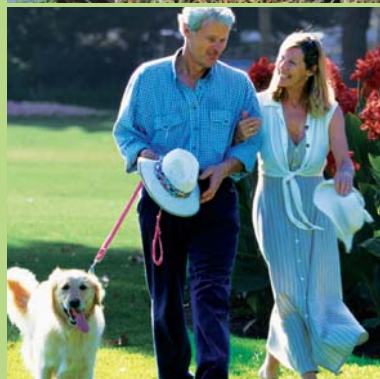
healthy landscapes

clean water starts at home

cultivating change

engaging community participation in water quality protection



accomplishments and impacts of an extension education program

Making Strides For Future Generations

It's easy to see why the Ocean State's identity and livelihood depend on water. Rhode Island is dominated by the Narragansett Bay and Atlantic Ocean and also boasts freshwater lakes, ponds, rivers and streams, abundant groundwater resources, coastal ponds and estuaries.

Human use of this precious resource can have far-reaching effects on individuals and their environment. Yet by maintaining their landscape for clean water, people can make great strides in protecting and improving water quality for themselves and future generations.

With this promise, the University of Rhode Island Cooperative Extension (URICE) and several partners developed Healthy Landscapes.

Healthy Landscapes is an integrated program that brings together the state's leading voices in water quality education, community residents and state-of-the-art research for a common purpose: to learn better how to care for their landscape in order to improve and preserve water quality.

Smart Landscaping

With this “smart” landscaping in mind, Healthy Landscapes set out to create a water quality education program tailored to a slice of “suburban-rural” southern New England. Its pilot community: North Kingstown, Rhode Island.

The extension education program, which spanned from September 2002 to August 2006 and continues to have a lasting impact on the community, sought to:

- Increase residents’ know-how, and give them concrete ideas and approaches to gardening and landscaping which protect watershed health
- Establish and maintain hands-on local demonstration sites
- Conduct training programs for landscape professionals
- Publicize the program and educate the public through the media and at special events
- Strengthen partnerships and cultivate new ones among forerunners in water quality—locally, regionally and nationally

Collaboration Spawns a New Approach

Collaboration is at the heart of the Healthy Landscapes program, which galvanized a diverse cross-section of partners. By integrating these academic, municipal, private, nonprofit and regional groups of conservation-minded individuals, Healthy Landscapes has spawned a brand new approach to water quality education.

Overarching the entire Healthy Landscapes program is the University of Rhode Island’s College of the Environment and Life Sciences (CELS). Through its departments and programs, CELS brings a breadth and depth of applied and natural science to Healthy Landscapes.

The URICE Home *A* Syst Program created and coordinated Healthy Landscapes. The Home *A* Syst Program is the state’s leader in residential pollution prevention topics and develops education materials and workshops for the community.

The URI Healthy Landscapes program exemplifies the commitment that the College of the Environment and Life Sciences has to the citizens of Rhode Island—connecting research, education and extension to improve and protect the quality of life within our communities.

Dr. Jeff Seemann
Dean, College of the Environment and Life Sciences
University of Rhode Island

▲ Healthy Landscapes visited more than 40 events in Rhode Island, such as the annual URI GreenShare Field Day, where the public learned firsthand how to improve water quality in their own backyards.

URI Master Gardeners are a strong corps of volunteers trained in Healthy Landscapes techniques, which they transfer to the gardening public. Their presence in the field was integral to the success of Healthy Landscapes. URI's Master Gardeners and Home*A* Syst had never before worked together in this way and, as a team, they were instrumental in the synthesis of Healthy Landscapes. The integration of these two groups proved seamless.

The URI GreenShare Program educates and trains professional landscapers and shares science-based information through a longstanding local television news program, "Plant Pro."

The Department of Plant Sciences and the Department of Natural Resources Science were the research base for Healthy Landscapes. Faculty provided technical assistance with demonstration sites and co-authored and reviewed printed materials.

The Town of North Kingstown, Rhode Island is located in southern, coastal Rhode Island and is characterized as two-thirds rural but has experienced 14 percent population growth since 1990. Spanning 44 square miles and with a population of 24,000, the town serves as an ideal setting for the Healthy Landscapes pilot program because of its mix of rural and suburban land use. In North Kingstown, a public opinion survey of residents revealed that protecting drinking water supplies is one of the most important reasons for preserving open

North Kingstown has always been concerned about the need for water conservation, preserving the environmental health of the bay and the town's drinking water supplies. Healthy Landscapes effectively works toward our goal of educating residents and businesses about the connection between landscaping and water resource protection. Through the local print media and our demonstration rain garden, residents are continually reminded that "clean water starts at home."

