Quick Overview of Extension Programs to Educate Homeowners about Environmentally Friendly Landscape Practices in Florida, South Carolina, and Tennessee

Tatiana Borisova, Katie Giacalone, Ruth Anne Hanahan, and Esen Momol

Introduction

Nationwide, landscape irrigation is estimated to account for a significant portion — almost one-third — of all residential water use, or more than 7 billion gallons of water per day (US EPA 2010). Some experts estimate that up to 50 percent of this water may be wasted due to overwatering, poor irrigation system design, evaporation, or other factors (US EPA 2010). Such waste depletes water supplies, especially in times of drought, and when combined with excessive or poorly timed fertilizer application, causes pollution runoff and deterioration of surface and ground water.

Federal, state, and local agencies, as well as cooperative extension services, have developed outreach programs to educate homeowners about environmentally friendly landscaping practices, the importance of water conservation, and opportunities to reduce the environmental impacts of landscaping practices while at the same time maintaining lawn aesthetics and saving time and money on landscape maintenance. This publication presents a quick overview of one such program (Yards and Neighborhoods) that educates homeowners about nine core principles for landscape management. The program was originally developed by the University of Florida, and it is currently implemented in seven states: Alabama, Florida, Kansas, Louisiana, North Carolina, South Carolina, and Tennessee. In this publication, we use a table format to characterize Yards and Neighborhoods programs in three southeastern states: Florida, South Carolina, and Tennessee. In these three states, the program is in different stages of implementation. In Florida, the program is well-established and supported by state and local agencies. It was re-named Florida-Friendly Landscaping™ (FFL), and is used as a trademark of the University of Florida. In Tennessee, the program is relatively new, but it is actively developing and expanding in its geographic coverage. In South Carolina, the program is undergoing growth due to new partnerships between horticulture agents and Clemson's Carolina Clear program, which works with communities to deliver regional, strategic stormwater education and public involvement programming. Although all began as Yards and Neighborhoods programs modeled from the one at the University of Florida, they each have grown in unique ways based on resources, clientele needs and interests, policy support, and other factors. By comparing these three programs, other states may gain insight as to how this program could best be delivered in their states and territories.

1. This is EDIS document FE892, a publication of the Food and Resource Economics Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL. Published August 2011. Please visit the EDIS website at http://edis.ifas.ufl.edu.

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Outreach Programs Targeting Residential Landscaping Practices

Several programs have been developed to encourage environmentally friendly landscaping practices and are being promoted by different agencies and organizations (Table 1). Although these programs are developed for different geographical regions (Southern, Northeastern, and Western United States), they promote a similar set of core landscaping principles:

1. Planning and designing landscapes to meet homeowners’ recreational, functional, and aesthetic needs, which often translates into decreasing areas covered with turf, while increasing the use of trees and bushes
2. Using plants with low-water requirements, preferably native plants
3. Designing efficient irrigation
4. Using mulch for moisture retention and weed management

The programs can also include additional principles, such as proper landscape maintenance (e.g., proper fertilizing, mowing, weeding, and pruning); holistic pest management; wildlife habitat creation; stormwater runoff reduction; composting; lawn aeration; water recycling; and proper waterfront management. Homeowners who follow the landscaping principles promoted by the programs can benefit from reduced costs and time requirements for landscape maintenance; improved landscape aesthetics and functionality; reduced environmental impacts (such as water use and stormwater runoff); and reduced exposure to potentially harmful chemicals (such as pesticides).

The Yards and Neighborhoods program is one of the most comprehensive educational programs promoting environmentally friendly residential landscaping practices (discussed in detail in the tables).

