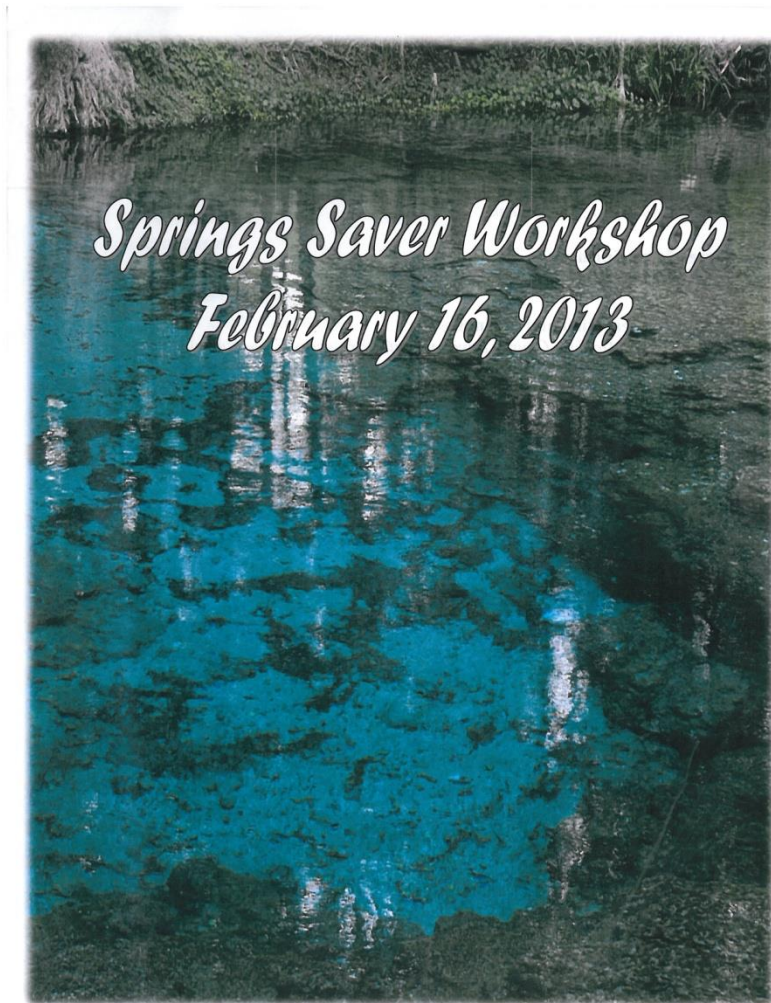


Watermelon Spring Run and Water Conservation and Springs Friendly Landscaping Outreach

Protect Florida Springs Tag Grant - PFS 1213-03



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September 30, 2013

Introduction

The Alachua County Environmental Protection Department (ACEPD) received a Protect Florida Springs Tag Grant from the Wildlife Foundation of Florida for state fiscal year 2012-13 for the project titled Watermelon Spring Run and Water Conservation and Springs Friendly Landscaping Outreach. The funding was utilized to conduct a public education workshop at Poe Springs County Park on outdoor water conservation and springs friendly landscape practices. The workshop included planting a springs friendly landscape at the park and presentations about springs, landscape water conservation, and planting drought tolerant native species to conserve water and minimize fertilizer use in the landscape (See Appendix A for Agenda).

The educational Springs Saver Landscaping Workshop was held at Poe Springs Park on Saturday, February 16, 2013. Over 50 participants and others attended the workshop and most assisted with the planting. Lunch for the event was donated by the Great Outdoors Restaurant in High Springs; other project partners included Current Problems, Inc., and University of Florida IFAS Alachua County Extension staff and Master Gardeners. Current Problems made extra efforts to ensure that the workshop notices were placed to gather participants from the High Springs area and surrounding parts of the Santa Fe River springsheds.

