

CHAPTER 10: STEWARDSHIP

Given the many complex and longstanding demands on Maryland's land and water resources, complete restoration of Maryland's Bays can never be fully accomplished by even the most stringent implementation of the Critical Area regulations. There are, however, many opportunities for Maryland citizens to become involved in activities that maximize the amount of restoration that is possible. Stewardship efforts by all Critical Area landowners, whether they are residential property owners with a one-acre lot or farmers with 500 acres, are absolutely vital. Likewise, voluntary citizen actions that promote the concept of living gently on the landscape inside and outside the Critical Area can only serve to promote the goals of the Critical Area Program.

While planting native species and recycling cans and bottles may seem like small steps, cumulatively these acts of environmental stewardship are a meaningful part of the restoration effort. In fact, environmental stewardship by all Critical Area property owners and by citizens who use and enjoy the resources of the Chesapeake and Atlantic Coastal Bays is essential to the success of the Critical Area Program. This stewardship is key to returning Maryland's water resources to their former bountiful and productive state.

Homeowner Efforts

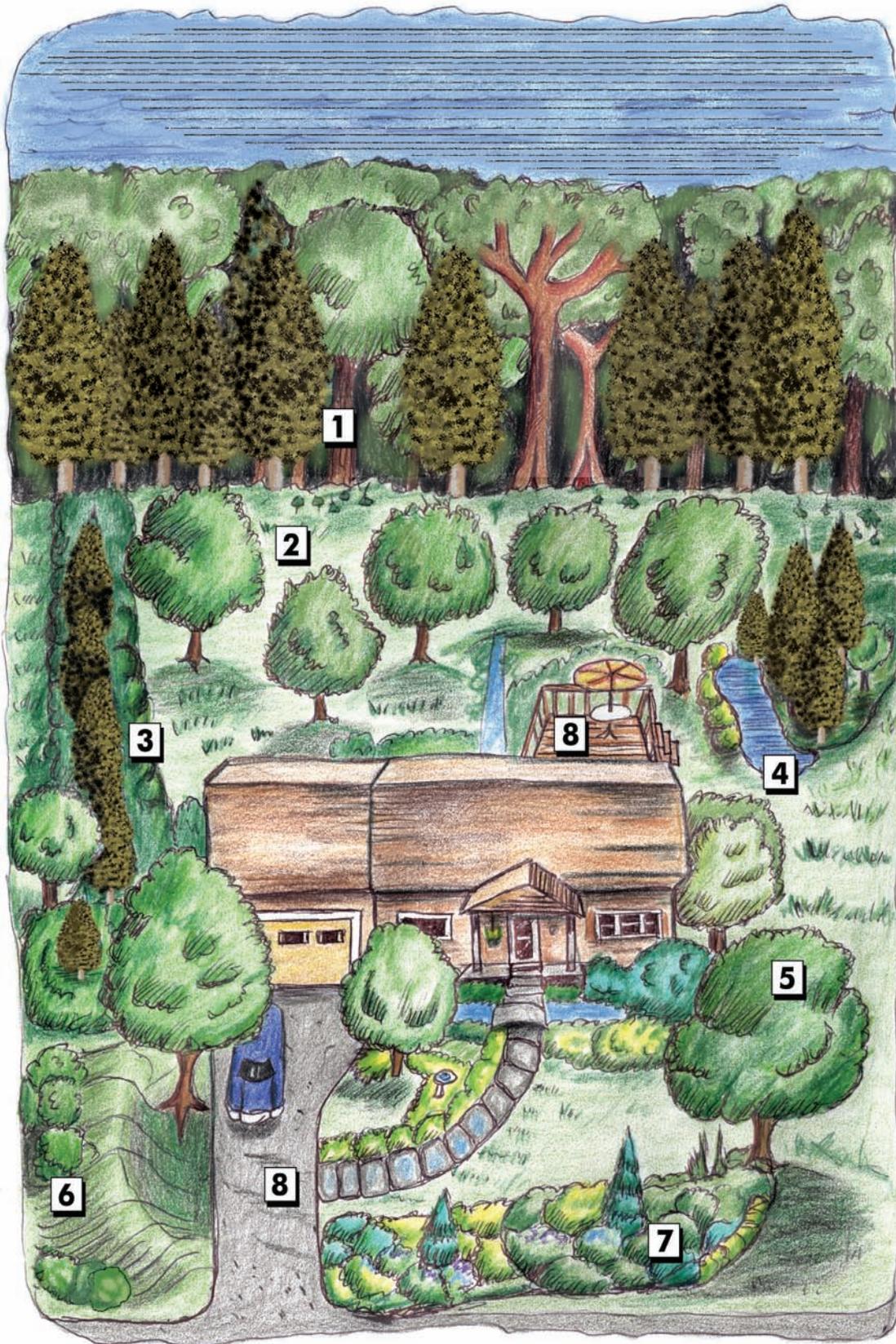
Residential property owners who live on or near the Chesapeake Bay, the Atlantic Coastal Bays, or their tidal tributaries are fortunate to enjoy the natural beauty and recreational opportunities these resources provide. However, this privilege is accompanied by an important responsibility – that is, to protect and care for this area so as to conserve the important water quality and habitat functions that directly affect the health of the Bays. Homeowners

