

GOOD MATE PROGRAM

Education Module

Learning Objectives:

As a result of this session the participant should:

- More fully understand and value the ecological and economic importance of our water resources
- Recognize the environmental connections between the Earth's water and recreational boating
- Recognize potential environmental impacts of oil and fuel, sewage, and learn associated pollution prevention measures related to recreational boating and onshore operations.
- Recognize potential environmental and economic impacts of vessel maintenance and repair activities; solid waste and debris; storm water runoff; vessel operations damage, and learn associated pollution prevention measures.

Resources:

GOOD MATE Recreational Boating & Marina Manual, The Ocean Conservancy
GOOD MATE Stewardship of the Waterways Video, The Ocean Conservancy
GOOD MATE Program Presentation – Venturing Version (CD)
GOOD MATE Program Presentation – Venturing Version (Hardcopy)

Material and Equipment:

Equipment Items

TV/VCR System
Computer Projection System or Overhead Projector

Material Items

Provide for each participant:
Stewardship of the Waterways, Venturing Version Certificate
Stewardship of the Waterways, Venturing Version Burgee

Provide a handout packet for each participant containing the following items:

Good Mate Brochures from The Ocean Conservancy
Fast Facts About Oil and Fuel Pollution
Fast Facts About Sewage Pollution

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Fast Facts About Vessel Maintenance Pollution
Fast Facts About Solid Waste and Debris
Fast Facts About Storm water Runoff
Fast Facts About Vessel Operation Damage

Handouts

Laws and Agreements Governing Water Pollution Summary
Time Garbage Takes to Decompose in the Environment
A Minimum Recommended List of Boat Safety Equipment
No-Discharge Zone for Vessel Sewage

Instructor Qualification:

The Ocean Conservancy Approved Master Trainer or Trainer

Time Allocation: 1.5 Hours.

Session Plan:

Classroom Session

[Use the Good Mate Program – Venturing Version CD or Hardcopy Presentation. Use the session plan topic outlines (2 – 8) with the Good Mate Recreational Boating and Marina Manual. Explain that “council onshore facilities” and “marina” are equivalent terms.]

1. Module Introduction.

- a. Welcome the participants to the Good Mate Program.
- b. Introduce yourself and each member of the module staff.
- c. Explain the Goals and Objectives of the Good Mate Program.

2. The Water Environment.

Describe the Ocean, Coastal Waters, Rivers, and Lakes Ecosystems and their ecological and environmental importance to recreation activities.

3. Oil and Fuel Potential Impact.

- a. Describe what oil and fuel types are and where they come from.
- b. Explain their impact on the environment, fish and bird species, and the recreational economy.
- c. Explain how boaters can implement “Best Management Practices (BMP)” to

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reduce oil and fuel pollution and how council onshore facilities can implement BMP by storage and spill prevention, Recycling and spill control.

4. Sewage Potential Impact.

a. Describe the impact sewage has on human health, aquatic environment and recreational economy.

b. Explain how boaters can implement BMP to reduce sewage pollution by using one of the three types of Marine Sanitation Devices and how council onshore facilities can implement BMP by using pump out services, dump stations and restrooms.

5. Vessel Maintenance and Repair Potential Impact.

a. Describe the impacts that vessel maintenance and repair has on the environment, species and recreational economy.

b. Explain how performing routine maintenance on a boat along with safety equipment reduce pollution.

c. Explain how individual boaters and council onshore facilities can implement BMP to reduce vessel maintenance and associated repair pollution.

6. Solid Waste and Debris Potential Impact.

a. Describe the impact marine debris has on human health and safety, the aquatic environment, and recreational economy.

b. Explain how boaters and council onshore facilities can implement BMP by Reducing, Reusing and Recycling solid waste.

7. Storm Water Runoff.

a. Describe the natural process of storm water runoff and the impact it has on the aquatic environment, species, and recreational economy.

b. Describe how boaters and council onshore facilities can play a role in reducing storm water pollution by implementing structural filtration and detention practices and non-structural BMP.

