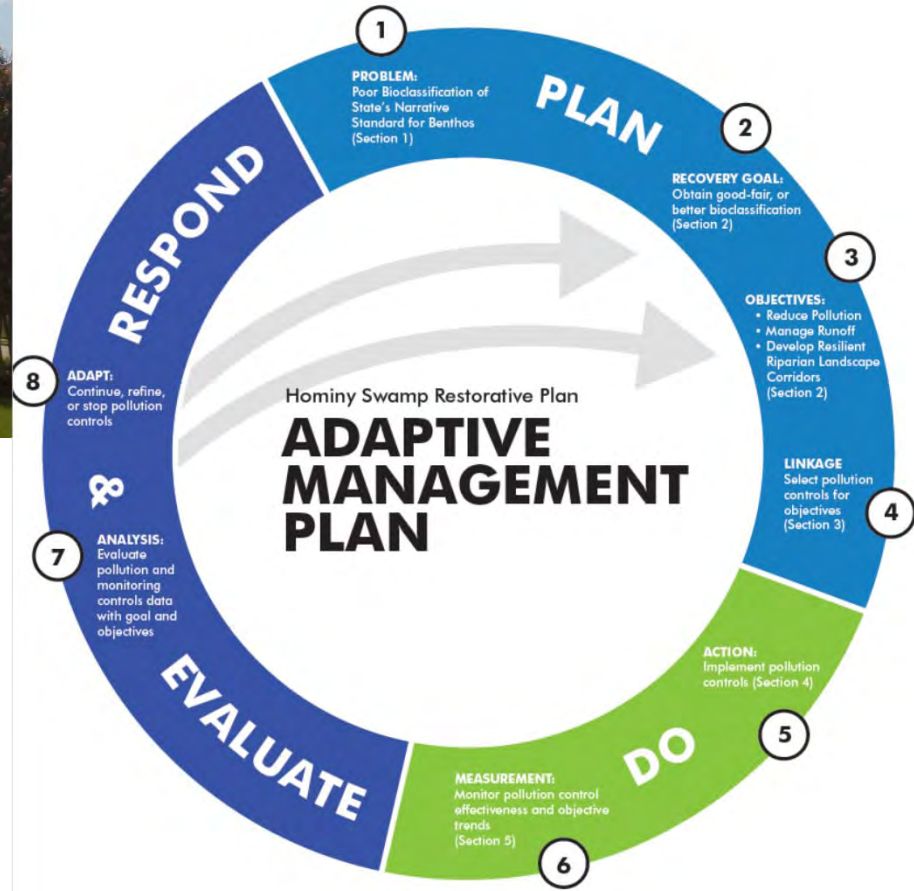


HDR



HOMINY SWAMP CATEGORY 4B PLAN





01 WILSON AND HOMINY SWAMP

02 CATEGORY 4B PLAN

01

**WILSON AND HOMINY
SWAMP**

WILSON NEEDS A PLAN

History

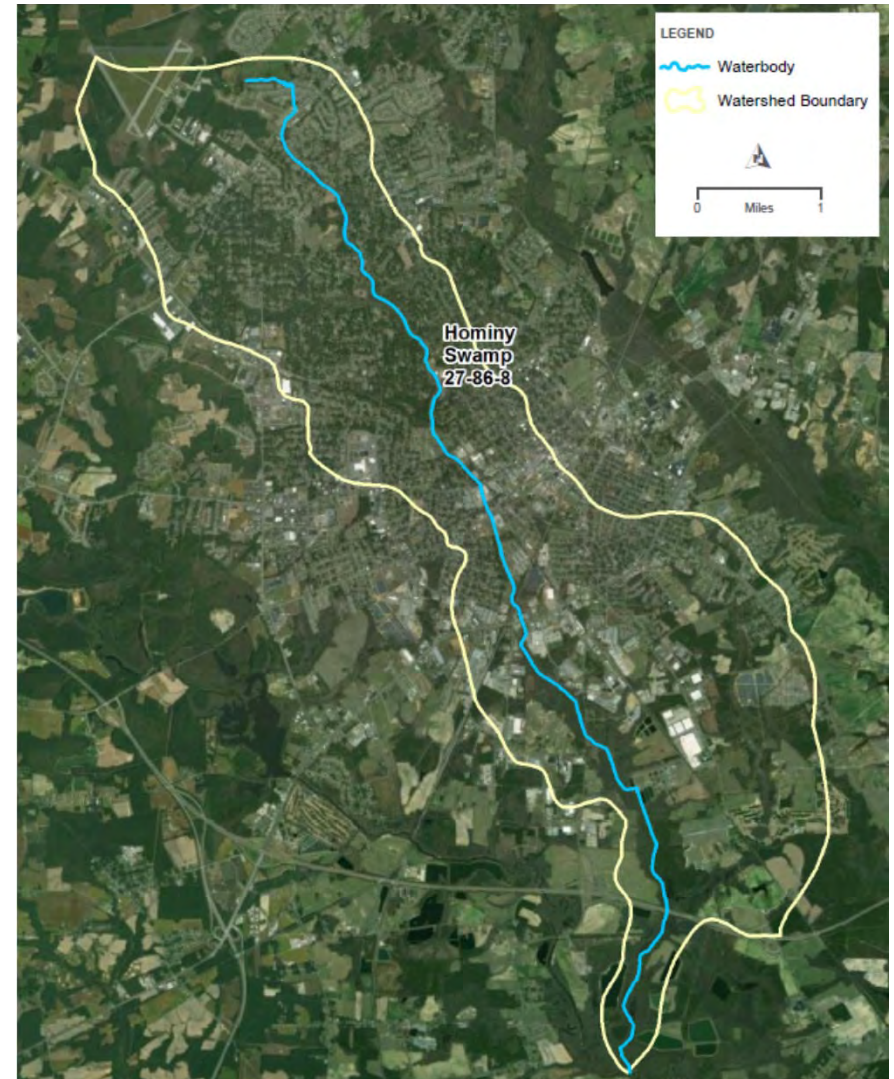
- Hominy sub-basin was almost completely built out prior to Neuse regulations with little focus on water quality issues. During that time, development practices negatively impacted the stream leading to poor aquatic habitat in Hominy Swamp for benthos causing Hominy's 303(d) Listing in 2004.

Goals

- To improve benthos rating
- To improve local water quality
- To avoid potential issuance of TMDL
- Improve erosion and nuisance flooding issue

HOMINY SWAMP

- Main stressors (from NC DWQ Report, 2004)
 - **Impervious area** contributing to significant fluctuations from base flow to peak flow
 - **Loss of riparian buffers**
 - **Channelization** of the water body resulting in erosion, sedimentation, and decline in benthic habitat





GOT THE BALL ROLLING

- **Secure funding**

- Increased existing stormwater utility fee to fund the development of the 4b Plan as well as support multiple programs that are needed to implement our 4b Plan.

- **Community support**

- Stormwater Advisory Committee determined that a 4b Plan was needed, both from an environmental and developmental perspective.

- **Staff consensus**

- City staff are all on the same page to achieve the goal of getting Hominy Swamp de-listed and improve overall health of the Hominy Swamp basin.