The focus of the workshop activities was to educate the public and provide helpful information that workshop participants can use in their own home landscapes and share with others to protect Florida's springs. Education and outreach with hands-on activities offers the public a unique environment to learn about springs ecosystems and how citizens can help protect springs by reducing outdoor water use and planting native drought tolerant plants in the landscape. Following the presentations, participants used their newly acquired skills to assist with the following projects (See Appendix B for location map):

- Planted a water conservation friendly landscape at the Poe Springs Park gatehouse,
- Made and installed a rain barrel and rain garden at the lodge in the park,
- Native Plant Restoration in Watermelon Spring Run, and
- At a later date, planted native wildflowers at the gatehouse and lodge, including the rain garden, and toured the Longleaf Pine restoration area (conducted on May 1, 2013), and
- Installed an educational sign focusing on landscape water conservation and rain gardens at the lodge in June 2013.

The participants completed a pre and post evaluation to quantify their knowledge of the topics covered. Research shows that participants often retain more information if they participate in outdoor activities where they can put into use the information learned in the workshop. Based on the responses, the evaluation concluded that most participants agreed strongly that the program: increased their knowledge of issues impacting springs, increased awareness of the importance of landscaping decisions, and inspired them to take action to protect springs.

Workshop - Presentations

The educational workshop included presentations about springs, rain gardens, low impact design and development, water conservation and springs, landscape planting for dry areas and water conservation, invasive exotic plant species found in Watermelon Spring (Little Poe Spring) Run, and project planting activities (Figure 1).

The workshop agenda, a listing of resources for additional information, all of the presentations and the project final reports are available for view on the Alachua County Environmental Protection Department website at:

<http://www.alachuacounty.us/Depts/EPD/WaterResources/EducationalPrograms/Pages/default.aspx>



Figure 1. Clockwise from top left: Annett Long presenting on the State of Our Springs; Fritzi Olson, Current Problems introducing Stephen Hofstetter; the workshop participants; and Jennifer Mitchell presenting on Rain Gardens.

The State of the Springs - *Annette Long (photographs by Mark Long)*

While cave divining since 1981, Mark Long has documented the changes in the springs. This presentation shared numerous photographs taken above and below the water depicting the impact of various changes in water level, flow, water clarity, submerged aquatic vegetation, and algae growth present in Florida's springs.

Waterwise - Making Every Drop Count - *Stacie Greco, ACEPD*

Waterwise principles include indoor and outdoor water conservation techniques to protect groundwater and surface water. This public education program is focused on limiting household water use to preserve lakes, rivers, and springs and decrease negative impacts on recreation, wildlife, plants, and future water supplies.

Overview of Low Impact Development in Alachua County - *Stephen Hofstetter, ACEPD*

Low Impact Development (LID) utilizes design strategies to conserve and protect natural resources while managing stormwater runoff through infiltrating, filtering, storing, evaporating, and detaining runoff close to its source. LID projects present in Alachua County include rain barrels, rain gardens, vegetated swales, bioretention, Florida-friendly landscaping, pervious pavement/pavers, and underground storage tanks.

Benefits of Rain Gardens - *Jennifer Mitchell, ACEPD*

Increases in urbanization and impervious surfaces leads to increased stormwater runoff. Typically stormwater is conveyed over paved surfaces, collects pollutants, and discharges into nearby waterways. Rain Gardens provide a solution to decrease runoff, reuse stormwater, replenish groundwater, and trap sediments, fertilizers, and other pollutants. Native plants also provide food and shelter for wildlife.

Planting for Conserving Water - *Wendy Wilber, University of Florida IFAS, Alachua County Extension*

University of Florida IFAS Extension offices provide information and assist residents with various landscaping principles. IFAS programs promote use of drought tolerant native plants, selecting the right plant in the right place, proper installation and establishment, and water conservation with irrigation.

