



Ellerbe Creek Watershed Improvement Project

Overview

- Project Goals
- Project Schedule
- Project Status
- Q & A
- Breakout discussions



Public Works Department

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Ellerbe Creek Watershed Improvement Project

Goals:

Restore and protect the watershed functions of

Ellerbe Creek:

- Assess current stream and watershed conditions
- Identify and prioritize restoration projects
- Improve or prevent further deterioration of water quality conditions

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Ellerbe Creek Watershed Improvement Project

Critical Success Factors

- Provide an unbiased, independent assessment of the means and costs for improving water quality in the Ellerbe Creek Watershed
- Engage the public at key decision points
- Use this project as a model for future City watershed improvement studies.

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Ellerbe Creek Watershed Improvement Project Schedule

Data Collection and Field Inventories:

- December 2007 through March 2008

Development of GIS-based Water Quality Evaluation Tool and Watershed Characterization:

- April through July 2008



Pilot Study Area Evaluation and Development of Watershed Alternatives:

- August through November 2008

Prepare Watershed Improvement Plan:

- December 2008 through April 2009

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Ellerbe Creek Watershed Improvement Project

Evaluate Benefits of Two Primary Types of Capital Projects:

1. Stormwater Best Management Practices (BMPs)
 - Structural BMPs: ponds, constructed wetlands, vegetated swales, filters
 - Non-structural: public education, street sweeping, good housekeeping practices, etc.
2. Stream Restoration
 - Preservation, Enhancement, or Restoration

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Ellerbe Creek Watershed Improvement Project

Field Assessments

- Inventory and assessment of existing stormwater management BMPs
- Identification and assessment of potential sites for new BMPs
- Assessment of condition and health of Ellerbe Creek and its tributaries



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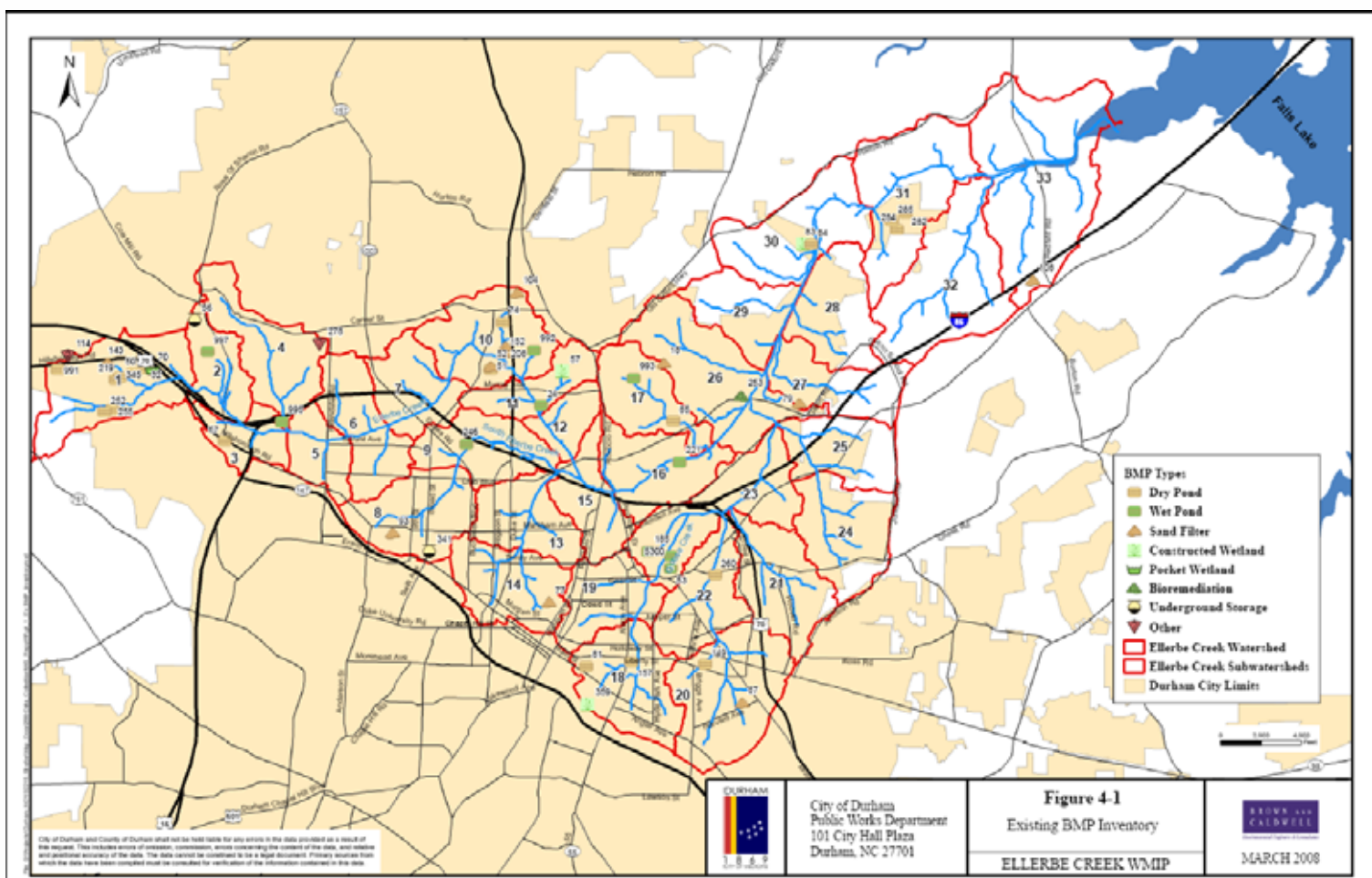
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Inventory of Existing Stormwater BMPs