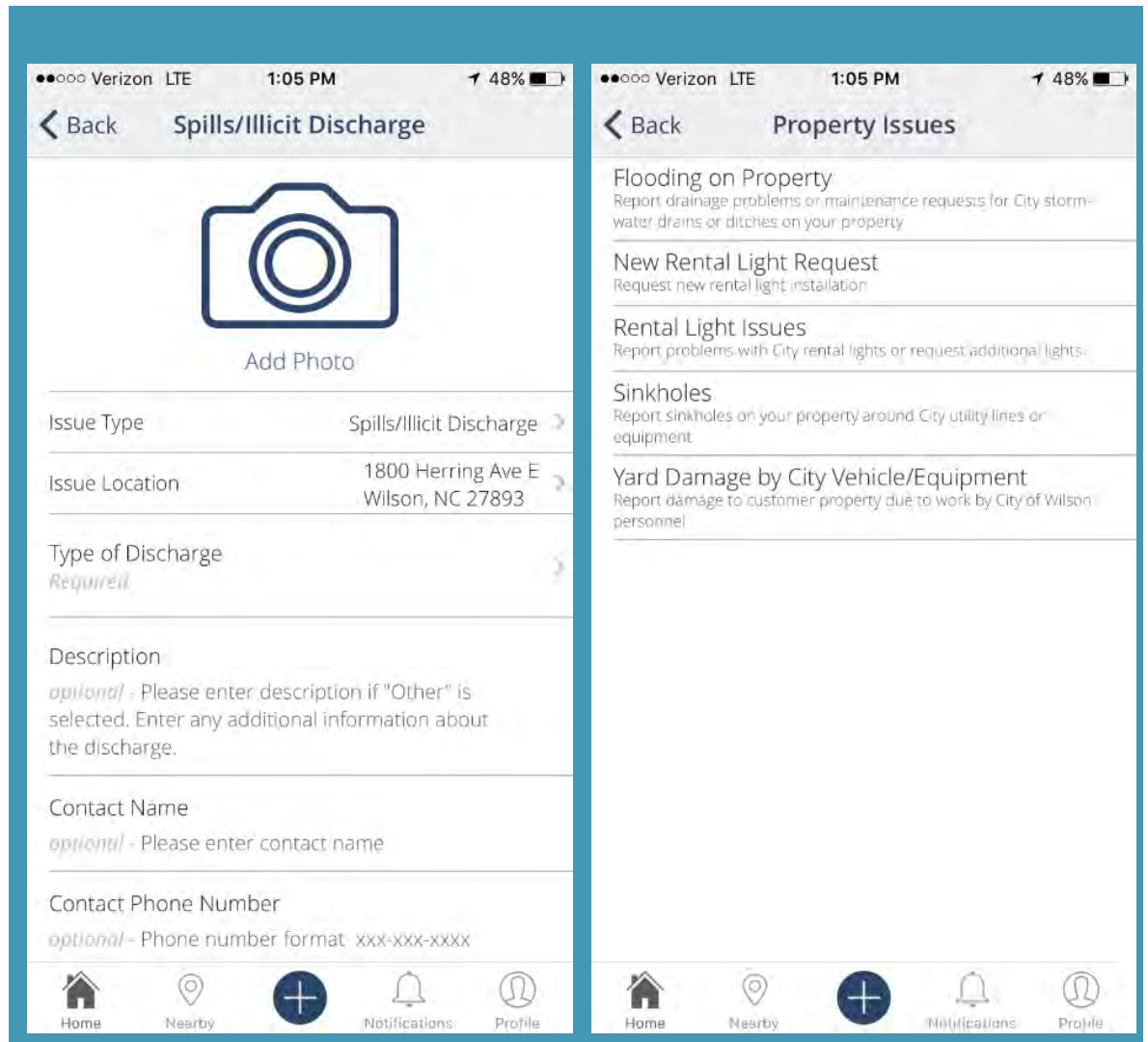




MULTIPLE PIECES TO PUZZLE

- Since we became a named community in Neuse nitrogen regulations and watershed/water supply rules, we have worked on developing multiple programs and policies that will aid us in improving our local water quality.
- Illicit discharge detection/removal, streambank stabilization and buffer restoration, SCM retrofits, public education, post construction stormwater flow reductions, Adopt-a-Street, Adopt-a-Stream, infrastructure assessments, implementation of Accela/Fix-it-Wilson (app which allows for citizens to upload requests which assists us in tracking and expediting issues)
- Not a NPDES Phase II community but anticipating it

FIX-IT-WILSON





STREAMBANK STABILIZATION

POST-CONSTRUCTION STORMWATER FLOW REDUCTION

TABLE 6.1 PEAK FLOW ATTENUATION REQUIREMENTS

STORM EVENT	PEAK FLOW REQUIREMENT	REASON FOR REQUIREMENT
1-year, 24 hour 2-year, 24 hour	20% Reduction	To reduce downstream channel degradation, and to not aggravate existing flooding problems
10-year, 24-hour	10% Reduction	To protect downstream drainage system capacity
25-year, 24-hour	10% Reduction	To protect downstream properties

BUY OUTS/RETROFITS FOR FLOOD-PRONE AREAS

- Merrimont Park
- Parkside Pond



TEAMING FOR PROGRESS



- Wilson wanted to improve the rating.
- HDR brought specialists with knowledge to:
 - Implement and properly document
 - Set up a monitoring and reporting metric to help get organized
 - Track our progress and provide transparency to citizens and required agencies
- Goal of a Good/Fair rating eventually in benthos, improve local water quality, and ultimately have Hominy Swamp de-listed permanently.

02

CATEGORY 4B PLAN

AUTHORITY FOR CATEGORY 4B

- Reasons for States to exclude listing impaired waters on 303(d) list:
 - Technology-based effluent limits required by CWA
 - More stringent effluent limitations required by local, state, or federal authority
 - Other pollution control requirements required by local, state, or federal authority

40 CFR 130.7(b)(1)(iii)

ELEMENTS OF CATEGORY 4B DEMONSTRATION (PLAN)



1. Identification of segment and statement of problem causing the impairment



2. Description of pollution controls and how they will achieve WQS



3. An estimate or projection of the time when WQS will be met



4. Schedule for implementing pollution controls



5. Monitoring plan to track effectiveness of pollution controls



6. Commitment to revise pollution controls, as necessary



1. IDENTIFICATION OF SEGMENT AND STATEMENT OF PROBLEM

Hominy Swamp Restoration Plan
RESTORATION HIERARCHY

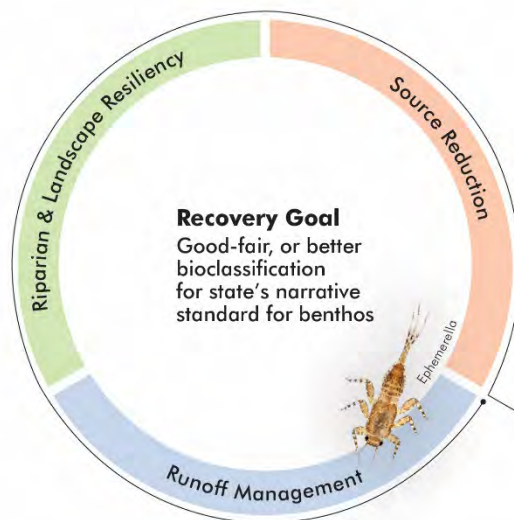


Recovery Goal
Good-fair, or better
bioclassification
for state's narrative
standard for benthos



