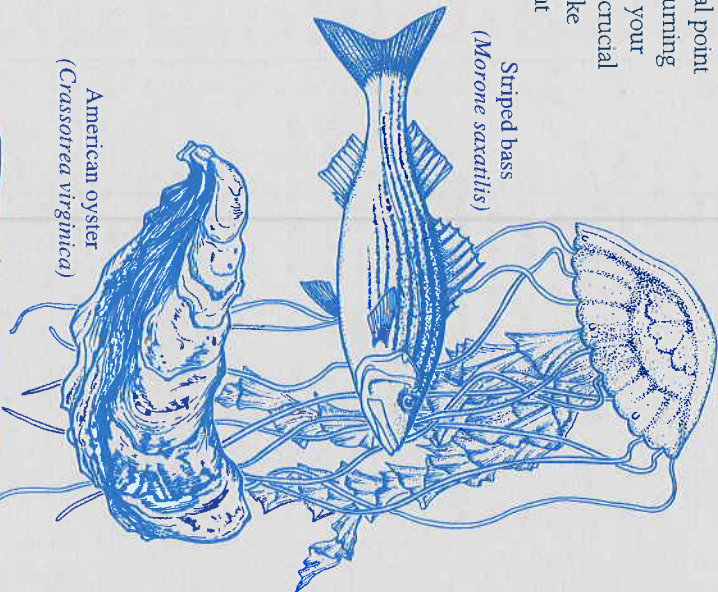


Take some time now to give "watershed" a spiritual dimension. Think of the ways we use "watershed" to mean a critical point that marks a change in course or a turning point. Recall watershed moments in your own life, like the establishment of a crucial friendship or the birth of a child. Take note of watershed moments in recent American history, like the passage of the civil rights bill or the fall of the Soviet Union.

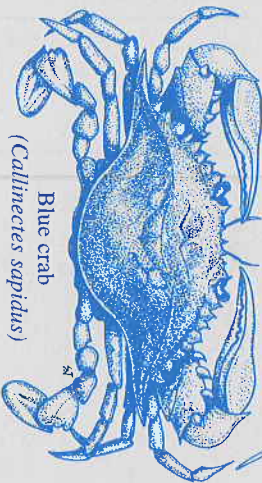
Look at the list of actions listed inside the Canticle. Pick two that you would really like to do, even if you know that you might not be able to do them right away. Now close your eyes and picture yourself doing each action. Give yourself time to get a clear image of yourself taking the action. Picture many of your neighbors and friends seeing what you are doing and then joining you in that action. Then see your whole community, your whole state, and the whole nation joining in the action. In your mind's eye, notice how much your action has helped the water in the streams, lakes, and ocean purify itself. See your action as the watershed, the turning point.

Sea nettle
(*Chrysaora quinquecirrha*)

Striped bass
(*Morone saxatilis*)



American oyster
(*Crassostrea virginica*)



Blue crab
(*Callinectes sapidus*)

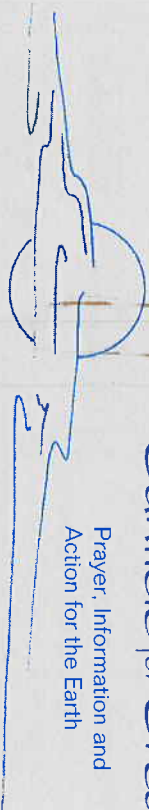


We thank the Chesapeake Bay Program for the information and graphics used here. To learn more about efforts to restore the Chesapeake Bay, call the Chesapeake Regional Information Service at 1-800-662-CRIS, or visit the web pages at www.chesapeakebay.net/bayprogram. Upcoming issues of the Canticle will be about the importance of prairies. It will include information about natural landscaping, which helps water quality.

Center for the Celebration of Creation

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Canticle for Creation

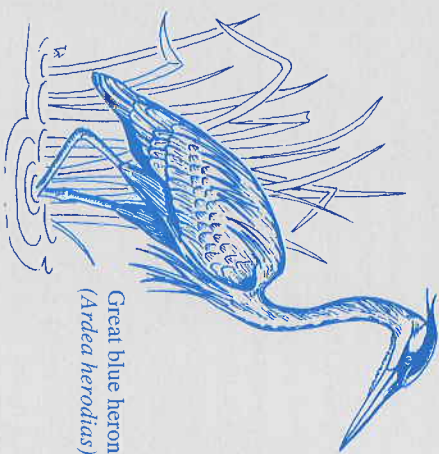
Prayer, Information and
Action for the Earth

INFORMATION

Watersheds

A watershed is the area that drains into a river, bay, or other body of water. This Canticle explores why watersheds matter and makes suggestions for protecting them. We'll focus on the Chesapeake Bay along the East Coast. Even if you don't live near the Chesapeake, much of what appears here will apply to your own watershed. Every one of us lives in a watershed that deserves our respect and caring.

Watersheds are nature's boundaries for water. When rain falls or when snow melts, water flows downhill through brooks, drains, and ditches into wetlands, rivers, lakes, and eventually to the ocean. Or, the water may seep down through the soils to become ground water. As it flows, water picks up pollution, sediments, and debris. All activities—natural and human—affect the quantity and quality of water that collects in the watershed.



