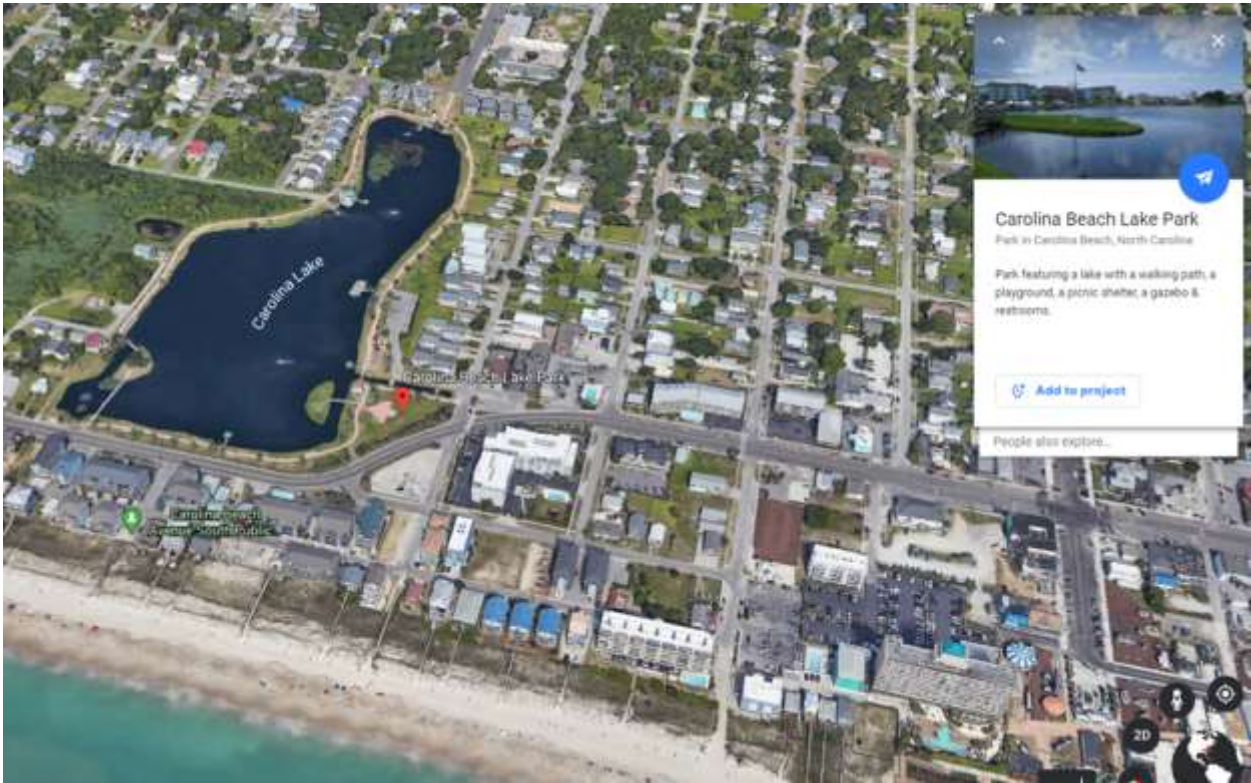




Carolina Beach Lake Park *Enhancement Proposal*

A collaborative effort of citizen volunteers,
grant funders and pro-bono experts





Current Uses of Carolina Beach Lake

Used extensively by the local
community and by wildlife



- Weekly farmers market
- Exercise area
- Tourist attraction
- Area for town or holiday events
- Learning area for school children
- Important area for migrating birds and other wildlife

Current Issues with Carolina Beach Lake

A group of over 300 Carolina Beach citizens and tourists recently signed a petition to improve the management and conservation of Carolina Beach Lake



- Lake edge erosion
- Poor water quality
- Heavy metal contamination
- Algal blooms
- Poor aesthetics
- Nuisance geese

Lake Improvement Opportunities:

