Situation Analysis

- Most people moving to the south are not familiar with Florida’s plants and growing conditions.
  - As the population grows and the dominant sector becomes more urban, the green industry also grows.
Florida’s Water Situation

Water Resource Caution Areas: places where water is either scarce or contaminated as defined by Florida’s Water Management Districts


Efforts to correct existing problems and to prevent future problems have led to a proliferation of local and state ordinances, rules, and regulations.

Local Fertilizer Ordinances

- Urban Turf Fertilizer Rule RE-1.003(2) FAC
- FL SB494 – Requires all fertilizer applicators to be licensed by 2014.
- FL SB2080 – Florida Friendly Landscaping
- FL Statutes 373.185 Local Florida-friendly landscaping ordinances.
- FL SB 604 – Limited Certification for Urban Landscape Commercial Fertilizer Application
- Local ordinances
“Do not fertilize when rain is imminent.”

This statement has led to numerous fertilizer “black out” ordinances – typically May through October.

Increased Scrutiny
City of Rockledge Florida

Mario Jacobs of Zoo Our Aquifer said, “We need to stay polishing the lagoon with lawn fertilizers. It is more important to have a healthy lagoon than to have unnaturally green turf grass. Many people i know have healthy turf grass and use no fertilizers; polishing the lagoon with lawn fertilizers is in a completely needless and unnecessary waste.

Laws Passed

- 1972 Clean Water Act – Created TMDLs
- State laws
  - 1991 Xeriscape Law
  - 1994 Nitrate Bill
  - 1999 TMDL Bill
- 2005 Amendments to TMDL Bill
**BMPs vs. BMPs**
- BMPs mean different things to different people!
  - To some, it simply means best management practices as opposed to the not-so-best management practices.
  - In Florida, BMPs can signify regulatory influence!
  - FDACS – Ag BMPs
  - FDEP – Urban BMPs

**BMPs – defined**
- 373.4595 Florida Statutes
  - "Best management practice" means a practice or combination of practices determined by the coordinating agencies, based on research, field-testing, and expert review, to be the most effective and practicable on-location means, including economic and technological considerations, for improving water quality in agricultural and urban discharges.

**Florida Yards & Neighborhoods (FYN)**
- Popular, but some misinterpreted voluntary nature and tried to make law.
  - This resulted in confused elected officials and legal chaos.
  - FYN handbook recommendations were not consistent with the Florida Lawn Handbook.

**FYN – growing pains**
- Did not connect with average homeowner in a pre-landscaped development.
- Did not address those who wanted conventional or high-maintenance yards.
  - In 2001, FYN was still a niche audience.

**Three Major BMP Audiences**
- Green Industry Stakeholders agreed FYN should focus on homeowners.
- FYN became more inclusive, retained Right Plant-Right Place and low-impact focus but;
  - Included information on how to properly maintain all common Florida yards without environmental harm.
  - Horticulturally consistent with other UF-IFAS/FDEP publications.
- Determined that Golf Courses and Sod need separate BMP manuals.
  - Too specialized a topic for others.
  - May need manual for athletic fields too.
Green Industry BMPs

- Prompted by flawed local ordinance in early 2000.
- Developed by FDEP for the pest control and lawn/landscape service industry with multi-agency, industry, and UF-IFAS help.
- Educational tool for elected public officials, local regulators and interested parties.
- Intended audience does not include golf courses, athletic fields, sod production (specialized areas), or individual homeowners (FYN).

The axe has fallen...

- Beginning January 2014, ALL commercial fertilizer applicators MUST BE certified by FDACS in order to make ANY TYPE of fertilizer application to:
  - Commercial turf or ornamental areas;
  - Turf or ornamental areas of parks or fields (other than agricultural areas);
  - Turf or ornamental area of any residential property.
- Prior to issuance of this certification, the applicator MUST PROVIDE proof of having received training in "Green Industry Best Management Practices" taught by UF/IFAS.

GI-BMP Training Options

"You must enclose a certificate of completion of training issued by the University of Florida (IFAS) and/or Department of Environmental Protection (DEP) with this application."
BMPs are a Starting Point

Employment Classification

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<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
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<tbody>
<tr>
<td>Pesticide: Handlers, sprayers, and Applicators, Vegetation</td>
<td>2,890</td>
<td>3,070</td>
<td>3,280</td>
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<td>Landscaping and Groundskeeping Workers</td>
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<td>Unskilled Maintenance Workers and All Other</td>
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<td>1,030</td>
<td>1,140</td>
<td>1,110</td>
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<tr>
<td>Total</td>
<td>76,610</td>
<td>73,140</td>
<td>74,960</td>
<td>74,490</td>
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</table>

*Estimates are based on Standard Occupational Classification Codes.