Richard Kerbel
Town Manager, Town of North Kingstown, RI

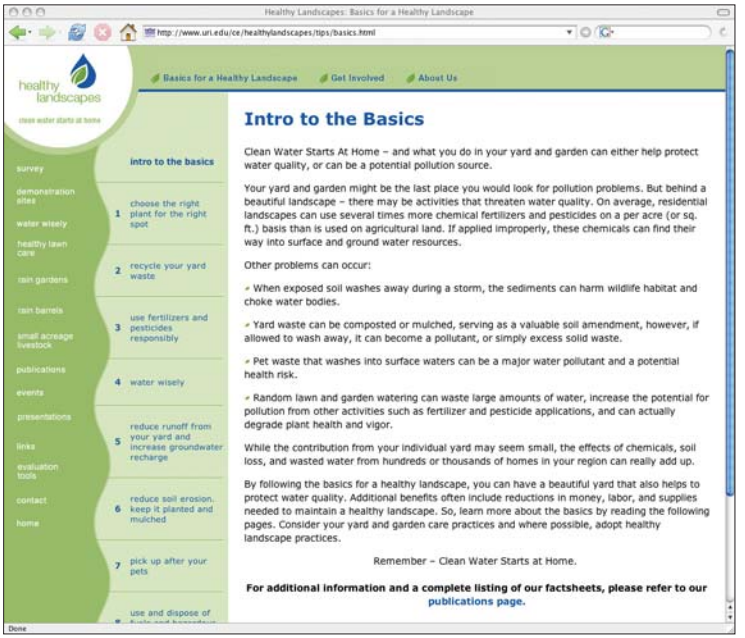
▲ Master Gardener Jackie Dawley (on right), who implemented "smart" landscaping techniques at her North Kingstown home, shares her experiences with an NBC news consumer reporter.

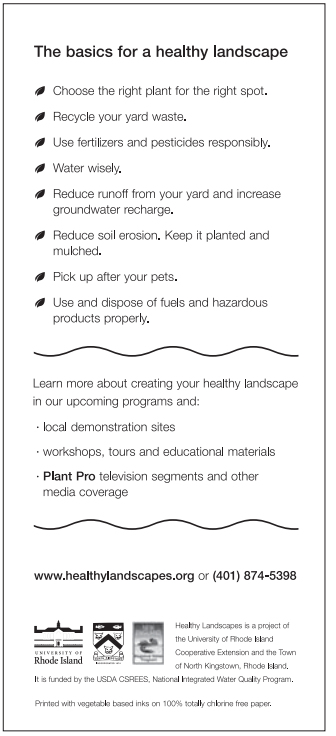
spaces. Town members were a primary inspiration for the Healthy Landscapes program.

Landscape professionals from the local community, including retail garden centers and nurseries, rallied behind Healthy Landscapes, giving time, expertise and equipment to help with demonstrations. Many participating landscape professionals were trained in "smart" landscaping techniques through the URI GreenShare Program.

The University of Rhode Island's Institute of Human Science and Services developed an evaluation process to ensure that Healthy Landscapes carried out its objectives.

USDA Cooperative State Research, Education and Extension Service (CSREES) provided national program leadership and funding for both the Healthy Landscapes program and the New England Regional Water Quality Program. The integrated efforts of USDA's CSREES and the New England program embody the collaborative spirit of this entire endeavor. They build on the strengths of extension water quality programs at land grant universities. The Sustainable Landscaping Focus Area is part of the New England program, through which faculty and staff from the New England region provided guidance and practical assistance in the development of Healthy Landscapes.





Top left: The Healthy Landscapes website (www.healthylandscapes.org) is a rich educational and networking resource for water quality protection.

Top right: A window decal identifies trained Healthy Landscapes practitioners.

Bottom: This multi-purpose rack card outlines the eight principles of Healthy Landscapes and is used to drive recipients to the Healthy Landscapes website.

A Successful Program Fills a Void

As it pledged, Healthy Landscapes has made great strides in bringing the importance of water quality closer to the hearts and minds of landowners and users in North Kingstown and the surrounding community and is fully equipped to build on this momentum.

Healthy Landscapes fills an educational void common to "suburban-rural" landowners in southern New England and clearly succeeds in reaching out to the public with a simple yet challenging message: "clean water starts at home."

A strong research base

Science-based strategies to educate the public are the hallmark of URICE, and Healthy Landscapes is no different. With rigorous planning, methodical tracking and careful critiquing, Healthy Landscapes' overall approach is based on solid factual scientific information and is designed to spawn and cultivate future research on water health.

