Alachua County Fertilizer Ordinance and Social Marketing Campaign

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Alachua County Fertilizer Code (Chapter 77 Article 4)

- Fertilizer with phosphorus is only allowed if a soil or tissue test verifies a need
- Fertilizer with nitrogen is only allowed **March – June** and must have at least 50% slow-release nitrogen
- April 9, 2019 public hearing - Staff summarized findings from a literature review

2012 FDEP (WM869) Funded IFAS Research: Nitrate Leaching from Established Grasses

- Caveats of the research:
  - Field conditions maintained by turf scientists
  - Did not include mixed species/typical lawns
  - Below average rainfall throughout the study
  - Did not simulate over irrigation- many publications link fertilizer movement to over irrigation
  - Only looked at nitrate (no other forms of N) and leaching

Table 2-3. Select IFAS References Incorporating Recommended Fertilizer Rates from DEP WM 869

Document Type and Title	Link
EDIS Documents	
Bahiagrass for Florida Lawns (2/14/2022)	https://edis.ifas.ufl.edu/publication/LH006
Bermudagrass for Florida Lawns (8/21/2022)	https://edis.ifas.ufl.edu/publication/LH007
Best Management Practices for Irrigating Lawns and Urban Green Spaces with Reclaimed Water (12/5/2021)	https://edis.ifas.ufl.edu/publication/SS704
Central Florida Gardening Calendar (1/11/2021)	https://edis.ifas.ufl.edu/publication/EP450
General Recommendations for Fertilization of Turfgrasses on Florida Soils (3/21/2017)	https://edis.ifas.ufl.edu/publication/LH014
Homeowner Best Management Practices for the Home Lawn (3/15/2018)	https://edis.ifas.ufl.edu/publication/EP236
Managing Landscape Irrigation to Avoid Soil and Nutrient Losses (12/21/2016)	https://edis.ifas.ufl.edu/publication/SS586
North Florida Gardening Calendar (1/11/2021)	https://edis.ifas.ufl.edu/publication/EP451
Soils and Fertilizers for Master Gardeners: The Florida Gardener's Guide to Landscape Fertilizers (8/29/2021)	https://edis.ifas.ufl.edu/publication/MG448
South Florida Gardening Calendar (2/14/2021)	https://edis.ifas.ufl.edu/publication/EP452
St. Augustinegrass for Florida Lawns (8/15/2021)	https://edis.ifas.ufl.edu/publication/LH010
The Fate of Nitrogen Applied to Florida Turfgrass (1/10/2018)	https://edis.ifas.ufl.edu/publication/EP546
The Florida Fertilizer Label (2/20/2017)	https://edis.ifas.ufl.edu/publication/SS170
The Role of Soil Management In Minimizing Water and Nutrient Losses from the Urban Landscape (4/26/2022)	https://edis.ifas.ufl.edu/publication/SS593
Urban Fertilizer Ordinances in the Context of Environmental Horticulture and Water Quality Extension Programs: Frequently Asked Questions (2/13/2020)	https://edis.ifas.ufl.edu/publication/AE534
Urban Turf Fertilizer Rule for Home Lawn Fertilization (2/6/2018)	https://edis.ifas.ufl.edu/publication/EP353
Zoysiagrass for Florida Lawns (5/15/2022)	https://edis.ifas.ufl.edu/publication/LH011
EDIS and Related Websites	
Fertilizing Your Florida Lawn	https://gardeningsolutions.ifas.ufl.edu/care/fertilizer/fertilizing-the-lawn.html
Florida-Friendly Landscaping™ Program	https://ffl.ifas.ufl.edu/about-ffl/9-principles/principle-3-guidance/
Landscape Irrigation and Fertilization	https://edis.ifas.ufl.edu/entity/topic/landscape_irrigation_and_fertilization
Lawn Fertilizer	https://edis.ifas.ufl.edu/entity/topic/lawn_fertilization
Turfgrass Nutrition	https://edis.ifas.ufl.edu/entity/topic/turfgrass_nutrition
Your Florida Lawn	https://edis.ifas.ufl.edu/entity/topic/lawns
Your Florida Lawn*	https://hort.ifas.ufl.edu/yourfloridalawn/
Manuals and Handbooks	
Best Management Practices for Protection of Water Resources by the Green Industries	https://ffl.ifas.ufl.edu/media/fflifasufledu/docs/GIBMP_Manual_Web_English.pdf
The Florida Yards & Neighborhoods Handbook	https://ffl.ifas.ufl.edu/media/fflifasufledu/docs/FYN_Handbook_2015_web.pdf

* This website includes a link to a pdf with the previous IFAS recommended fertilizer rates.