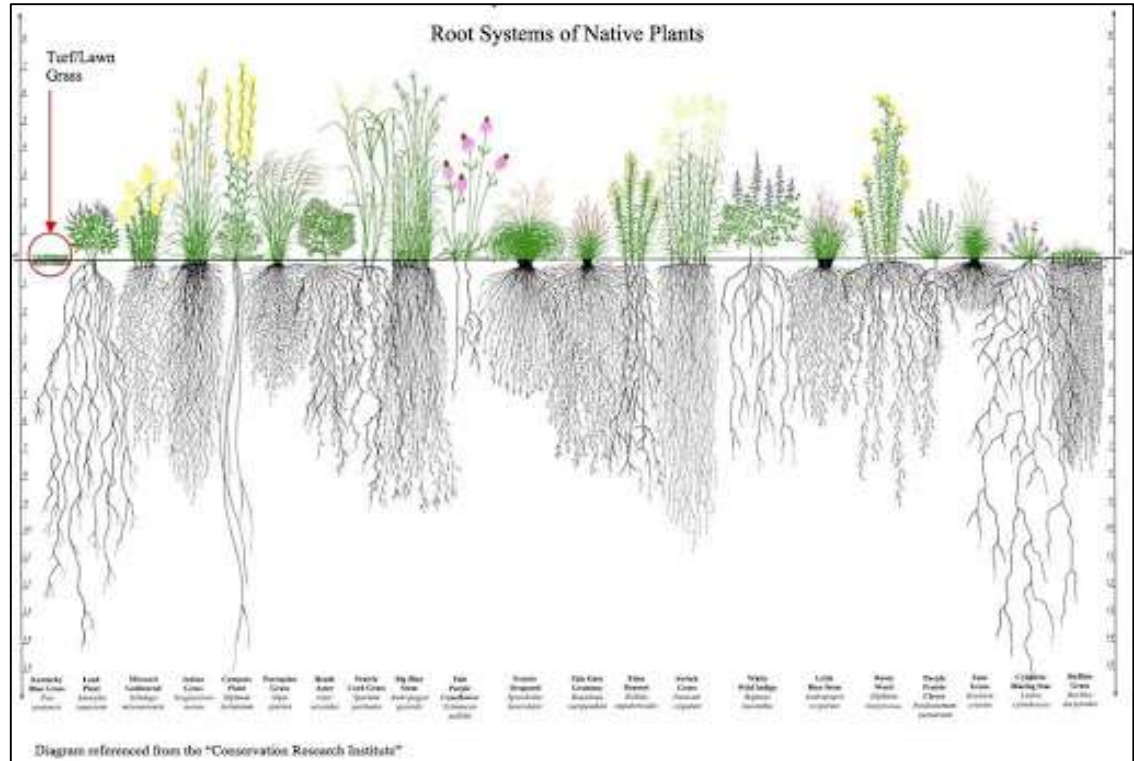
Concerned citizens have gained support of a variety of environmental groups including:

- North Carolina Wildlife Federation
- Plastic Ocean Project
- NC Cooperative Extension
- NC SeaGrant
- Cape Fear River Watch
- Island Montessori
- And more!

- Native Plantings around Lake:
 - Prevent lake edge erosion
 - Improve water & soil quality
 - Prevent algal blooms
 - Enhance aesthetics
 - Restrict nuisance geese

Native Plant Benefits

- Stabilize Soil
- Uptake of heavy metals
- Uptake of excess nutrients
- Aesthetically pleasing
- Provide habitat for pollinators and other wildlife



The Plan

After approval: Design, plant species selection, coordination with Parks & Rec, etc.

- Complete plantings in phases
 - Soil/water samples
 - Determine appropriate plant material
- Funding by NC Wildlife Federation
- Additional funding may occur upon approval
- Volunteer base ready for planting and maintenance needs