Workshop - Plantings

Workshop participants gained hands-on experience and assisted with planting a springs friendly landscape at Poe Springs Park. Approximately 300 plants were installed at the gatehouse, lodge, and Watermelon Spring Run. A water conservation landscape was installed at the gatehouse and lodge (Figure 2). In addition, the participants constructed a rain barrel and rain garden at the lodge. Only grasses and woody or cold hardy species were installed as part of the February 16th workshop. Due to the potential for cold weather and the dormant condition of the plants, the wildflower planting was postponed until May 1, 2013. A Plant List for each planting event is included in Appendix C. Temporary drip irrigation was installed at the lodge and gatehouse for plant establishment.



Figure 2. Clockwise from top left: workshop participants planting native species at the lodge; Emily Ott interviewing workshop participant; rain garden planting at the lodge; Fritzi Olson, Current Problems, and Jennifer Mitchell, ACEPD, at the completed rain garden.

The native plant restoration in Watermelon Spring (Little Poe Spring) Run focused on installation of Bald Cypress (Figure 3). Elevated water levels in Watermelon Spring (Little Poe Spring) Run and winter weather limited exotic plant removal and planting of herbaceous species.

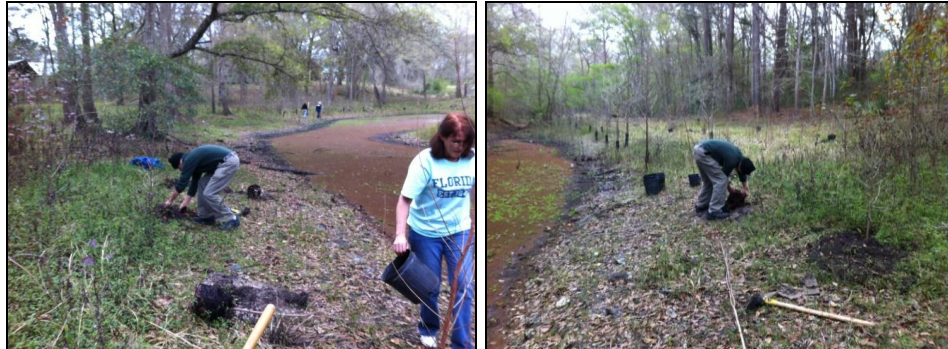


Figure 3. Workshop participants planting Bald Cypress at Watermelon Spring (Little Poe Spring) Run.

On May 1, 2013 over 330 native wildflowers (indian blanket flower, dune sunflower, powderpuff, wild petunia, and ironweed) were planted in the landscape at the gatehouse and lodge, including the rain garden (Figure 4). Several volunteers joined ACEPD staff to assist with planting activities. Interested participants from the wildflower planting were given a brief tour of Poe Spring and the Longleaf Pine restoration (preservation) area on the western side of the park. Longleaf Pine tublings were planted in the preservation area in August 2012.



Figure 4. Clockwise from top left: completed winter planting at the gatehouse (February 16, 2013); wildflower planting at the gatehouse (May 1, 2013); wildflower planting at the lodge; and wildflowers planted in the rain garden.

The planting activities were designed to further educate the participants on the topics covered during the presentations and provide hands-on experience that workshop participants can use in their own home landscapes and share with others to protect Florida's springs. Participants acquired knowledge about springs ecosystems and skills that can help protect springs by planting native drought tolerant plants in the landscape and reducing outdoor water use. The landscape will remain as an education and outreach exhibit that promotes planting native, low water use landscapes for springs protection (Figure 6).



Figure 5. Clockwise from top left: planting at the lodge (July 3, 2013); wildflowers at the gatehouse (May 31, 2013); gatehouse landscape (July 21, 2013); and the rain garden (July 21, 2013).

Education Signage

In order to explain the recent planting efforts and educate the public about planting a landscape for springs protection, an educational sign was developed as an public outreach tool (Figure 6). The purpose is to inform the public about planting landscapes that that require less water and fertilizer. The focus is on the outdoor water conservation projects installed at Poe Springs Park including drought tolerant native plants and utilizing rain gardens that retain stormwater and slowly replenish the groundwater.

Alachua County, Florida Environmental Protection

Planting for Springs Protection

You can protect springs by planting native plants which use less water and fertilizer in your landscape.