- *Stream and beach clean-ups provide opportunities for citizens to get involved in restoring Maryland's Bays right in their own communities.*



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Environmental Stewardship Begins at Home



1. 100-Foot Buffer

- provides habitat
- filters stormwater
- takes up nutrients
- protects aquatic resources from human activities

2. Small Lawn Area

- minimizes need for fertilizer and pesticides
- reduces maintenance activities including mowing and watering

3. Corridor Plantings

- screen winter winds
- create wildlife habitat and corridors

4. Rain Garden

- treats and infiltrates stormwater
- provides food and cover for wildlife
- reduces stormwater flows into waterways

5. Canopy Trees

- provide shade
- clean the air
- reduce stormwater runoff
- stabilize soil

6. Groundcovers

- reduce lawn area
- stabilize steep slopes
- provide habitat diversity

7. Planting Islands

- add privacy and habitat
- reduce high-maintenance lawns

8. Permeable Materials for Decks, Driveways, and Walkways

- reduce stormwater temperature, quantity, and velocity
- provide more area for infiltration
- allow run-off to be absorbed slowly and contribute to groundwater recharge

■ Homeowners can engage in activities that protect water quality and enhance habitat right in their own backyards.



■ *Planting trees is a stewardship activity that contributes to the improvement of water quality and enhances wildlife habitat. (Photo courtesy of USDA NRCS)*

can be effective stewards of Maryland's Bays by knowing about and complying with the local Critical Area regulations, informing others about the Critical Area Program, and actively managing their land to promote the goals of the Critical Area Program.

The sheer number of residential property owners in the Critical Area makes the activities of homeowners significant to the effectiveness of the Critical Area Program. One shed constructed illegally in the Buffer may not seem to have much of an effect on water quality, but when the cumulative impacts of thousands of sheds and other structures are considered, it becomes apparent that successful implementation of the Critical Area regulations must begin in each backyard. Homeowners can educate themselves about Maryland's Critical Area Program by reading this publication and by researching other local resource materials that are available at local planning offices and on the Internet. A property

owner who is unclear as to whether a specific activity is allowed or requires a permit is strongly encouraged to contact the local planning office before starting any work.

Landowners can also help to educate others about the Critical Area Program by discussing local regulations with their neighbors and by conspicuously posting any permits or authorizations for activities on their own properties. If a homeowner observes a potential violation on a neighbor's property, it is best to report the suspected violation so that the situation can be rectified. If the person reporting the violation does not wish to be identified, the Critical Area Commission and some local governments will accept anonymous complaints and follow up on them.

