ESTABLISHING THE CONDITION OF FLORIDA STORMWATER PONDS USING A RAPID HABITAT ASSESSMENT

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Stormwater is the biggest contributor to water pollution in Florida and wet detention ponds are the most common method for stormwater management. We can and must get more ecosystem function and service from stormwater ponds. Homeowners who hold the permit and responsibility to maintain the health and functionality of stormwater systems often do not know where to begin to improve the condition of their neighborhood ponds. In order to help owners assess the habitat services provided by stormwater ponds, a Stormwater Pond Habitat Assessment Tool (the tool) was created. The tool provides an overall rating of the pond's physical habitat for aquatic wildlife, which depend on these water bodies for food, refuge, and reproductive success. Specifically, the tool partitions various aspects of the buffer, littoral and open water zones as a basis for judging the overall condition. Nine parameters are assessed and given a score between 1 and 4 with 4 being optimal, 3 suboptimal, 2 marginal and 1 poor. The scores are compiled to provide an overall rating. The tool was used to examine the condition of stormwater ponds in Sarasota County. A spatially balanced sample representing one-percent of the total wet detention pond population across county boundaries was examined. The results indicated that 73% of ponds assessed (n=41) had a score ≥ 3, rating them as either optimal or suboptimal. Buffer zone extent was the lowest ranked parameter with 68% of scores ≤ 2. Over half of the ponds had adequate littoral zones, but plant abundance and native plant diversity were lacking. The majority of stormwater ponds were discovered to be hotspots for non-native plant species with 78% containing one or more species not native to Florida. Overall, the tool was effective at ranking, comparing, and communicating the relative condition of stormwater ponds across Sarasota County.

PRESENTER BIO: Dr. Abbey Tyrna is the Water Resources Agent for UF/IFAS Extension Sarasota County. Since coming back to Florida in 2016, Abbey has been working on water quality and conservation issues; everything from Florida Microplastics Awareness Project and Florida Waters Stewardship Program to stormwater pond management and drinking local tap water.