What you can do in your landscape:

- Reduce the size of your lawn
- Plant native trees and shrubs
- Irrigate only when plants show signs of wilting
- Keep stormwater on your property by creating rain gardens

For more information go to www.AlachuaCountyWater.org

Planting

Native plants require little or no irrigation, which saves water and helps maintain healthy spring flows.

Native Plants

Native plants are drought tolerant and provide beneficial food and habitat for wildlife.

Rain Garden

Rain gardens receive water every time it rains, reducing runoff and allowing water to percolate slowly in the soil, replenishing our groundwater.

Suggested Plants

Powder puff <i>Mimosa strigillosa</i>	Coralbean, Cherokee Bean <i>Erythrina herbacea</i>	Butterflyweed, Butterfly Milkweed <i>Acletoisanthus tuberosus</i>	Red-eyed Vireo <i>Vireo olivaceus</i> or <i>Blue-cherry</i> <i>Callipepla americana</i>	Zebra Swallowtail <i>Euryides marcellus</i> or <i>Regenerick's</i> <i>Delias alba</i>	Coontail, Florida Arrowroot <i>Zizania punctata</i>	Blarkeflower, Firewheel <i>Gaillardia pulchella</i>	Adair's Needle <i>Yucca filamentosa</i>	Yucca Holly <i>Ilex vomitoria</i>
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The project was funded by a Protect Florida Springs Tag (license plate) grant through the Wildlife Foundation of Florida, Inc.

The Alachua County Environmental Protection Department wishes to thank workshop participants, volunteers, Master Gardeners, the University of Florida IFAS, County staff, and others who assisted with development of the landscape plan, planting and helping to maintain this landscape for everyone to enjoy.

Figure 6. Education signage developed for the landscaped area at the lodge plantings.

Summary

The Springs Saver Workshop included presentations and hands-on experience to educate participants on outdoor water conservation and springs friendly landscaping. Research shows that participants often retain more information if they participate in outdoor activities where they can put into use the information learned in the workshop. The planting projects allowed participants to immediately use their newly acquired skills. The planting areas ranged from the floodplain spring run area to the drier upland areas at the gatehouse and lodge. These different environments provided the workshop participants with experiences planting in varied conditions with different water needs and planting considerations. Participants can utilize the knowledge and skills in their own home landscapes and also share with others to protect Florida's springs.

Participants voluntarily provided demographics data and completed a pre and post evaluation to quantify their knowledge of the topics covered in the workshop. The *Springs Saver Event Evaluation* report prepared by Emily Ott and Paul Monaghan (June 13, 2013), University of Florida detailing the responses from workshop participants that completed the pre and post event evaluations is provided separately. Based on the responses, the evaluation concluded that most participants agreed strongly that the program:

- Increased their knowledge of issues impacting springs,
- Increased awareness of the importance of landscaping decisions, and
- Inspired them to take action to protect springs.

Almost 30% of the survey participants indicated they would plant more native plants and more drought tolerant plants. Over 10% indicated they would fertilize less and turn off automatic irrigation and water only as need. A full description of the survey results can be found in the *Springs Saver Event Evaluation* report prepared by the University of Florida Agricultural Education and Communication Center for Landscape Conservation and Ecology (June 13, 2013).

Current Problems (Fritzi Olson) received an e-mail following the workshop from a citizen that felt it was a day well spent and in part stated. "Thanks to you and the speakers, and to all who made the Springs Saver Workshop possible. I learned so much, was reminded of more, met some interesting people, had a great free lunch, and contributed by helping build the rain garden. It would be wonderful if this program could be done for many other audiences, as we need to spread the word about Florida's water problems." The Alachua County Environmental Protection Department was pleased with the workshop and educational landscape. We believe that the landscape and signage will continue to provide a resource for protection of springs water quality and quantity.