- This is a selection of publications that reference 2012 FDEP (WM869) Funded IFAS Research

- This illustrates the wide reach of this study

The caveats from the original report have been lost!

A Note on Fertilizer Bans

With the passing of the state budget last week and its implementation bill, there is a provision that would prevent local governments from banning fertilizers.

As you know, fertilizer ordinances in the past have not demonstrated efficacy, according to research by UF|IFAS.

In fact, grasses are extremely efficient at filtering nutrients. A healthy lawn typically takes up and uses virtually all of the applied fertilizer, according to UF|IFAS. Grass systems are the best known bio filters to man. Maintaining a healthy lawn is your best defense toward reducing pollution which comes from human activities like oil, pet waste, road salt, sediment, and other contaminants. Proper fertilizer, irrigation and mowing practices are important to maintaining a healthy lawn.

weakening the very system that prevents nutrients from reaching our groundwater.

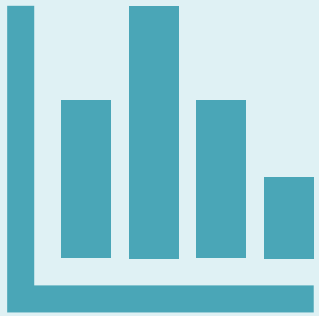
Fortunately, the state budget also invested $6 million in research so the University of Florida can examine the impact of preventing new fertilizer bands. This is an opportunity for science to correct common misunderstandings.

FDEP 319 Public Education Grant

- $135,000 from 2018 – 2021
- Design, implement, and evaluate a social marketing behavior campaign to reduce landscape fertilizer use
- Calculate load reductions based on results of campaign

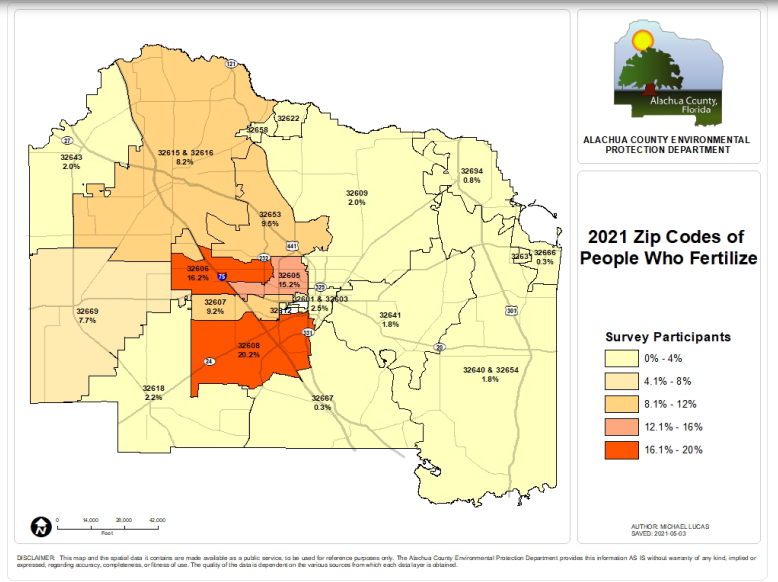
What is Social Marketing?

