.O. Box 1085
Avalon, CA 90704
(310) 510-0535
Contact: John Romo

Delaware
Department of Natural Resources and Environmental Control
Wetlands and Aquatic Protection Branch
Division of Water Resources
89 Kings Highway
P.O. Box 1401
Dover, DE 19903
(302) 739-4691
Contact: Laura Herr

Hawaii
Department of Land and Natural Resources
Boating and Ocean Recreation Division
Honolulu, HI
(808) 587-1975
Contact: Dave Parsons

Illinois
Illinois Environmental Protection Agency
Water Quality Division
Permit Section
Springfield, IL
(217) 782-0610
Contact: Tom McSwiggin

Indiana
Department of Environmental Management
Water Quality Surveillance and Standards Branch
105 S. Meridian Street
Indianapolis, IN 46225
(317) 243-5028
Contact: John Winters

Louisiana
Department of Environmental Quality
Office of Water Resources
Water Quality Management Division
Baton Rouge, LA
(504) 295-8911
Contact: Al Hindrichs

Department of Environmental Quality
Office of Water Resources
Water Quality Management Division
Capital Region Office
Baton Rouge, LA
(504) 295-8480
Contact: Chris Piehler

Massachusetts
Nantucket Town Pier
34 Washington Street
Nantucket, MA 02554
(508) 228-7260
Contact: Dave Fronzuto

Michigan
All Seasons Marine, Inc.
South Haven, MI
(616) 637-3655
Contact: Bob Giesler

Minnesota
Pollution Control Agency
Water Quality Division
Industrial Section
520 Lafayette Road
St. Paul, MN 55155
(612) 297-1832
Contact: Doug Hall

Minnesota
Pollution Control Agency
St. Paul, MN
(612) 296-0905
Contact: Kim Elverum

Mississippi
Department of Environmental Quality
Office of Pollution Control
(601) 961-5151
Contact: Jim Morris

New Hampshire
Department of Environmental Services
Water Quality Permits and Compliance Bureau
Concord, NH
(603) 271-2547
Contact: Patricia Chesebrough

New York
Sea Grant Extension Program of the New York Sea Grant Institute
SUNY at Stony Brook
125 Nassau Hall
Stony Brook, NY 11794
(516) 632-8730
Contact: Jay Tanski

North Carolina
Department of Environment, Health and Natural Resources
Division of Environmental Management
Water Quality Planning
512 N. Salisbury Street
P.O. Box 29535
Raleigh, NC 27604
(919) 733-5083
Contact: Gregory Thorpe

Ohio
Department of Health
Columbus, OH
(614) 466-1390
Contact: Steven Binns

Rhode Island
Block Island Harbors Department
New Harbor
Block Island, RI 02807
(401) 466-3204
Contact: Larry Constantine

Department of Environmental Management
Water Resources Quality Division
Providence, RI
(401) 277-3961
Contact: David Chopy

South Carolina
Department of Health and Environmental Control
Bureau of Water Pollution Control
Water Quality Certification and Wetlands Programs Section
Charleston, SC
(803) 734-5229
Contact: Sally Knowles

Virginia
Department of Health
Office of Water Programs
Division of Wastewater Engineering
1500 E. Main Street
Room 109-31
Richmond, VA 23219
(804) 786-1761
Contact: Al Golding

Washington
Department of Ecology
Water Resources Division
3190 160th Avenue
Bellevue, WA 98008
(206) 649-7278

Puget Sound Water Quality Authority
P.O. Box 40900
Olympia, WA 98504-0900
(206) 493-9300
Contact: JoAnn Polk

Wisconsin
Department of Natural Resources
Madison, WI
(608) 266-5893
Contact: Tom Newbauer

Appendix F:

Annotated List of References Related to the Discharge of Vessel Sewage

Table of Contents

Annotated List of References Related to the Discharge of Vessel Sewage

INTRODUCTION

The following reference list consists of 39 pieces of literature related to the problem of sewage discharge from vessels. Each reference includes bibliographic information, key words related to the document, and an abstract to summarize the key ideas expressed in the document. The types of documents included, the reason for inclusion, the organization of the reference list, and the elements of the reference entry are described below.

Reference Inclusion Criteria

This annotated reference list is limited to the problem of sewage discharge from vessels. The reference list covers the technical, organizational, economic, and behavioral aspects of the issue. It was not designed to, nor does it, focus on the scientific aspects of the water quality issues of vessel sewage. Documents which address scientific procedures for water quality assessment or other topics were included only if they also include substantial material related to the problem of sewage discharge from vessels and if they satisfy the other criteria. The key words identified for each document focus on the issue of sewage discharge from vessels as discussed in the document. They may not represent a comprehensive subject list for the document. Although there are other types of pollution originating from vessels and marinas (i.e., fuel, solid waste), these pollutants are only covered in this list if the document also discussed the vessel sewage discharge problem.

The reference list includes documents published within the last 10 years, with two exceptions. The exceptions were included because the content of these documents was unique to the literature. Approximately three-quarters of the references included in the list were published since 1989.

Although a thorough search was conducted to identify the references reviewed, the list should not be taken as an exhaustive list of references on this topic.

Organization of Reference List

The reference list is organized into three sections: (1) Reference List A: Marinas; (2) Reference List B: Vessels; and (3) Reference List C: Other. Within each list, the references are organized alphabetically by author.

Reference List A contains documents that are focused primarily on the control of vessel sewage discharge from the marina's perspective. For example, some of the topics covered in these documents include sanitary waste facilities (pumpout and dump stations), issues related to the treatment of sewage after collection from vessels, shellfish harvesting closure areas around a marina, and issues related to sewage collection from live-aboards.

Reference List B includes documents that present information on the prevention of sewage discharge from vessels. Literature included in this list covers topics such as the description of marine sanitation devices (MSDs) and the related discharge laws, costs of retrofitting a vessel with a MSD, issues surrounding discharge enforcement, ideas to promote voluntary discharge compliance by boaters, and environmental impacts from MSD chemicals.

Reference List C includes documents that contain information either on vessel sewage discharge or on general water quality issues related to vessel-generated sewage.

Reference Format

A summary of each document is presented using a standard reference format. There are three sections to each reference -- overview, bibliographic information, and abstract. At the top of each reference entry is a "Reference No." to allow for cross-referencing.

The overview of the document, that is, the top section of the reference, provides key words related to the document, principal geographic area on which the document focuses, and document type.

- **Key Words**. This section of the reference entry lists the applicable key words located in the document related to the discharge of sewage from vessels. The words listed in parentheses are subcategories of the key word. One or more of these subcategories are included in parentheses in the reference key word list. A glossary is provided in the last section of this document. The master key word list, in alphabetical order, is:

  - Discharge compliance
  - Dump station (costs, equipment, and options)
  - Education
  - Enforcement (issues and procedures)
  - Environmental impacts (MSD chemicals, pumpouts, and sewage)
  - Fecal coliform level
  - Federal laws
  - Live-aboards
  - Local government role
  - MSDs (costs, definitions, issues, and laws)
  - No Discharge Areas
  - Nonpoint source pollution
  - Occupancy rates
  - Portable toilets
  - Pumpout facility (compliance, costs, equipment, grant programs, issues, operation/maintenance, options, and permit process)
  - Sewage loading rates
  - Sewage treatment (issues and options)
  - Shellfish harvesting buffer zones
  - State laws
  - Survey

- **Geographic Area (Geog. Area).** This reference category provides the geographic area (U.S., specific state, specific waterbody, etc.) for which the document was written. Many of the documents included in the list were written for a specific area (e.g., Puget Sound, Washington), but the information provided in the document has a universal application.

- **Document Type (Doc. Type).** The references were categorized into eight document types in an attempt to provide more information on each document and to assist in locating it. The majority of the documents referenced are Federal and state government documents. The list also includes conference papers, fact sheets, journal articles, guidance documents, academic reports, and magazine articles. In one case, only one chapter in a government report is referenced because of the length of the report and the irrelevancy of the other sections.

The middle section of the reference entry provides bibliographic information. The document author(s), sponsor, publisher, publication date, title, location in a document, identification number, number of pages or page numbers, and any other pertinent information are provided in this section. An "N/A" appears for any category not applicable to a particular entry.

- **Author(s).** This element provides the author name(s), if individuals, or the company name or government agency responsible for preparing the document. If the author is an individual, the person's affiliation is provided in parentheses after his/her name. If the affiliation is not provided, then it is assumed that the individual is affiliated with the sponsor on the line below.

- **Sponsor.** This category provides the name(s) of the organization or government agency that provided funding for preparation of the document. Often, this should be the initial contact when trying to locate a copy of the document.

- **Publisher.** This information is provided for conference papers, journal articles, and magazine articles. The publisher is a good alternate contact if the document cannot be located through a local library.

- **Publication Date (Pub. Date).** The publication date provides some insight into how current the information is and further assists in the location of the document.

- **Title.** The title is an essential piece of information for locating a document. The title also provides additional information about the document (for instance, if only one part of the document is discussed in the abstract, the title will indicate what the entire document is about).

- **In.** This category provides the main source (i.e., conference proceedings, journal) of the document for conference papers, journal articles, and magazine articles.