In addition to abiding by the Critical Area regulations, the following voluntary actions by



■ *Efforts to restore and improve Maryland’s waterways are newsworthy and publicizing them heightens awareness about the condition of Maryland’s Bays.*

homeowners are strongly encouraged because they promote good stewardship of Maryland’s water resources:

- Planting trees, shrubs, and herbaceous plants in the Critical Area provides far greater water quality and habitat benefits than planting turf grass. The United States Fish and Wildlife Service publication titled *Native Plants for Wildlife Habitat and Conservation Landscaping – Chesapeake Bay Watershed* includes pictures and detailed descriptions of more than 400 native tree and plant species that are uniquely adapted to the Chesapeake Bay’s ecosystems. Replacing turf grass with native species in a mulched area within the 100-foot Buffer is particularly beneficial because it restores the Buffer’s natural water quality and habitat functions.
- Using nonstructural shoreline erosion methods, particularly living shorelines that provide water quality and habitat benefits in addition to controlling erosion, is the preferred method of controlling erosion.
- These methods involve less disturbance to riparian habitat than structural methods, and they are often less expensive as well.
- Managing stormwater runoff by disconnecting downspouts and providing areas for infiltration provides inexpensive treatment to remove sediments, nutrients, and other pollutants from stormwater. Property owners can install rain gardens that include native plants that are attractive, provide habitat, and treat stormwater.
- By minimizing the use of fertilizers and pesticides and conserving water used for turf grass and landscape plants, property owners can reduce the amount of nutrients and toxic chemicals that end up in Maryland’s streams, creeks, rivers, and Bays.
- “BayScapes” are low-input landscapes that use native plant species and require less mowing, fertilizing, and pesticide than turf grass and other types of landscaping. Residential use of native plants provides habitat that promotes

biodiversity, and reduces nutrient and chemical applications that can adversely affect water quality in streams, rivers, and the Bays.

Restoration Opportunities on Commercial Properties

Businesses in the Critical Area also play an important role in the effective implementation of Maryland's Critical Area Program. Commercial and industrial properties in the Critical Area tend to be intensely developed with high levels of impervious surface coverage and relatively little natural habitat. In addition, by their very nature, these uses bring more frequent and more concentrated human activity to the Critical Area than other land uses. For these reasons, compliance with local Critical Area regulations on commercial and industrial properties is particularly important. Fortunately, the redevelopment of existing sites and the development of vacant properties provide many opportunities to enhance the environment and promote the goals of the Critical Area Program.

Business owners proposing to redevelop existing commercial properties or to develop a vacant property with a new commercial use promote good stewardship by designing and constructing projects that fully comply with the local Critical Area program. Moreover, they can explore opportunities to go above and beyond the minimum requirements. Sites can be designed to conserve any existing natural areas or they can be redeveloped to provide additional areas of natural habitat. Redevelopment activities frequently provide opportunities to reduce lot coverage by designing multi-story buildings, creating shared parking arrangements, and by replacing impervious materials, such as concrete walkways, with pervious or semi-pervious materials. Development activities also can allow for the installation of stormwater treatment facilities, such as pocket ponds, bioretention areas, and shallow wetlands, which provide habitat as well as water quality benefits.