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Ellerbe Creek Watershed Improvement Project

Results for Existing stormwater BMPs

- 48 existing BMPs were assessed for options to improve their water quality benefits
- 27 of these have “retrofit” potential to provide added water quality benefits:
 - change outlet structure
 - increase pond storage volume
- Remaining BMPs were not suitable for retrofits due to:
 - Lack of room for expansion
 - Infeasible to treat additional stormwater runoff

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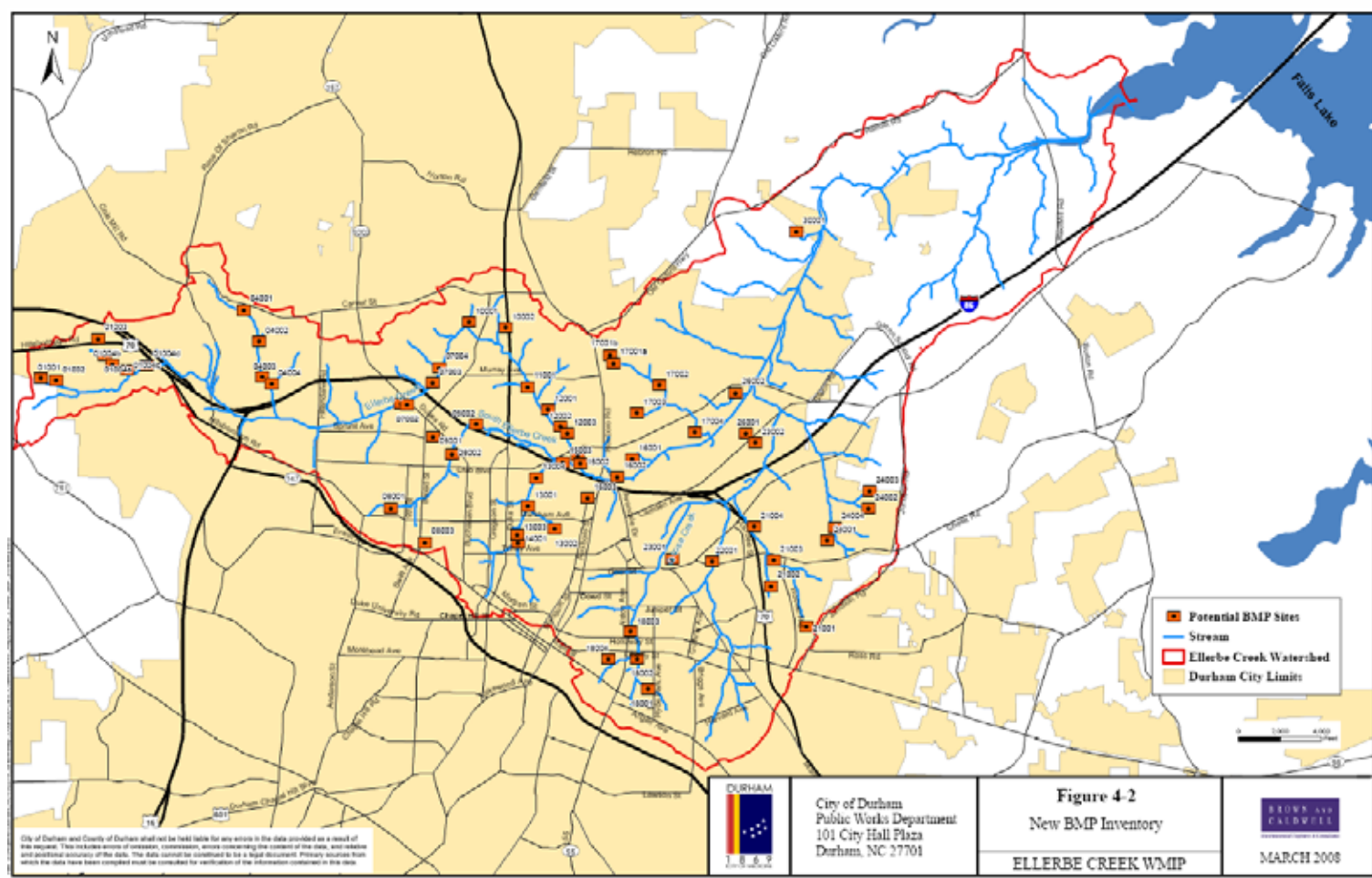




Potential New Stormwater BMP Sites

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Ellerbe Creek Watershed Improvement Project

Results for Potential New Stormwater BMPs

- 59 sites were assessed for installing new water quality BMPs
- 46 sites appear suitable and were recommended for further evaluation
- Remaining sites were not suitable due to:
 - Preservation of existing upland forest
 - Utility conflicts
 - Inadequate space available

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Stream Inventory and Assessment