Acknowledgements

The Alachua County Environmental Protection Department (ACEPD) wishes to thank the following partners for their funding, assistance, and/or participation in the Springs Saver Workshop. Special thanks go to Jim Myles, ACEPD, for revising the landscape designs where needed, coordinating acquisition of plant materials and supplies for the plantings, managing plant installation, and conducting landscape maintenance and to Takumi Sullivan, Alachua County Communications Office, for her work on design of the educational sign.

- Protect Florida Springs Tag Grant Program & Wildlife Foundation of Florida
- Alachua County Parks Office
- Alachua County Communications Office
- Current Problems, Inc.
- University of Florida IFAS Alachua County Extension Agent and Master Gardeners
- University of Florida Agricultural Education and Communication Center for Landscape Conservation and Ecology
- Great Outdoor Restaurant in High Springs

APPENDIX A. Workshop Agenda

A SPRING SAVERS WORKSHOP

February 16, 2013

9:00 – 4:00

Welcome

Fritzi Olson, Current Problems

The State of the Springs 9:15

Annette Long (photographs by Mark Long)

Waterwise - Making Every Drop Count 9:45

Stacie Greco, ACEPD

Break

10:15 – 10:30

Overview of Low Impact Development in Alachua County 10:30

Stephen Hofstetter, ACEPD

Benefits of Rain Gardens 11:00

Jennifer Mitchell, ACEPD

Planting for Conserving Water 11:30

Wendy Wilber, University of Florida IFAS, Alachua County Extension Horticulturist

Lunch

12:00 – 1:00

Introduction to the Four Projects 1:00

Jim Myles, ACEPD

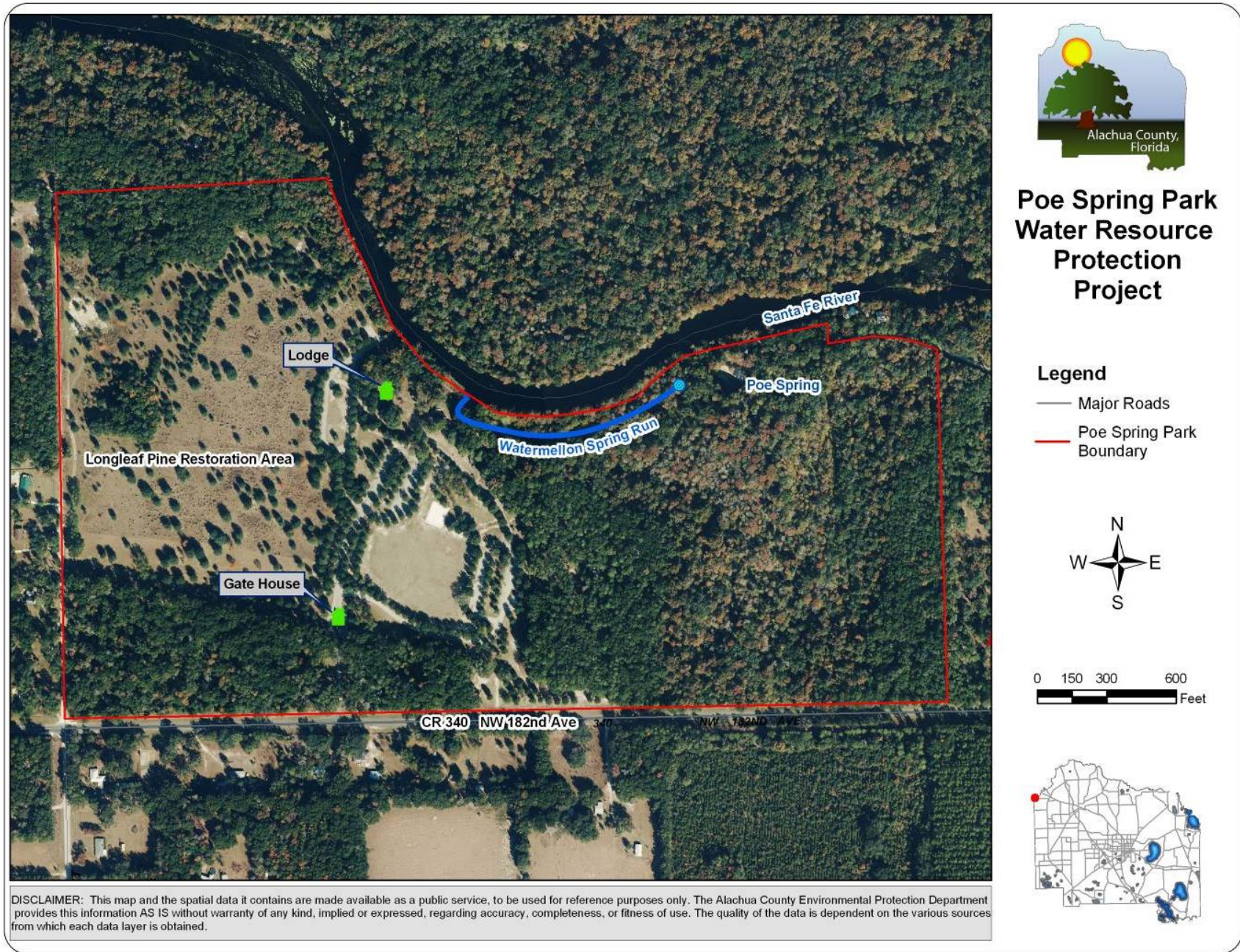
Planting Native Species at Watermelon Spring Run

