NITROGEN LOAD REDUCTION FROM ALACHUA COUNTY'S FERTILIZER ORDINANCE AND BEHAVIOR CHANGE CAMPAIGN

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Water resources within Alachua County are impaired by too many nutrients, with landscape fertilizers being one of the sources. Alachua County amended its Landscape Fertilizer Ordinance in 2019 to include a ban on nitrogen fertilizers from July through February. Funding was obtained from the Florida Department of Environmental Protection Department to design, implement, and evaluate a behavior change campaign to decrease fertilizer use and to quantify the resultant nitrogen load reduction.

This presentation highlights social marketing concepts and data used in campaign development, implementation, and evaluation. Survey data was used to identify homeowners' perceived benefits and barriers to reducing fertilizer use, segment the audience, market test campaign strategies, and evaluate results. The initial campaign cost $44,000. Campaign strategies have included television, social media, billboards, print media, and direct mail since 2019. Alachua County continues to fund the campaign and it has been seen over 19 million times at a media budget of $84,000 to date.

The campaign is evaluated each year with a post-campaign survey. In 2021, respondents that said, "My lawn is not fertilized" jumped to 65% compared to 55% in the pre-campaign survey. This value increased to 68% in 2022. Respondents were asked to provide their level of agreement to the statement, "Residential fertilizer use causes algal blooms in waterbodies." In 2022, 80% of participants agreed, which is a considerable increase from the 68% agreement in the 2019 pre-campaign survey.

Survey, spatial, and literature data were combined with fertilizer label information to estimate a 20% reduction in annual nitrogen loading in Alachua County. We calculated an 8,000 pound nitrogen reduction to surface water using the Simple Model, and a 12,000 pound reduction to groundwater using the Nitrogen Source Inventory Loading Tool (NSILT), thus quantifying the cost of reducing nitrogen loading at, $1.4 - $8.3 per pound.

PRESENTER BIO: Stacie Greco is the Water Resources Program Manager with the Alachua County Environmental Protection Department. She received a B.S. from Warren Wilson College in Asheville, NC prior to her M.S. in Environmental Engineering from UF. She also has a graduate certificate in Social Marketing for applying marketing tools to influence behaviors.