- **Identification Number (ID Number).** The document identification number should be used when trying to locate a copy of a document. There are several types of identification numbers used, when appropriate, in this reference list. The

first type is a document tracking number issued by the National Sea Grant Depository. Loaner copies for references with a "NSGD #" (e.g., RIU-E-92-002) can be obtained from:

National Sea Grant Depository, Pell Library Building
University of Rhode Island, Narragansett Bay Campus
Narragansett, RI 02282
(401) 792-6114

The second document identification number is a Federal government number. For example, EPA-904/6-85-132 is a U.S. Environmental Protection Agency (U.S. EPA) document. In several cases, the National Technical Information Service (NTIS) number is provided in parentheses after the government number. For documents with a "NTIS #" provided, the document can be ordered from:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
(703) 487-4650

The third type of document identification provided is the contract number under which the document was prepared. This number may assist in the location of a specific document from the author, sponsor, or publisher. The last identifier is the volume number for journal articles, which also expedites the search process.

- **Pages.** The number of pages in a document and an indication of whether or not the document has appendices is provided for the reference list user. For several of the conference papers and all of the journal and magazine articles, the pages on which the paper or article can be found in the proceedings, journal, or magazine are provided in place of number of pages.

- **Other.** Any additional information about a document that gives further insight to its content or location is provided in this category.

The last section of the reference entry provides an abstract of the document referenced. This content summary provides additional information on the document and allows the reference list user to decide whether the document is valuable enough to locate.

Guidelines on Reference List Use

There are three primary methods by which an individual can make use of this reference list. The first method is simply paging through the entire list to grasp an understanding of the literature currently available on the topic of sewage discharge from vessels. A second approach is to turn to the following table of key words relevant to this topic and look up the references (by "Reference No.") that are of interest by key word. The third method is to scan the alphabetical list of document titles (located at the end of the annotated reference list) which are cross-referenced to the corresponding reference by the "Reference No.".

Key Word Guide To Annotated Reference List

Key Word		Reference List A: Marinas																			
		A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8	A-9	A-10	A-11	A-12	A-13	A-14	A-15	A-16	A-17	A-18	A-19	A-20
Discharge compliance		•	•						•	•				•			•				
Dump Station	Costs										•									•	
	Equipment				•			•			•										
	Options					•					•									•	
Education			•	•		•		•				•		•							
Enforcement	Issues	•		•				•									•				
	Procedures	•	•	•										•							
Environmental Impacts	MSD chemicals			•	•					•											
	Pumpouts				•																
	Sewage			•	•	•			•	•											•
Fecal coliform level						•	•		•	•						•		•			•
Federal laws		•		•	•	•		•	•	•	•			•	•		•		•	•	•
Live-aboards			•			•		•				•	•	•							•
Local government role				•																	
MSDs	Costs			•							•										
	Definitions	•		•		•		•	•	•	•				•		•				•
	Issues			•	•			•	•	•	•			•			•				•
	Laws	•		•		•		•	•	•	•						•		•		
No Discharge Areas		•		•		•			•	•	•	•		•			•		•		
Nonpoint source pollution																			•	•	
Occupancy rates							•							•		•		•			•
Portable toilets				•		•		•	•		•	•		•			•			•	
Pumpout Facility	Compliance										•	•		•							
	Costs				•				•	•	•		•				•		•	•	•
	Equipment				•			•	•		•		•		•				•		•
	Grant programs			•	•			•				•									
	Issues			•				•	•	•	•			•			•				•
	Operation/maint.		•		•								•						•		•
	Options			•	•	•		•	•	•	•				•				•	•	•
	Permit process				•										•						
Sewage loading rates																•		•			
Sewage Treatment	Issues			•	•			•		•	•			•			•		•		
	Options			•	•			•		•	•			•	•						•
Shellfish harvesting buffer zones				•		•								•		•		•			•
State laws				•	•	•		•		•	•	•		•	•						
Survey				•							•		•	•		•	•				

Key Word Guide to Annotated Reference List (Cont'd)

Key Word		Reference List B: Vessels											Reference List C: Other							
		B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	C-1	C-2	C-3	C-4	C-5	C-6	C-7	C-8
Discharge compliance		•		•	•		•	•	•	•	•	•		•				•		
Dump Station	Costs																			
	Equipment																			
	Options																			
Education				•					•					•				•		
Enforcement	Issues			•	•			•		•	•							•		
	Procedures			•				•										•		
Environmental Impacts	MSD chemicals	•		•	•			•	•		•								•	
	Pumpouts			•				•	•										•	
	Sewage	•	•	•	•	•	•	•	•		•			•			•	•		
Fecal coliform level				•	•	•	•		•				•	•			•	•		•
Federal laws		•	•	•	•	•	•	•		•	•	•						•	•	•
Live-aboards			•	•										•						•
Local government role		•						•	•	•				•				•		
MSDs	Costs	•																		•
	Definitions	•	•	•	•		•	•			•	•						•		•
	Issues	•		•	•			•	•	•	•	•			•	•		•	•	•
	Laws	•	•		•		•		•	•	•	•						•	•	•
No Discharge Areas		•	•	•			•	•		•	•	•		•				•	•	•
Nonpoint source pollution		•	•	•		•	•		•					•						
Occupancy rates													•							•
Portable toilets		•	•	•			•				•	•								•
Pumpout Facility	Compliance							•												
	Costs			•																•
	Equipment																			
	Grant programs	•		•						•				•						
	Issues	•		•					•	•	•			•		•				
	Operation/maint.	•																		
	Options																			
	Permit process																			
Sewage loading rates						•							•							•
Sewage Treatment	Issues			•				•	•						•				•	
	Options							•							•				•	
Shellfish harvesting buffer zones						•			•					•						
State laws			•	•	•			•			•			•						•
Survey					•								•			•			•	•

Reference List A: Marinas

Reference No. A-1

****

Key Words: Discharge compliance; Enforcement (issues and procedures); Federal laws; MSDs (definitions and laws); No Discharge Areas

Geog. Area: U.S.

Doc. Type: Government Report

. . . . . .

Author(s): Amaral, M. and V. Lee (University of Rhode Island)

Sponsor: Rhode Island Sea Grant; and University of Rhode Island, Coastal Resources Center

Publisher: N/A

Pub. Date: July 1992

Title: Federal Regulations: Coastal Structures, Environmental Protection, and Boating Safety, Module II: Harbormaster Reference Series

In: N/A

ID Number: NSGD #: RIU-E-92-002

Pages: 28 pp. (plus appendices)

Other: N/A

. . . . . .

Abstract: Federal regulations which are most pertinent for harbormasters are presented in this report. The first section presents the Federal guidelines for the placement of objects or structures in navigable waters as regulated by the Army Corps of Engineers. The second section presents elements of the Federal Code of Regulations, which are administered by the Coast Guard, pertaining to boating safety and water quality impacted by boating. The second section specifically provides Federal regulations and other information related to MSDs and the definition, designation, and enforcement of No Discharge Areas. [Adapted from document]

****

Reference No. A-2

****

Key Words: Discharge compliance; Education; Enforcement (procedures); Live-aboards; Pumpout facility (operation/maintenance)

Geog. Area: U.S.

Doc. Type: Conference Paper

. . . . . .

Author(s): Bleier, A. (KECO/Pump-A-Head, San Diego, CA)

Sponsor: N/A

Publisher: International Marina Institute (Wickford, RI)

Pub. Date: 1991

Title: Waste Management/Marine Sanitation

In: 1991 National Applied Marina Research Conference

ID Number: N/A

Pages: 4 pp.

Other: N/A

. . . . . .

Abstract: This paper describes several waste management methods that marina operators can use to help boaters properly dispose of their waste. Three boater waste types are described: (1) solid waste (including hazardous waste); (2) recyclable waste; and (3) sanitary waste. A brief description of each waste type is provided in addition to suggestions for marinas to encourage boater participation, including boater education (i.e., proper signage, convenience, newsletters). The section on sanitary waste provides information on: maintaining clean, operable pumpout stations; tying sanitary waste disposal compliance into the marina's slip rental agreement; placing dye tablets into boater's holding tanks; requiring live-aboards to follow certain sanitary waste disposal procedures; and including the pumpout service cost in the slip rental rates.

****

Reference No. A-3

****

Key Words: Education; Enforcement (issues and procedures); Environmental impacts (MSD chemicals and sewage); Federal laws; Local government role; MSDs (costs, definitions, issues, and laws); No Discharge Areas; Portable toilets; Pumpout facility (grant programs, issues, and options); Sewage treatment (issues and options); Shellfish harvesting buffer zones; State laws; Survey

Geog. Area: Buzzards Bay, Massachusetts

Doc. Type: Government Report

. . . . . .

Author(s): The Coalition for Buzzards Bay and the Buzzards Bay Project

Sponsor: The Buzzards Bay Project (Massachusetts Executive Office of Environmental Affairs; and U.S. EPA)

Publisher: N/A

Pub. Date: November 1990

Title: An Assessment of Marine Pump-Out Facilities in Buzzards Bay

In: N/A

ID Number: N/A

Pages: 99 pp.

Other: N/A

. . . . . .

