What Can We Do?

There are lots of ways that each of us can contribute to the improvement of Delaware's Inland Bays/Atlantic Ocean Basin. This list includes only a few of them. Get involved! The future of this environmental treasure — and the health of future generations — rests with each of us.

Plant Beach Grass

Since 1990, dedicated volunteers have stabilized Delaware's sand dunes by planting more than 3 million stems of Cape American beach grass on them. The beachgrass is planted annually in March. The program is coordinated by the Division of Soil and Water Conservation, Department of Natural Resources and Environmental Control. For information, please call (302) 739-4411.

Clean Up the Coast

An annual cleanup of Delaware's coast has been under way for 13 years as part of the Delmarva Coastal Cleanup. Volunteers join in a cooperative effort with other groups on the Delmarva Peninsula to pick up debris along the coast as well as collect data for the Center for Marine Conservation. Call the Department of Natural Resources and Environmental Control for information, (302) 739-6324.

Monitor Bay Water Quality

Volunteers have been taking water samples on a regular basis along the Inland Bays since 1991 to measure important water-quality characteristics, from dissolved oxygen levels to water clarity. Training is provided by the University of Delaware Sea Grant College Program, which manages the Inland Bays Citizen Monitoring Program with support from the Division of Water Resources, Department of Natural Resources and Environmental Control. For more information, call (302) 645-4250.

Help Out at the James Farm Preserve

Volunteers are always needed and welcome at the James Farm Ecological Preserve. The preserve, located on Cedar Neck Road in Ocean View, is managed by the Center for the Inland Bays. If you are interested in volunteering for projects such as trail maintenance, tree planting, mowing, and other activities, call the Center at (302) 645-7325.

Volunteer in a State Park

Delaware's state parks offer a variety of opportunities to get involved with projects ranging from trail construction and maintenance to helping out with special programs. For information on volunteer opportunities within our state parks, call the Division of Parks and Recreation, (302) 739-3197.

Reduce Household Hazardous Waste

Our everyday activities can contribute significant levels of pollution to waterways. Nonpoint sources of pollution such as chemical fertilizers that are transported through erosion and runoff must be reduced if we are to make progress in the cleanup of our waters. We must also be mindful not to add hazardous, toxic, or unnecessary materials to increase the burden on wastewater systems. Here are some tips for reducing household impacts.

- Use non-phosphate laundry detergents. Phosphates may overstimulate plant growth in the bays and deplete oxygen levels needed by fish.
- Purchase non-toxic cleaning products.
- Read and follow directions on labels carefully.
- Use latex paint instead of oil-based paint when possible.
- Use fabric softener sheets rather than liquids (they have a lower metals content), or add one cup vinegar or a quarter cup of baking soda to the final rinse.
- Use stains and finishes derived from natural sources such as shellac, tung oil, and linseed oil.
- Know how to identify a hazardous product. Federal law requires that hazardous products be labeled DANGER, WARNING, or CAUTION.
- Safely dispose of hazardous substances at the Delaware Solid Waste Authority's Sussex County facility the first Saturday in February, June, and October. The Southern Solid Waste Management Center is located along Route 20, Jones Crossroads. Hours are 8 a.m. to 3 p.m. You can drop off product containers marked, "Warning: Hazardous," "Flammable," "Corrosive," or "Explosive."

The following items are accepted:

Household — full aerosol cans; bleach; chemistry kits; nail polish, polish removers, perfumes; disinfectants; drain cleaners; floor wax; mercury thermometers; moth balls; oven cleaner; smoke detectors; spot remover; toilet cleaner.

Home Health Care — prescription medications; used syringes.

Explosives — ammunition; firecrackers; gunpowder.

Workshop — corrosives; paints (other than latex); small compressed-gas cylinders; solvents; stains; strippers; thinners; varnish; wood preservatives; fluorescent bulbs.

Garden/Yard — fungicides; herbicides; pesticides; pool chemicals.

Automotive — antifreeze; auto batteries; degreasers; waste fuels-gasoline, kerosene; used motor oil mixed with other fuels.

The following items will not be accepted:

Friable asbestos — accepted by appointment at Cherry Island Landfill for a fee. Call 764-2732.

Non-friable asbestos — accepted by appointment at all Solid Waste Authority landfills for a fee.

Unknown substances — greater than 1 gallon or 8 pounds.

Radioactive waste — not accepted.

Materials with other disposal methods:

Latex paint — water-soluble, not hazardous. Can be taken to landfill.

Containers with less than 1-inch of material — can go in regular trash.

Used motor oil — accepted at specific "Recycle Delaware" locations.

Maintain a Healthy Lawn and Garden

A healthy lawn and garden makes a home more attractive and is also environmentally beneficial. Healthy lawns and gardens, coupled with trees and shrubs, can help prevent erosion and runoff to the bays. However, lawns can be a source of pollution if proper lawn-care techniques are not followed.