Planting a Landscape for Water Conservation

Make & Install a Rain Barrel

Create a Functioning Rain Garden

APPENDIX B. Poe Springs Park project location map



APPENDIX C. Plant Species Installed at Poe Springs Park

Table C1. Plants Installed on February 16, 2013

Size	Species	Common Name	Comments	Quantity
TREES				
7 gal	<i>Chionanthus virginicus</i>	Fringe Tree	Flowering tree	3
7 gal	<i>Sassafras albidum</i>	Sassafras Tree	Accent tree/butterfly host	1
3 gal	<i>Taxodium distichum</i>	Bald Cypress	Wetland species	20
SHRUBS				
7 gal	<i>Hydrangea quercifolia</i>	Oak Leaf Hydrangea	Flowering shrub	2
7 gal	<i>Serenoa repens</i>	Silver Saw Palmetto	Accent Palm	1
3 gal	<i>Illicium floridanum</i>	Florida Anise	Evergreen foundation	6
3 gal	<i>Zamia pumila</i>	Coontie	Evergreen accent	50
3 gal	<i>Viburnum obovatum</i> 'Mrs. Schiller's Delight'	Walter's Viburnum	Evergreen foundation	11
1 gal	<i>Yucca filamentosa</i>	Bear Grass	Evergreen foundation	27
1 gal	<i>Zamia pumila</i>	Coontie	Evergreen accent	9
GRASSES AND GROUNDCOVERS				
1 gal	<i>Eragrostis elliottii</i>	Love Grass	Accent/border planting	163
1 gal	<i>Muhlenbergia capillaris</i>	Muhly Grass	Accent planting	6
TOTAL				299

Plants purchased from Blooming House Nursery (Newberry, Florida)

Table C2. Native Wildflowers Installed on May 1, 2013

Size	Scientific Name	Common Name	Comments	Quantity
4"pot	<i>Gaillardia pulchella</i>	Indian Blanket Flower	Flowering accent	180
4"pot	<i>Helianthus debilis</i>	Dune Sunflower	Flowering accent	30
4"pot	<i>Mimosa strigillosa</i>	Powderpuff	Native lawn substitute/ butterfly host	30
4"pot	<i>Ruellia caroliniensis</i>	Wild Petunia	Flowering accent for shade	70
1 gal	<i>Vernonia gigantea</i>	Ironweed	Deep shade flowering accent	24
TOTAL				334

Plants purchased from Urban Forestry Services (Micanopy, Florida)