Abstract: This report presents the findings of a survey conducted for the Coalition for Buzzards Bay and the Buzzards Bay Project, in the ten towns on Buzzards Bay, of existing marine pumpout facilities and the need for such facilities in the future. For each town, the report provides: a profile of the town, description of the coastal embayments, summary of any proposed vessel sanitary waste handling or treatment facilities, and recommendations on how to most efficiently implement or strengthen the town's pumpout program. The report presents some bay-wide recommendations for sanitary waste handling and treatment. The report also provides information on treatment of vessel sewage in Buzzards Bay, sewage discharge enforcement issues, alternatives to traditional marine pumpouts, funding vehicles for marine pumpout facilities, holding tank retrofitting costs, and information needs for the future. [Adapted from document]

****

Reference No. A-4

****

Key Words: Dump station (equipment); Environmental impacts (MSD chemicals, pumpouts, and sewage); Federal laws; MSDs (issues); Pumpout facility (costs, equipment, grant programs, operation/maintenance, options, and permit process); Sewage treatment (issues and options); State laws

Geog. Area: Maryland

Doc. Type: Guidance Document

. . . . . .

Author(s): Coastal Technology, Inc.

Sponsor: Maryland Department of Natural Resources, Boat Administration

Publisher: N/A

Pub. Date: February 1990

Title: A Guidebook for Marina Owners and Operators on the Installation and Operation of Sewage Pumpout Stations

In: N/A

ID Number: N/A

Pages: 19 pp. (plus appendices)

Other: N/A

. . . . . .

Abstract: This guidance document provides an overview of the installation and operation of sewage pumpout and dump stations. Various pumpout station options and their related costs are provided along with a discussion of several sewage collection and disposal methods. The document briefly describes the pumping equipment, piping, fitting, hoses, and holding tanks needed to develop an effective pumpout station. Suggested parameters are also provided for portable toilet dump stations. The process for obtaining pumpout station construction permits at Federal, state, and local government levels (in Maryland) is also provided. A brief discussion of pumpout station legal requirements and operation and maintenance procedures is included. The appendices provide pumpout equipment brochures (with diagrams), a list of Maryland wastewater treatment plants, a list of local Maryland permitting agencies, a sample Maryland Department of Natural Resources (DNR) pumpout facility permit application, and a sample Maryland DNR pumpout facility grant application.

****

Reference No. A-5

****

Key Words: Dump station (options); Education; Environmental impacts (sewage); Fecal coliform level; Federal laws; Live-aboards; MSDs (definitions and laws); No Discharge Areas; Portable toilets; Pumpout facility (options); Shellfish harvesting buffer zones; State laws

Geog. Area: Delaware

Doc. Type: Guidance Document

. . . . . .

Author(s): Delaware Department of Natural Resources and Environmental Control, Division of Water Resources

Sponsor: (see author)

Publisher: N/A

Pub. Date: August 1990

Title: State of Delaware Marina Guidebook: A Guidance Document for Locating, Planning and Designing Marinas

In: N/A

ID Number: N/A

Pages: 64 pp.

Other: N/A

. . . . . .

Abstract: This guidebook presents information on the marina permitting and licensing process in Delaware, marina alterations, marina operation and maintenance plans, and requirements for siting and designing new marinas. The guidebook discusses shellfish harvesting buffer zones. Proper sanitary waste-handling procedures for marinas, such as holding tank pumpout facilities, portable toilet dump facilities, shoreside sanitary facilities, and live-aboard sewage hookups are also discussed. Although this guidebook is targeted toward Delaware marinas, some of the information is applicable to marinas in other states.

****

Reference No. A-6

****

Key Words: Fecal coliform level; Occupancy rates

Geog. Area: North Carolina

Doc. Type: Government Report

. . . . . .

Author(s): Fisher, J.S., R.R. Perdue, M.F. Overton, M.D. Sobsey, and B.L. Sill

Sponsor: North Carolina Sea Grant; North Carolina Department of Administration; and North Carolina Department of Natural Resources and Community Development, Division of Coastal Management

Publisher: N/A

Pub. Date: January 1987

Title: A Comparison of Water Quality at Two Recreational Marinas During a Peak-Use Period

In: N/A

ID Number: Sea Grant: NCU-T-87-001

Pages: 34 pp.

Other: N/A

. . . . . .

Abstract: This study was undertaken as a pilot project to develop the experience and data collection procedures needed to design a more comprehensive study of the impacts of marinas on water quality. The study characterized the relative flushing at two marinas using dye tracers, surveyed the number of occupied vessels at the marinas, and systematically collected water samples to measure the concentrations of fecal coliform. The recreation use pattern phase of the study concluded that use patterns varied dramatically between the two study sites. Any model developed to predict the recreational use of marinas should include not only the number of slips, but other site characteristics as well. It also concluded that the composition of vessels in a marina needed further study. The data did not support the assumption of many coliform concentration models that all vessels in a marina will be used at some time during each day. Neither traffic counts or parking lot counts provided an adequate explanation of vessel use. The study results also indicated that data collection concerning the identification of vessel owners using vessel registration numbers should include the use of a vessel because some owners backed their vessels into slips thereby making collection of registration numbers impossible.

****

Reference No. A-7

****

Key Words: Dump station (equipment); Education; Enforcement (issues); Federal laws; Live-aboards; MSDs (definitions, issues, and laws); Portable toilets; Pumpout facility (equipment, grant programs, issues, and options); Sewage treatment (issues and options); State laws

Geog. Area: Washington

Doc. Type: Government Report

. . . . . .

Author(s): Howard Edde, Inc.

Sponsor: Washington State Parks and Recreation Commission

Publisher: N/A

Pub. Date: December 1991

Title: State of the Art Assessment of Boat Sewage Pumpout Program in Washington State

In: N/A

ID Number: N/A

Pages: 7 pp. (plus tables and appendices)

Other: N/A

. . . . . .

Abstract: This report provides an assessment of the Washington State effort to furnish adequate pumpout facilities for boaters. The Washington State Parks and Recreation Commission is the lead agency for this issue. The report explains the agency's plan for controlling the discharge of vessel sewage, which includes an extensive boater education program and adequate sanitary waste reception facilities (pumpout and dump stations) throughout the state. Findings from the study and recommendations for improving the pumpout program are provided. Tables attached to the end of the report provide the following useful information: Washington Department of Ecology guidelines for pumpout facilities at new or expanded marinas; model ordinance for establishing rules and regulations for sewage disposal from vessels with live-aboards at marinas; mitigation measures to control water pollution from live-aboards at marinas; consolidated use figures at vessel pumpout facilities; vessel sewage pumpout/dump station design criteria; and relevant sections of the 1991 Puget Sound Water Quality Management Plan.

****

Reference No. A-8

****

Key Words: Discharge compliance; Environmental impacts (sewage); Fecal coliform level; Federal laws; MSDs (definitions, issues, and laws); No Discharge Areas; Portable toilets; Pumpout facility (costs, equipment, issues, and options)

Geog. Area: U.S.

Doc. Type: Conference Paper

. . . . . .

Author(s): Natchez, D.S. (Daniel S. Natchez and Associates, Inc., Mamaroneck, NY)

Sponsor: New England Interstate Environmental Training Center (In cooperation with: U.S. EPA, Region I; and New England Interstate Water Pollution Control Commission)

Publisher: N/A

Pub. Date: July 1992

Title: Types of Pump Out Facilities

In: Operating and Managing Sewage Pump Out Facilities in New England, July 30, 1992

ID Number: N/A

Pages: 11 pp.

Other: N/A

. . . . . .

Abstract: This paper presents the issues related to handling sanitary wastes from vessels. The paper provides an overview of the water quality problems which arise from both point and nonpoint pollution sources. The paper describes the Federal MSD regulations and defines the three types of MSDs. A brief discussion on No Discharge Areas and the need for adequate pumpout facilities is also provided. The paper discusses the correlation of proper sanitary vessel waste practices and improved water quality based on several previous studies and surveys. The paper concludes by describing the advantages and disadvantages (i.e., costs, convenience) of three types of sanitary waste pumpout facilities -- portable facilities, single location fixed systems (pumpout stations), and slip-side systems.

****

Reference No. A-9

****

Key Words: Discharge compliance; Environmental impacts (MSD chemicals and sewage); Fecal coliform level; Federal laws; MSDs (definitions, issues, and laws); No Discharge Areas; Pumpout facility (costs, issues, and options); Sewage treatment (issues and options); State laws

Geog. Area: U.S.

Doc. Type: Conference Paper

. . . . . .

Author(s): Natchez, D.S. (Daniel S. Natchez and Associates, Inc., Mamaroneck, NY)

Sponsor: N/A

Publisher: International Marina Institute (Wickford, RI)

Pub. Date: 1990

Title: Marine Sanitation -- Approaches, Benefits, Misconceptions and the Impacts of the Chemicals Used

In: 1990 Environmental Management for Marinas Conference, September 5-7, 1990, Washington, D.C.

ID Number: N/A

Pages: 11 pp.

Other: N/A

. . . . . .