- Perform soil tests every 3–4 years to determine the amount of nutrients necessary for a healthy lawn. Contact your local soil conservation district for more information and test kits.
- Use fertilizers only as needed in the fall. Do not heavily water lawn after application because it may lead to excessive aquatic algae growth.
- Don't give your lawn a crew cut. Lawns should be 2–4 inches high. Cutting too short or too frequently weakens grass and fosters weed growth.
- Leave grass clippings on the lawn to serve as a natural fertilizer or compost them.
- Use pesticides sparingly. If pesticides are used, read and follow directions carefully. Try to use natural (non-toxic) alternatives to pesticides, such as insecticidal soap. Never use pesticides if rain is in the forecast because the chemicals will run off into a local stream or storm drain.
- Consult your local nursery for advice on selecting plants suited for the site characteristics. Use mulch to reduce weed growth and evaporation.
- Do not overwater your lawn or garden. Excessive watering can cause chemicals to leach into ground water and can make plants more prone to disease.

Build a Compost Pile

- Select a flat, well-drained spot that gets full sun. Try to build the pile in the middle of the garden.
- Construct a compost bin out of scrap lumber, bricks, concrete blocks, or wire. Make sure the bin has openings to let air penetrate the pile.
- Feed the pile, mixing coarse and fine materials in 6- to 8-inch layers. The bottom layer should contain twigs, chopped cornstalks, or other coarse material. Next, add a layer high in nitrogen such as grass clippings or manure. Top with soil and repeat the process. Sprinkle the pile with water.
- Mix the layers well and shape so the center is lower than the sides to help water flow into the pile. Turn the pile once a month and remoisten the material as you turn it.
- Plant material should decompose into compost within five months in warm weather, longer under cool/dry conditions. Spread compost in the garden and till it under to benefit soil and plants.

Keep Septic Systems Functioning Properly

Septic systems require periodic check-ups and proper care to function properly. They must have a healthy diet to prevent ground water and soil contamination as well as costly repair bills.

- Keep all toxic and hazardous chemicals out of your septic systems. Even small amounts can destroy your system's biological digestion.
- Avoid dumping grease/fats down kitchen drains. They can cause blockages in the system. Collect grease in a container near the sink.

- Have your septic tank pumped by a certified contractor every three years. Failure to pump can cause clogging and result in costly repairs.
- Don't drive over absorption fields. This can cause compacting, which can result in clogging. Do not plant trees over the system or construct walkways, patios, swimming pools, or other permanent structures over or within the leach line.
- Minimize the solids load. Minimize or avoid using a garbage disposal unit. Remove scraps with the garbage or compost them.
- Minimize the liquid load. The less wastewater you produce, the less the soil has to absorb. Repair leaky fixtures, washing clothes only with a full load. Use water-saving devices. Do not let water run while brushing teeth or washing dishes.
- If you have a holding tank, it should be pumped out every 10 to 15 days.

Follow Bay-Friendly Boating Practices

- Avoid discharging sewage directly into the water. Sewage contains disease-carrying organisms and nutrients that are harmful to humans, plants, and wildlife. Boaters should have some type of sanitation device on board, such as a portable toilet or holding tank, to treat the sewage. The waste should be disposed at dump stations or pumpout facilities. Dumping of sewage directly into the water is illegal. Take the time to find the proper disposal area near your boating area and, whenever possible, use onshore rest rooms.
- Don't litter. Dispose of trash in proper containers once onshore.
- Clean fish at designated areas and dispose waste in proper containers. Do not throw fish waste into surface waters at marinas; the waste can cause water-quality problems within the marinas.
- Dispose of or store liquid waste (e.g., oil, grease, detergents, paint) in the proper containers.
- Avoid over-fueling. One quart of engine oil spilled in 1 million quarts of seawater will kill half of the exposed crab larvae.Do not top off tanks. Purchase vents that act as fuel/air separators so that fuel does not enter the bilge. Use oil-absorbing pads in the bilge and dispose properly.
- Perform boat maintenance out of the water if possible. Use areas designated for dust and scraping control, where wash water is effectively treated. Treat paint dust and scrapings as hazardous waste and dispose properly. Recycle boat engine oil and other fluids.
- While keeping boat hulls clean is important for efficient operation, use detergents and antifouling treatments that do not contain phosphate and are biodegradable to minimize environmental impacts. Antifouling paints work by releasing chemicals that are toxic to unwanted organisms that attach to boat surfaces. Unfortunately, high concentrations of chemicals such as copper and tin can be extremely harmful to other aquatic organisms in enclosed marine environments such as bays, harbors, and marinas.
- Obey speed limits and no-wake zones. Slow your boat before coming to speed-limit markers. Boat wakes contribute to shoreline erosion. Be careful in shallow areas; do not disturb the sediment or uproot vegetation with the boat propeller.

