



Innovative Technologies: Pilot Study of the Algae Turf Scrubber for Nutrient Reductions

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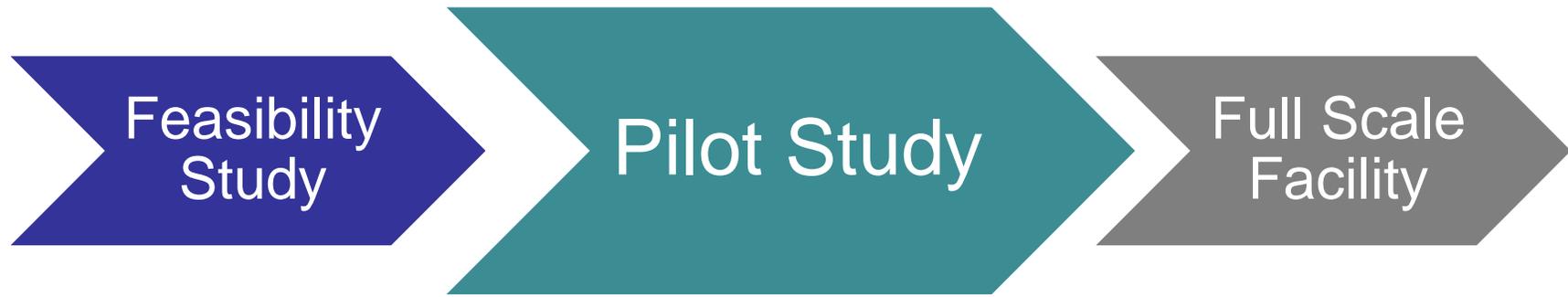
Michelle Woolfolk, Danielle Mir and Paul Wiebke
Public Works Department
21 August 2014 Work Session



Is there a way to meet the Falls and Jordan Lake goals in a cost-effective manner?