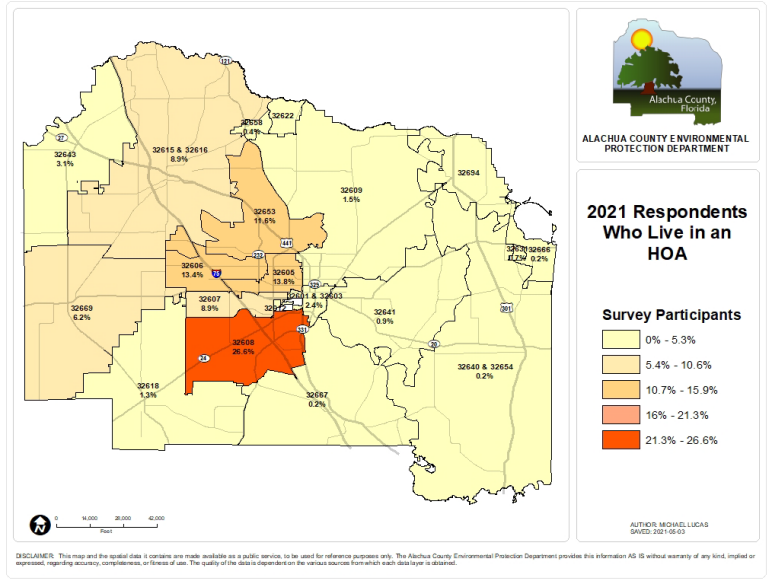
Research-based marketing campaign developed to change behaviors to benefit the greater social or environmental good.

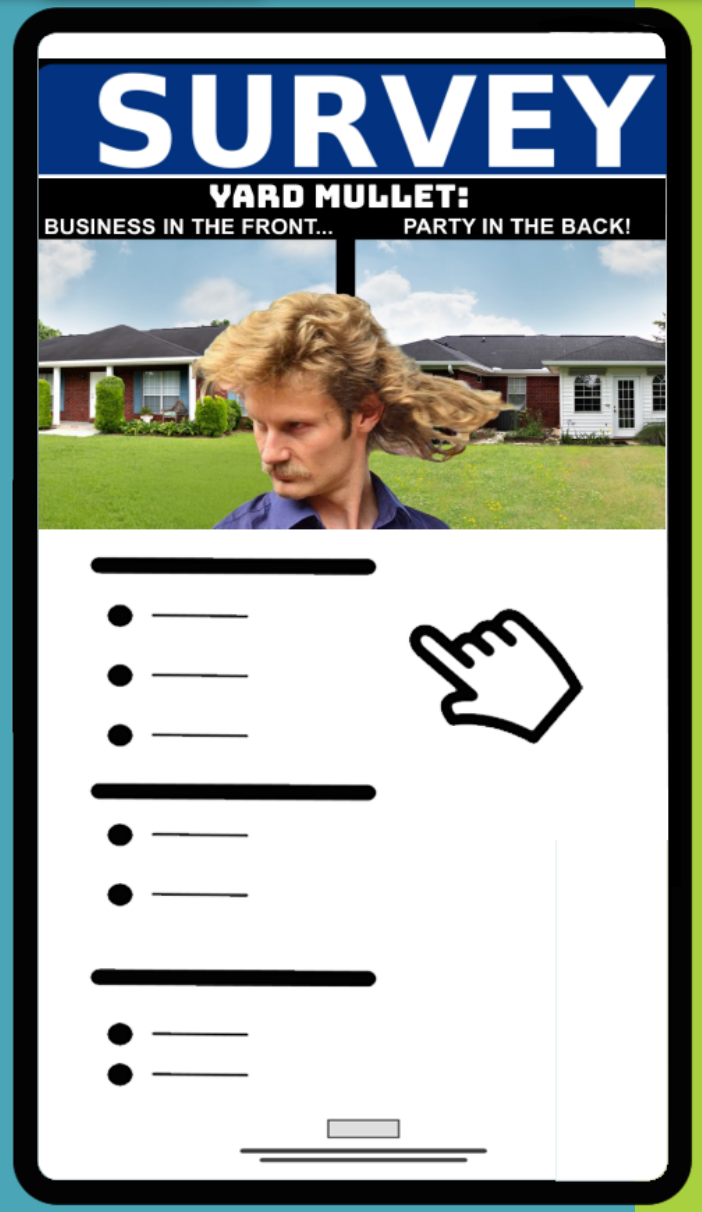


Steps of Social Marketing

1. **Segment Target Audience(s)**
   - There is no “general public”
   - 55% said they don’t use fertilizer – so why spend money on them?
     - Use fertilizer
       - Residents who hire a landscape company
       - DIY fertilizer users
       - Live in an HOA







Steps of Social Marketing

2. Select Specific Behavior

Reduce Fertilizer Use? NO!