Abstract: This paper examines different means of dealing with marine sanitation, including the use of pumpout facilities in marinas and the benefits/problems of using pumpout facilities both in terms of the environment and the perception of the public and politicians. The paper also discusses the effects of the chemicals commonly used in holding tanks and other MSDs on the environment and sewage treatment processes. The paper deals with many common misconceptions regarding the use of pumpout facilities and MSDs in general, and the need for marina operators to be more informed as to how to educate their patrons. [Adapted from document]

****

Reference No. A-10

****

Key Words: Dump station (costs, equipment, and options); Federal laws; MSDs (costs, definitions, issues, and laws); No Discharge Areas; Portable toilets; Pumpout facility (compliance, costs, equipment, issues, and options); Sewage treatment (issues and options); State laws; Survey

Geog. Area: New Jersey

Doc. Type: Government Report

. . . . . .

Author(s): New Jersey Department of Environmental Protection, Division of Coastal Resources

Sponsor: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management

Publisher: N/A

Pub. Date: January 1989

Title: The Availability of and Demand for Sanitary Sewage Handling Facilities on New Jersey's Coastal Waters

In: N/A

ID Number: N/A

Pages: 36 pp. (plus appendices)

Other: A report to the State Legislature as required by P.L. 1988 c. 117: The Marine Sewage Treatment Act

. . . . . .

Abstract: This report was prepared under a requirement of New Jersey's Marine Sewage Treatment Act. The report assesses the availability of sewage pumpout facilities and portable toilet dump stations and the boater's demand for these facilities in New Jersey. An overview of MSDs and the different types of sanitary waste collection facilities is provided. Based on a survey by the New Jersey Sea Grant, the availability of public and private pumpout stations was evaluated. The report also estimated the number of vessels that potentially need these sewage pumpout or dump services. After a comparison of the results was made, several options were presented to further control the discharge of vessel sewage into the state's water. An addendum to this report (April 1989) further describes recommendations resulting from this analysis.

****

Reference No. A-11

****

Key Words: Education; Live-aboards; No Discharge Areas; Portable toilets; Pumpout facility (compliance and grant programs); State laws

Geog. Area: New Jersey

Doc. Type: Government Report

. . . . . .

Author(s): New Jersey Department of Environmental Protection, Division of Coastal Resources

Sponsor: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management

Publisher: N/A

Pub. Date: April 1989

Title: The Availability of and Demand for Sanitary Sewage Handling Facilities on New Jersey's Coastal Waters: Addendum and Recommendations

In: N/A

ID Number: N/A

Pages: 19 pp.

Other: A report to the State Legislature as required by P.L. 1988 c. 117: The Marine Sewage Treatment Act

. . . . . .

Abstract: This report is an addendum to the New Jersey Department of Environmental Protection's report from January 1989. This report takes the findings on availability of and demand for sanitary waste facilities in New Jersey, presented in the previous report (see Reference No. A-8), and provides several draft proposed state regulations and recommends specific legislative action. In addition, a boater education brochure with information on marine sewage disposal practices and pumpout facility locations in New Jersey is presented as part of the plan to encourage proper sanitary waste handling by boaters and marinas.

****

Reference No. A-12

****

Key Words: Live-aboards; Pumpout facility (costs, equipment, and operation/ maintenance); Survey

Geog. Area: New England Coastal States (CT, ME, MA, NH, RI)

Doc. Type: Government Report

. . . . . .

Author(s): Ross, N. and M. Amaral (International Marina Institute, Wickford, RI)

Sponsor: U.S. Environmental Protection Agency, Region I

Publisher: N/A

Pub. Date: 1992

Title: New England Coastal Marine Pumpout Survey: EPA Region I

In: N/A

ID Number: N/A

Pages: 51 pp. (plus appendices)

Other: N/A

. . . . . .

Abstract: This document presents the results of a 1991 survey of New England coastal public and private marina facilities. Its purpose was to identify and update the New England marina facility database, document the availability of vessel sewage pumpout services, and determine the in-water vessel storage capacity and related services of the identified marinas. The survey results, based on an 81 percent response rate, are organized around the following topics: pumpout stations, pumpout operations and use, sewage waste collection and disposal, boating facility use, live-aboards, cost of installation and operation of pumpout stations, profile of a typical pumpout station in New England, elements of pumpout success, and roles of stakeholders in cleaning up the Nation's water. Among the study conclusions were that pumpout units in the region were underutilized in 1991, that the service fee charged influenced usage (the higher the fee the lower the use), and that the major element of success for harbors under public control was enforcement and education. The appendices include a list of pumpout manufacturers and a list of installed pumpout stations by state.

****

Reference No. A-13

****

Key Words: Discharge compliance; Education; Enforcement (procedures); Federal laws; Live-aboards; MSDs (issues); No Discharge Areas; Occupancy rates; Portable toilets; Pumpout facility (compliance and issues); Sewage treatment (issues and options); Shellfish harvesting buffer zones; State laws; Survey

Geog. Area: Virginia

Doc. Type: Conference Paper

. . . . . .

Author(s): Sawyer, C.M. and A.F. Golding (Virginia Department of Health)

Sponsor: N/A

Publisher: International Marina Institute (Wickford, RI)

Pub. Date: 1990

Title: Marina Pollution Abatement

In: 1990 Environmental Management for Marinas Conference, September 5-7, 1990, Washington, D.C.

ID Number: N/A

Pages: 21 pp.

Other: N/A

. . . . . .

Abstract: This paper describes the public education program for promoting voluntary no discharge of boater sanitary waste which was developed and implemented by Virginia. In connection with the educational program, Virginia has implemented a program of establishing several demonstration pumpout facilities at publicly-owned marinas. The establishment of a shellfish harvesting buffer zone around marinas is also discussed. The paper presents issues surrounding treatment of vessel holding tank wastes by municipal sewage treatment plants and options when municipal plants are not available. A lengthy section of the report is dedicated to the issues related to live-aboards and the disposal of their sanitary wastes. A survey was conducted to determine the areas and extent of the live-aboard waste disposal problem. Results from the survey are provided in the paper. [Adapted from document]

****

Reference No. A-14

****

Key Words: Federal laws; MSDs (definitions); Pumpout facility (equipment, options, and permit process); Sewage treatment (options); State laws

Geog. Area: South Carolina

Doc. Type: Guidance Document

. . . . . .

Author(s): South Carolina Coastal Council (Charleston, SC)

Sponsor: (see author)

Publisher: N/A

Pub. Date: 1984

Title: Guidelines for Preparation of Coastal Marina Report

In: N/A

ID Number: N/A

Pages: 47 pp. (plus appendices)

Other: N/A

. . . . . .

Abstract: This guidance document provides the application requirements for receiving a coastal marina facility permit in South Carolina. Among the marina requirements is a wastewater pollution control system. The document provides information on wastewater facilities capable of handling sanitary waste from vessels. The different types of pumpout facility systems (i.e., slip-side, portable, fixed) and options for sewage treatment are described. All pumpout facilities have to be certified by the South Carolina Department of Health and Environmental Control before the South Carolina Coastal Council will consider permit approval for the marina.

****

Reference No. A-15

****

Key Words: Fecal coliform level; Occupancy rates; Sewage loading rates; Shellfish harvesting buffer zones; Survey

Geog. Area: South Carolina

Doc. Type: Government Report

. . . . . .

Author(s): South Carolina Department of Health and Environmental Control, Bureau of Water Pollution Control, Division of Water Quality and Shellfish Sanitation

Sponsor: (see author)

Publisher: N/A

Pub. Date: June 1990

Title: Rules and Regulations Related to Shellfish (R61-47: "Shellfish")

In: N/A

ID Number: N/A

Pages: 54 pp.

Other: Statutory Authority: Section 44-1-140 of the South Carolina Code of Laws, 1976

. . . . . .

Abstract: This report provides the rules and regulations relating to shellfish in South Carolina. One part of the regulations, developed by the South Carolina Department of Health and Environmental Control, describes the shellfish harvesting buffer zone determination assumptions and criteria in the vicinity of marinas and other vessel docking facilities, where vessel traffic is more concentrated and the flushing action is typically at a lower rate than in open water areas. Previously, the state provided two alternatives for this determination: (1) an assumed 1,000 foot radius buffer zone; or (2) a reduced buffer zone with the presentation of results from a site-specific hydrographic study. These regulations only allow the second alternative to be used for buffer zone determination. The other shellfish regulations relate to the harvesting, handling, processing, and sampling of shellfish.

****

Reference No. A-16

****

Key Words: Discharge compliance; Enforcement (issues); Federal laws; MSDs (definitions, issues, and laws); No Discharge Areas; Portable toilets; Pumpout facility (costs and issues); Sewage treatment (issues); Survey

Geog. Area: Suffolk County, Long Island, New York

Doc. Type: Conference Paper

. . . . . .

Author(s): Tanski, J. (New York Sea Grant Extension Program)

Sponsor: New York Sea Grant Extension Program

Publisher: International Marina Institute (Wickford, RI)

Pub. Date: 1989

Title: Boater Use of Pumpout Facilities in Suffolk County, Long Island, New York

In: 1989 National Marina Research Conference, January 9-12, 1992, Narragansett, Rhode Island (N.W. Ross, ed.)