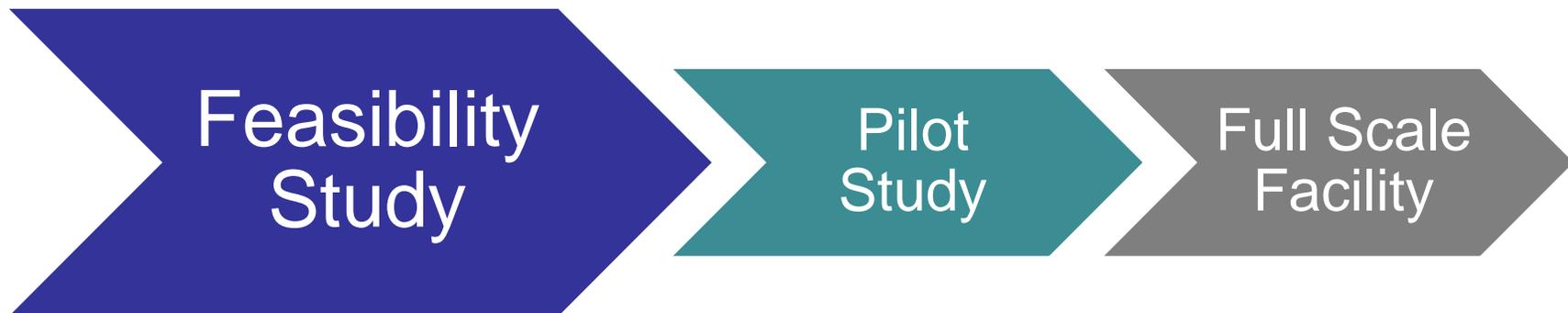


A 3-Step Process





A 3-Step Process





Algal Turf Scrubber® Feasibility Study

Ellerbe and
Little Lick Creek

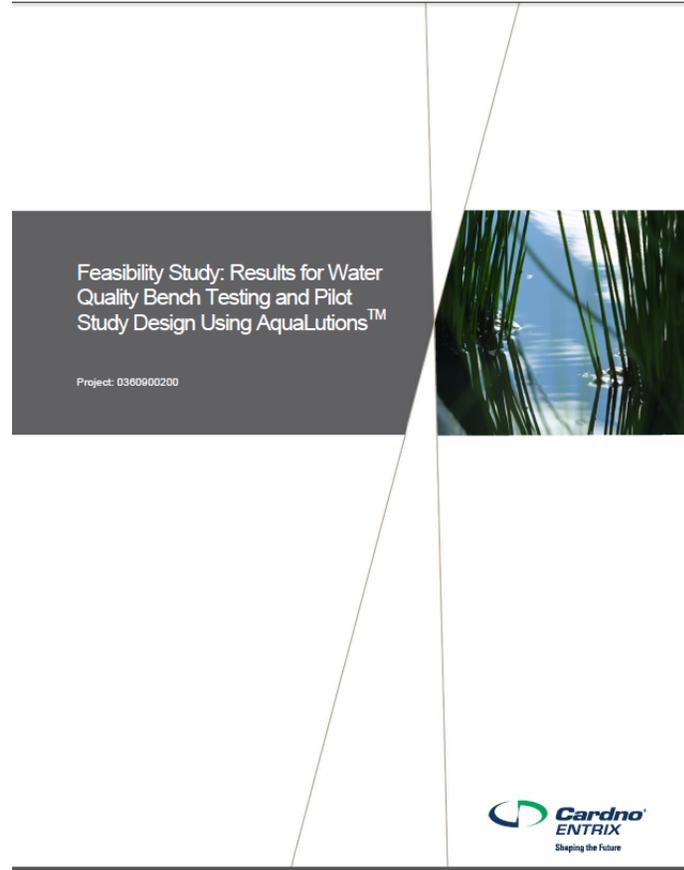
October 11, 2013

Prepared for:

