

I. ABSTRACT

There are more than 2.6 million retention and detention ponds in the United States, over 14,000 in coastal South Carolina, and almost 6,000 ponds in the Berkeley, Charleston, and Dorchester (BCD) counties alone. Most of these ponds were constructed in the last three decades primarily for the purpose of stormwater management in urban and suburban areas. Stormwater ponds are the most common best management practice (BMP) used by developers to meet volume and sediment control requirements set by the South Carolina Department of Health and Environmental Control. Ponds also have additional benefits for developers, such as providing fill material for construction, potential recreational benefits for neighborhoods, and higher property values for land proximal to the pond features. A proportion of sediment and pollutants in runoff are deposited in stormwater ponds, thus providing on-site filtration before the runoff drains into nearby waterways. Therefore, stormwater ponds are dynamic systems that require regular maintenance to manage a number of issues, including aquatic vegetation, wildlife and sedimentation. This project represents ongoing work, on a student internship, developing a comprehensive GIS-based Inventory / database of retention ponds in the BCD region.

OBJECTIVE Inventory and collect data on the residential stormwater ponds in the Berkeley, Charleston, and Dorchester tricity region to guide outreach efforts targeted for stormwater pond owners and managers.

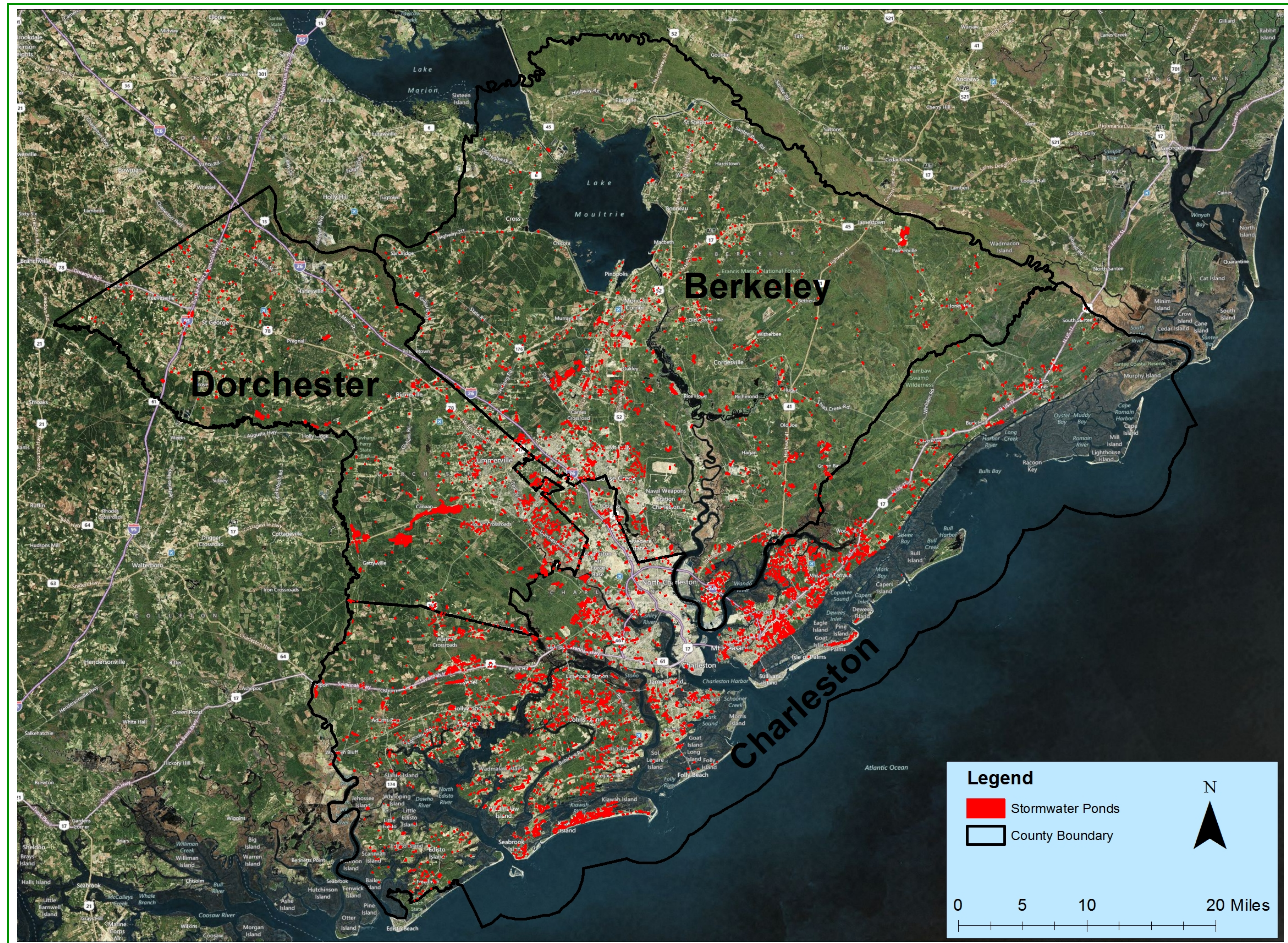
II. DATABASE

- All stormwater ponds have been digitized in Berkeley, Charleston, and Dorchester counties, totaling 5,962.
- Attributes to include: owner/manager contact information, pond size and volume, pond construction date, community, surrounding land use, presence or absence of a vegetated buffer, watershed

III. SURVEY

A survey will be developed to help the Ashley Cooper Stormwater Education Consortium to target outreach efforts in areas of stormwater pond management that are least well understood by owners/managers.

The survey will be given to individuals, companies, and homeowners' associations (HOAs) who are responsible for the management of stormwater ponds. Questions will be asked regarding the current maintenance practices and common problems associated with the stormwater pond in order to better understand the respondent's perceptions, knowledge, and behavior related to stormwater ponds.



IV. POND INFORMATION BOOKLET AND MAINTENANCE LOG

A pond information booklet and maintenance log prototype will be created for stormwater pond managers to aid them in their efforts to properly maintain their pond. Information on the purpose and design of stormwater ponds will be included, as well as information and helpful hints on how to prevent common stormwater pond ailments such as algae, unstable shorelines, poor water quality. Also included will be a maintenance worksheet for the stormwater pond managers to fill out whenever there is an issue with the pond in order to create a maintenance record.

V. FUTURE USES

In addition to helping the Ashley Cooper Stormwater Education Consortium in their outreach efforts, data and results collected during this effort will be used in future research on pond dynamics, pond placement within the watershed and subwatershed, land use impacts, and pond efficiency over time. From this effort, the ACSEC will be able to tailor pond maintenance information and resources to meet the specific needs of pond managers.