8. Vessel Operation Damage.

a. Describe how vessel operation damage occurs and who is responsibly for its causes.

b. Explain the impacts improper anchoring, and shallow water operations, excessive wake and aquatic nuisance species (ANS) have on the underwater environment, aquatic and wildlife, and the recreational economy.

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c. Explain how council onshore facilities can help support safe vessel operations.

9. **Session Wrap-up.**

a. Describe and distribute the handout packet.

b. Summarize the program by showing the GOOD MATE Stewardship of the Waterways Video.

c. Present the Good Mate Program Certificate and Stewardship of the Waterways-Venturing Version Burgee.

Laws and Agreements Governing Water Pollution

Handout

Although the seas and other waterways have historically been viewed as convenient dumping grounds of human-made waste, in the last 20 years concern about declining water quality has prompted some changes.

The following is a list of major laws or agreements governing the disposal of wastes into U.S. waters. The particular relevance of some of these laws to recreational boating will be addressed in the Good Mate Program module, but boaters and onshore facility staff should know these laws exist, that they govern boating operations, and where to find more information.

MARPOL

In 1973, the **International Convention for the Prevention of Pollution from Ships at Sea (MARINE POLLUTION)** was drafted and signed by a number of seafaring nations. In 1978, it was updated to include five annexes on ocean dumping, In 1997, an annex on air pollution by ships was added. The annexes cover the following:

Annex I	Oil
Annex II	Hazardous liquid carried in bulk
Annex III	Hazardous substances carried in packaged form
Annex IV	Sewage
Annex V	Garbage
Annex VI	Air Pollution

By ratifying MARPOL, 73/78, a country automatically adopts annexes I and II; the remaining annexes are optional. The United States has ratified optional annexes III and V. For a summary of MARPOL see

<http://www.epa.gov/OWOW/OCPD/marpol.html>

MPPRCA

Marline Plastic Pollution Research and Control Act (1978) - MPPRCA implements the International Convention for the Prevention of Pollution from Ships, Annex V (MARPOL 73/78) and restricts the overboard discharge of plastic and other garbage. For a summary see

<http://www.cmc-ocean.org/mdio/marpol.php3>

CWA

Clear Water Act (1972) - focuses on the use, discharge, and disposal of sewage, oil, and hazardous substances including dispersants. For summary of the CWA and a link to the full text of the Act, go to

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<http://www.epa.gov/region5/defs/html/cwa.htm>

OPA

Oil Pollution Act (1990) – requires reporting and cleanup of all oil and hazardous substance spills. For a summary of the OPA and a link to the full text of the Act see

<http://www.epa.gov/region5/defs/html/opa.htm>

OAPCA

Organotin Antifouling Paint Control Act (1988) – regulates the use and application of antifouling paints for some marine vessels. For the full text of the Act see

<http://www4.law.cornell.edu/uscode/unframed/33/2404.html>

CVA

Clean Vessel Act (1992) – designed for the construction of pump-out facilities through financial incentives to local marinas. For a summary of the CVA see

http://fa.r9.fws.gov/cva/cva_info.html#CVA

For the details of the Act see

<http://www.fws.gov/laws/digest/reslaws/cleaves.html>

FWPCA

Federal Water Pollution Prevention and Control Act (1997) – establishes goals and policies for the restoration and maintenance of the chemical, physical, and biological integrity of our nation's waters. A summary of the FWPCA can be viewed at

<http://www4.law.cornell.edu/uscode/33/ch26.html>

For FWPCA (section 1322) information on the use of marine sanitation devices see

<http://www.uscg.mil/hq/gm/mse/regs/FWCPA.html>

ESA

Endangered Species Act (1973) – provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found. For a summary of the ESA and a link to the full text of the Act see

<http://www.epa.gov/region5/defs/html/esa.htm>

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MMPA

Marine Mammal Protection Act – establishes a moratorium on taking and importing marine mammals, their parts, and products. The Act provides protection for polar bears, sea otters, walruses, dugongs, manatees, whales, porpoises, seals, and sea lions. For a summary of the MMPA see