Great blue heron
(*Ardea herodias*)

A Raindrop's Journey

What do you know about your local watershed? Do you know where your water comes from? Or where it goes when it leaves your house? Do you know where the closest stream is? Is it relatively clean or polluted? Let's go on a journey of the mind to learn more about the journey of water.

Imagine yourself to be a raindrop falling in a watershed just outside a big city. As you fall to earth, you carry tiny, airborne pollutants, by-products from automobiles and industry. You might percolate into the soil on your way to the groundwater below. More likely you'll be part of the runoff—the water that runs over the surface, heading down hill.

In a typical suburban neighborhood you'd fall on a broad expanse of lawn. Flowing across the grass, you'd pick up fertilizers and pesticides. As you flowed into the street you'd gather sediments, the oil that leaked from a parked car, the detergent your neighbor used to wash her car, plus anything else in the gutter. You'd probably tumble down a storm sewer then to the end of the drainage pipe, where you'd spill unfiltered into your local stream.

By imagining the raindrop's journey, you have given yourself a good sense of the pollutants that may be in the water running into your nearby stream.

We all live downstream

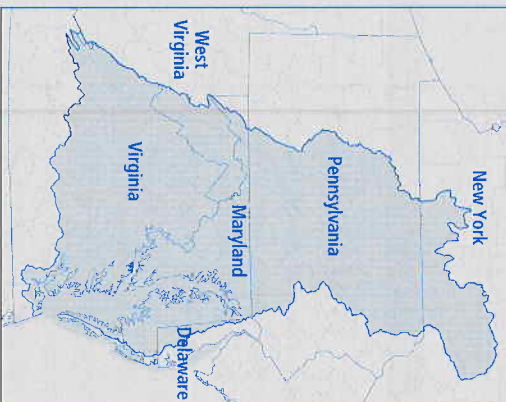
The quality of your local stream is affected by the human activity in the watershed. Your stream's water and the pollutants it carries are gathered with the waters of other streams into rivers, and so on to the sea. We all live downstream of someone else, and so our activities are inextricably linked through our watersheds.

It's a matter of scale. A few pollutants picked up here or there wouldn't seem to matter. But when every little stream is picking up and carrying pollution, it amounts to just plain too much!

By illustration, let's consider a watershed about which much is known—the Chesapeake Bay.

Over forty rivers in six states feed the Chesapeake watershed. Water entering the bay carries toxic pollutants, excessive nutrients from fertilizers (nitrogen and phosphorus), and sediments. Ironically, the nutrients are a problem because they nourish algae blooms that cloud the water, block sunlight to the underwater grasses, and use up the oxygen needed by fish. Sediments also cloud the water, then limit the growth of underwater plants by settling out on the bottom. This ruins the habitat for oysters, clams, crabs, and other species. Fishermen are losing their jobs because of the total effect of all the pollutants and fertilizers that countless drops of water pick up and carry on their way through the watersheds.

Chesapeake Bay Watershed



The shaded area shows the Chesapeake Bay Watershed.

One might think that wastewater treatment plants and industrial discharge sites are the big polluters. But they are a comparatively small part of the problem. Most of the damage comes from the activities of people living within the watershed. Many of us need to think more carefully about how we live upon the land.

Many problems hurt the water quality of the Chesapeake Bay and local streams. You imagined the flow of water into your local watershed. Can you now imagine some of the changes that will restore it to health? Let's think personally, not just theoretically, about what we can do. The Chesapeake Bay—or any other watershed—can only be restored when we address how we care for each parcel of land and every drop of water. Here are some actions you can take to protect and restore your watershed.

- If you have a lawn or garden, consider using slow-release fertilizers, or use smaller amounts more often to increase the uptake by plants and decrease the loss to run-off. Better yet, try a season without fertilizing your grass. You'll save work and money, and you may well find that your grass doesn't need those extra chemicals.
- Keep your grass trimmed higher to permit more absorption of water and nutrients and limit runoff.

- "Grass-cycling" means allowing the clippings to filter back into your lawns to serve as a natural fertilizer. This can reduce fertilizer needs by a third, and will add needed organic matter to your lawn.
- Check out the methods used to maintain your church's lawn and your community lawns and parks. Urge that the practices listed above be used to maintain public spaces.
- Organize a local watershed advocacy group. Sponsor a clean-up of your local stream. One of the best things you can do is to protect the vegetation in the area along the bank. Thick meadows, shrubs, and trees help slow runoff, sediments, and nutrients before they enter the stream.
- Fix that oil leak in your car. If you change your own oil, take the used oil in to be recycled.
- Tune up your car, especially the emission system, to contribute as little pollution into the atmosphere and watershed as possible. Drive less.
- Be careful what you pour down the drain. For all practical purposes you're pouring it into your drinking water. Use local hazardous waste recycling programs to dispose of chemicals, cleaners, solvents, paints—the stuff you wouldn't want to swim in if you were a fish, or that you don't want in the fish you eat.
- If you're not sure what watershed you live in, call the Center for the Celebration of Creation at (215) 242-9321, extension 2. We'll help you find out.

Waterman handpicking for oysters.