Hominy Swamp Restoration Plan

RESTORATION HIERARCHY

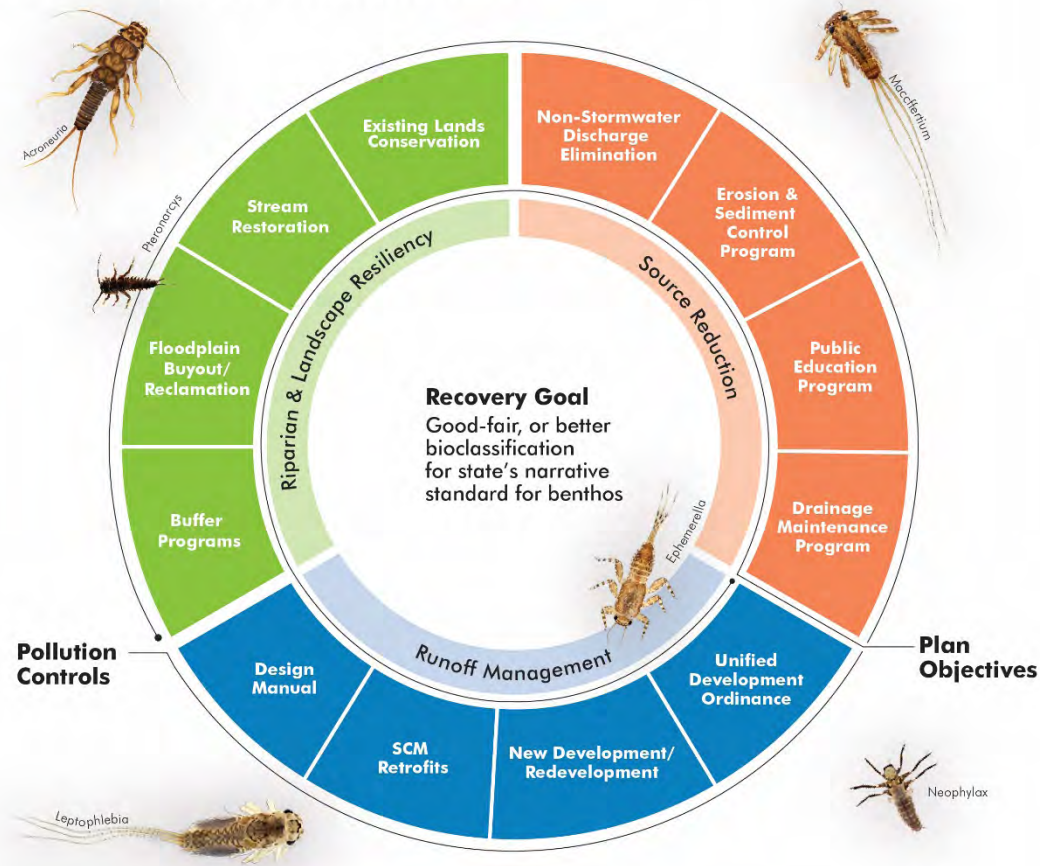


Plan Objectives



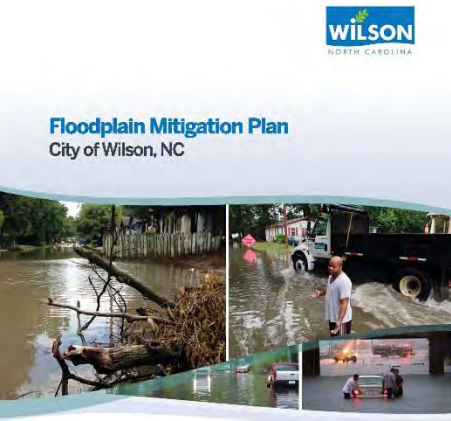
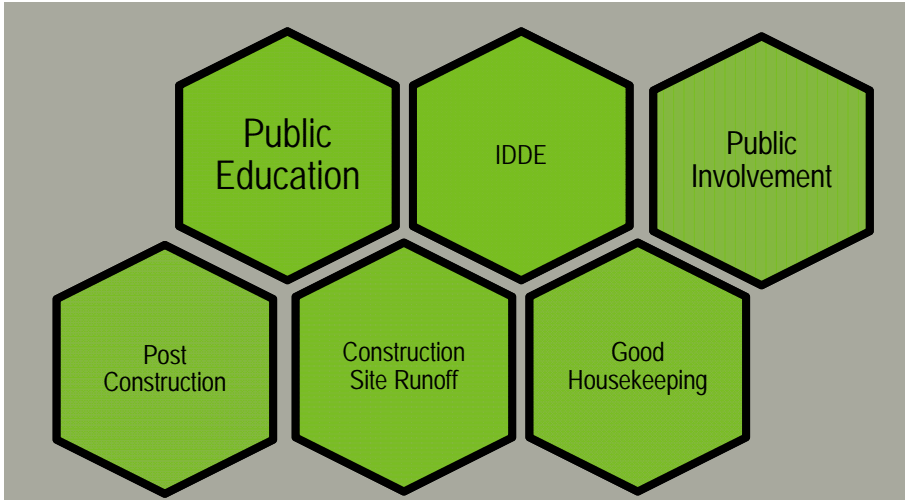
Hominy Swamp Restoration Plan