Several water quality issues examined by CELS and partners underscored the need for Healthy Landscapes:

- The link between impervious surfaces (such as pavement) and declining health of streams and wetlands
- Improper use of lawn chemicals and yard waste and their detrimental effects on water quality
- Pollution risk to private wells and ground and surface water resources due to pet waste and livestock activities

Years of expertise in natural and applied science, a depth of experience in extension service and past collaboration with numerous regional and national partners stand behind the Healthy Landscapes program.

Eight Simple Steps

- Choose the right plant for the right spot.
- Recycle your yard waste.
- Use fertilizers and pesticides responsibly.
- Water wisely.
- Reduce runoff from your yard and increase groundwater recharge.
- Reduce soil erosion. Keep it planted and mulched.
- Pick up after your pets.
- Use and dispose of fuels and hazardous products properly.

▲ Town Hall in North Kingstown now sports a rain garden of shrubs and flowering plants specially chosen to capture and soak up storm water runoff. Here, in May 2005, University of Rhode Island Master Gardeners work alongside professional landscapers to install the garden.

Hands-on learning

Keeping in mind North Kingstown's unique blend of rural and suburban land use, Healthy Landscapes established four private and three public demonstration sites where the public could learn how to best manage property for clean water. These sites included a small-acreage farm, private residences, a public-access historic site and portions of URI's Botanical Gardens. A rain garden installed at the North Kingstown Town Hall in 2005 not only provided a focal point for town residents, but also served as an excellent educational opportunity. (Rain gardens are designed to capture and soak up storm water runoff.)

Through educational tours, the sites brought to life the Healthy Landscapes mission and gave people a chance to see firsthand how making some simple adjustments to the way they garden or take care of their property could have long-term beneficial effects for their backyards, their neighborhood and their surroundings.

The sites targeted specific land management practices and focused on critical water resources: freshwater, groundwater and coastal water.

Leaders in extension service

Fortified by its solid research base and trained extension staff and volunteers, Healthy Landscapes used a multifaceted outreach and communications strategy to reinforce eight simple steps to maintain a landscape for clean water *(see above)*.

The Healthy Landscapes program is the ideal type of education outreach for trained Master Gardeners. As a result of this program, we have several outreach workers now well versed in protecting water resources, and the information gleaned from this program will be included in the curricula of future public presentations for many years to come.

Rudi Hempe
URI Master Gardener
Past president, URI Master Gardener Association

▲ Some 500 University of Rhode Island Master Gardeners were trained in Healthy Landscapes techniques, and several now teach the public how to garden and landscape to protect and improve water quality. At her home in Wickford Cove, Master Gardener Deirdre Wrenn conducts a "how-to" tour.

Healthy Landscapes reached out to the public with comprehensive and useable information and a consistent brand, which featured a water drop logo and slogan: "clean water starts at home." The Healthy Landscapes website *(www.healthylandscapes.org)* offers succinct calendars of events, reader-friendly synopses of relevant water conservation issues and information about how to get involved in the program.

Communications also penetrated a number of news outlets. Thirty news segments about Healthy Landscapes appeared on "Plant Pro," an NBC affiliate television show reaching 250,000 people twice a week and hosted by URI GreenShare's director. Some 15 articles on topics ranging from gardening tips to pollution prevention and three advertisements appeared in Rhode Island and regional newspapers. Ninety-four percent of North Kingstown residents received quarterly articles about Healthy Landscapes via a newsletter tucked into their water bills. Several articles ran in the *North Kingstown Villager* magazine, which spotlighted North Kingstown's rain garden and local demonstration sites.

In all, more than 40 events—ranging from lectures to fairs and the annual Rhode Island flower show—took place across the state. Almost 300 individuals participated in residential education programs.

A trained staff, an educated public

Healthy Landscapes would not have worked without the participation of hundreds of volunteers who shared knowledge of land management with thousands of individuals. Training was a chief accomplishment and essential for the overall success of the program.

More than 500 URI Master Gardeners were trained in “smart” landscaping strategies. These vivacious and dedicated volunteers also took part in demonstration sites, hotline operator instruction, tour leading and speakers’ bureau workshops.

Healthy Landscapes also trained the professional sector. Staff and faculty spoke at three Rhode Island Nursery and Landscape Association meetings, participated in URICE GreenShare’s Winter Training Program, developed and led a course for 50 professionals who became “Healthy Landscapes Trained Practitioners” and presented at URICE’s pesticide applicator training.