Model Ordinances

- Florida Friendly Lawn & Landscape Model Ordinance Guidelines for Water Quality and Quantity – 2003
  - Revised in 2008 and 2010

“New” Golf Course BMPs

- 2003 Began FGCSA BMP group meetings with FDEP and Dr. J. Bryan Unruh, UF.
- 2005 Created full stakeholder workgroup to create finished product.
- January 2007, Published on web, initiated print publication process. Delivered to printer late March.
- 2007 Referenced by FDACS fertilizer label law.
Participants

- FDEP, DCA, FDACS
- FGCSA, GCSAA, USGA, and several individual superintendents
- GC developers and designers
- UF-IFAS faculty
- Sierra Club, 1000 Friends of Florida, Audubon International
- WMDs, county and city personnel,
- Private citizens and individual golfers
- Many others

Audiences

- Who uses (or is supposed to use) the manual?
  - Superintendents and workers
  - Managers and Greens committees
  - Planners, regulators, elected officials
  - Developers and designers
  - Golfers and concerned citizens
- User expertise ranges from none to expert.

Golf BMP Topics

- Introduction
- Environmental Concepts
- Environmental Monitoring
- Design and Construction
- Irrigation
- Nutrition and Fertilization
- Cultural Practices
- Lake and Aquatic Plant Management
- Turfgrass Pest Management
- Pesticide Management
- Maintenance Operations

Golf Course BMPs – Law?

- Currently not adopted by DEP rule
  - If adopted, only Water Quality aspects will be covered.
  - If adopted, quasi-voluntary, depending on local Basin Management Action Plan (BMAP)
  - Will be required in new stormwater rule (new courses only).
  - Are being added to MS4* permits (municipal owned GCs only).
- FDACS fertilizer label refers to BMPs, only affects manufacturers’ labeling
- Could be required by local ordinances

* Municipal Separate Storm Sewer Systems (Federal NPDES permits issued by DEP)

Push for “Certification”

- FGCSA has a Golf BMP “certification” process.
  - Administered by the FGCSA.
  - Includes a written test with questions taken from the Golf BMP Manual.
  - Does not include attesting.
- Seven hour training (with breaks and lunch).
  - One hour test.
BMPs are a Starting Point

FGCSA BMP Certified Superintendents

219

574

Untested

Tested

Table of Contents

• General Information for Environmental Protection on Sod Farms
  – Pest and Pesticide Management
  – Nutrient Management
  – Irrigation & Water Resources Management
  – Agronomic and Turf Species Issues

List of BMPs

• Nutrient Management*
• Irrigation Scheduling*
• Irrigation System Maintenance & Evaluation
• Sediment & Erosion Control Measures
• Integrated Pest Management*
• Wellhead Protection
  – *Denotes BMPs for Accelerated Implementation

List of BMPs (Continued)

• Wetland and Springs Protection
• Ditch Construction and Maintenance
• Conservation Buffers
• Flood Protection
• Access Roads
• Mowing Management

NOI Form
NOI Form

Importance of NOI Form

- NOI Form is Key to Starting the Process
  - Declares Your Intent to Implement BMPs
- Mechanism for the Presumption of Compliance with State Water Quality Standards
  - Prerequisite to Cost-Share Monies
  - Can be Filed Electronically or Sent as Hard-Copy via Mail to Tallahassee FDACS Office
- Generates Data for GIS Maps and Reports for BMP Coverage by Basin

BMPs are a Starting Point

A fertilizer ordinance timeline

Pre-2015 Statewide Fertilizer Rule (a.k.a Urban Turf Rule)

- Limits N to 1 lb per 1,000 ft² maximum application rate or 0.7 lb per 1,000 ft² for quick-release N
- Limits P to 1/4 lb P₂O₅ per 1,000 ft² per application and 1/2 lb P₂O₅ per 1,000 ft² annually
- Annual N rates follow UF recommendations
- Requires lawn care industry to follow Green Industries BMP manual

2015 Statewide Fertilizer Rule (a.k.a Urban Turf Rule)

- “Actively Growing” means turf that needs mowing at least every two weeks.
- Nitrogen shall not be applied at an application rate greater than 0.7 lbs of readily available nitrogen, per 1000 sq. ft. per application at any one time based on the soluble fraction of formulated fertilizer.
2015 Statewide Fertilizer Rule
(a.k.a Urban Turf Rule)

- Not more than 2 lbs. of total nitrogen per 1000 sq. ft. per application may be applied during the spring or early summer;
- Not more than 1 lb total nitrogen per 1000 sq. ft. per application may be applied during the fall or winter.

Education – must be “outcomes” based

- Inputs - what resources go into a program
  - Money, staff, equipment
- Activities - what activities the program undertakes
  - Development of materials, training programs
- Outputs - what is produced through those activities
  - Number of booklets produced, workshops held, people trained

Education programs must:
- Be sufficiently rigorous;
- Delivered by qualified instructors;
- Focus on the Principles!
  - Teach the “why’s” – not just the “how’s”.
- Those being educated must demonstrate competency.

“Tell me and I’ll forget; show me and I may remember; involve me and I’ll understand.”

Chinese proverb

SR Nitrogen Source Study – Jay, FL

Arrows denote fertilizer application dates.