RESTORATION HIERARCHY



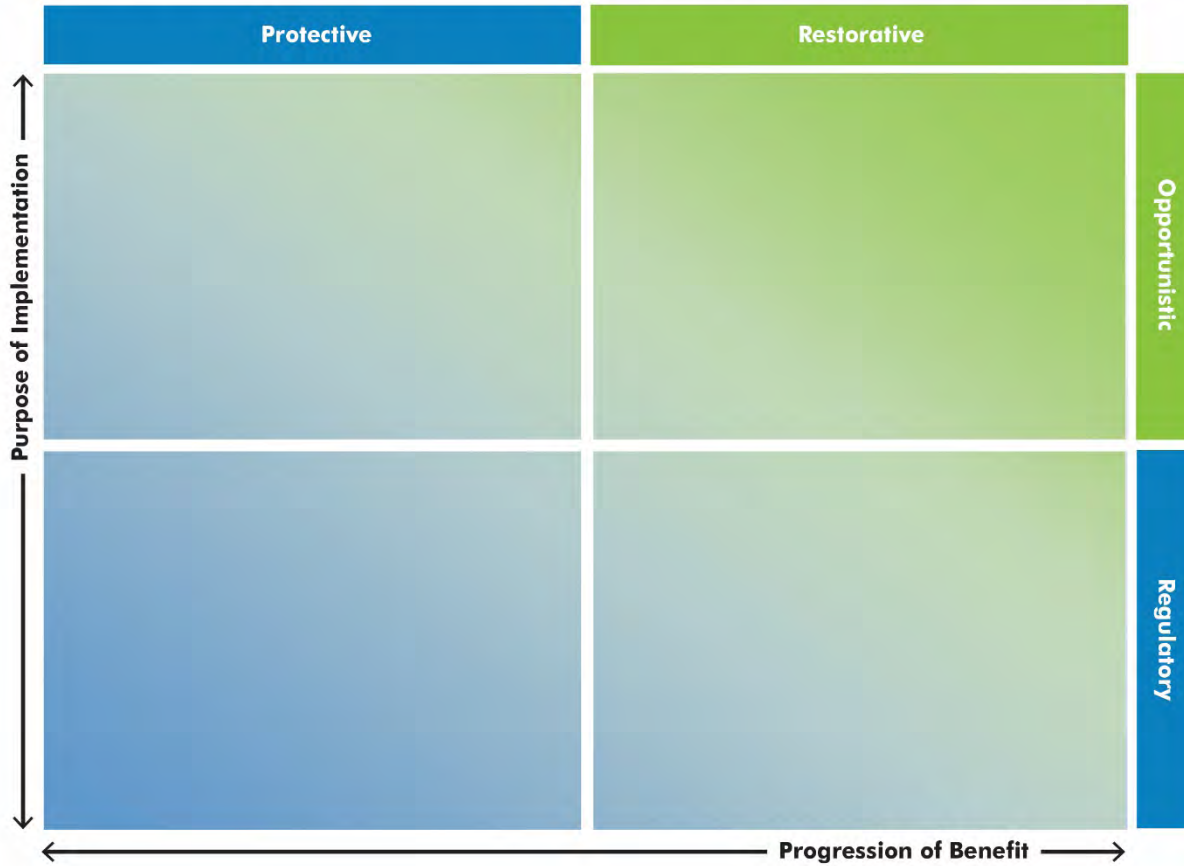


2. DESCRIPTION OF POLLUTION CONTROLS AND HOW THEY WILL MEET WQS



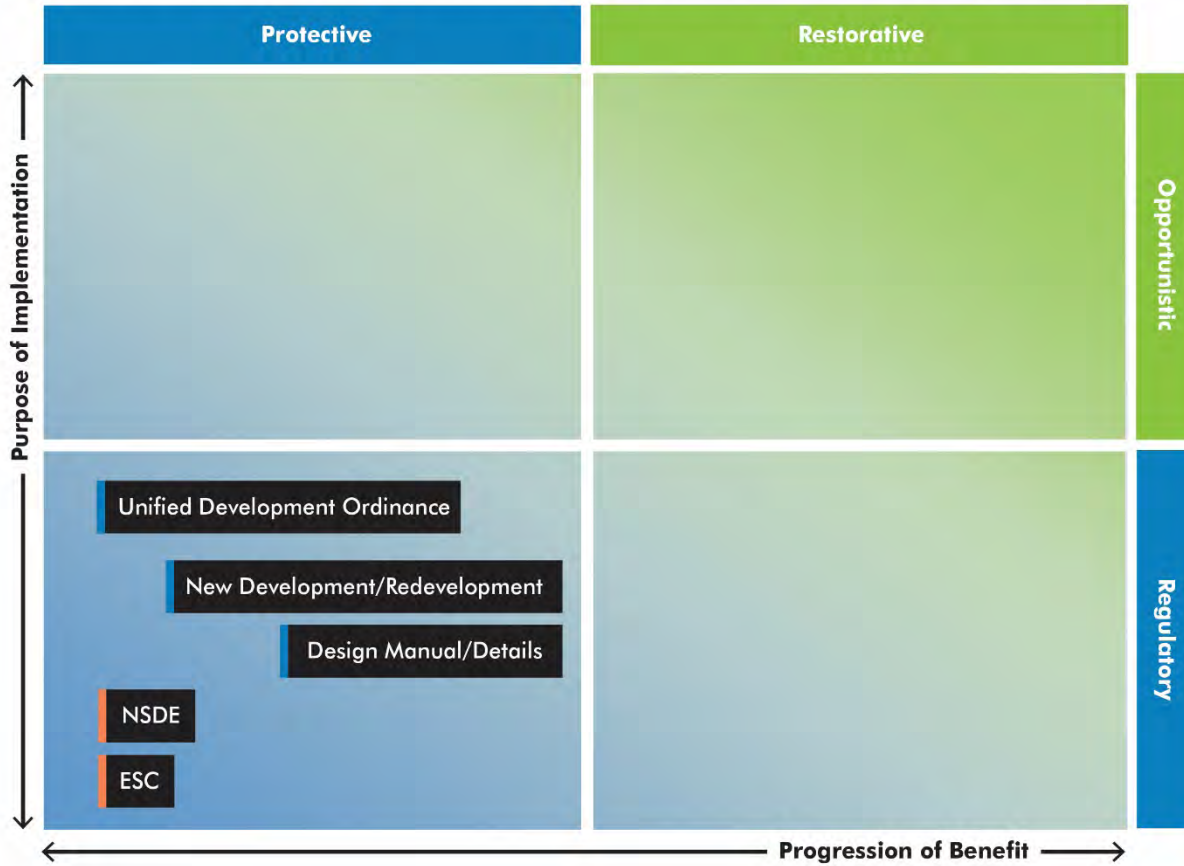
Hominy Swamp Restoration Plan

POLLUTION CONTROL IMPLEMENTATION & BENEFIT



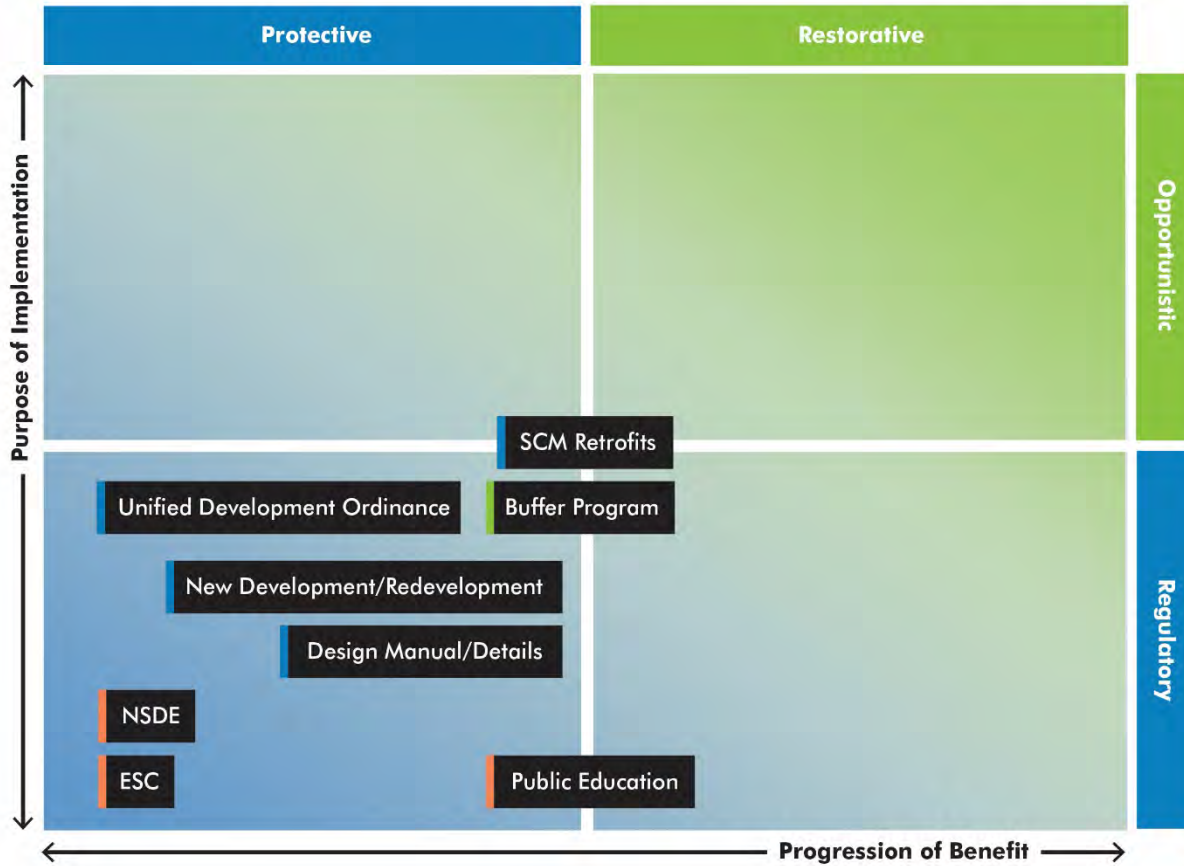
Hominy Swamp Restoration Plan

POLLUTION CONTROL IMPLEMENTATION & BENEFIT



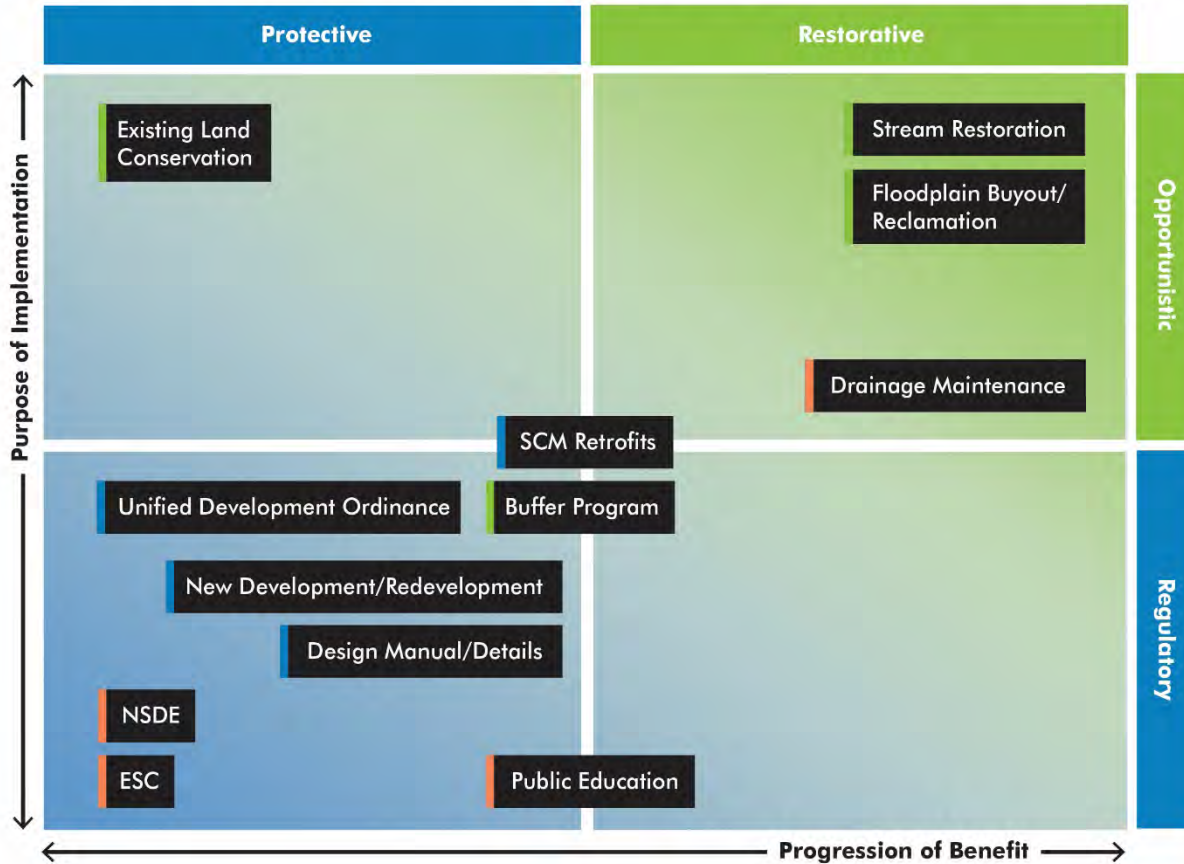
Hominy Swamp Restoration Plan

POLLUTION CONTROL IMPLEMENTATION & BENEFIT



Hominy Swamp Restoration Plan

POLLUTION CONTROL IMPLEMENTATION & BENEFIT





3. ESTIMATE OF TIME WHEN WQS WILL BE MET

Hominy Swamp Restoration Plan