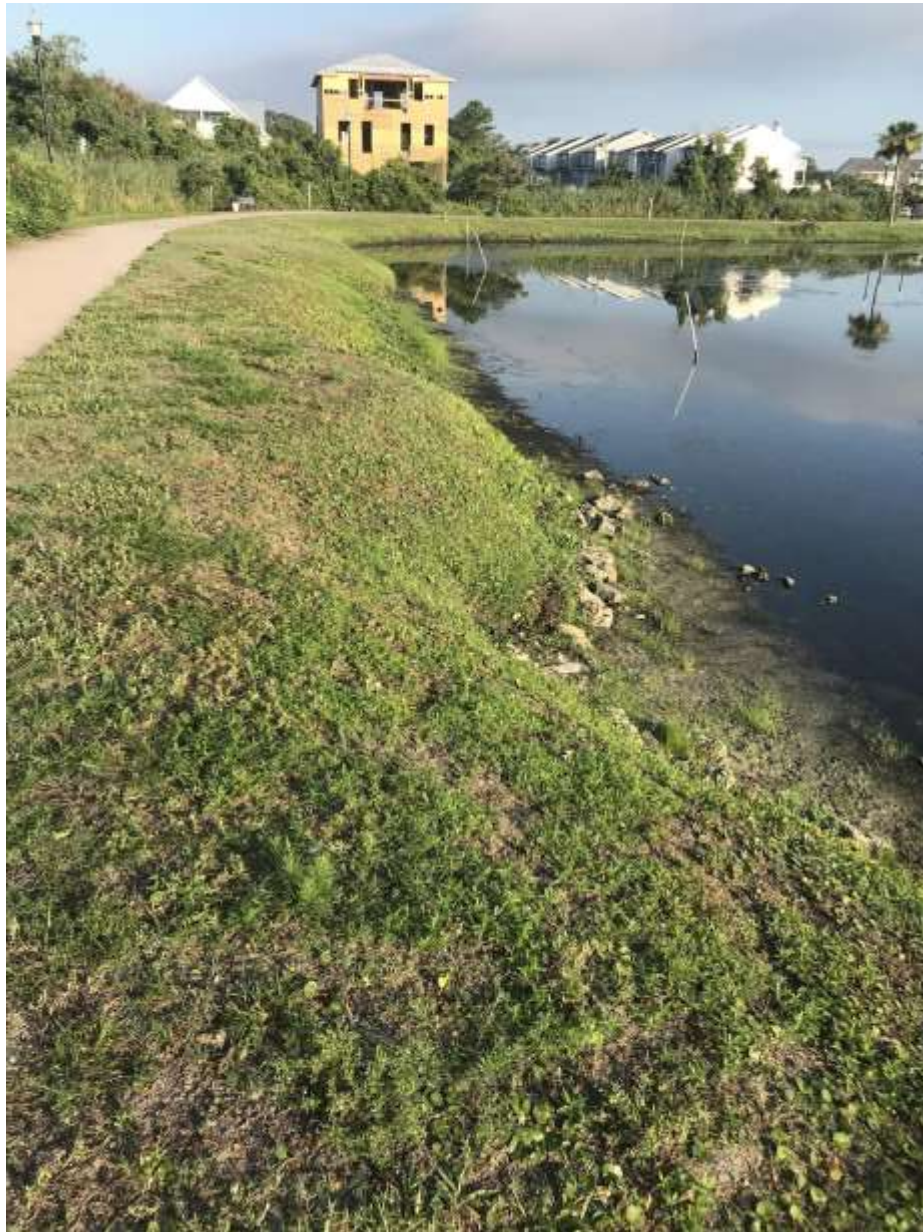
Initial phase, Southern Lake Shoreline

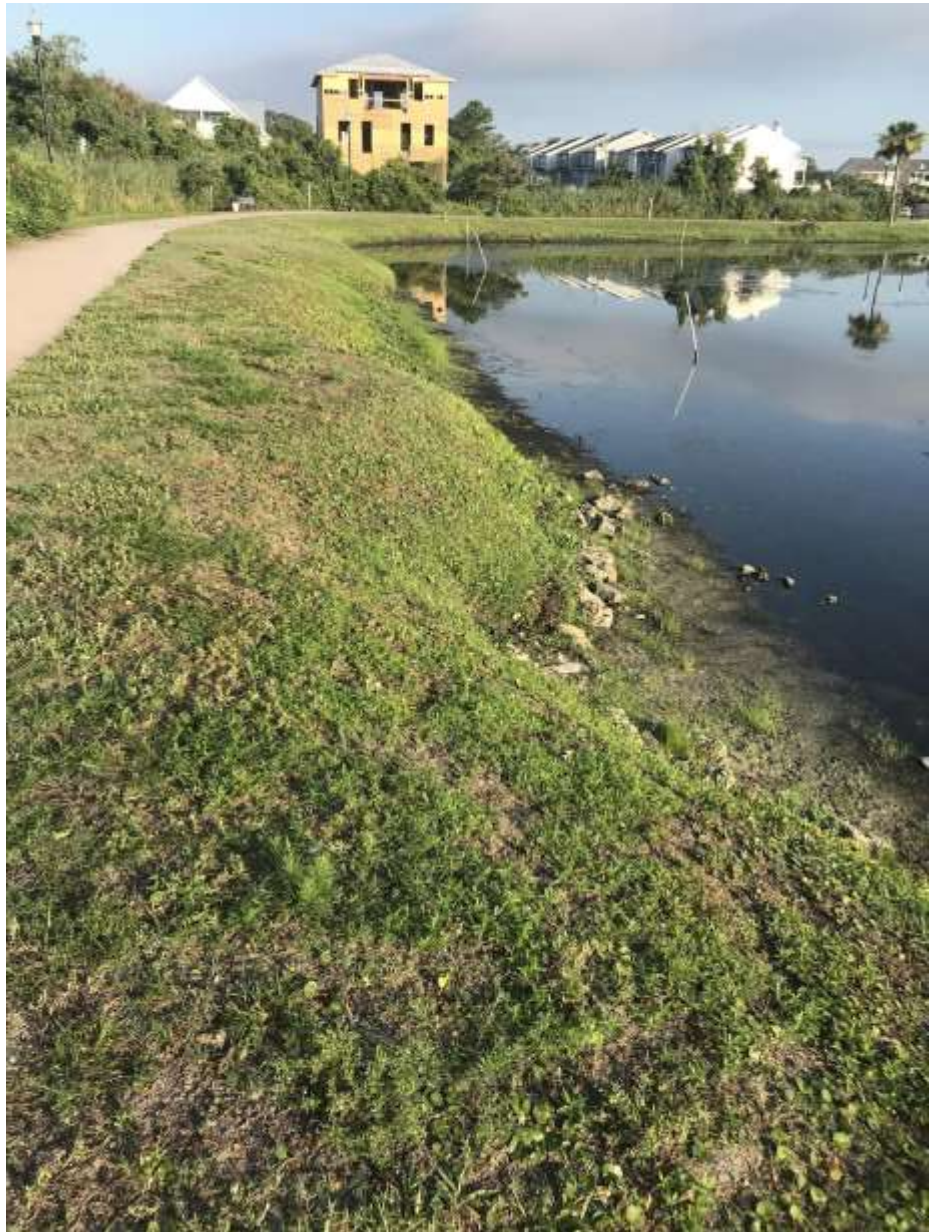
Urgent, due to severe erosion issue.