- Most people think they are environmentally friendly as it is. They may not see room for improvement.

- **Fertilizer Users**
  - Skip the fertilizer this year!

- **Live in an HOA**
  - Don’t Use fertilizer in the backyard

Steps of Social Marketing

3. Identify Barriers and Benefits

What would encourage you to reduce your fertilizer use?

- 69% Still Look Great
- **57% Harm the Environment**
- **52% Harms the Springs**
- 49% Harms My Pets
- 46% Harms My Children
- **37% Illegal/Banned**
- 22% If Mixed Grass Were More Socially Acceptable
- 21% If I Didn't Have an HOA

- **Knowledge was a barrier**
  - Around half of fertilizer users thought residential fertilizer could cause algal blooms in nearby waterbodies (53%).

Steps of Social Marketing

4. Develop Strategy Using Tools of Change

- **Norms**
  - **Position desired behavior as the norm, not the exception.**
  - **Join the 55%!**

Steps of Social Marketing

4. Develop Strategy Using Tools of Change

- **Incentives (highlight the benefits)**
  - **Healthier springs**
  - **Healthier groundwater (drinking water)**
  - **Your yard can still look great!**
  - **Future generations**

Steps of Social Marketing

4. Develop Strategy Using Tools of Change

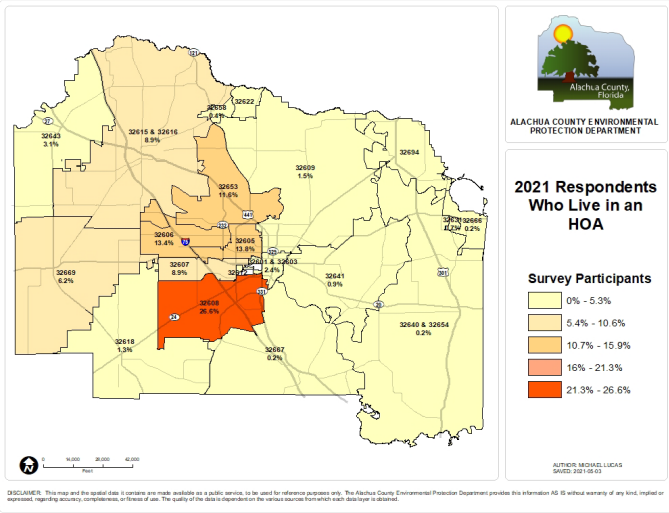
Communication

- Gainesville Magazine and Sun
- Utility Mailer
- Billboards
- Website
- Vehicle Wrap
- Press releases

$84,000 has been spent on the campaign and it has been seen over 19 million times

Fertilizer Campaign- Social Media

"Over half of Alachua County residents (55%) say they don't use fertilizer at all. Thank you! For those that are still using fertilizer, would you pledge to skip the fertilizer at least in the backyard this year? Backyards are for belly laughs and rolling in the grass, not fertilizer. "