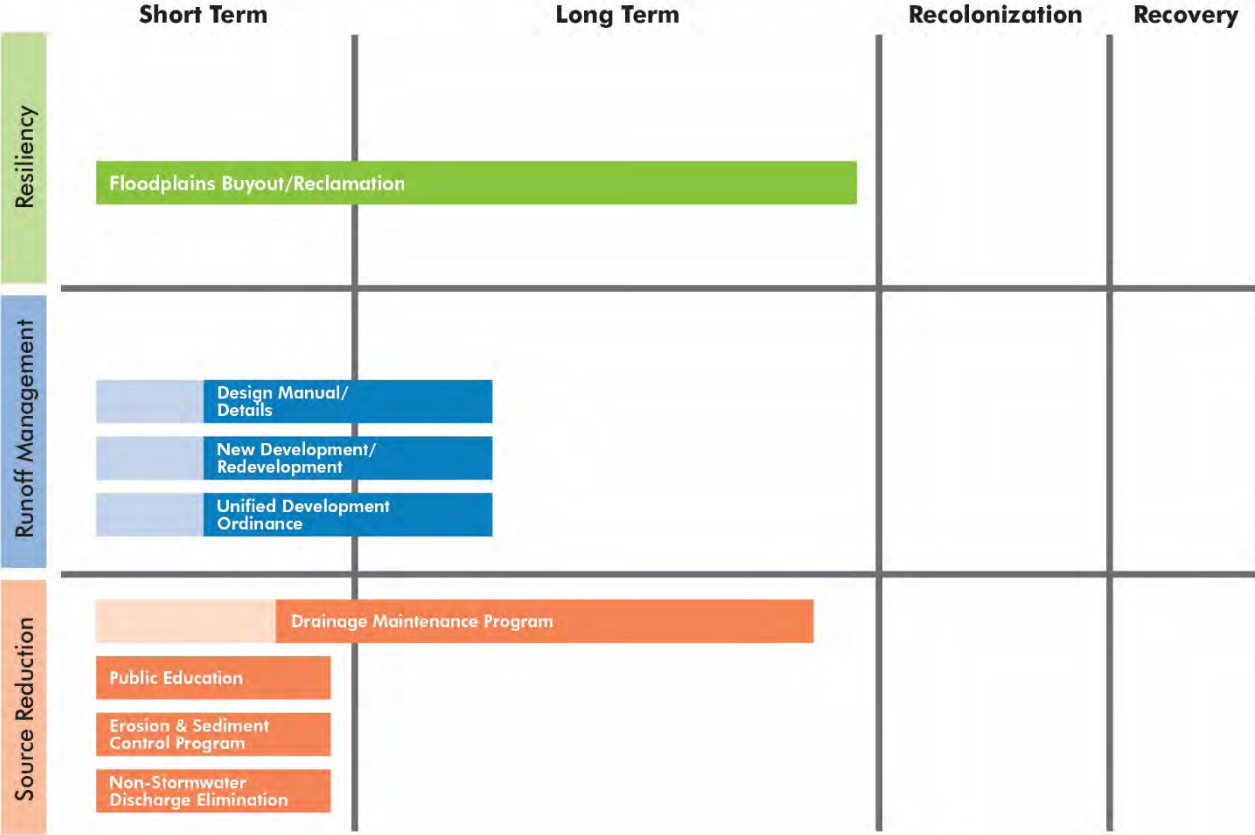
POLLUTION CONTROL PHASING

	Short Term	Long Term	Recolonization	Recovery
Resiliency				
Runoff Management				
Source Reduction				

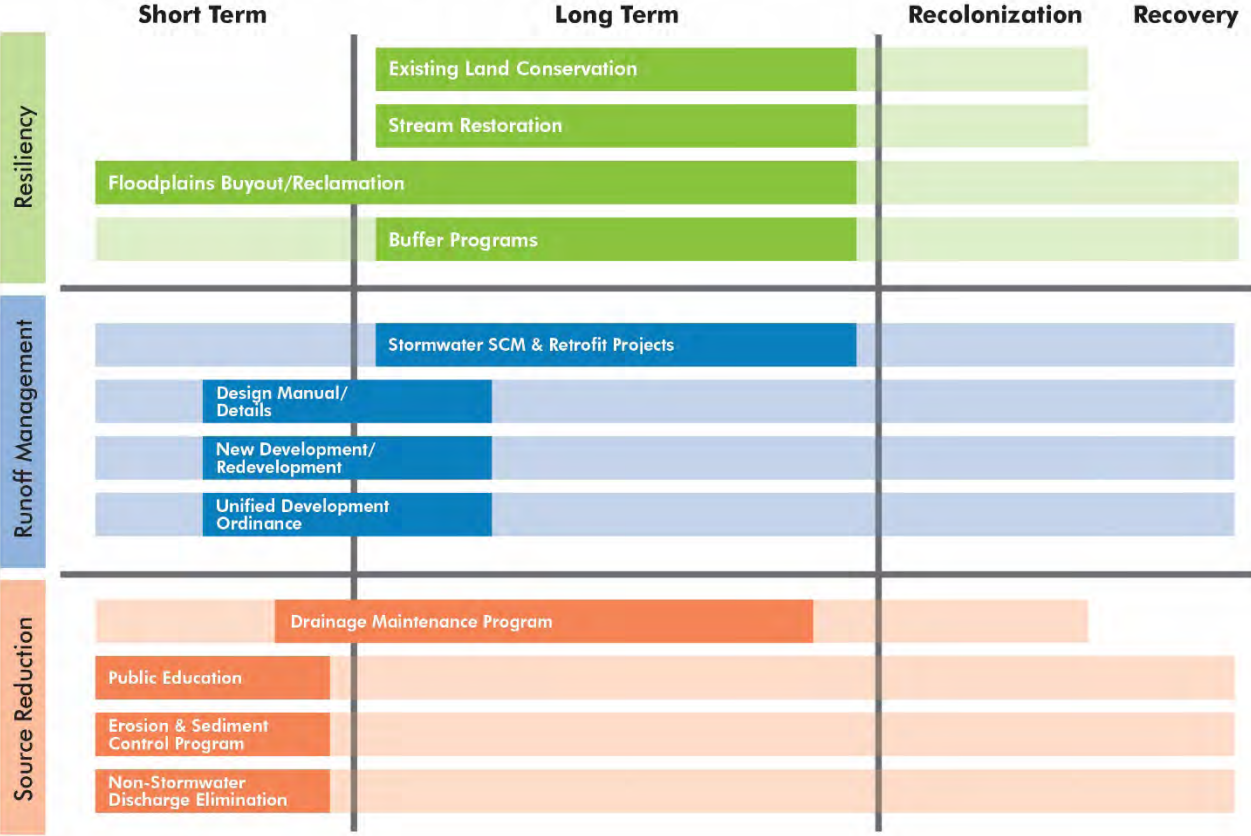


4. SCHEDULE FOR IMPLEMENTING POLLUTION CONTROLS

Hominy Swamp Restoration Plan
POLLUTION CONTROL PHASING



Hominy Swamp Restoration Plan
POLLUTION CONTROL PHASING





5. MONITORING PLAN TO DETERMINE EFFECTIVENESS OF POLLUTION CONTROLS

MONITORING STRATEGY

- Effectiveness monitoring
 - **Goal:** Measure effectiveness of pollution controls
 - NCDEQ restoration tools
 - Water quality sampling
- Objective monitoring
 - **Goal:** Evaluate positive trends in objectives
 - Water quality sampling
 - Flow gauging
 - Macroinvertebrate sampling



RESTORATION MONITORING

- Need for a means for communities and DMS to document watershed restoration and progress
 - Accessible
 - Program-based
 - Inexpensive
- Web-based, watershed implementation tracking and reporting tools
 - WIPS
 - FOATS



BENEFITS FOR 4B BENTHIC PLANS

- Provides means for crediting
 - Habitat and other ecological efforts are measurable now
- Focuses resources on implementation
 - Simple, early efforts may be performed over extensive studying
- Makes progress more visible
 - Sampling for benefits and overall gain can be hard to quantify