APPENDIX D. Landscape Design for Poe Springs Park

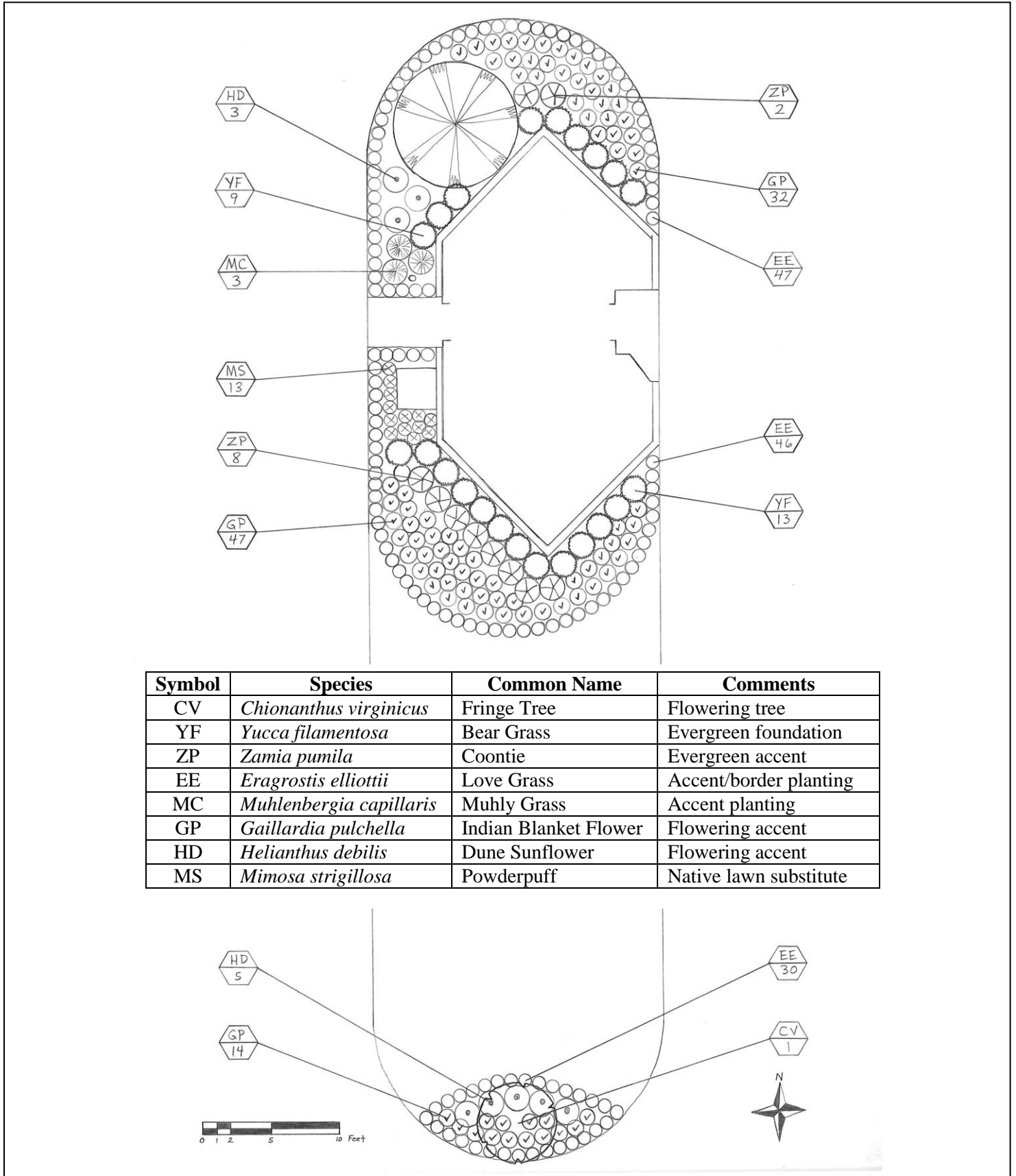


Figure D1. Landscape Design for Poe Springs Park Gatehouse