Yards and Neighborhoods Programs in Florida, South Carolina, and Tennessee

A summary of Yards and Neighborhoods programs in Florida, South Carolina, and Tennessee is presented in Table 2. The primary target audiences for the three programs are individual homeowners and homeowner associations. In addition, Florida-Friendly Landscaping™ (FFL) has two special components targeting builders/developers and green industry professionals. Instead of promoting a “prescribed” design for the homeowner yard, the programs use a flexible approach and encourage implementation of nine core landscaping principles:

1. Right Plant, Right Place
2. Water Efficiently
3. Fertilize Appropriately
4. Mulch
5. Attract Wildlife
6. Manage Yard Pests Responsibly
7. Recycle Yard Waste (note that in Tennessee, this principle is substituted with “Manage Turfgrass Appropriately”)
8. Reduce Stormwater Runoff
9. Protect the Waterfront

The programs in the three states rely on similar educational methods to reach their target audiences. All three programs offer a yard recognition program to homeowners implementing Yards and Neighborhoods practices; however, the requirements for receiving the recognition certificate are slightly different among the programs. Furthermore, the programs in all three states have demonstration sites that educate homeowners about the nine core landscaping principles. In addition, program faculty and staff conduct workshops and training programs. An extensive library of resources for each program is available online.

In the three states, the programs partner with state and local government agencies. Particularly, FFL is referenced in Florida Senate Bill 2080 (2009), which mandates that homeowner association (HOA) covenants, deed restrictions, and local government ordinances may not prohibit or be enforced so as to prohibit any property owner from implementing FFL practices. Support from local government agencies is linked to the ability of the local government to use some features of the program to meet educational program requirements in their water pollution permits as part of the Municipal Separate Storm Sewer Systems, or MS4, program.

The programs’ effectiveness in educating individual homeowners are measured through a set of indicators: (a) funding received by the programs and the partnerships established; (b) number of workshops conducted and participant attendance; (c) educational materials developed and distributed; (d) case studies with documented behavioral changes of target audience; and (e) a collection of “success stories” or the results of program implementation for individual yards or homeowner association properties for which water and/or landscape chemical use reductions are documented. An example of such success stories is the one provided by FFL. After delivering a series of FFL classes,
the Village Las Palmas community, one of the three villages in Ocean Gallery (St. Johns County, Florida), decided to decrease irrigation costs and save water for common areas. They applied low-volume irrigation principles, installed soil moisture sensors, and replaced difficult-to-maintain turf grass areas with low-water and low-maintenance groundcovers. Savings attributed to the program include 10 million gallons of water in 2.5 years, and $6,500 that would otherwise be spent on landscape maintenance. Other success stories from the three states can be found by following the links provided in Table 2.

In the three states, the program’s challenges include:

1. Development of strategies to increase participation in workshops, as well as the level of adoption of landscaping practices by the homeowners
2. Limited extension personnel and limited funding for the programs
3. Difficulties associated with coordinating Yards and Neighborhoods programs across different counties, and coordinating Yards and Neighborhoods with other programs implemented by cooperative extension services (i.e., making sure that a consistent message is delivered to the homeowners)
4. Tracking system for the implementation of Yards and Neighborhoods practices and consistent evaluations of the outcomes associated with implementation of the program’s core landscaping principles. This specifically includes quantifying the economic costs and benefits resulting from the use of Yards and Neighborhoods practices, understanding the reasons for the variation in these costs and benefits among homeowners’ properties and communities, and developing strategies to measure the impact of the program on local, regional, and state levels.

Conclusions

This paper presents a summary of Yards and Neighborhoods programs in Florida, South Carolina, and Tennessee in a convenient table format, to be used as a quick reference guide to the similarities and differences among the Yards and Neighborhoods programs implemented in these three southeastern states.