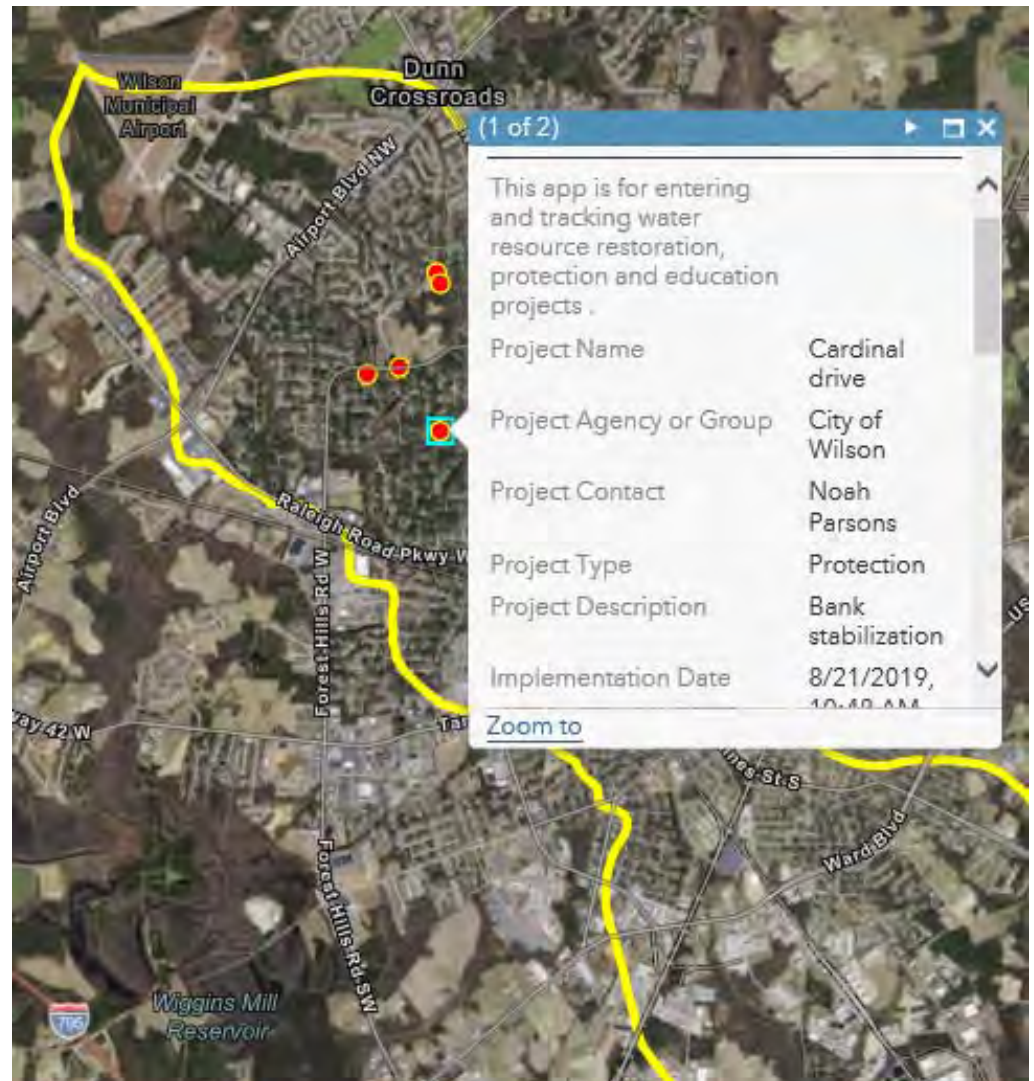
REPORTING

Plan

- Increases reporting efficiency and simplifies the process for annual report
- Input project details, before and after photos, project location
- Provides a project by project breakdown mapped in your specific area that is easily viewable

Public

- Makes project progress visible to the community and gives them the opportunity to stay informed and get involved



ENABLES YOU TO SHOW BENEFIT FROM A PROJECT NO MATTER THE SIZE

- What was the issue?
- How did you address it?
- What benefit did it return?



WIPS

- Tool for broad watershed restoration application
- Basic project data
 - Location, function, project goals

Watershed Improvement Projects System

Verizon LTE 11:55 AM 49%

NC Watershed Improvement Projects Tracker

This app is for entering and tracking water resource restoration, protection and education projects .

Project Name
Merrimont Park

Project Agency or Group
Try to be consistent across your agency.
City of Wilson

Project Contact
Noah Parsons

Project Type
If a project does more than one pick the one highest on the list and note the others.
 Restoration
 Protection
 Education

Project Description
Brief description of project

Verizon LTE 12:37 PM 46%

NC Watershed Improvement Projects Tracker

Return on Investment (years)
estimate using WRVAL tool

Protection Project Type
 Land Acquisition
 Easement
 Ordinance/Rule

Map the project location at the downstream or outfall
35°44'N 77°53'W ± 65 m

Collect image looking upstream from outfall of project area
include outfall in photo

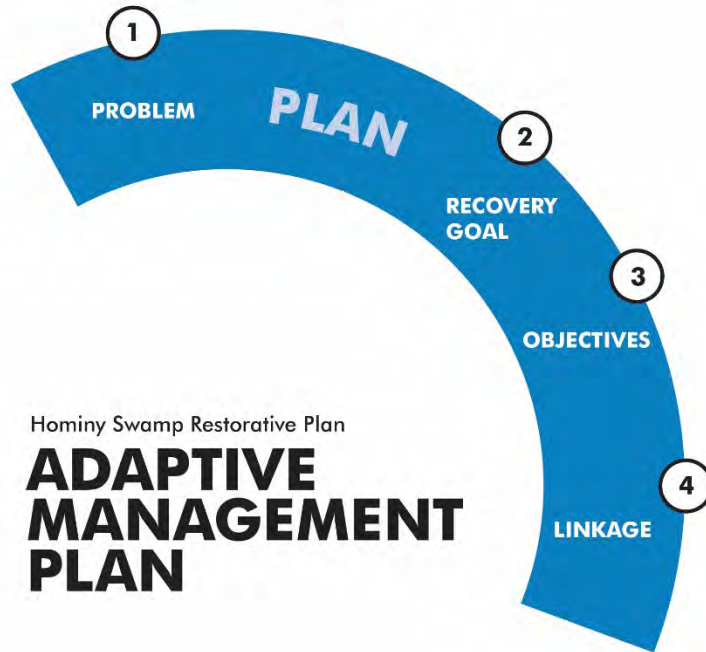
FOATS (Field Observations and Assessment Tracking System)

- More detailed assessments
- Observation based
- Tracking criteria condition
- Good for benthic impaired communities

The image displays the FOATS 1.0 web application interface, which is divided into three main sections. The left section is a header bar labeled 'FOATS 1.0' in a green box. Below this, there are three input fields: 'Project Name', 'Project ID' (with a sub-note 'to correlate with business databases'), and 'Project Agency or Group' (with a sub-note 'Try to be consistent across your agency.'). The middle section is titled 'Enter Assessments' and contains an 'Assessment Measure' dropdown menu with a list of options: 'Conveyances', 'Aquatic Passage', 'Geomorphology', 'Hydraulics', and 'Hydrology'. Below this is an 'Assessment Note' text area. The right section is also titled 'Enter Assessments' and contains an 'Assessment Measure' dropdown menu, an 'Assessment Status' dropdown menu with options 'Exceeding Criteria', 'Meeting Criteria', and 'Data Inconclusive', and an 'Assessment Note' text area. The interface uses a clean, modern design with green accents and clear labels.