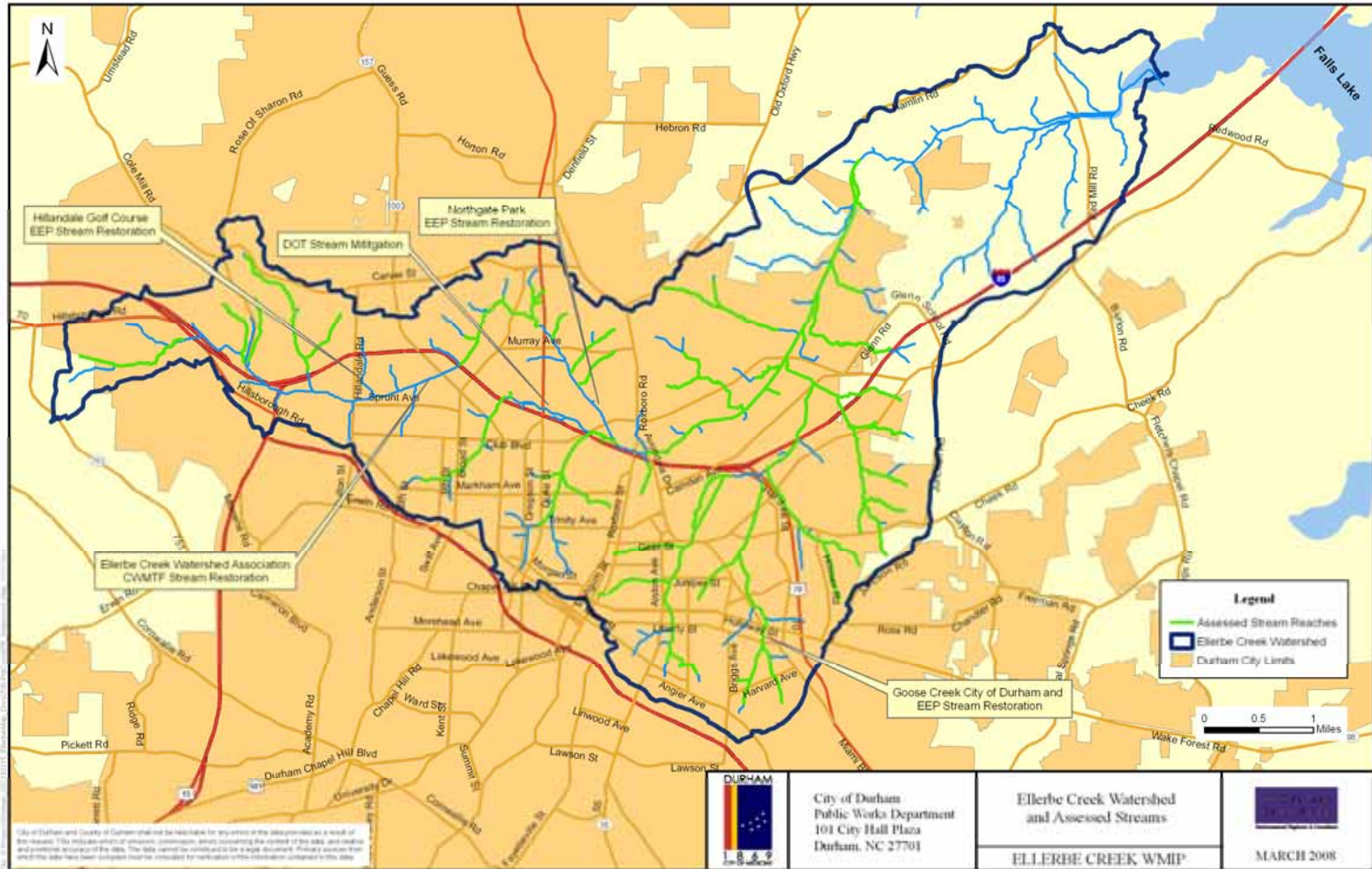
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Services





Ellerbe Creek Watershed Improvement Project

Results of Stream Assessment

- Assessed condition of 37 miles of Ellerbe Creek and its tributaries; conditions were typically “Fair” and “Poor”
- Categorized restoration opportunities into five categories:
 - Restoration
 - Enhancement
 - Stabilization
 - Buffer Restoration
 - Preservation

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Ellerbe Creek Watershed Improvement Project Next Steps

- Apply Watershed Improvement Planning (WIP) model to determine effectiveness, benefits, costs, and other relevant issues for each potential BMP and stream restoration project
- Determine criteria to be used in prioritizing projects:
 - Discussion session immediately following this meeting

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Ellerbe Creek Watershed Improvement Project Next Steps

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- Identify Critical Areas for protection and preservation
- Develop **Riparian Area Management Plan** for publically owned land along Ellerbe Creek





Discussion Sessions

Session #1

- Further discussion of the results of the BMP and stream assessment
- Presentation of potential BMP and stream restoration projects

Session #2

- Discussion of Prioritization Criteria

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