References

4. The following references correspond to the numbers in the tables in the document:
6. Southern Regional Water Program. 2011. Who We Are. Texas A&M University, College Station, TX. http://srwqis.tamu.edu/about-us
11. The University of Tennessee. Welcome to Tennessee Yards & Neighborhoods. University of Tennessee, Knoxville, TN. http://tnyardsandneighborhoods.tennessee.edu/Pages/default.aspx

15. The University of Arizona Cooperative Extension — Cochise County. Welcome to Water Wise! http://ag.arizona.edu/cochise/waterwise/


Table 1. Examples of environmentally-friendly residential landscape management programs

<table>
<thead>
<tr>
<th>Program Characteristics</th>
<th>Yards and Neighborhoods</th>
<th>GreenScapes</th>
<th>BayScaping</th>
<th>Xeriscaping / water-wise landscaping</th>
<th>Natural Landscaping</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organization</strong></td>
<td>Developed by the University of Florida, used in Kansas (3), Louisiana (4), North Carolina (5), South Carolina (6), Tennessee (7)</td>
<td>US EPA (8)</td>
<td>Alliance for the Chesapeake Bay and the U.S. Fish and Wildlife Service, Chesapeake Bay Field Office (9)</td>
<td>Initiated in Colorado, currently available in many states, including Alabama (10), Arizona (11), Georgia (12), New Mexico (13,14), North Carolina (15), South Carolina (16), Texas (17), and Virginia (18)</td>
<td>US EPA – Great Lakes office (&quot;GreenAcres&quot; website) (19,20)</td>
</tr>
<tr>
<td><strong>Geographical region</strong></td>
<td>See above</td>
<td>Nationwide</td>
<td>Chesapeake Bay</td>
<td>See above</td>
<td>Great Lakes</td>
</tr>
</tbody>
</table>

**Benefits – as described by the programs**

- **Low-cost, low-maintenance, attractive landscapes that add value to communities, conserve water and natural resources, and reduce the chance of polluting the water supply (21)**

- **Cost savings**
- **Waste reduction**
- **Reduction of environmental impacts**
- **Water conservation**
- **Energy savings**
- **Climate impact**
- **Reduced exposure to potentially harmful chemicals**
- **Improved aesthetics**
- **Improved public perception of business**
- **Knowledge that you are making a difference and protecting environment (22)**

- **Wildlife**
- **Water quality and quantity**
- **Air quality**
- **Reduced time and cost for the gardener (23)**

- **Attractive, comfortable landscapes**
- **Reduce water and maintenance costs by up to 60%**
- **Increase property value (by as much as 15%)**
- **Help extend water supplies**
- **Drought-proof landscapes that do not suffer from water use restrictions (24)**

- **Economic:**
  - Reduced cost of installation and maintenance;
  - Reduced expense for stormwater management facilities
  - Distinctive community image, strengthened real estate market
  - Support green industry

- **Environmental:**
  - Reduced soil erosion
  - Improved water quality
  - Reduced air / noise pollution
  - Climatologic benefits
  - Reduced greenhouse effect
  - Habitat restoration
  - Beautification

- **Educational and recreational benefits (19)**

**Main principles**

- **Right plant, right place**
- **Water efficiently**
- **Fertilize appropriately**
- **Mulch**
- **Attract wildlife**
- **Manage yard pests responsibly**
- **Recycle yard waste**
- **Reduce stormwater runoff**
- **Protect the waterfront**

- **Right plant for your site**
- **Practice smart watering**
- **Build and maintain healthy soil with compost and mulch**
- **Adopt a holistic approach to pest management**
- **Practice natural lawn care (26)**

- **Plant selection (native and drought tolerant plants; emulate a natural area)**
- **Water efficiently**
- **Mulch**
- **Provide water for wildlife**
- **Control water runoff**
- **Reduce areas in lawn grass**
- **Practice lawn aeration**
- **Recycle water (27,28)**

- **Plan and design**
- **Create practical turf areas**
- **Select low water plants**
- **Use soil amendments**
- **Use mulches**
- **Irrigate efficiently**
- **Maintain the landscape properly (29)**

- **Use native plants**
- **Use more vegetation and less concrete and asphalt**
- **Retrofit areas for more natural stormwater detention (19)**

Archival copy: for current recommendations see [http://edis.ifas.ufl.edu](http://edis.ifas.ufl.edu) or your local extension office.
Table 2. Summary of Yards and Neighborhoods programs in Florida, South Carolina, and Tennessee (several pages)