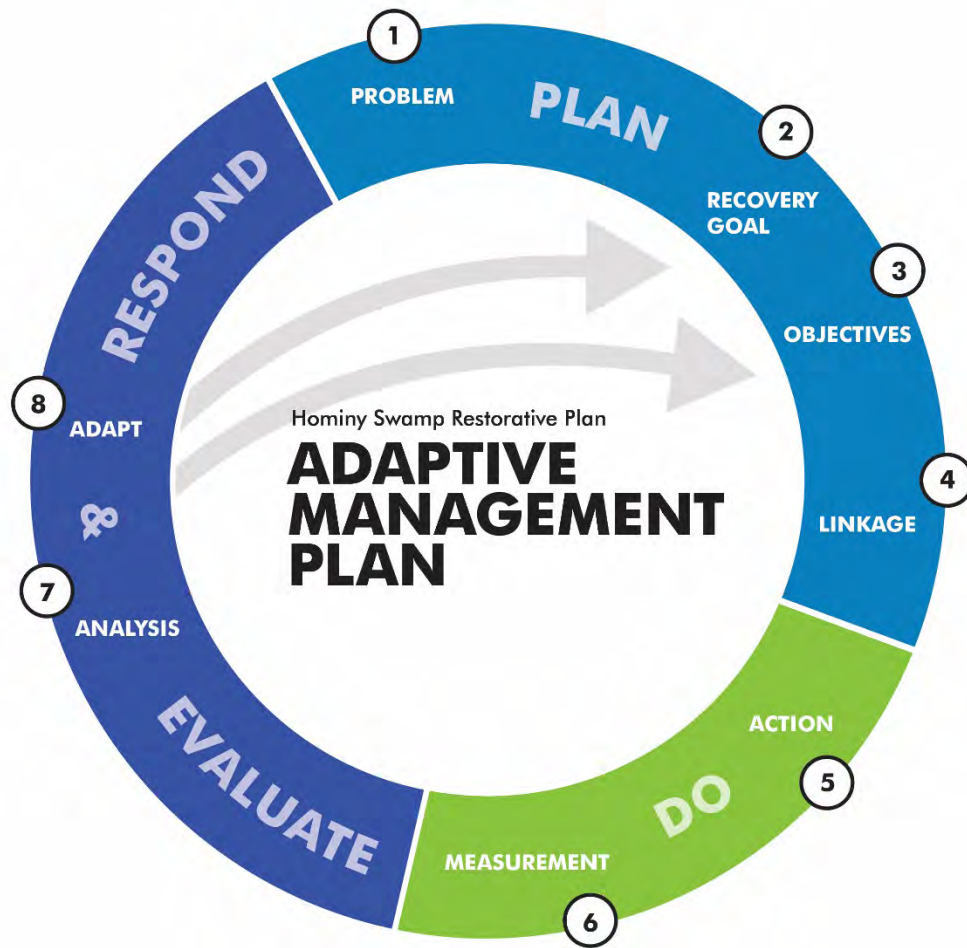
6. COMMITMENT TO REVISE POLLUTION CONTROLS



Hominy Swamp Restorative Plan

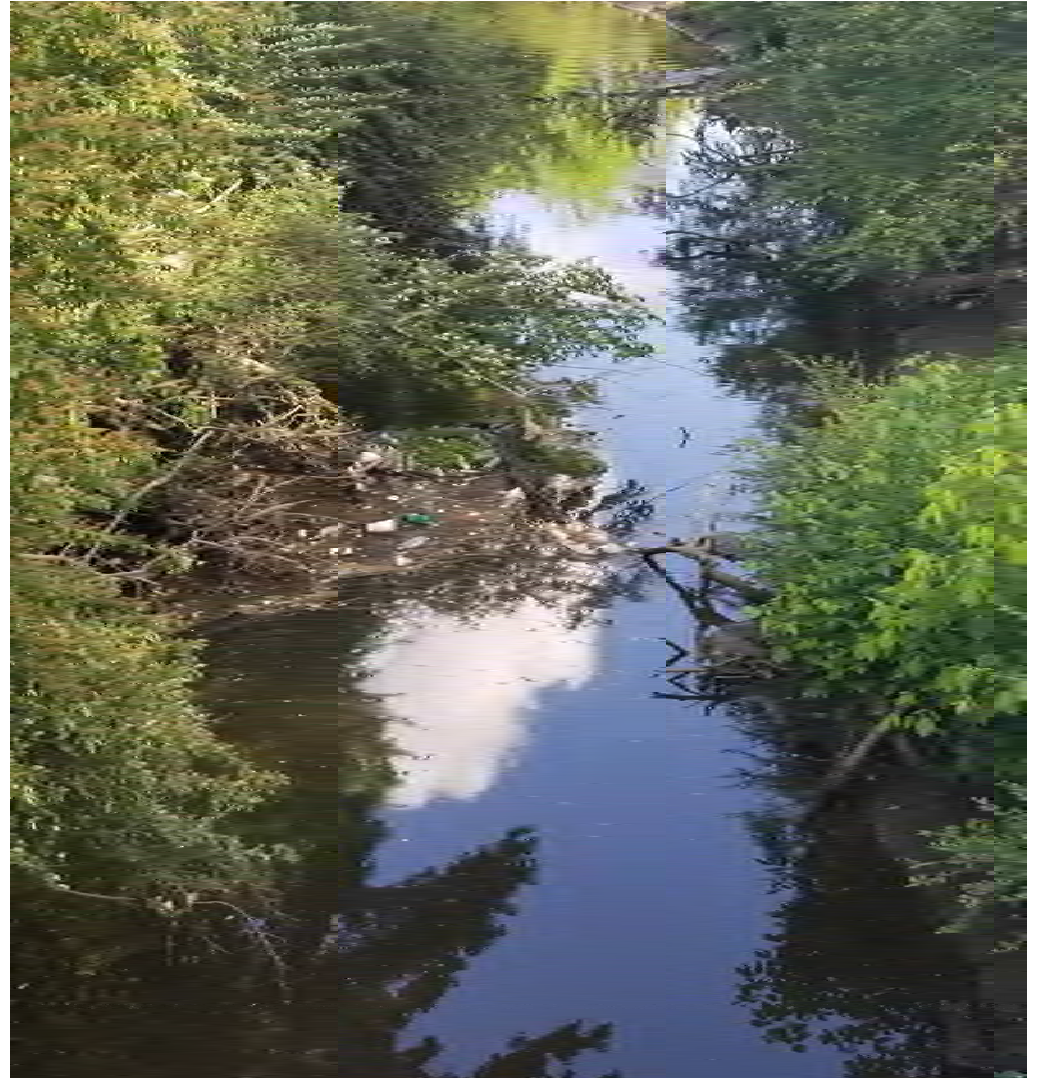
ADAPTIVE MANAGEMENT PLAN





CLOSING THOUGHTS

- Establish own path to success
- Align plan benefits with community interests
- Harness and maximize existing resources
- Leverage partnerships



QUESTIONS?

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 - (252) 296-3305

