



Marine Defenders Lesson Plan

Grade Level: College

Subject: Marine Oil Pollution

Duration: Two 60 Minute Classes

Written by: Capt Walt Nadolny, 2012

For more information about oil pollution,
visit MarineDefenders.com

Marine Defenders is an educational project created by SUNY Maritime College and Common Good Productions with funding from the National Fish and Wildlife Foundation.



MARINE DEFENDERS

2 – DAY LESSON PLAN

COLLEGE: ENVIRONMENTAL LAW / MARINE TRANSPORTATION



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What is the Marine Defenders Project?

While the media tends to focus on dramatic accidental discharges of oil like the recent Deep Water Horizon spill in the Gulf of Mexico, most of the oil spilled into the world's oceans by humans actually comes from intentional spills from ships.

One recent study estimated that more than 88 million gallons of oil is intentionally spilled into US waters each year – nearly eight times more than the amount of oil spilled by the Exxon Valdez into Alaskan waters.

Because chronic oil pollution is intentional, it represents the single most easily controlled aspect of oil pollution in US waters. Changing attitudes about illegal dumping will decrease the amount of oil entering our waters and improve the health of our coastal environment.

Marine Defenders is an educational program designed to reduce chronic oil pollution along US coastal waters in New Jersey and New York.

The goal is to raise awareness about the extent of chronic oil pollution, its impact on the marine environment, and the key laws that govern oil pollution.

Marine Defenders has created lesson plans for high school and college students about chronic oil pollution as well as a short educational film and a mobile reporting tool that turns concerned citizens into Marine Defenders.

The Marine Defenders mobile reporting tool allows real-time reports of oil spills and marine debris to be mapped geospatially on the Marine Defenders website and reported to the Coast Guard via the National Reporting Center.

National Fish and Wildlife Credit

Marine Defenders is a public educational project created by the SUNY Maritime College and Common Good Productions with funding from the National Fish and Wildlife Foundation.

National Fish and Wildlife Disclaimer

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MARINE OIL POLLUTION MODULE FOR MARINERS

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Grade Level: College

Intended Audience:

Students in programs leading to deck or engine licenses or certificates of competency.

Length of Lesson: Two 60-minute class periods.

Materials Required:

- Internet access for Marine Defenders website
- “Oil in Our Waters” video is online as a streaming video or a download at www.marinedefenders.com/video
- IMO Manual (<http://marinedefenders.com/educators/using.php>)
- Sample Oil Record Book (<http://marinedefenders.com/educators/using.php>)
- Marine Oil Pollution PowerPoint (<http://marinedefenders.com/educators/using.php>)
- Marine Oil Pollution Discussion homework hand out (page 6)

Preparation:

- Explore oil pollution facts and law at www.marinedefenders.com
- Download “Oil in Our Waters” video, IMO Manual, Sample Oil Record Book, PowerPoint, and homework

Goals of the lesson:

- To educate mariners on their environmental responsibilities with respect to oil pollution.
- To highlight the applicable MARPOL regulations and, in part, domestic United States Laws.
- To inform Mariners of the consequences of knowingly violating these laws.

- To demonstrate the methods used in identifying and prosecuting violators.
- To graphically show the reasons behind the laws as well as the effects on living organisms.
- To act as part of a comprehensive Marine Environmental Management Course leading into the discussion of other MARPOL annexes as well as the Vessel General Permit Program
- To remind mariners that their primary responsibility is to protect life, the environment and property in that order

Suggested 2-Day Lesson Plan:

Day 1 Objective: Students will gain knowledge about the environmental impacts and laws surrounding marine oil pollution.

- Initiate class discussion of oil pollution in general. (10 minutes)
 - Talk about the Exxon Valdez/Deepwater Horizon incidents. Follow this with a discussion of chronic oil pollution.
- Show the video “Oil in Our Waters” (23 minutes)
 - Available streaming or for download at www.marinedefenders.com/video
- Use the **Prof Mariner Education Module** PowerPoint (20 minutes)
 - Further illustrate the problem as well as the penalties for violation
- Present the website, **www.marinedefenders.com** (7 minutes)
 - Highlight applicable sections of the website Show the students where to find information on the laws and environmental impacts.

Day 2 Objective: Students will be familiar with the laws surrounding marine oil pollution, and know how to make entries in an oil record book and report criminal activity.

- Introduce the **Oil Record Book** as well as the guideline for entries in the **IMO Manual**. (20 minutes)
 - Discuss both the Deck and Engine requirements for a proper log entry.
 - Tell students where they can download the IMO Manual and sample Oil Record Book.

- Discuss the methods of discovery and the vessel inspection shown in “Oil in Our Waters” (5 minutes)
- Discuss what a “false entry” is and how it is prosecuted under the Act to Prevent Pollution from Ships (15 minutes)
- Discuss methods of reporting criminal activity and the whistle blower provision. (15 minutes)
- Assign the **Marine Oil Pollution Discussion Questions** as homework (5 minutes)

Marine Oil Pollution Homework:

Materials:

- Marine Defenders Video
 - (www.marinedefenders.com/video)
- Sample Oil Record Book
 - (<http://marinedefenders.com/educators/using.php>)
- IMO Guidance Document
 - (<http://marinedefenders.com/educators/using.php>)
- Marine Defenders Website
 - (www.marinedefenders.com)

Answer the following questions using the materials above:

1. In “Oil in Our Waters,” during the Coast Guard boarding of the vessel, the Oil Water Separator (OWS) did not function correctly. Assume you are the Chief Engineer or Master, how should the incident be handled? What evidence would you use to support your innocence?
2. If your OWS malfunctioned during a voyage, what would be the proper entry for the Oil Record Book (ORB)?
3. How would you report the OWS failure up the chain of command?
4. Describe what options are available to dispose of oil bilge water?
5. Describe the correct way to enter alternate methods of documenting the handling of oily bilge water in an ORB. What other venues for documentation are available?
6. Does having a non-functioning OWS affect your vessel’s classification society? Are you still in class? What about your vessel’s P&I club?
7. Under what conditions can a vessel sail with a non-functioning OWS? What notifications would be necessary?
8. Assume the incident documented in “Oil in Our Waters” was intentional. What penalties would the Chief Engineer face? What about the Master who signed the ORB entries?