EXETER STORMWATER RESILIENCE
LINCOLN STREET PHASE II PROJECT

Project Summary and Goals

WATERSTONE ENGINEERING
INNOVATIVE STORMWATER MANAGEMENT

ROCKINGHAM PLANNING COMMISSION

1. Achieve municipal capacity building around planning for climate change and flood events.
2. Implement public outreach and communication to build support for and understanding of adaptation planning including economic considerations.
3. Advance green infrastructure and other effective means of adaptation implementation for flood damage avoidance and water quality improvements.

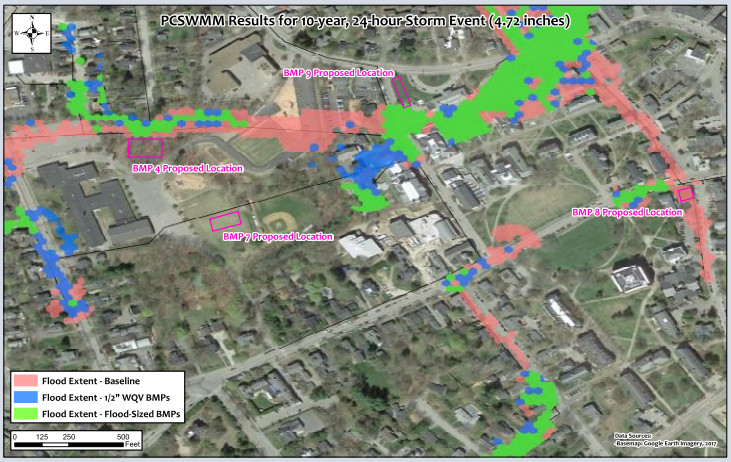
Resilient Green Infrastructure

Climate Adaptation Policy

Innovative Messaging

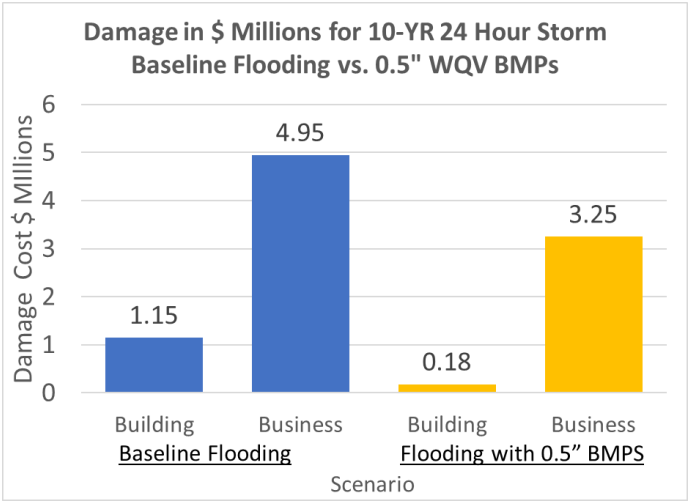
Watershed Assessment, Flood Analysis, and Adaptation with Green Infrastructure

1. The total annual nitrogen load from the entire Lincoln Street watershed is 1,265 pounds.
2. Installation of BMPs 1, 2, 3, 4, 5, 7, 8 and 9 is expected to reduce this load by 691 pounds annually, a 76% reduction.
3. The BMP unit cost performance averaged $1,000 and ranged from $498 - $5,080 per pound of nitrogen, and is estimated to be $1,200 for the new Exeter facility at $3 mg/L.
4. Flood reductions are estimated at 60% for the current 10-YR storm and 50% for the future 2040 storm with 9.21 ft of storm surge.
5. These activities address requirements of EPA's 2017 NH Small MS4 General Permit for stormwater for nitrogen source identification reporting, and BMP optimization and prioritization.



Flood Damage Avoidance

- A **cost impact analysis** evaluated the flood damage avoidance potential with green infrastructure.
- The estimated flood loss from a current 10-YR storm is $6.11 million or $3.43 million, or a **51% reduction with green infrastructure**.
- The total estimated cost to implement **green infrastructure is $689,000**.
- The flood reduction **benefit is from small sized BMPs** with a 0.5" water quality volume.



Exeter Climate Adaptation Policy

VISION FOR THE FUTURE *"Proactive strategies are identified and implemented that address the impacts of climate change to create a more sustainable and resilient community."* The purpose of a ***Climate Adaptation Policy (CAP)*** is to guide local decision making and investment in climate adaptation and implementation actions.

CLIMATE ADAPTATION POLICY GOALS

Ensure the community is better prepared to protect the security, health and safety of its citizens.

Protect natural resources from the impacts of flooding from sea-level rise and storm events.

Provide for a stable and viable economic future.

Minimize the future costs of infrastructure replacement and maintenance.

Support installations of renewable energy systems and electric vehicle charging stations.

IMPLEMENTATION ACTIONS - FOCUS AREAS

- Municipal Policy and Actions

- Management and Investment

- Environment-Natural Resources

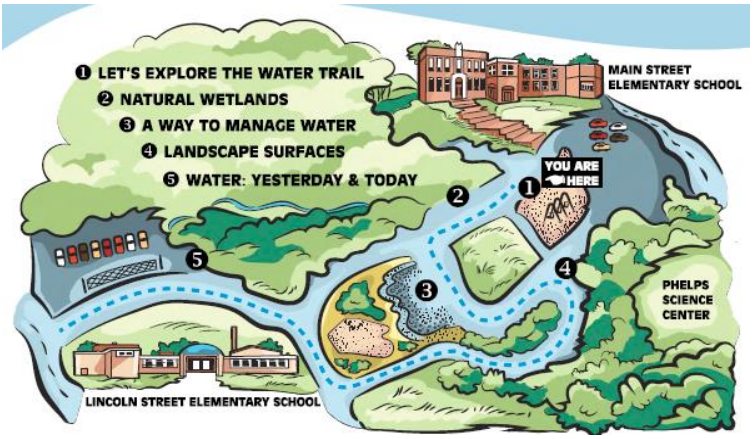
- Regulatory and Land Use Planning

- Community-Based

Exeter Water Trail

Explore How Water Works

The Exeter Water Trail is an educational installation on the campuses of the Main Street Elementary School and Lincoln Street Elementary School. The Trail consists of a series of five signs located at various landscape features that illustrate concepts relating to water. Topics such as stormwater runoff, water quality, flooding, watersheds and the water cycle are displayed in brightly colored graphic images and narrative explanations.



Learn about water! It's everywhere – above ground and below ground!

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