<http://www.lab.fws.gov/lab/cargo/mmp.htm>

CZMA

Coastal Zone Management Act – encourages states to preserve, protect, develop, and, where possible, restore or enhance valuable natural coastal resources such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats. For a summary of the CZMA see

http://tis-nt.eh.doe.gov/oepa/law_sum/CZMA.HTM

CAA

Clean Air Act – regulates air emissions from area, stationary, and mobile sources. This law authorizes the U.S. Environmental Protection Agency to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. For a summary of the CAA see

<http://www.epa.gov/region5/defs/html/caa.htm>

RCRA

Resources Conservation and Recovery Act – addresses the issue of how to safely manage and dispose of the huge volumes of municipal and industrial waste generated nationwide. For more information on the RCRA see

<http://www.epa.goepaoswer/hotline/rcra.htm>

PWSA

Port and Waterways Safety Act – states navigation and vessel safety and protection of the marine environment are matters of major national importance. Insures that the handling of dangerous articles and substances on the structures in, on or immediately adjacent to the navigable waters of the United States is conducted in accordance with established standards and requirements. For details see

<http://www4.law.cornel.edu/uscode/33/1221.html>

NMSA

National Marine Sanctuaries Act – protects special marine resources, such as coral reefs, sunken historical vessels or unique habitats, while facilitating all “compatible” public and private uses of those resources. For a summary of the NMSA see

<http://www.sanctuaries.nos.noaa.gov/natprogram/nplegislation/nplegislation.html>

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Time Garbage Takes to Decompose in the Environment

Handout

(Information Source: U.S. National Park Service; Mote Marine Lab, Sarasota, Florida)

Glass Bottle	1 million years
Monofilament Fishing Line	600 years
Plastic Beverage Bottles	450 years
Disposable Diapers	450 years
Aluminum Can	80-200 years
Foamed Plastic Buoy	80 years
Rubber-Boot Sole	50-80 years
Foamed Plastic Cubs	50 years
Tin Cans	50 years
Leather	50 years
Nylon Fabric	30-40 years
Plastic Film Container	20-30 years
Plastic Bag	10-20 years
Cigarette Butt	1-5 years
Wool Sock	1-5 years
Plywood	1-3 years
Waxed Milk Carton	3 months
Apple Core	2 months
Newspaper	6 weeks
Orange or Banana Peel	2-5 weeks
Paper Towel	2-4 weeks

A Minimum Recommended List of Boat Safety Equipment

Handout

Courtesy of the U.S. Coast Guard Boating Safety Division

At the beginning of each boating season, every owner of a recreational boat should conduct a thorough inspection of his or her boat and all of its equipment prior to that first outing. This will insure a fun and safe boating season. The following is the minimum equipment to be inspected for most boats.

- **Personal Flotation Devices (PFDs).** USCG approved, in good and serviceable condition, one wearable for each person on board of the appropriate size stowed in a readily accessible manner, and a throwable device (if required) stowed in an immediately available location.
- **Visual Distress Signals.** 1) Pyrotechnic devices (flares; smoke) USCG approved, not expired, in good and serviceable condition, in sufficient number, stowed in a readily accessible manner. 2) Non-pyrotechnic devices (day flag; night auto SOS lantern) USCG certified, in good and serviceable condition, batteries in good charge (lantern), stowed in a readily accessible manner.
- **Fire Extinguishers.** USCG approved, in good and serviceable condition, properly charged as per the gauge, of appropriate size and type for length of vessel (B-I or B-II), recommend mounting outside entrance to galley and engine room spaces.
- **Ventilation.** (for enclosed machinery with gasoline as its fuel) – All vent hoses and cowls are free of obstruction, vent hose has no holes or tears, exhaust hose is above the normal level of bilge water, blower (if fitted) is operable and all wiring is free of cuts and abrasions.
- **Backfire Flame control (for gasoline engines only)** – USCG, SAE, or UL approved, external mounted device should fit tightly to carburetor and is free of damage, if fitted re-breather hoses are connected, device should be free of dirt and oil build up for more efficient engine operation.
- **Sound Producing Devices and Bells.** If required, insure horn emits a clear audible sound, horn bells are free of water and obstructions, and portable horns using canned propellant are full. For mouth-operated horn, make sure you can make a constant sound for at least 6 seconds in duration. It is recommended having at least one back up device such as a police whistle. For a bell, if required, insure clapper is attached to bell, and bell emits a clear, bell-like tone.