A model for the future

One of the most promising avenues of Healthy Landscapes is the plan to use this successful program again throughout Rhode Island and New England. One example of this is in the Town of Scituate, Rhode Island.

In January 2006, staff shared methods and resources with the Northern Rhode Island Conservation District and Town of Scituate Conservation Commission to develop local demonstration sites and to assist with outreach and evaluation. A workshop was conducted in March 2006, and a Healthy Landscapes display was featured at the Conservation Commission’s Annual Meeting in the same month. This community project continues to progress, drawing on URICE staff expertise and resources.

Such endorsement is a testament to the reliability, validity and integrity of the Healthy Landscapes program.

Adopted Practices

When people embrace the lessons they have learned, only then can they make a difference in their lives and the lives of others. For Healthy Landscapes, the changes are heartening. As a result of the program, 80 percent of individuals (who responded to a Healthy Landscapes program evaluation) indicate a willingness to change their yard care practices to better protect their water quality. An empowered public is now better able to make decisions about water quality in their community.

In evaluations conducted with program participants, almost 69 percent of the respondents said they gained new knowledge in water conservation techniques, roughly 56 percent discovered new ways to control runoff and soil erosion, and half agreed they learned more about common landscape pollutants.

More than 54 percent of respondents have adopted at least one "smart" landscaping practice, and about 21 percent plan to incorporate a new practice in their landscaping. Of these individuals, more than 58 percent said their adoption of a practice is based on water quality protection, 54 percent on landscape appearance and half on ease of use.

The program's eight simple steps proved easy to adopt as well. Almost 48 percent of the respondents installed a rain gauge, about 40 percent now use yard waste as mulch and more than 35 percent incorporated native and sustainable plants in their gardens. Roughly 31 percent plan to install a rain barrel or cistern.

And the benefits of Healthy Landscapes are being multiplied thanks to its feasibility, flexibility and ease of use. Almost 67 percent of evaluation respondents shared information with friends, 58 percent with family and half with neighbors. Master Gardeners have been trained in using the Healthy Landscapes display and slide presentation and continue to extend and integrate these resources within their programs throughout the state.

In personal communications with private demonstration site owners, program staff learned that all who were interviewed strongly agreed that their experiences were positive and enjoyable. They gained new knowledge and plan to continue or improve on the "smart" landscaping ideas they have made part of their backyards.

For the URICE program, Healthy Landscapes has enriched local and regional partnerships, increased its knowledge base, strengthened the Sustainable Landscaping Focus Area as part of the New England Regional Water Quality Program, reached new audiences and further empowered its corps of trainers in the form of Master Gardeners.

Left: Master Gardener Dick Perreault installs rain barrels at a Healthy Landscapes demonstration site. This simple tool conserves water by collecting rain for later use in container plants and gardens.

Middle: Easy to do and worth the effort, composting yard waste recycles nutrients and improves soil fertility. If washed directly into storm drains or water resources, these leaves and grass clippings can pollute water.

Right: Depending on management, livestock manure and activities can pollute water resources, including drinking water wells. On this North Kingstown small-acreage farm, landowners rotate their animal pastures by using portable electranet fencing, making pastures healthier and manure recycling easier.

Having our property chosen as a demonstration site has meant much to us, on so many levels. Our house was built over 100 years ago, before coastal regulations. Knowing this, it's important to us to be as environmentally friendly as possible. Our landscape is now healthier for the environment and, a bonus, more aesthetically pleasing! We will continue to encourage Healthy Landscapes practices, each person can make a difference.

Deirdre Wrenn, URI Master Gardener &
David Wrenn, Wickford Cove Demonstration Site

▲ By planting species like Russian arborvitae and bayberry, University of Rhode Island students helped ease erosion and replenish a difficult-to-maintain lawn at Wickford Cove in North Kingstown.

Cultivating Resources

The dissemination of ideas, collaboration of partners and the ripple effect of successful extension are the fuel behind the Healthy Landscapes program.

In addition to Scituate, Rhode Island, interest in Healthy Landscapes practices has been expressed in many Rhode Island and New England communities, and several collaborations are currently in progress, including small-acreage livestock management, water conservation and sustainable lawn care topics. A training held at the 2006 Northeast Regional Master Gardener conference extended the Healthy Landscapes approach and materials throughout the northeast; these opportunities will continue through the New England Regional Water Quality Program.

By carefully cultivating its resources of research, staff and volunteers, Healthy Landscapes promises to be an enduring voice for water quality wherever conservation-minded individuals are caring for the land.

Its flexibility, ease of use and opportunity for partnership make Healthy Landscapes a program that can adapt to its environment and a catalyst for future water quality protection endeavors.

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