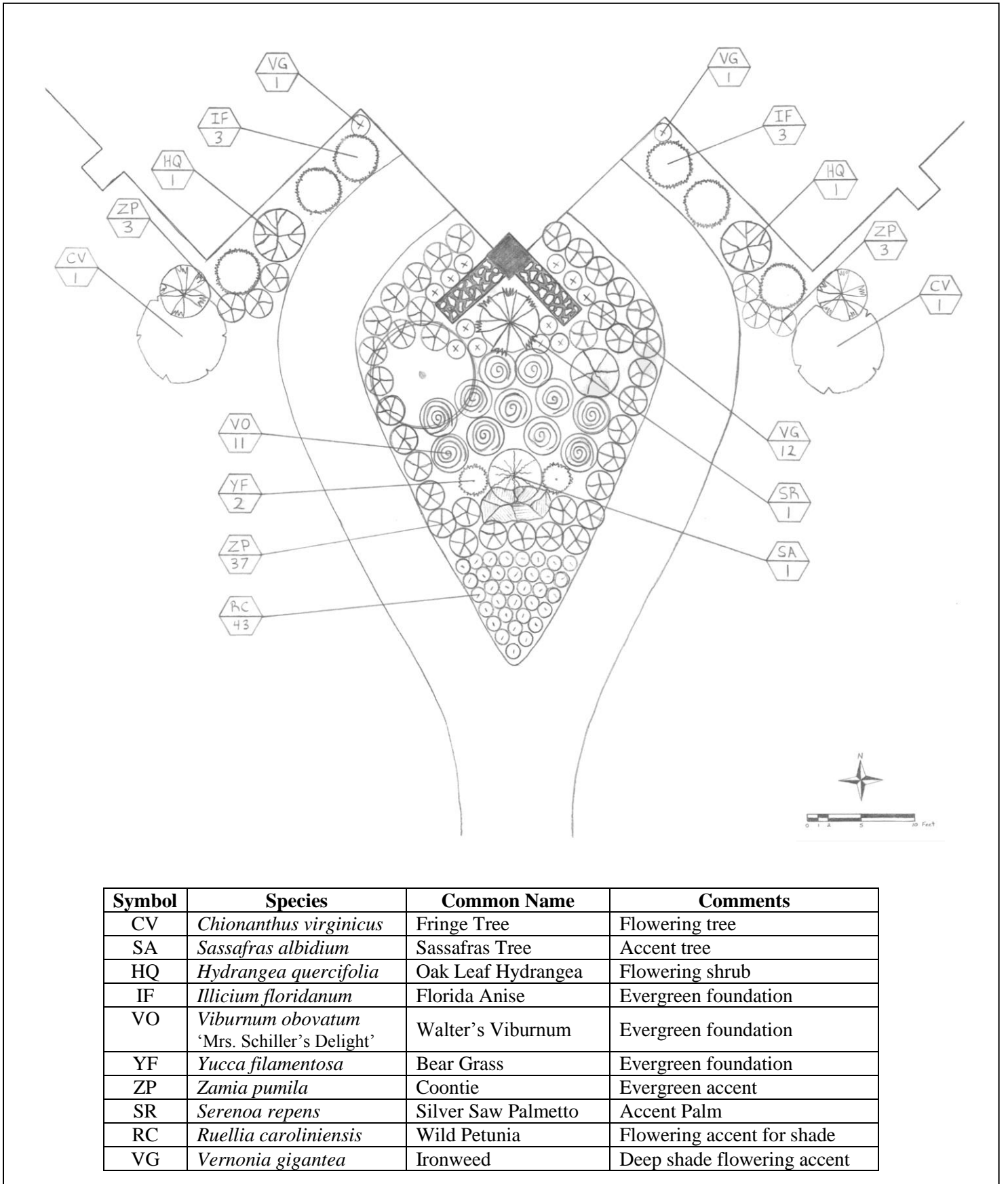


Figure D2. Landscape Design for Poe Springs Park Lodge (Multi-purpose Building)