ID Number: NSGD #: NYEXT-R-89-002

Pages: pp. 173-191

Other: N/A

. . . . . .

Abstract: A survey was conducted in 1987 to determine the current situation of pumpout stations in an area known for heavy boating activity, Suffolk County, Long Island, New York. The survey was conducted by interviewing the operators of marinas which offer sewage pumpout service. This list of marina operators was compiled from several sources. The findings discussion is divided into several topics: number of pumpout facilities; boater pumpout use (pumpouts per season and use per slip); factors controlling boater pumpout use (i.e., cost, boater need); boater demand and the need for additional pumpout facilities; increasing pumpout use and demand; economic considerations (pumpout facility construction, operation, and maintenance costs); and vessel waste disposal and treatment issues.

****

Reference No. A-17

****

Key Words: Fecal coliform level; Occupancy rates; Sewage loading rates; Shellfish harvesting buffer zones

Geog. Area: U.S.

Doc. Type: Guidance Document

. . . . . .

Author(s): U.S. Department of Health and Human Services, Public Health Service, Food and Drug Administration, Shellfish Sanitation Branch

Sponsor: (see author)

Publisher: N/A

Pub. Date: June 1989

Title: Evaluation of Marinas by State Shellfish Sanitation Control Officials

In: N/A

ID Number: N/A

Pages: 7 pp.

Other: N/A

. . . . . .

Abstract: This guideline is provided to ensure the uniform application of the National Shellfish Sanitation Program criteria, as adopted by the Interstate Shellfish Sanitation Conference, for the evaluation and classification of shellfish growing waters in and around docks, marinas, or other vessel mooring areas. This guideline for the calculation of shellfish harvesting closure areas provides two example calculations of the closure areas around a marina. The first example provides assumptions for the vessel slip occupancy rates and discharge rates when this information is unknown. The second example presents the calculation when the vessel slip occupancy, population, number of holding tanks, and pumpout facility use is known. The result of these calculations is the minimum area that needs to be closed to shellfish harvesting to protect human health. [Adapted from document]

****

Reference No. A-18

****

Key Words: Federal laws; MSDs (laws); No Discharge Areas; Nonpoint source pollution; Pumpout facility (costs, equipment, operation/maintenance, and options); Sewage treatment (issues)

Geog. Area: U.S.

Doc. Type: Chapter in Government Report

. . . . . .

Author(s): U.S. EPA, Office of Water

Sponsor: (see author)

Publisher: N/A

Pub. Date: January 1993

Title: Management Measures for Marinas and Recreational Boating (Chapter 5)

In: Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters

ID Number: EPA-840-B-92-002

Pages: 74 pp. (plus appendix)

Other: N/A

. . . . . .

Abstract: This government report specifies management measures for various coastal waters nonpoint pollution sources, including agriculture, forestry, urban areas, hydromodification, wetlands, riparian areas, and vegetated treatment systems, and marinas and recreational boating. The chapter on marinas and recreational boating defines management measures and practices and describes Federal and state marina and boating programs. The chapter continues by identifying the management measures under two categories, which are: (1) siting and design; and (2) marina and vessel operation and maintenance. The management measures related to marina siting and design are marina flushing, water quality assessment, habitat assessment, shoreline stabilization, storm water runoff, fueling station design, and sewage facility management. The management measures related to marina and vessel operation and maintenance are solid waste management, fish waste management, liquid material management, petroleum control management, vessel cleaning management, public education management, maintenance of sewage facilities management, and vessel operation management.

****

Reference No. A-19

****

Key Words: Dump station (costs and options); Federal laws; Nonpoint source pollution; Portable toilets; Pumpout facility (costs and options)

Geog. Area: U.S.

Doc. Type: Government Report

. . . . . .

Author(s): U.S. EPA, Office of Water

Sponsor: (see author)

Publisher: N/A

Pub. Date: December 1992

Title: Economic Analysis of Coastal Nonpoint Source Pollution Controls: Marinas

In: N/A

ID Number: N/A

Pages: 146 pp. (plus appendices)

Other: N/A

. . . . . .

Abstract: This report analyzes the economic impacts of EPA-proposed management measures designed to control nonpoint source pollution from the construction, operation, and maintenance of marinas under the Coastal Zone Act Reauthorization Amendments (CZARA) of 1990. The report briefly describes nonpoint source pollution from marinas, reviews the legislative history of the CZARA, presents an overview of the findings of the analysis, summarizes characteristics of marinas and recreational boating trends, discusses the model marina approach to measuring the impacts on marinas and estimating the capital and operating costs of implementing the management measures, and reports the results of the economic analysis. [Adapted from document]

****

Reference No. A-20

****

Key Words: Environmental impacts (sewage); Fecal coliform level; Federal laws; Live-aboards; MSDs (definitions and issues); Occupancy rates; Pumpout facility (costs, equipment, issues, operation/maintenance, and options); Sewage treatment (options); Shellfish harvesting buffer zones

Geog. Area: Coastal States in EPA Region IV (AL, FL, GA, MS, NC, SC)

Doc. Type: Government Report

. . . . . .

Author(s): U.S. EPA, Region IV, NEPA Compliance Section

Sponsor: (see author)

Publisher: N/A

Pub. Date: April 1985

Title: Coastal Marinas Assessment Handbook

In: N/A

ID Number: EPA-904/6-85-132 (NTIS #: PB85-234573)

Pages: 379 pp. (plus appendices)

Other: N/A

. . . . . .

Abstract: This report was developed to provide guidance to marinas in EPA Region IV coastal states (AL, FL, GA, MS, NC, and SC), however, most of the information is relevant to other parts of the United States. The guidance document provides information on siting, environmental impacts, environmental solutions, and regulations as they relate to coastal marina development. One section describes the environmental impact of sanitary wastes from vessels and provides methods for determining the concentration of fecal coliform within a marina area. A discussion on water quality mitigation measures related to marina design and construction provides information on sanitary wastes, including shoreside facilities, sanitary wastes from vessels, MSDs, marina wastewater collection facility, facility characteristics and costs, overall comparison of facilities, and examples of operational facilities. This section of the guidance document also includes diagrams and photos of the different types of pumpout facilities.

****

Reference List B: Vessels

Reference No. B-1

****

Key Words: Discharge compliance; Environmental impacts (MSD chemicals and sewage); Federal laws; Local government role; MSDs (costs, definitions, issues, and laws); No Discharge Areas; Nonpoint source pollution; Portable toilets; Pumpout facility (grant programs, issues, and operation/maintenance)

Geog. Area: Puget Sound, Washington

Doc. Type: Guidance Document

. . . . . .

Author(s): Briggs, J.D. (*48° North: The Sailing Magazine*), B. Taylor (environmental geographer), J. Anderson (marine author), and M. Aarhaus (Washington Department of Ecology)

Sponsor: Puget Sound Water Quality Authority; Washington State Centennial Clean Water Fund; Washington State Department of Ecology; and Washington State Department of Natural Resources

Publisher: *48° North: The Sailing Magazine* (Seattle, WA)

Pub. Date: 1993

Title: SOUNDWATCH: An Environmental Guide for Boaters

In: N/A

ID Number: N/A

Pages: 64 pp.

Other: N/A

. . . . . .

Abstract: This environmental guide covers a wide range of boater/vessel-related pollution (i.e., sewage, anti-fouling paint, fuel). The guide targets boaters within the Puget Sound area, but much of the information can be applied to other areas. A background of vessel-related pollution and its impact on the environment is provided with a discussion on the relationship between boaters, marina operators, and government agencies, and their roles in the pollution control solution. A section on vessel sewage discharge provides: an overview of applicable Federal, state, and local laws; the steps boaters can take to increase discharge compliance; general pumpout station protocol; pumpout facility funding opportunities; MSD and portable toilet definitions and explanation of 3-mile discharge limit and Y-valves; and 12 pumpout facility location charts for the Puget Sound. The guide continues by providing parallel information on gray water, vessel-generated garbage, hazardous materials, and related marina Best Management Practices.

****

Reference No. B-2

****

Key Words: Environmental impacts (sewage); Federal laws; Live-aboards; MSDs (definitions and laws); No Discharge Areas; Nonpoint source pollution; Portable toilets; State laws

Geog. Area: Delaware

Doc. Type: Fact Sheet

. . . . . .

Author(s): Falk, J.M. (University of Delaware Sea Grant Marine Advisory Service) and B.N. Anderson (Delaware Department of Natural Resources and Environmental Control)

Sponsor: University of Delaware Sea Grant Marine Advisory Service

Publisher: N/A

Pub. Date: July 1989

Title: Recreational Boaters: Take Charge of Your Discharge

In: N/A

ID Number: NSGD #: DELU-G-89-004

Pages: 1 p.

Other: Delaware Sea Grant MAS Note

. . . . . .

Abstract: The purpose of this fact sheet is to inform recreational boaters of Delaware state laws related to the discharge of sewage from vessels that went into effect. An overview of the water quality problems vessel sewage can cause for swimmers and shellfish harvesters is provided. The state laws designate all tidal waters of Delaware as a No Discharge Area and specifically include no discharge from portable toilets. Marinas are also required by state law to provide "adequate" pumpout stations for vessels docked at the marina that use Type III MSDs (holding tanks) and live-aboards.