Goals:

- Large trees planted along perimeter, taking views into consideration.
- After trees are installed, native plants will be added along shoreline.
- Path will have mown 3-foot buffer on each side.
- Low simple fence installed by scouts to provide a visual barrier for foot traffic and grass maintenance.







Phase Two

- Island #1 Goals:
 - Native planting around perimeter and around sidewalk
 - Phragmites removal





Phase 3

- Island 2 Goals:
 - Turn into a butterfly garden using native seed packets or native plants
 - Add turtle basking log/platform



LANDSCAPE PROPOSAL
CAROLINA LAKE- ISLAND #2 WITH FLAGPOLE
CAROLINA BEACH
JULY 2020

SWEET PEPPERBUSH

YUCCA 'COLORGUARD'

GAILLARDIA

YARROW

SWEET PEPPERBUSH

COREOPSIS 'MOONBEAM'

LITTLE BLUESTEM
'THE BLUES'

SWEET PEPPERBUSH

DWARF YAUFRON HOLLY

BUTTERFLY WEED

BLACK-EYED SUSAN

SWITCH GRASS

SWEET PEPPERBUSH



Management Plan

Volunteer Based Management and assistance from Parks and Recreation



- Native plants are self-sufficient once established
- NCWF CB chapter, CFRW, and other groups have committed to ongoing cleanups and maintenance.
- We have also reached out to members of the town's newly formed beautification committee to assist—one member, local master gardener Dawn Betz is already on board to assist.

Benefits to the Town

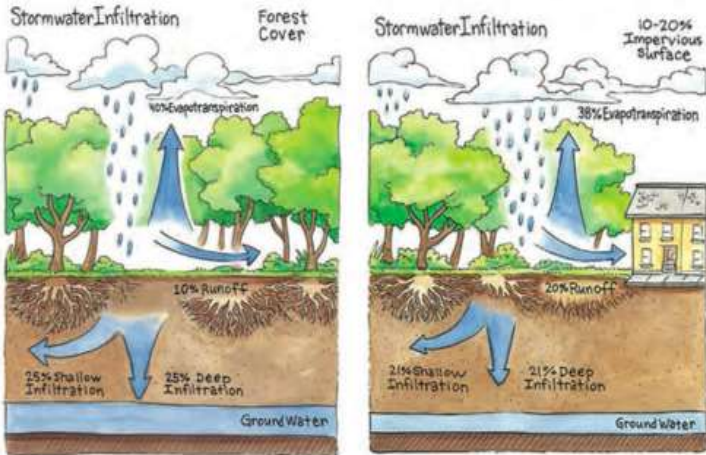
Enhanced aesthetics will not obstruct desirable views and will help control phragmites (invasive plant nuisance)

- Improve lake qualities
- Improve lake habitat

Encourage tourism

Promote local businesses and events (imagine Night of Lights with decorated trees!)

Increase property value



Runoff increases as land is developed. Information source: U.S. EPA

Next steps

With Town Council's permission, we can begin to use these opportunities to benefit the town



- Set dates for planting
- Select and order plants
- Gather supplies and organize volunteers
- Utilize all resources and funding opportunities
- Select location of tree installations

Thanks for your consideration!

Sources

- Parson, B. et. al. (2020) *Economic Outcomes of Urban Floodplain Restoration: Implications for Puget Sound*
- (2014) *Plants as Useful Vectors to Reduce Environmental Toxic Arsenic Content*. Retrieved at: <https://www.hindawi.com/journals/tswj/2014/921581/>
- (2018) *C-2 Bioretention Cell*. Retrieved at <https://files.nc.gov/ncdeq/Energy%20Mineral%20and%20Land%20Resources/Stormwater/BMP%20Manual/C-2%20%20Bioretention%201-19-2018%20FINAL.pdf>
- Root system Diagram retrieved at <http://www.chambersdesign.net/yarblog/-rooting-for-spring>