Fertilizer Campaign- Social Media

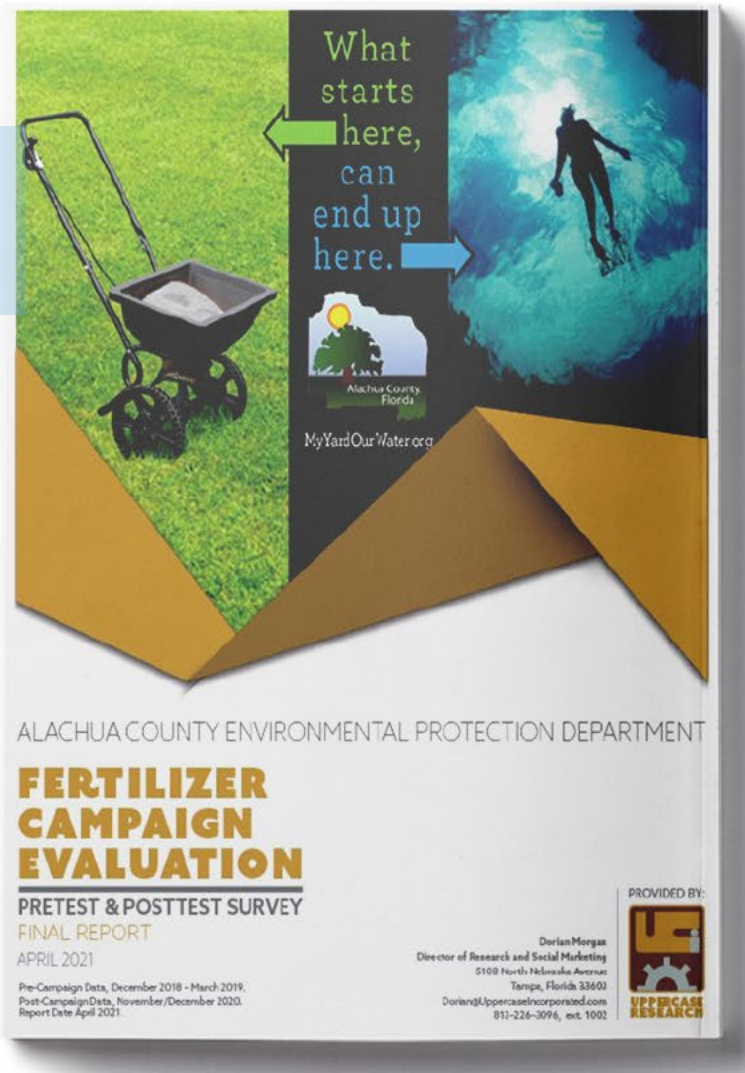
"Fertilizer washes off our yards and can seep into our waterways and contribute to algae blooms which block sunlight and choke out aquatic plants and fish. Over half of Alachua County residents (55%) say they don't use fertilizer at all. Thank you!"