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- **Navigation Lights.** Check all lights to insure they burn bright and clear, and free of obstruction, lenses are of the appropriate color (red = portside; green = starboard side) and not cracked. Check all positions of light switch to make sure the lights displayed agree with the switch positions.
- **Navigation Rules.** If required, have a book for ready reference, It is recommended that you maintain an updated copy, as rules change from time to time.
- **State and/or Local Requirements.** Be sure to check for any additional safety requirements through your state and local boating agencies.

To insure that your vessel is truly ready for the water, have a free Vessel Safety Check conducted by your local U.S. Coast Guard Auxiliary or U.S. Power Squadron. This vessel safety check is a courtesy examination of safety carried or installed on a vessel and certain aspects of the vessel's overall condition. VSC requirements parallel Federal and State requirements with regard to equipment and vessel condition. If the vessel meets or exceeds the VSC requirements, the examiner will award the owner or operator a Vessel Safety Check Decal. The VSC is not a law enforcement action and is not conducted by, nor is any information obtained or provided to any law enforcement organization. It is a free public service provided in the interest of boating safety.

HANDOUT

No-Discharge Zone for Vessel Sewage

This table is designed to illustrate where the current no-discharge zones (NDZs) for vessel sewage are located. It includes a listing, by States, of the waterbodies that have been designated as NDZs for vessel sewage. Also provided are active links (if available) to the actual Federal Register Notice associated with a particular NDZ designation. Note, however that these active links are only available for Federal Register Notices published from 1995 to the present.

Also included in the table are the types of designations that the State requested:

- **312(f)(3) which protects aquatic habitats where pumpout facilities are available;**
- **312(f)(4)(A) which protects special aquatic habitats or species; and**
- **312(f)(4)(B) designed to safeguard human health by protecting drinking water intake zones.**

NO-DISCHARGE ZONES

State	Waterbody	Designation Type CWA (Sect. 312)	Federal Registration Notice	Date
California	Mission Bay	(f)(3)	41 FR 34353	8/13/76
California	Oceanside Harbor	(f)(3)	41 FR 34353	8/13/76
California	Dana Point Harbor	(f)(3)	41 FR 34353	8/13/76
California	Channel Islands Harbor	(f)(3)	44 FR 26963	5/8/79
California	Oxnard	(f)(3)	44 FR 26963	5/8/79
California	Avalon Bay Harbor	(f)(3)	44 FR 26963	5/8/79
California	Santa Catalina Island	(f)(3)	44 FR 26963	5/8/79
California	Newport Bays	(f)(3)	41 FR 2274	1/15/76
California	Sunset Bay	(f)(3)	41 FR 2274	1/15/76
California	Pacific Coast Hwy Bridge	(f)(3)	41 FR 2274	1/15/76
California	Richardson Bay	(f)(3)	52 FR 33282	9/2/87