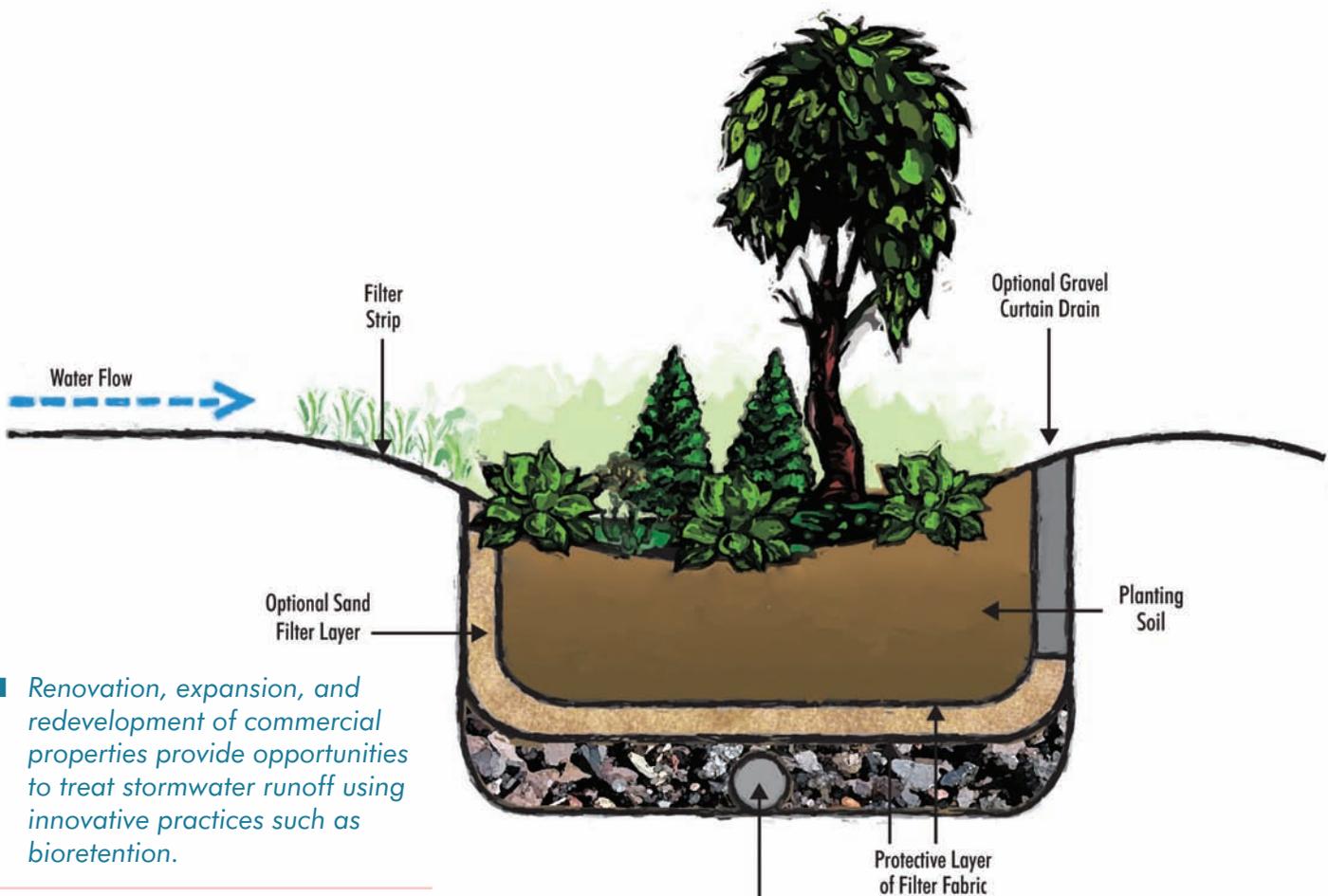
Owners and operators of marinas and other commercial facilities with water frontage have significant opportunities to improve the water quality

and habitat of Maryland's waterways through optimum management of the 100-foot Buffer. On undeveloped properties, planting the Buffer as required by the local program, providing connections to natural areas on adjacent properties, and minimizing permitted impacts to the Buffer associated with access or water-dependent activities all work together to maximize vital Buffer functions.

For properties that are already developed and that may be paved to the water's edge, redevelopment projects provide opportunities to restore some Buffer functions by removing structures, roadways, parking areas, and walkways where feasible and planting the area with native trees, shrubs, and herbaceous plants. Even if the entire 100-foot Buffer cannot be restored, establishing a landscaped strip adjacent to tidal waters, tidal wetlands, or tributary streams will provide some water quality and habitat benefits. This area is then better able to infiltrate sheet flow from parking lots, trap sediments and debris in stormwater runoff, reduce the temperature and velocity of stormwater, and take up nutrients. Depending on the width of this area and connections to other larger natural areas, a landscaped strip may even provide food and cover for some wildlife species.