<table>
<thead>
<tr>
<th>Florida-Friendly Landscaping™ (FFL) (University of Florida)</th>
<th>Carolina Yards and Neighborhoods (CYN) (Clemson University, South Carolina)</th>
<th>Tennessee Yards &amp; Neighborhoods (TYN) (University of Tennessee-led)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mission</td>
<td>Help communities meet their sustainable landscaping needs while also helping to conserve and protect water resources</td>
<td>Initiated in 2007 as a 3-year pilot</td>
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<td></td>
<td>Based on Yards &amp; Neighborhoods programs in North Carolina and Florida</td>
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<td></td>
<td></td>
<td>Founding partners: TN Water Resources Research Center, University of Tennessee Extension, Tennessee Valley Authority</td>
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<td></td>
<td></td>
<td>7 county Extension offices in partnership with 12 community stormwater programs (MS4s)</td>
</tr>
<tr>
<td>Goal</td>
<td>Low-cost, low-maintenance, attractive landscapes that add value to communities; conserve water and natural resources; and reduce the chance of polluting the water supply</td>
<td>Initiated in 2007 as a 3-year pilot</td>
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<td>Based on Yards &amp; Neighborhoods programs in North Carolina and Florida</td>
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<td>Founding partners: TN Water Resources Research Center, University of Tennessee Extension, Tennessee Valley Authority</td>
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<td></td>
<td></td>
<td>7 county Extension offices in partnership with 12 community stormwater programs (MS4s)</td>
</tr>
<tr>
<td>Program history</td>
<td>• Initiated in 1994 • 52 participating counties</td>
<td>• Initiated in 2002 • Based on Yards and Neighborhoods programs in Florida • Originally, all 46 counties received information; estimated 11 counties currently active</td>
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<tr>
<td></td>
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<td>Initiated in 2007 as a 3-year pilot</td>
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<td>7 county Extension offices in partnership with 12 community stormwater programs (MS4s)</td>
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<tr>
<td>LargeAudience</td>
<td>• Individual homeowners and homeowner associations • Builders / developers • Green industry professionals</td>
<td>• Individual homeowners, neighborhoods • Property managers</td>
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<td></td>
<td></td>
<td>Individual homeowners and homeowner associations</td>
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<tr>
<td></td>
<td></td>
<td>(future) builders / developers</td>
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<tr>
<td></td>
<td></td>
<td>(future) green industry professionals</td>
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<tr>
<td>Goals, principles for homeowners</td>
<td>• Right Plant, Right Place • Water Efficiently • Fertilize Appropriately • Mulch • Attract Wildlife • Manage Yard Pests Responsibly • Recycle Yard Waste • Reduce Stormwater Runoff • Protect the Waterfront</td>
<td>• Right Plant, Right Place • Water Efficiently • Fertilizing • Mulch • Wildlife • Managing Yard Pests • Recycle Yard Waste • Stormwater Runoff • On the Waterfront</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Right Plant, Right Place • Water Efficiently • Fertilizer Appropriately • Manage Soils and Mulch • Provide for Wildlife • Manage Yard Pests • Manage Turfgrass Appropriately • Reduce Stormwater Runoff and Its Pollutants • Protect Water's Edge</td>
</tr>
<tr>
<td>Outreach materials and methods</td>
<td>1) Yard recognition checklist and program a) for homeowners, homeowner associations, and developers b) recognition levels for homeowners are based on points collected in Yard recognition checklist: Standard (50–52 points) and Gold (75–77 points) 2) Individual consultations for homeowners by extension agents / master gardeners 3) Demonstration sites 4) Online materials: a) publications b) videos, narrated presentations c) photo gallery d) success stories e) interactive websites f) monthly e-newsletters 5) Publications and leaflets 6) Workshops, training, and certification programs</td>
<td>1) Yardstick workbook / yard recognition program (for homeowners) 2) Individual consultations for homeowners (by extension agents with horticulture responsibilities; master gardeners) 3) Demonstration sites and photo gallery a) online Home and Garden Information Center: publications b) videos c) narrated presentations 5) Publications and leaflets 6) Training and presentations</td>