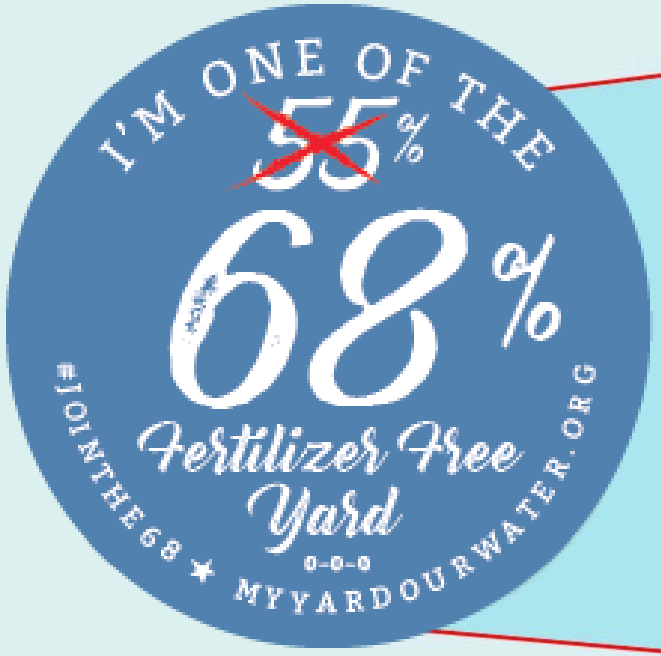
Steps of Social Marketing

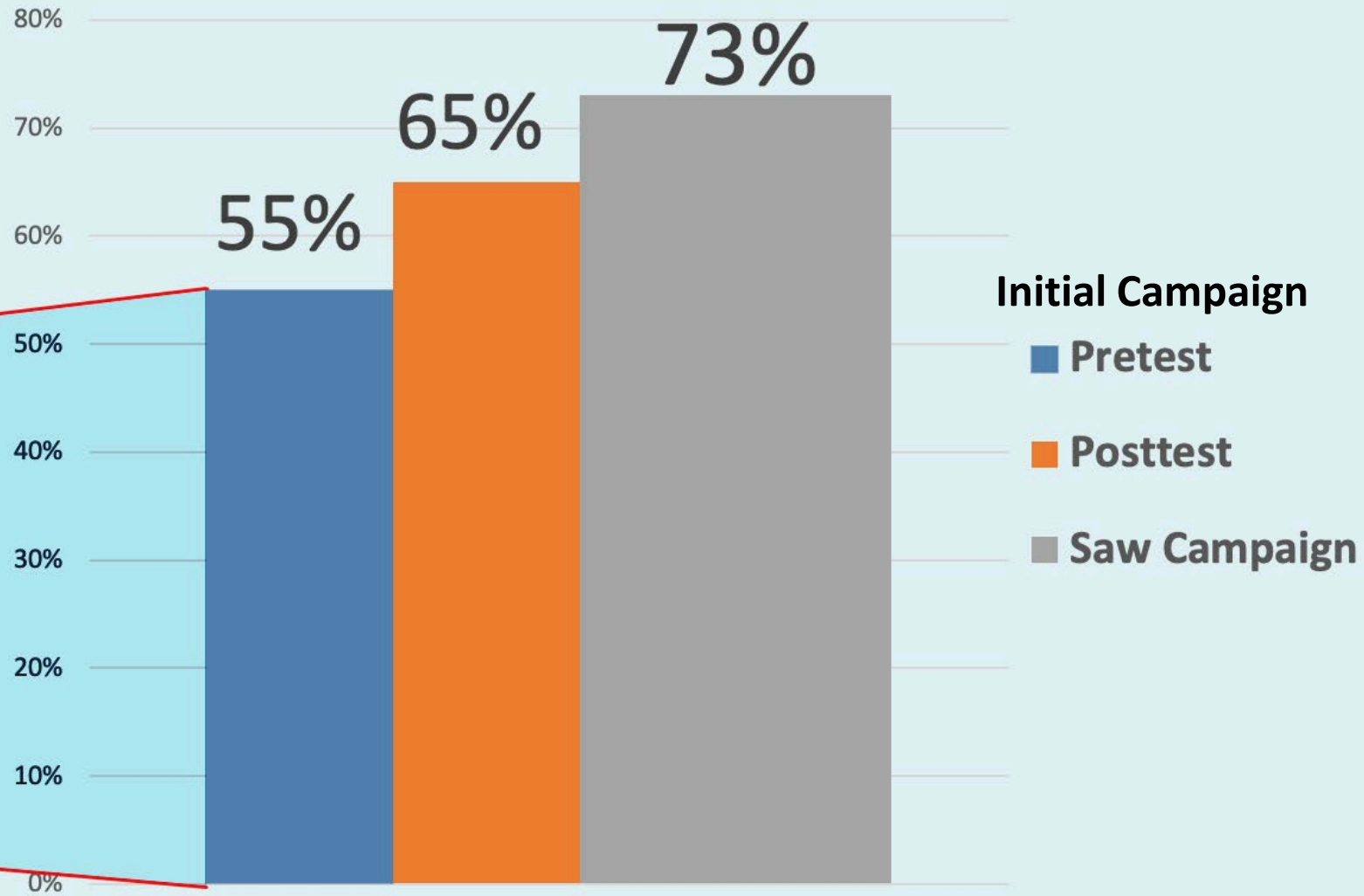
5. Evaluate the Strategy

Pretest Survey- 1,118 participants (2018-2019)

Posttest Survey- 2,297 participants (2020-2021)







2022 Results- 68% do not fertilize!

Load Reduction Results

- Combined survey, spatial, and literature data with fertilizer label information to estimate nitrogen load reductions
  - Simple Model used for surface water
  - Nitrogen Source Inventory Loading Tool (NSILT) used for groundwater

- 20% reduction in annual nitrogen loading from ~70,000 acres of medium and low-density residential land uses to reduce loading by:
  - 8,000 pounds for surface water and
  - 12,000 pounds for groundwater

Load Reduction Results

- Removal costs ranged from $1.35 - $8.28 per pound.
- Engineering projects range from $200 - $1,000 per pound.

Thank You!

Funding includes:

- Gainesville Clean Water Partnership
  - Alachua County
  - City of Gainesville
  - FDOT
- Florida Department of Environmental Protection
- US Environmental Protection Agency
- St. Johns and Suwannee River Water Management Districts

Questions?

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