In addition to obtaining required permits and approvals and ensuring that contractors fully comply with all permit requirements and approved plans, commercial property owners can explore the following opportunities to promote the goals of Maryland's Critical Area Program:

- Removing abandoned structures and pavement and cleaning up degraded sites can reduce stormwater runoff, maintain areas available for infiltration, and provide places to plant native species. Demolishing vacant buildings, taking up unused walkways, and cleaning up trash and debris enhance natural ecosystem functions and avoid pollution and contamination of aquatic resources from improperly stored hazardous materials and chemicals.



■ *Renovation, expansion, and redevelopment of commercial properties provide opportunities to treat stormwater runoff using innovative practices such as bioretention.*

- Renovation, expansion, and redevelopment of commercial properties provide opportunities to improve water quality by treating stormwater runoff from areas that are not currently being treated. Because commercial properties tend to be more heavily developed, with little or no area available for infiltration, treating stormwater from these sites maximizes water quality benefits.
- Local efforts to improve and restore Maryland’s Bays are newsworthy. Businesses that are expanding or rebuilding in ways that improve water quality, enhance wildlife habitat, or restore degraded areas can publicize these activities and promote their businesses by keeping local and regional media informed about their efforts.

Government Projects

Federal, State, and local government projects are not exempt from the requirements of Maryland’s

Critical Area Program. These projects are reviewed for consistency with the appropriate regulations, and some projects require formal approval by the Critical Area Commission. Federal projects, such as the construction of post offices and buildings on naval stations, must comply with the Coastal Zone Management Act (CZMA). In Maryland, compliance with the CZMA is accomplished by ensuring that all development activities on federally-owned lands comply with all State environmental regulations, including the Critical Area Program.

State-sponsored development activities must fully comply with Maryland’s Critical Area Program, and the Critical Area Criteria include specific provisions for these projects. All development activities proposed by a State agency or located on State-owned land must be reviewed and approved by the Critical Area Commission. This includes projects ranging from bridge reconstruction projects, such as the Woodrow Wilson Bridge, to the construction of State park improvement projects, like restroom facilities at Point

Lookout State Park. Just like projects undertaken by any private landowner, State agencies are required to replace trees or forest cover that is removed and to provide three-to-one mitigation for activities that involve authorized impacts to the Buffer. Wherever possible, mitigation is usually performed on or near the project site; however, in some cases, such as highway improvement projects, off-site mitigation projects are necessary. The Commission staff works closely with many State agencies to facilitate the implementation of all required mitigation.

Most local government projects are reviewed for compliance with the local Critical Area program by the jurisdiction's planning department. Local governments are required to notify the Commission of the proposed development activity and certify to the Commission that the project has been reviewed for consistency with the Critical Area program. Projects identified as "major development" require approval by the Commission. These are projects that may cause State-wide, regional, or inter-jurisdictional environmental or economic effects in the Critical Area or which may have a significant impact on a jurisdiction's Critical Area program. Major development projects include airports, power plants, public housing projects, public beaches, and intensely developed park and recreation facilities. Projects proposed by local governments in the Critical Area present an opportunity for local governments to demonstrate their commitment to strict compliance with Maryland's Critical Area Program and to provide on-the-ground examples of environmentally sensitive development projects.