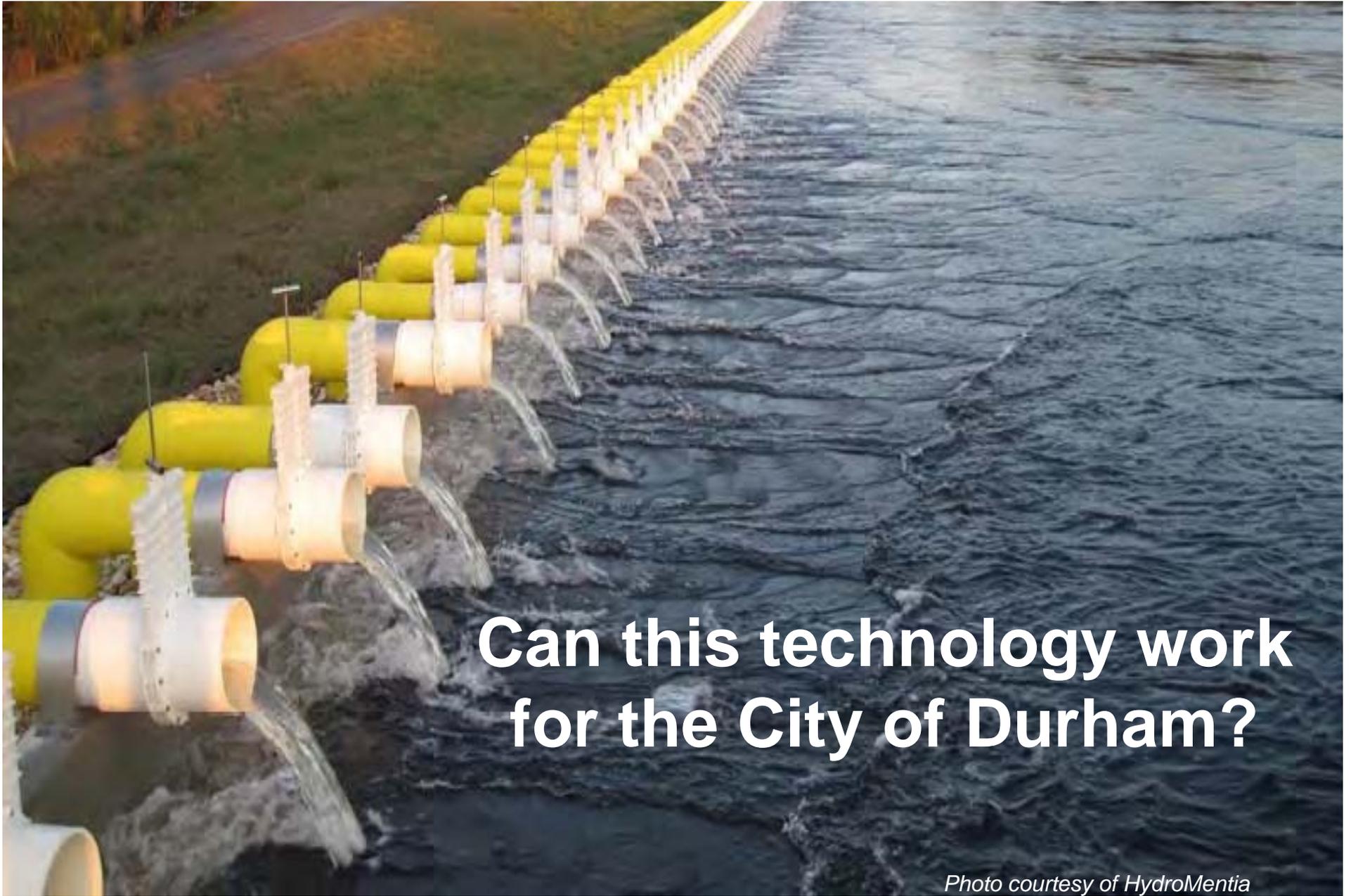
The City of Durham
Stormwater Services



Prepared by:



Feasibility Study ✓



Can this technology work for the City of Durham?

Photo courtesy of HydroMentia



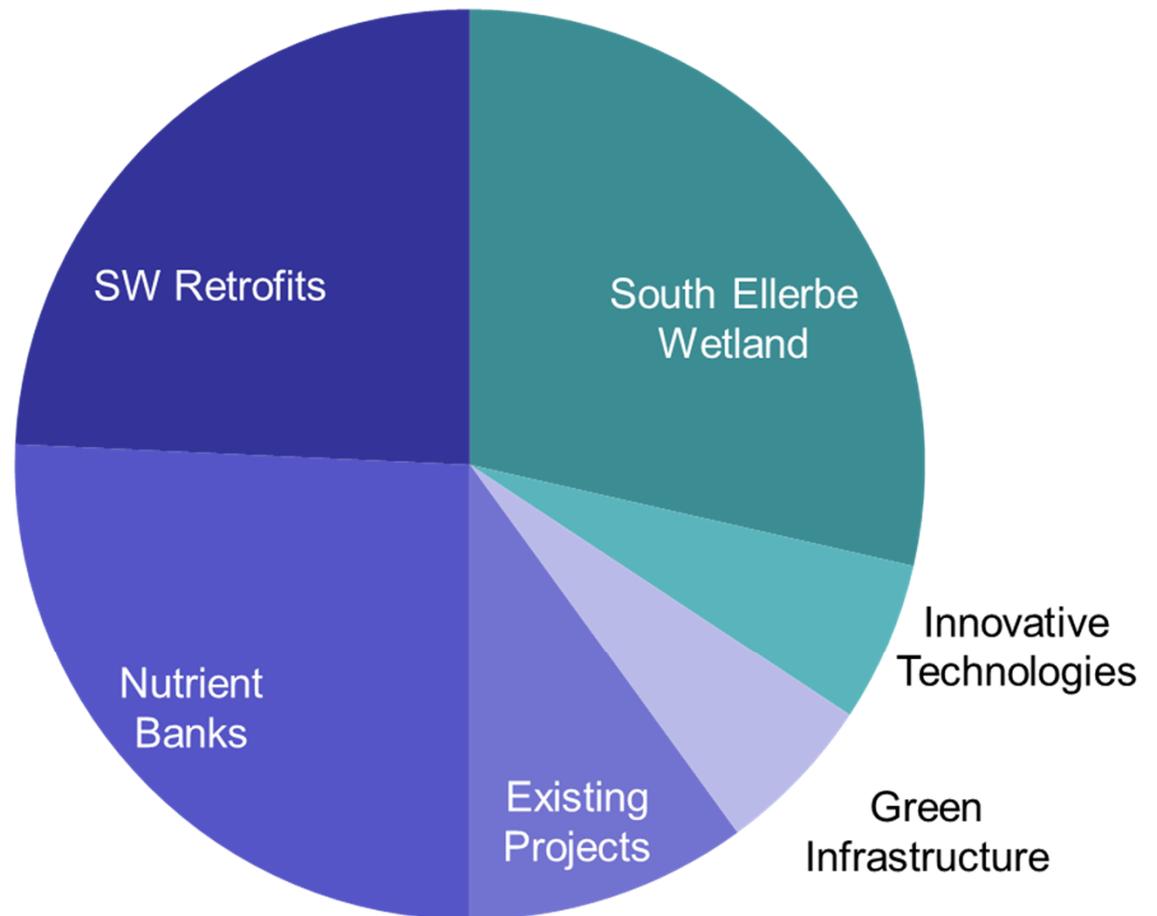
Cost per pound of nitrogen and phosphorus removed