Recycle

Recycle Delaware is a voluntary recycling program. Most centers are located within a 5-mile radius of most households so residents can easily drop off recyclables. For the center nearest you, call the the Delaware Solid Waste Authority's Citizens Response Line, 1-800-404-7080.

Items accepted through Recycle Delaware:

Paper — newspapers, magazines, phone books, newspaper inserts and paperback books.

Plastic — narrow-neck plastic bottles only (milk jugs, soda bottles, laundry detergent, salad dressing, cooking oil, shampoo, cleaning bottles). Rinse lightly, remove lids, and crush. Labels and rings can stay on.

Cans — aluminum, steel, and empty aerosol cans (drink/food cans, pet food, hair/bug spray). Rinse lightly. Crush if possible. Labels can stay on. Remove plastic spray knob from aerosols.

Glass — food/beverage containers, jars. Rinse lightly. Remove lids. Label and ring can stay on.

Cardboard — (specified locations only, call 1-800-404-7080 for locations) corrugated cardboard only. Fold to fit in 60-inch by 5-inch opening.

Motor Oil — (specified locations only, call 1-800-404-7080 for locations) used motor oil, hydraulic or diesel oil.

Oil Filters — (same locations as motor oil) used car and truck oil filters.

Batteries — small household batteries (A, C, D) and button type (watch, hearing aid, camera).

Buy Recycled Products

We can all be more environmentally conscious when making purchases. Consider buying recycled products. Ask local suppliers about the following:

Household Items — carpet and backing, kitchen containers, wall panels, roof materials, tissues, toilet paper, paper towels, gift wrap, trash bags, plastic lumber, floor tile, steel/aluminum containers, benches, picnic tables, flower pots, mailboxes.

Office Items — computer paper, stationery, envelopes, file folders, copier paper, notepads, printer and laser cartridges, rulers, wastepaper baskets, pens and pencils, binders.

Auto Parts — retreaded tires, oil filters, license plate frames, batteries, rubber accessories, rebuilt auto parts, oil.

Home*A*Syst for Risk Assessment

Home*A*Syst, a companion program of the Farm Assessment System, takes you step-by-step through a series of worksheets that help you understand potential hazards around your home. Topics include drinking water; fuel storage; septic systems; fertilizers, herbicides/insecticides; hazardous waste; indoor air; and lead. Call University of Delaware Cooperative Extension for more information, (302) 856-7303.

Glossary

Aquifer: a water-bearing geological formation that will yield water to a well or spring. Aquifers can be classified as confined or unconfined.

Atmospheric Deposition: pollutants from the air falling on the land or water, sometimes at great distances from their original sources. Can be an important contributor to declining water quality.

Basin: the surface area that drains into a surface water system.

Contaminant: Any element, substance, compound, mixture, or agent, other than a hazardous substance, which, after release from a facility and upon exposure of, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations in the organism or their offspring.

Erosion: Wearing away of soil by running water, wind, or ice; erosion is the process by which the Earth's surface is shaped and occurs even in remote, uninhabited areas at a slow rate (geologic erosion); of more concern is accelerated erosion caused by human activities.

Eutrophication: The enrichment of natural waters with inorganic material, especially nitrogen and phosphorus, such that they support excessive growth of plants/algae.

Ground Water: Water beneath the Earth's surface at varying depths; in reservoirs called aquifers.

Hazardous Waste: Any waste material that is potentially dangerous, including explosives, radioactive materials, and chemicals.

Non-Point Source Pollution: Pollution of surface or groundwater supplies originating from land-use activities and/or the atmosphere, having no well-defined point of entry.

Point Source Pollution: Pollution of surface or ground water supplies at well-defined, usually manufactured points or locations; discharges of treated wastewater from municipal and industrial treatment plants are common point sources of pollution.

Septic System: An on-site system designed to treat and dispose of domestic sewage. A typical sewage system consists of a tank that receives wastes from a residence or business and a system of tile lines or a pit for disposal of the liquid effluent remains after decomposition of the solids by bacteria in the tank.

Surface Water: Lakes, ponds, streams, rivers, and other water bodies, which lie on the surface of the land; may be partially or fully supplied by ground water.

TMDL or Total Maximum Daily Load: a calculation of the maximum amount of a pollutant that a water body can receive and still meet water-quality standards, and an allocation of that amount to the pollutant's sources.

Turbidity: A measure of the amount of fine particles of solid matter suspended in water.

Watershed: An area of land that contributes runoff to one specific delivery point; large watersheds may be composed of several smaller "sub-watersheds," each of which contributes runoff to different locations that ultimately combine at a common delivery point.

Water Table: The upper level of a saturated zone below the soil surface, often the upper boundary of a water-table aquifer.