****

Reference No. B-3

****

Key Words: Discharge compliance; Education; Enforcement (issues and procedures); Environmental impacts (MSD chemicals, pumpouts, and sewage); Fecal coliform level; Federal laws; Live-aboards; MSDs (definitions and issues); No Discharge Areas; Nonpoint source pollution; Portable toilets; Pumpout facility (costs, grant programs, and issues); Sewage treatment (issues); State laws

Geog. Area: Chesapeake Bay (DC, MD, PA, VA)

Doc. Type: Government Report

. . . . . .

Author(s): Implementation Committee of the Chesapeake Bay Program, Recreational Boat Pollution Work Group

Sponsor: Chesapeake Bay Program (Annapolis, MD)

Publisher: N/A

Pub. Date: January 1991

Title: Time for Action: Recreational Boat Pollution and the Chesapeake Bay

In: N/A

ID Number: N/A

Pages: 23 pp.

Other: N/A

. . . . . .

Abstract: This report provides the recommendations and proposed measures from the Implementation Committee of the Chesapeake Bay Program's Recreational Boat Pollution Work Group on addressing the issues of nonpoint source pollution (especially vessel sewage) from recreational vessels using the Chesapeake Bay. The report provides a brief overview of the current problems and concerns related to this issue. The pollutants discharged from boating activities are identified. The applicable Federal and state (for Maryland, Virginia, Pennsylvania, and the District of Columbia) laws and programs applicable to MSDs and other vessel-related pollution are described. The report concludes by describing the Work Group's findings and recommendations for lessening the effect of vessel sewage and other types of recreational vessel-related pollutants.

****

Reference No. B-4

****

Key Words: Discharge compliance; Enforcement (issues); Environmental impacts (MSD chemicals and sewage); Fecal coliform level; Federal laws; MSDs (definitions, issues, and laws); State laws; Survey

Geog. Area: U.S.

Doc. Type: Government Report

. . . . . .

Author(s): JRB Associates, Inc.

Sponsor: U.S. EPA, Office of Analysis and Evaluation

Publisher: N/A

Pub. Date: April 1981

Title: Analysis of Wastewater Discharge from Marine Sanitation Devices

In: N/A

ID Number: EPA-440/5-81-013 (NTIS #: PB82-158072)

Pages: 90 pp. (plus appendices)

Other: N/A

. . . . . .

Abstract: This report presents data pertinent to analyzing alternative Federal policies for regulating the discharge of human wastes from recreational watercraft. The study indicates that low compliance with current MSD regulations is the result of deliberate resistance, uncertainty about the finality of the current regulations, and doubt that the regulations will be effectively enforced. The report indicates that pleasure vessels, particularly when congregated in relatively slow-moving waters, such as marina basins or inlets with minimal current or tidal action, can produce unacceptable fecal coliform concentrations. This is of particular concern because shellfish can accumulate sewage-borne microorganisms, rendering the shellfish unacceptable for human consumption. Of the two major disinfectant chemicals commonly used in MSDs, chlorine and formaldehyde, only chlorine has been shown to be toxic in the aquatic environment, but only in discharges from large shore-based facilities, such as sewage treatment plants. No study was found linking either chlorine or formaldehyde, when used as MSD disinfectants, with effects on the environment. MSD testing, which is conducted by the USCG, has shown that if a MSD is properly installed and operated, concerns about odors, explosion from trapped gas, and constant maintenance are unwarranted. [Adapted from document]

****

Reference No. B-5

****

Key Words: Environmental impacts (sewage); Fecal coliform level; Federal laws; Nonpoint source pollution; Sewage loading rates; Shellfish harvesting buffer zones

Geog. Area: U.S.

Doc. Type: Government Report

. . . . . .

Author(s): Milliken, A.S. and V. Lee (University of Rhode Island)

Sponsor: Rhode Island Sea Grant

Publisher: N/A

Pub. Date: January 1990

Title: Pollution Impacts from Recreational Boating: A Bibliography and Summary Review

In: N/A

ID Number: NSGD #: RIU-G-90-002

Pages: 26 pp.

Other: N/A

. . . . . .

Abstract: This report provides a summary review and non-annotated bibliography for four types of nonpoint pollution sources associated with recreational boating. These four sources are vessel sewage, vessel engine pollution, antifouling paints, and plastic debris. The vessel sewage summary identifies two major water quality concerns related to an increase or heavy presence in water (especially non-flushing areas): (1) the increase in biological oxygen demand reduces the amount of dissolved oxygen, which directly affects certain aquatic organisms; and (2) the increase of fecal coliform bacteria also increases the number of pathogens (disease-carrying microorganisms) likely to affect shellfish harvesting areas, thus posing a serious health threat. The summary also includes the formulas developed by the FDA Shellfish Sanitation Branch, the State of Maryland, and the State of South Carolina for determining the number of vessels allowed in or near a shellfish harvesting area. The bibliography provides 170 references for the four nonpoint pollution sources indicated above and for a general vessel pollution category.

****

Reference No. B-6

****

Key Words: Discharge compliance; Environmental impacts (sewage); Fecal coliform level; Federal laws; MSDs (definitions and laws); No Discharge Areas; Nonpoint source pollution; Portable toilets

Geog. Area: New Jersey

Doc. Type: Fact Sheet

. . . . . .

Author(s): New Jersey Sea Grant Extension Service

Sponsor: (see author)

Publisher: N/A

Pub. Date: 1988

Title: Dump It or Pump It!: Proper Disposal of Sanitary Wastes for Coastal Boaters

In: N/A

ID Number: NSGD #: NJMSC-G-88-001

Pages: 2 pp.

Other: Sea Notes Series No. 9

. . . . . .

Abstract: This fact sheet for boaters provides an overview of the issues and solutions to sewage discharge from vessels. Although the fact sheet is targeted at New Jersey boaters, most of the information is not region specific. The fact sheet explains the sensitivity of estuaries to sewage and describes the specific effects on other water-related recreational activities and shellfish sanitation. Other types of nonpoint source pollution are mentioned (e.g., agricultural runoff). The Federal MSD law, from the Clean Water Act, is described, including the definitions of the three MSD types (Types I, II, and III). The fact sheet concludes by suggesting several steps that boaters can take to prevent the discharge of sewage from their vessels.

****

Reference No. B-7

****

Key Words: Discharge compliance; Enforcement (issues and procedures); Environmental impacts (MSD chemicals, pumpouts, and sewage); Federal laws; Local government role; MSDs (definitions and issues); No Discharge Areas; Pumpout facility (compliance); Sewage treatment (issues and options); State laws

Geog. Area: Massachusetts

Doc. Type: Government Report

. . . . . .

Author(s): Putala, C.E. (author affiliation not indicated)

Sponsor: Massachusetts Executive Office of Environmental Affairs, Coastal Zone Management

Publisher: N/A

Pub. Date: June 1988

Title: Marine Head Discharges from Recreational Vessels: Analysis and Policy Response

In: N/A

ID Number: N/A

Pages: 18 pp.

Other: N/A

. . . . . .

Abstract: This report describes the political environment surrounding the issue of sewage discharges from recreational vessels in Massachusetts. The three discharge scenarios (i.e., no MSD, flow-through MSDs, and holding tanks) and their relationship to Federal and Massachusetts laws are discussed. The environmental impacts related to treated and untreated sewage discharges and sanitary waste pumpout stations are addressed along with potential solutions. Discharge and pumpout facility compliance issues and possible solutions are also addressed. The role of local governments is discussed in relation to discharge enforcement and provision of additional pumpout facilities to encourage discharge compliance. The report concludes by suggesting several policy options for the Massachusetts Executive Office of Environmental Affairs to consider, including the development of a Marine Head Task Force.

****

Reference No. B-8

****

Key Words: Discharge compliance; Education; Environmental impacts (MSD chemicals, pumpouts, and sewage); Fecal coliform level; Local government role; MSDs (issues and laws); Nonpoint source pollution; Pumpout facility (issues); Sewage treatment (issues); Shellfish harvesting buffer zones

Geog. Area: U.S.

Doc. Type: Conference Paper

. . . . . .

Author(s): Ross, N.W. (University of Rhode Island)

Sponsor: University of Rhode Island, Sea Grant Marine Advisory Service

Publisher: University of Wisconsin - Madison

Pub. Date: October 1985

Title: Towards a Balanced Perspective...Boat Sewage

In: 12th National Technical Conference on Docks and Marinas, October 7-11, 1985, Madison, Wisconsin

ID Number: NSGD #: RIU-R-85-007

Pages: 4 pp.

Other: Conference in cooperation with the University of Wisconsin Sea Grant Institute

. . . . . .

Abstract: This paper discusses several issues related to the discharge of vessel sewage contributing to the degradation of water quality. The paper presents the government's and boaters' sides of the issue on the degree to which boaters' sewage really pollutes water versus the other types of point and nonpoint sources of pollution (e.g., sewage treatment plants). The effect of vessel sewage on water quality and this effect on shellfish beds and swimmers is discussed. The paper also presents the potential environmental effects from the chemicals added to holding tanks to control odor and the sewage treatment problems at marinas. Boater education and peer pressure are suggested by the author as important links in the effort to control the discharge of sewage from vessels. The author also emphasizes the need for balanced (between government officials, marinas, communities, and boaters) vessel sewage control management guidelines and alternatives to be proposed and implemented.