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<td>Yardstick Workbook 2) The TYN “Giraffe” yardstick – a yard long document depicting TYN actions – designed for participants to track and reinforce their progress 3) Homeowner Yard Recognition Program based on the implementation of TYN actions (36 inches = Tennessee Yard Done Right) 4) Individual consultations for homeowners (by Extension agents / Master Gardeners) 5) Demonstration sites 6) On-line materials a) success stories b) publications c) resources (TN and other states) 7) Workshops for homeowners</td>
</tr>
<tr>
<td>Collaboration with local and state agencies</td>
<td>Measuring success</td>
<td>Challenges</td>
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<td>--------------------------------------------</td>
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<tr>
<td>Florida-Friendly Landscaping™ (FFL) (University of Florida)</td>
<td>Partially funded by US EPA Clean Water Act Section 319 Nonpoint Source Management Program (administered by Florida Department of Environmental Protection)</td>
<td>Number of workshops conducted &amp; participant attendance</td>
</tr>
<tr>
<td>Carolina Yards and Neighborhoods (CYN) (Clemson University, South Carolina)</td>
<td>Partial funding from local water utilities</td>
<td>Presentations made and educational materials developed and distributed</td>
</tr>
<tr>
<td>Tennessee Yards &amp; Neighborhoods (TYN) (University of Tennessee-led)</td>
<td>Supported by state legislature</td>
<td>Survey of public knowledge and awareness (Carolina Clear program)</td>
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<td>Promoted by Florida Department of Environmental Protection and five Florida Water Management Districts</td>
<td>Partnerships established (Carolina Clear program)</td>
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<td>FFL™ program supports local watering restrictions</td>
<td>Interest and attendance at Demonstration Site(s)</td>
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<td>Model ordinance for Florida-Friendly fertilizer use on urban landscapes</td>
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<td>Currently, CYN is a partnership between horticulture agents and natural resource agents. Program growth is spearheaded by partners and Carolina Clear program, which works with MS4 communities to educate and involve general public in stormwater management.</td>
<td>As part of Carolina Clear, each regional consortium develops own stormwater educational program (not always linked to CYN) to meet local needs</td>
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<td>Carolina Clear includes education providers, universities, city and county governments who work together to identify stormwater education and outreach needs within their community, then develop and implement a strategy to successfully meet those needs as they relate to stormwater education and watershed awareness. Program goals are:</td>
<td>A variety of publications describing various environmentally-friendly landscaping techniques in on-line &quot;Home and Garden Information Center&quot;</td>
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<td>o Maximizing efficiency of stormwater education by using a regional / watershed approach.</td>
<td>Master Gardener program</td>
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<td>o Helping local MS4s meet NPDES Phase II permit requirements for public stormwater education and outreach</td>
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<td></td>
<td>o Creating a model for collaborative stormwater education that can be presented and applied throughout the state of South Carolina and beyond.</td>
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<td>South Carolina Department of Health and Environmental Control and South Carolina Nursery and Landscape Association involved in adapting Florida Yards and Neighborhoods program and in CYN Workbook distribution.</td>
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<td>Source Management Program</td>
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<td>Partially funded by US EPA Clean Water Act Section 319 Nonpoint Source Management Program (administered by Tennessee Department of Agriculture)</td>
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<td>On the state level, collaborating agencies – University of Tennessee Extension, University of Tennessee Institute for a Secure and Sustainable Environment / TN Water Resources Research Agency &amp; the Tennessee Valley Authority</td>
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<td>Statewide Advisory Board comprised of federal, state, local agencies, NGOs, trade associations, utilities, and the private sector</td>
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<td>On the local level, implemented by County Extension offices and MS4s</td>
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<td>Web-links</td>
<td>Florida-Friendly Landscaping™ (FFL) (University of Florida)</td>
<td>Carolina Yards and Neighborhoods (CYN) (Clemson University, South Carolina)</td>
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