

Clean Marinas

Thousands of people annually enjoy recreational boating within the state of Indiana and more than 21 marinas dot the coastline and waterfront property of Indiana. Because boats, wave runners, and other watercrafts are operated and maintained directly in the water or near the shore, the growing number of recreational boaters and marina managers must take special care to manage maintenance activities that cause water pollution.

Individual watercrafts and marinas usually release only small amounts of pollutants. Yet, when multiplied by thousands of boaters, they can cause distinct water quality problems in Indiana's lakes, rivers and coastal waters. The following are potential environmental impacts from boating and marinas: high toxicity in the water; increased pollutant concentrations in aquatic organisms and sediments; increased erosion rates; decrease in oxygen (eutrophication); and high levels of pathogens. Additionally, marina construction can lead to the physical destruction of sensitive ecosystems and bottom-dwelling aquatic communities.

Water pollution from boating and marinas is linked to poorly flushed waterways, boat maintenance, discharge of boat sewage, stormwater runoff from marina parking areas, and the physical alteration of shoreline, wetlands, and aquatic habitats during marina construction and operation.

Managing Boat Operation and Maintenance

During boat operation and maintenance activities, a significant amount of solvent, paint, oil, and other pollutants can potentially wash directly into surface water or seep into ground water. Many boat cleaners contain chlorine, ammonia, and phosphates - substances which can potentially harm fish and limit aquatic bottom growth. Additionally, petroleum hydrocarbons released through small oil spills during refueling and/or motor activities can harm bottom-dwelling organisms that form the base of the aquatic food chain.

Managing Boat Sewage and Waste

Water quality is degraded by the discharge of sewage and waste from boats. Fecal contamination from improper disposal of human waste during boating makes water unsightly and unsuitable for recreation; causes severe human health problems; and stimulates algae growth, reducing the available oxygen needed by fish and other aquatic organisms.

Boaters should avoid the discharge of all sewage into recreation waters. While on the boat, fecal matter and other solid waste should be contained in a U.S. Coast Guard-approved marine sanitation device (MSD). Upon return to the marina or dock, portable toilets should be emptied into approved shore side waste handling facilities and MSDs should be discharged into approved pumpout stations.

Boaters can reduce pollution by:

- Selecting nontoxic cleaning products that will not harm humans or aquatic life;
- Using drop clothes;
- Cleaning and maintaining boats away from the water;
- Vacuuming up loose paint chips and paint dust;
- Fueling boat engines carefully, avoiding petroleum spillage;
- Recycling used motor oil;
- Discarding worn motor parts into proper receptacles;
- Draining water out of all waterlines and tanks during winter freezes; and
- Keeping boat motors well tuned to prevent fuel and lubricant leaks and to improve fuel efficiency.

Managing Location and Design of Marinas

The location and design of marinas are two of the most significant factors impacting marina water quality. Poorly planned marinas disrupt natural water circulation and cause soil erosion and habitat destruction. To reduce activities that contribute to NPS pollution, marinas should be located and designed so that natural flushing regularly renews marina waters. Additionally, incorporation of some simple design elements can greatly reduce NPS pollution, including:

1. Where possible, minimize paved surfaces next to the bulkhead to allow rain to soak into the ground instead of running into the water; install lawn and garden buffers along the bulkhead to act as natural filters and add beauty to the facility; each year fix up a section of the facility with new landscaping to reduce runoff.
2. Use the earth as much as possible as a natural filtration system with crushed stone paving, sand filters, wet ponds, grassy swales (low areas), traps to catch solids from runoff.
3. Install simple oil traps with absorption pillow and debris filters between the work areas and the bulkhead to protect the water quality.

Proper planning and an educated boating public will help reduce marina pollution, promote long-term economic benefits and environmental health, and help recreational boating to remain a fun-filled outdoor experience. Clean marinas, clean boats, and clean boating habits benefit the entire boating community as well as aquatic life.