****

Reference No. B-9

****

Key Words: Discharge compliance; Enforcement (issues); Federal laws; Local government role; MSDs (issues and laws); No Discharge Areas; Pumpout facility (grant programs and issues)

Geog. Area: U.S.

Doc. Type: Magazine Article

. . . . . .

Author(s): Sisson, W. (*Soundings* staff writer)

Sponsor: N/A

Publisher: Soundings Publishers (Essex, CT)

Pub. Date: June 1991

Title: MSD Rules Remain Slow, Confusing

In: *Soundings*

ID Number: N/A

Pages: p. A22

Other: N/A

. . . . . .

Abstract: This article discusses the controversy over the enforcement of MSDs and discharge of raw sewage from several perspectives (i.e., boaters, marina owners, MSD manufacturers). The Catch-22 situation of boaters complaining of inadequate pumpout facilities and the marinas complaining about the disadvantages of operating pumpout facilities (i.e., cost, lack of boater use) is described. The issue of local or state governments establishing their own No Discharge Area, instead of gaining approval from the U.S. EPA, is presented. The article also discusses the problem of adequate and effective enforcement procedures to discourage boaters from discharging sewage from their vessels.

****

Reference No. B-10

****

Key Words: Discharge compliance; Enforcement (issues); Environmental impacts (MSD chemicals and sewage); Federal laws; MSDs (definitions, issues, and laws); No Discharge Areas; Portable toilets; Pumpout facility (issues); State laws

Geog. Area: New York

Doc. Type: Journal Article

. . . . . .

Author(s): Smith, L. (New York Department of Environmental Conservation)

Sponsor: N/A

Publisher: New York Department of Environmental Conservation

Pub. Date: July/August 1990

Title: Let's Not Go Overboard!

In: *The Conservationist*

ID Number: Vol. 45

Pages: pp. 8-15

Other: N/A

. . . . . .

Abstract: This article presents several issues related to water pollution from recreational vessels. The types of pollution discussed are hazardous substances, toxic products, fuels, sewage, solid waste, and plastics. The environmental effects of boater sewage and chemical additives for MSDs and portable toilets are presented. The article provides a brief overview of the relevant regulations. The importance of marinas providing adequate and affordable pumpout stations for boaters to encourage no discharge of sewage from vessels is also discussed. The article also discusses enforcement issues related to discharge compliance. The author suggests that boaters take on some of the responsibility of law enforcement officials by reporting boaters that are illegally discharging sewage and by applying peer pressure on other boaters to comply with a no discharge policy.

****

Reference No. B-11

****

Key Words: Discharge compliance; Federal laws; MSDs (definitions, issues, and laws); No Discharge Areas; Portable toilets

Geog. Area: U.S.

Doc. Type: Fact Sheet

. . . . . .

Author(s): U.S. Coast Guard, Office of Boating, Public, and Consumer Affairs

Sponsor: (see author)

Publisher: N/A

Pub. Date: January 1986

Title: Marine Sanitation Devices on Boats

In: N/A

ID Number: Coast Guard Consumer Fact Sheet #13

Pages: 2 pp.

Other: N/A

. . . . . .

Abstract: This USCG fact sheet provides specific information on MSDs. The topics covered include: a summary of Federal MSD regulations; a description of each MSD type (i.e., Types I, II, and III); an explanation of the certification labels required for MSDs; an explanation of No Discharge Areas; the discharge of sewage beyond 3 miles from shore, including a description of a Y-valve and methods for securing the valve in waters inside 3 miles; and a point of contact for MSD operation complaints.

****

Reference List C: Other

Reference No. C-1

****

Key Words: Fecal coliform level; Occupancy rates; Sewage loading rates; Survey

Geog. Area: Rhode Island

Doc. Type: Conference Paper

. . . . . .

Author(s): Eldredge, M.E. (University of Rhode Island)

Sponsor: Rhode Island Sea Grant

Publisher: International Marina Institute (Wickford, RI)

Pub. Date: 1989

Title: The Contribution of Recreational Boats to Bacterial Water Pollution: A Model for Determining Sewage Loading Rates

In: 1989 National Marina Research Conference, January 9-12, 1992, Narragansett, Rhode Island (N.W. Ross, ed.)

ID Number: NSGD #: RIU-R-89-016

Pages: pp. 143-157

Other: N/A

. . . . . .

Abstract: The study obtained data on vessel use in Rhode Island to determine sewage loading factors. This was done using a mail return survey distributed to boaters in Narragansett Bay during two high-use weekends and on-site observations. Preliminary results indicate a correlation between vessel use and vessel length. These results were used to create a modified formula which factors in relevant data on occupancy rates and number of people aboard. These data were used in conjunction with aerial photographs taken during the July 4th weekend to develop two models for the contribution of recreational vessels to bacterial water pollution. Dutch Island Harbor, R.I., is used as an example to show the application of the models. Using the models, allowable vessel numbers in the mooring field range from 73 to 243 vessels. The exact number is dependent on vessel length and which occupancy rate is used. The methodology of this study, as well as the resultant formula, can be used by harbor planners to balance use conflicts in sensitive areas. [Adapted from document]

****

Reference No. C-2

****

Key Words: Discharge compliance; Education; Environmental impacts (sewage); Fecal coliform level; Live-aboards; Local government role; No Discharge Areas; Nonpoint source pollution; Pumpout facility (grant programs and issues); Shellfish harvesting buffer zones; State laws

Geog. Area: Puget Sound, Washington

Doc. Type: Conference Paper

. . . . . .

Author(s): Hansen, N.R. (Puget Sound Water Quality Authority) and N. Carter (Washington State Parks and Recreation Commission)

Sponsor: Puget Sound Water Quality Authority; and Washington State Parks and Recreation Commission

Publisher: Washington Sea Grant Marine Advisory Services

Pub. Date: March 1989

Title: Water Quality Issues

In: Boating and Moorage in the '90s: Proceedings of a Conference, October 19-21, 1988, Everett, Washington (Goodwin, R.F., ed.)

ID Number: NSGD #: WASHU-W-88-001

Pages: pp. 51-55

Other: N/A

. . . . . .

Abstract: The Puget Sound Water Quality Authority identified nonpoint pollution from marinas and recreational boating as an issue to be considered as part of its comprehensive planning process. This paper describes several initiatives in the 1987 Puget Sound Water Quality Management Plan that were designed to address pollution from marinas and recreational vessels. The paper also discusses the respective responsibilities of the marina industry, the boating community, and state and local government in carrying out these initiatives. The initiatives discussed relate to issues such as requiring new or expanding marinas to conduct boater education activities and to provide adequate vessel sewage disposal facilities, providing adequate means of sewage disposal for live-aboards, and evaluating the need for No Discharge Areas in Puget Sound. [Adapted from document]

****

Reference No. C-3

****

Key Words: MSDs (issues); Sewage treatment (issues and options)

Geog. Area: U.S.

Doc. Type: Academic Report

. . . . . .

Author(s): Novak, J.T., C.R. McDaniel, and S.C. Howard

Sponsor: Virginia Polytechnic Institute and State University, Virginia Water Resources Research Center

Publisher: N/A

Pub. Date: 1989

Title: The Effect of Boat Holding Tank Chemicals on Treatment Plant Performance

In: N/A

ID Number: N/A

Pages: 18 pp. (plus appendix)

Other: N/A

. . . . . .

Abstract: This report presents research conducted by the authors to determine the effects of chemicals added to vessel holding tanks (or Type III MSDs) on small sewage treatment plants. These chemicals include disinfectants, dyes, and perfumes added to a holding tank to control the odor level until the tank is emptied. Since boating activity is heaviest during warm seasons and weekends, the study concentrated on the treatment plant's ability to handle extra chemicals during peak use periods. Septic tank and activated sludge systems were evaluated for this report. The study concluded that vessel holding tank chemicals will not have a significant effect on a small treatment plant's ability to properly process waste, although some decline in the plant's performance may occur during peak boating weekends.

****

Reference No. C-4

****

Key Words: MSDs (issues); Pumpout facility (issues); Survey

Geog. Area: U.S.

Doc. Type: Government Report

. . . . . .

Author(s): Price Waterhouse

Sponsor: U.S. Department of the Interior, Fish and Wildlife Service

Publisher: N/A

Pub. Date: January 1992

Title: National Recreational Boating Survey: Sanitation Pumpout Questionnaire Tabulation

In: N/A

ID Number: Contract #14-16-0009-90-006

Pages: 26 pp. (plus appendices)

Other: In association with Market Facts, Inc.

. . . . . .