California	Huntington Harbor	(f)(3)	41 FR 2274	1/15/76
Calif/Nevada	Lake Tahoe	(f)(3)	42 FR 59105	11/15/76
Florida	Destin Harbor	(f)(3)	53 FR 1678	1/21/88
Florida	City of Key West waters	(f)(3)	64 FR 46390	8/25/99
Florida				
State waters within the Florida Keys National Marine Sanctuary				
		(f)(4)(A)	67 FR 35735	5/21/02
Maryland				
Herring Bay and Northern Coastal Bays				
		(f)(3)	67 FR 1352	1/10/02
Massachusetts	West Port Harbor	(f)(3)	59 FR 45677	9/2/94
Massachusetts	WellFleet	(f)(3)	60 FR 30539	6/9/95
Massachusetts	Waquoit Bay	(f)(3)	59 FR 11271	3/10/94
Massachusetts	Nantucket Harbor	(f)(3)	57 FR 44379	9/25/92
	Nantucket Harbor			
Massachusetts	Wareham Harbor	(f)(3)	57 FR 2553	1/22/92
	Wareham Harbor			
Massachusetts	Stage Harbor Complex	(f)(3)	62 FR 13885	3/24/97
Massachusetts	Harwich	(f)(3)	63 FR 44255	8/18/98
Massachusetts	Buzzards Bay	(f)(3)	65 FR 46712	7/31/00
Massachusetts	Three Bay/Centerville Hbr	(f)(3)	66 FR 35628	7/06/01
Michigan	All	(f)(3)	41 FR 2274	1/15/76
Minnesota	Boundary Waters Canoe Area	(f)(4)(A)	42 FR 43837	8/31/77
Minnesota	Mississippi River (part)	(f)(3)	42 FR 33362	6/30/77
Minnesota	Minnesota River (part)	(f)(3)	42 FR 33362	6/30/77

Minnesota	St Croix River	DENIAL (f)(3)	42 FR 37844 62 FR 30868	7/25/77 6/18/96
Missouri				
	All (except Miss. River, Missouri River, part of Bull Shoals Lake)	(f)(3)	40 FR 54462	11/24/75
New Hampshire All (except coastal waters) (f)(3)				
	All (except coastal waters)		40 FR 36797	8/22/75
New Jersey	Shark River	(f)(3)	63 FR 12094	3/12/98
New Jersey	Manasquan River	(f)(3)	63 FR 12094	3/12/98
New Jersey	Shrewsbury River	(f)(3)	65 FR 32091	5/22/00
New Jersey	Navesink River	(f)(3)	64 FR 25504	5/12/99
New Mexico	All	(f)(3)	41 FR 17599	4/27/76
New York	Lake Champlain	(f)(3)	41 FR 24624	6/17/76
New York	Mamaroneck Harbor	(f)(3)	62 FR 223	11/19/97
New York	Lake George	(f)(3)	41 Fr 2668	1/19/76
New York	Hudson River (part)	(f)(4)(B)	60 FR 63941	12/13/95
New York	East Hampton (7 water bodies)	(f)(3)	64 Fr 7194	2/12/99
New York	Greater Huntington North Port	(f)(3)	65 FR 37385	6/14/00
New York	Port Jefferson Harbor Complex	(f)(3)	66 FR 51954	10/11/01
New York	Peconic Estuary	(f)(3)	67 FR 39720	6/10/02
Rhode Island	Great Salt Pond, Block Is.	(f)(3)	58 FR 31202	6/1/93
Rhode Island	All	(f)(3)	63 FR 42633	8/10/98

South Carolina (North Carolina and Georgia)

Broad Creek, Lake Keowee, Lake Murray, Lake Thurmond, and Lake Wylie
 (f)(3) 64 FR 10465 3/4/99

South Carolina (Georgia) Hartwell Lake (f)(3) 60 FR 25215 5/11/95

Texas 24 Freshwater bodies (f)(3) 42 FR 59776 11/21/77

Utah/Arizona Lake Powell (f)(3) 65 FR 56577 9/19/00

Vermont

All (including parts of Lake Champlain and Lake Memphremagog)
 (f)(3) 40 FR 42240 9/11/75

Virginia Smith Mountain Lake (f)(3) 65 FR 61166 10/16/00

Wisconsin

All (except Lake Superior, Mississippi River, part St. Croix River)
 (f)(3) 41 FR 11875 3/22/76

For the most up-to-date listing of No-Discharge Zones,
 visit the EPA website at : http://www.epa.gov/owow/oceans/vessel_sewage/vsdnozone.html