

# Boating Pollution Prevention Tips

*By following a few tips when using your boat, you can help prevent both air and water pollution.*

## You Can Make a Difference in Preventing Marine Engine Pollution

Over 10 million marine engines are operated in the United States. These marine engines are among the highest contributors of hydrocarbons (HC) and oxides of nitrogen (NO<sub>x</sub>) emissions in many areas of the country. HC and NO<sub>x</sub> emissions contribute to ground-level ozone, which irritates the respiratory system causing chest pain and lung inflammation. Ozone can also aggravate existing respiratory conditions such as asthma. Boaters can join many others who are working to make a difference in preventing pollution from marine engines.

## Improving the Marine Engine

The U.S. Environmental Protection Agency (EPA) set emission standards for new outboard and personal watercraft engines that started to take effect in 1998 and were fully phased in by 2006. To meet these standards, engine manufacturers developed technologies for new and better engine designs. Starting with the 2010 model year, new outboard and personal watercraft engines must meet a second round of more stringent standards. In addition, new 2010 model year sterndrive and inboard engines started to meet emission standards. These sterndrive and inboard engines will usually be equipped with fully electronic controls and catalytic converters, which will allow them to achieve a high level of performance while significantly reducing exhaust emissions. Similar emission standards also apply for diesel marine engines.

## Boaters Can Prevent Pollution

Even with the new technology, the cooperation of individual boaters is essential in the effort to improve air quality and prevent pollution. Boaters can make a difference

that will help protect the environment now and in the future by adopting the following practices:

- Limit engine operation at full throttle.
- Eliminate unnecessary idling.
- Follow the manufacturer's recommended maintenance schedule.
- Prepare engines properly for winter storage.
- Buy new, cleaner marine engines.

Refueling is also important. Any fuel that spills is not only wasted, it pollutes the water or it evaporates and contributes to air pollution. Pumping gasoline at a marina requires care to avoid overfilling. The marine industry has developed standards for new boats to address this problem. For older vessels, it is up to the operator to monitor the fill level while pumping the gasoline. For boats designed for refueling with portable fuel containers, the following steps can help prevent fuel spills:

- Pour slowly and smoothly.
- Use a spout with an automatic stop device for better control.
- Close the vent on the portable fuel containers for storage.
- Transport and store gasoline out of direct sunlight in a cool, dry place.
- Use caution when pumping gasoline into a container at the gas station.
- Measure carefully if you mix gasoline and oil.

By combining these strategies, boaters can reduce pollution from marine engines and help keep our air and water clean.

## For More Information

You can access documents on gasoline boats and personal watercrafts on EPA's Office of Transportation and Air Quality (OTAQ) Web site at:

[www.epa.gov/otaq/marinesi.htm](http://www.epa.gov/otaq/marinesi.htm)

You can also contact the OTAQ library for document information at:

U.S. Environmental Protection Agency  
Office of Transportation and Air Quality Library  
2000 Traverwood Drive  
Ann Arbor, Michigan 48105  
(734) 214-4311  
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