		Nitrogen	Phosphorus
Algae Turf Scrubber	Most Efficient	\$19	\$67
	Least Efficient	\$648	\$1,534
SCM	Most Efficient	\$2,450	\$11,270
	Least Efficient	\$39,573	\$195,214



Falls Stage 1

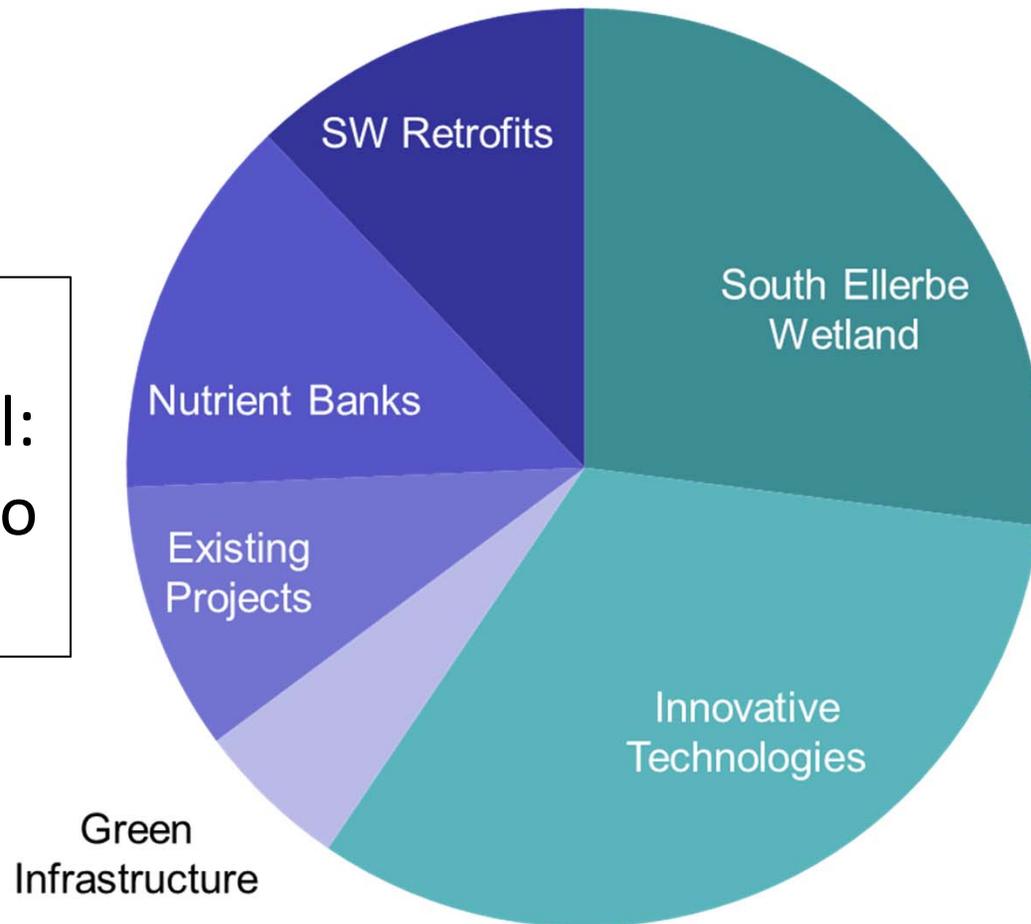
Stage 1 Existing
Development Goal:
Reduce Nitrogen to
2006 levels





Falls Stage 1 using Most Cost-Effective ATS *Estimated*

Stage 1 Existing
Development Goal:
Reduce Nitrogen to
2006 levels



Why do a Pilot Study?



Photo courtesy of HydroMentia