

# Gas and Oil

*One quart of oil will create an oil slick over two acres in size – the equivalent of nearly three football fields. A single gallon of fuel can contaminate over a million gallons of water. Small drips and spills of gasoline, diesel, and other petroleum products add up and can have a serious effect on the marine environment, such as: death of fish, mammals, and birds; cancer, mutations, and/or birth defects; destruction of plant life; and reduction of food supply for marine organisms.*

## Fuel Cautiously

- Fuel your boat slowly and carefully – attend the fuel nozzle at all times.
- Never “top off” or overfill your fuel tank. Only fill the tank to 90% since fuel expands as it warms up.
  - Use your hand to check for air escaping from the vent. When the tank is nearly full, you’ll feel an increase in airflow. Also listen for a gurgling sound before the tank is full.
  - Use fuel bib or collar to catch drips and backsplash from fuel intake and vent overflow.
  - Fill portable gas tanks on shore – where spills are less likely to occur and easier to clean up.
  - Outboards: close tank fuel vent when boat is not in use to save fuel from vapor loss.
  - Built-in fuel tanks: install fuel/air separator in air vent line from tank to prevent vent spills.



**Fuel Bib**

*(courtesy of BoatUS)*

*Traditional two-stroke engines are inefficient and can release up to 30 percent of their gas/oil mixture unburned directly into the water. Direct injected new technology two-stroke engines consume all of their oil, resulting in no oil sheen or smoke and no dirty waste oil to change. All four-stroke and traditional two-stroke engines may emit carbon monoxide at levels 100 times higher than new technology two-stroke engines and than safe workplace standards. If these high carbon monoxide emissions are trapped, passengers may be exposed to dangerous levels.*

## Reduce engine pollution

- Consider replacing a conventional two-stroke outboard with a quieter, cleaner, and more efficient new technology two-stroke or a four-stroke engine.
- Use premium two-cycle engine oil and use the gas to oil ratio recommended by the engine manufacturer.
- If you have a large outboard you don't plan to replace, consider purchasing a small four-stroke "kicker" to use when trolling or moving short distances. You'll save money on fuel, save wear-and-tear on your larger motor and enjoy a cleaner environment, too.



**Engine exhaust from old two-stroke engine**

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## Properly Dispose of Oil Absorbent Materials

- Reuse pads that are contaminated with gasoline.
- If pad is contaminated with only diesel or oil, wring out over oil recycling bins and reuse. Or, place in one plastic bag sealed in another and discard in your regular trash.
- Bioremediating bilge booms may be discarded in your regular trash as long as they are not dripping. Because the microbes need oxygen to function, do not seal them in plastic bags.
- Remember that materials soaked with fuel, oil, or solvents are flammable – keep away from heat.

# Bilges

*Bilges are also a major source of pollution since they tend to collect engine oil, fuel, antifreeze, and transmission fluid. When an automatic bilge pump is activated, these fluids are pumped overboard. Absorbent bilge pads absorb petroleum products but not water. When soaked with oil, they can be disposed of properly.*

## Control Oil in the Bilge

- Place oil absorbent pads or a bioremediating bilge boom in the bilge to catch oil.
- Place an oil absorbent pad under the engine.
- Replace oil absorbent materials when heavily soiled or saturated, or at least once a year.
- Keep the engine well tuned: no leaking seals, gaskets, or hoses.
- Change oil filters often. Slip a plastic bag over filter before removal to catch drips.
- Never discharge or pump any bilge water that appears oily into or near the water – it is against the law.
- Install a bilge pump switch that leaves an inch or two of water in the bilge. Or, connect a bilge water filter to your vessel's bilge pump. Filters will remove oil and fuel from the water.
- Trailer your boat to an area that provides containment before removing bilge or boat plugs.
- Do not use bilge cleaners when pumping to a waterbody - they simply spread out the oil and do not remove it from the bilge water.



**Bilge Socks**

*(courtesy of BoatUS)*

*When dispersants, such as detergents, soaps, and solvents, are put on fuel spills, fuel that might otherwise evaporate from the surface is dispersed down into the water. This rainfall effect causes contamination of all levels of the water, rather than just the surface, and is very difficult to cleanup. Left alone the gasoline will evaporate and, while smelly, by comparison is less harmful. Along with causing this dispersion effect, the detergent harms marine life.*

## Handle spills appropriately

- If you have a spill, wipe it up with a rag – don't hose it off into the water.
- If fuel is spilled into the water:
  - Don't use soap or dish detergent to disperse it. Using detergents to disperse fuel worsens the problem and is against federal law.
  - Call 1-800-OILS-911 for both large and small spills.
- If a spill occurs in a marina, notify the marina management immediately.



For more information, contact  
the Clean Marina Coordinator  
at 503-378-2625