Local governments can also facilitate or participate in a variety of stewardship activities that promote the goals of Maryland's Critical Area Program, such as:

- Planning activities and events that will focus community attention on the importance of clean water and abundant habitat helps community groups, clubs, and homeowners' associations to learn about the Critical



■ *In the spring and fall, many organizations sponsor tree-planting projects that provide opportunities for people of all ages to learn how to plant a tree and the importance of maintaining trees and forests for the health of Maryland's Bays*

■ *State and local governments are strongly encouraged to incorporate required mitigation into the project design, so that mitigation requirements can be met on the project site.*





- *Citizens of all ages can get involved in water quality monitoring efforts, which are often key to identifying sources of pollution.*

Area Program and the challenges confronting the restoration of Maryland's Bays. The Critical Area Commission staff is available to make presentations on a variety of topics and can provide information about other sources.

- Many government-sponsored development projects involve opportunities for the public to get involved in the planning process. Participating in recreation advisory groups, downtown renovation committees, and parent-teacher associations allows citizens to work closely with government officials and consultants to promote environmentally sensitive project designs and development activities.
- Water quality and habitat protection projects, such as raising Diamondback Terrapins or growing submerged aquatic vegetation, are ways that children can learn about the Bays

while participating in restoration efforts. Local schools often need adult volunteers to help with these efforts.

- Throughout the spring and fall in Maryland, numerous organizations sponsor tree-planting projects on public land. These projects enhance habitat, promote species diversity, and can improve the aesthetic appearance of schools, parks, playgrounds, and office complexes. Participants learn how to plant a tree so that it will survive, and they learn which native trees species are the best to plant. Information about tree plantings that promote the health of Maryland's Bays can be obtained by contacting the local government planning office, the Department of Natural Resources Forest Service (www.dnr.state.md.us/forests/), and the Chesapeake Bay Foundation (www.cbf.org).

Stewardship Opportunities for All Maryland Residents

Residents of Maryland who do not live in the Critical Area can still participate in efforts to promote the goals of the Critical Area Program. Stewardship activities take many forms, and even small changes in behavior make a significant difference.

- Citizens can learn about water quality issues first-hand by kayaking or canoeing a local stream, river, or the Bays. While enjoying the scenic beauty, water enthusiasts can note erosion problems, highway or construction runoff, algal blooms, any dead wildlife, foul smells, or direct discharge, and inform local authorities of the problem.
- Participating in or organizing a shore cleanup along a stretch of a stream, creek, river, or the Bays is an easy and effective way to exert a positive influence on the water quality and habitat of the Bays' ecosystems.
- Attending lectures, presentations, and community information meetings are ways for citizens to become more informed about topics related to the Bays and the challenges facing Maryland's restoration efforts. Information about these opportunities can be found on Internet sites of the sponsoring organizations, in local newspapers, and on community bulletin boards at the public library and other government buildings.
- Using public transportation is always more environmentally friendly than driving a private vehicle, but purchasing a Chesapeake Bay License Plate shows support for Maryland's restoration efforts because a portion of the fee for these plates goes to restoration and education projects related to the Chesapeake Bay. Additional information is available at <http://www.bayplate.org/>.
- Local newspapers provide an opportunity for those interested in promoting the goals of the Critical Area Program to express their opinions. Editorials and letters to the editor reach and influence a wide array of individuals. Not only does the general public read editorials, but local government officials and legislators do as well.
- Reporting suspected violations helps local governments enforce their Critical Area programs. Homeowners within the Critical Area can learn about the regulations and stay aware of construction and development activities that are taking place in their neighborhoods. Contacting the local planning and zoning office to report a potential violation helps local government inspection personnel perform their jobs more efficiently; such preventative action often stops unauthorized activities before they result in serious adverse environmental impacts.
- Participating in a water-quality monitoring project is another way for citizens to get out on the water and make a difference. Monitoring efforts often rely on volunteers to collect samples and perform basic scientific water quality tests. Citizen monitoring is, in fact, key to a number of stewardship activities, such as documentation of existing water quality, identification of point and nonpoint sources of pollution, involvement of the public in pollution prevention and reduction, and citizen education regarding water quality principles.

Stewardship activities take many forms, and even small changes in behavior make a significant difference.



Citizens who are knowledgeable about the regulations can ensure that local Critical Area programs are properly implemented and enforced.