Abstract: This report provides a summary of the results from the sanitation pumpout module of the National Recreational Boating Survey, conducted by the U.S. Fish and Wildlife Service. The survey collected data on the type of MSD on each surveyed vessel and, if the vessel was equipped with a Type III MSD (holding tank), additional questions were asked about the adequacy and availability of the pumpout facilities in the vessel's vicinity, the percentage of sewage discharged by method (discharged more than 3 miles from shore, discharged less than 3 miles from shore, or pumped out at a facility), and which pumpout facility characteristics (e.g., hours of operation) were important to boaters. These data are provided for the U.S., by region (Great Lakes, Mid-Atlantic, New England, Pacific, and Southern), and by state.

****

Reference No. C-5

****

Key Words: Environmental impacts (sewage); Fecal coliform level

Geog. Area: Puget Sound, Washington

Doc. Type: Government Report

. . . . . .

Author(s): Seabloom, R.W., G. Plews, and F. Cox

Sponsor: Washington State Department of Health, Shellfish Section; and U.S. Environmental Protection Agency

Publisher: N/A

Pub. Date: October 1989

Doc. Title: The Effect of Sewage Discharges from Pleasure Craft on Puget Sound Waters and Shellfish Quality

In: N/A

ID Number: N/A

Pages: 58 pp. (plus appendix)

Other: N/A

. . . . . .

Abstract: This study was undertaken to determine the extent of microbiological contamination contributed by waste discharges from recreational vessels. The study included baseline bacteriological water quality and shellfish tissue survey work in the non-boating season at five boating areas in the Puget Sound. The water quality was measured again at the same sites later during a period of intense boating activity for comparison with the baseline. The water or shellfish data from the study showed deleterious impact of vessel sewage on the bacteriological water quality at four of the five study sites. At one site, it was not possible to distinguish vessel sewage contamination from other known sources of contamination. The public health threat from these wastes was perceived to be significant because of the relative freshness of the vessel waste, in contrast to municipal sewage, and the resulting greater potential for the presence of pathogens. The study recommends onboard containment of wastes through boater cooperation and education, by installation of Type III MSDs, and by provision of pumpout facilities. The study contains a literature review of 21 studies related to watercraft wastes and their bacteriological impact. [Adapted from document]

****

Reference No. C-6

****

Key Words: Discharge compliance; Education; Enforcement (issues and procedures); Environmental impacts (sewage); Fecal coliform level; Federal laws; Local government role; MSDs (definitions, issues, and laws); No Discharge Areas

Geog. Area: EPA Region I Coastal States (CT, ME, MA, NH, RI)

Doc. Type: Guidance Document

. . . . . .

Author(s): U.S. EPA, Region I

Sponsor: (see author)

Publisher: N/A

Pub. Date: April 1992

Title: Guidance for States and Municipalities Seeking No-Discharge Area Designation for New England Coastal Waters

In: N/A

ID Number: N/A

Pages: 12 pp. (plus appendices)

Other: N/A

. . . . . .

Abstract: One method available to state and local governments for the prevention of all sewage discharges from vessels is to apply to the U.S. EPA for the approval of a water body as a "No Discharge Area." This document describes this process. It begins by providing background information on this water quality problem and describing the Federal laws and regulations related to the discharge of sanitary waste from vessels. The report explains the statutory and regulatory requirements that need to be satisfied before a No Discharge Area will be approved. Some additional guidelines for the application are also provided. Information on the enforcement of approved No Discharge Areas is also provided. The report discusses the enforcement authority, Federal preemption of enforcement, and enforcement methods. Although this report is directed toward states and municipalities in the New England area, the information is also applicable to the other regions of the U.S.

****

Reference No. C-7

****

Key Words: Environmental impacts (MSD chemicals and pumpouts); Federal laws; MSDs (issues and laws); No Discharge Areas; Sewage treatment (issues and options); Survey

Geog. Area: Virginia

Doc. Type: Journal Article

. . . . . .

Author(s): Walker, W.R., C.J. Haley, P. Bridgeman, and S.H. Goldstein

Sponsor: Virginia Department of Health; and Virginia Polytechnic Institute and State University, Virginia Water Resources Research Center

Publisher: Springer-Verlag New York, Inc.

Pub. Date: 1991

Title: Effects of Deodorants on Treatment of Boat Holding-Tank Waste

In: *Environmental Management*

ID Number: Vol. 15, No. 3

Pages: pp. 441-449

Other: N/A

. . . . . .

Abstract: A literature search and survey of Virginia campgrounds with RV pumpout stations were used to determine whether vessel holding-tank deodorant chemicals would have deleterious effects on marina septic systems or package treatment plants. Laboratory studies reported in the literature indicate that these chemical additives could affect septic system functions in three ways: (1) active ingredients in the additives can impair sewage degradation in septic tanks; (2) additive chemicals might enter the drainfield and, in high enough concentrations, reduce the drainfield's ability to degrade waste; and (3) toxic additive chemicals might migrate from the drainfield to ground or surface water. Experience in the field and in other laboratory studies suggests that factors such as dilution of treated waste with untreated waste and the characteristics of the sewage to be treated can reduce the possibility of damage to septic and activated sludge systems. The campground owners surveyed indicated that they have few problems with their septic systems in spite of the presence of chemical additives in the RV waste. [Adapted from document]

****

Reference No. C-8

****

Key Words: Fecal coliform level; Federal laws; Live-aboards; MSDs (costs, definitions, issues, and laws); No Discharge Areas; Occupancy rates; Portable toilets; Pumpout facility (costs); Sewage loading rates; State laws; Survey

Geog. Area: Narragansett Bay, Rhode Island

Doc. Type: Journal Article

. . . . . .

Author(s): West, N. (University of Rhode Island), C. Heatwole (Hunter College), and L. Smith (University of Rhode Island)

Sponsor: N/A

Publisher: Crane, Russak, and Co., Inc.

Pub. Date: 1982

Title: Environmental Improvement on Narragansett Bay as a Result of Section 312 Implementation of the Federal Water Pollution Control Act

In: *Coastal Zone Management Journal*

ID Number: Vol. 10, Nos. 1/2

Pages: pp. 125-140

Other: N/A

. . . . . .

Abstract: The study described in this article, based on a small survey conducted on Narragansett Bay during the summer of 1980, develops several empirical models to estimate the total costs of MSD conversions and other costs related to Section 312 of the Clean Water Act. As provisions of the Clean Water Act are exempt from provisions of the National Environmental Policy Act, no environmental impact statement was written concerning the impacts to the marine environment and the cost to the boating public. This article seeks to shed some light on this controversy by: (1) developing and operationalizing a conceptual model which estimates daily effluent load contributed by recreational vessels; and (2) estimating the cost of compliance to the boating public and marina operators. Although the data used are specific to a relatively small region (Narragansett Bay, Rhode Island), it is possible that the model and findings can be extrapolated to a large geographical area. [Adapted from document]

****

List of Document Titles

List of Document Titles

List of Document Titles (cont'd)

List of Document Titles (cont'd)

Glossary

Glossary

Discharge compliance	Boater compliance with proper discharge of on-board sewage.
Dump station	A designated area, usually at marinas, where boaters may empty their portable toilets.
Education	Public awareness of sewage discharge problem and proper control procedures.
Enforcement	Enforcement of legal sewage discharge from vessels and collection at marinas.
Environmental impacts	Effects on the environment from sewage, MSD chemicals (e.g., formaldehyde), and pumpout facilities (e.g., leaks from on-site sewage septic tanks).
Fecal coliform level	Acceptable levels of fecal coliform in water (a water quality measure used to test for the presence of sewage).
Federal laws	Laws implemented by the U.S. Federal Government that apply to the discharge of sewage from vessels.
Live-aboards	Vessels moored permanently in marinas and used solely as a dwelling unit.
Local government role	Methods by which local government agencies and organizations can assist in the control of vessel sewage discharge.
MSD	Marine Sanitation Device. A permanently installed device connected to a vessel's toilet that either treats sewage on-board for immediate discharge or holds sewage for onshore disposal and treatment.
No Discharge Areas	EPA-approved areas where the discharge of both treated and untreated sewage is prohibited.
Nonpoint source pollution	Water pollution that originates from a non-permanent or mobile source (which includes sewage and other pollutants discharged from vessels), not from a specific permanent source (e.g., underwater pipe outlet).
Occupancy rate	An estimate of the percentage of vessels occupied in an area at a specific time (used in the calculation of sewage loading rates and shellfish harvesting buffer zones).

Portable toilets	Toilets that are not permanently installed in vessels and to which the U.S. MSD regulations do not apply.
Pumpout facility	A pump device that empties, or pumps out, contents of a vessel's sewage holding tank. Vessels attach a flexible hose to the vessel's holding tank deck fitting and the pump empties the holding tank contents into a larger holding tank (onshore, on a vessel, or on a truck) or a wastewater collection and treatment system.
Sewage loading rate	The maximum number of vessels allowed in an area to protect the water quality (similar to shellfish harvesting buffer zones).
Sewage treatment	Proper sanitary waste treatment of vessel sewage collected by shoreside facilities.
Shellfish harvesting buffer zone	An area surrounding a marina, or other dense boating area that has low flushing activity, that is closed to shellfish harvesting because of the threat of contamination from sewage.
State laws	Laws implemented by various states that apply to the discharge of sewage from vessels.
Survey	Surveys conducted that are related to vessel sewage (e.g., boater use of pumpout facilities, types of MSDs on board vessels).