Urban Flood Reduction in South Wilmington through Community-Driven Greening

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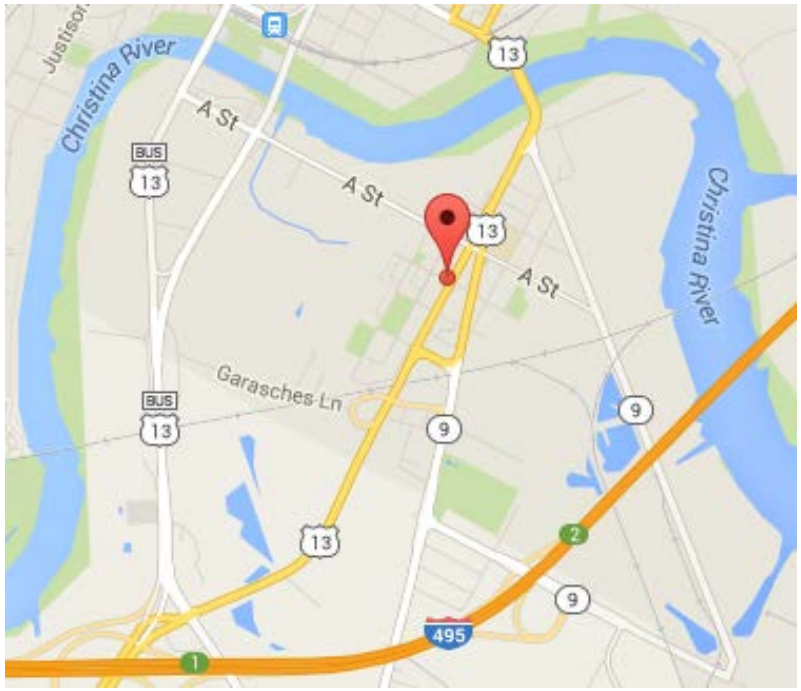
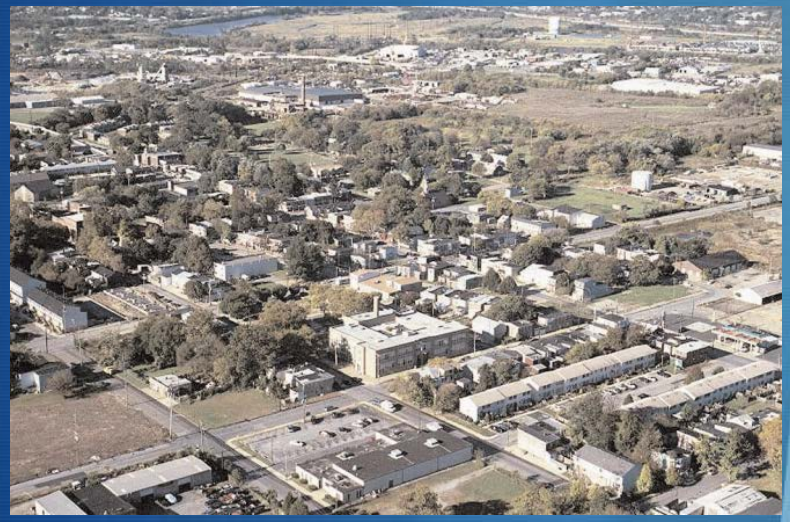
Clean Air Council

South Wilmington



- South Wilmington is a 1.6 sq mile community in Wilmington, Delaware.
- South Wilmington is bound by the Christina River to the north, east, and west, and by I-495 to the south.

Southbridge



- Southbridge is an environmental justice community located within South Wilmington.
  - 80.9% of the local population is African-American
  - 64.4% of the population earns an annual income less than $25,000
- Southbridge is prone to regular, heavy flooding.
  - Located within a 100-year floodplain
  - Inadequate stormwater infrastructure
  - Tidal effects

Photo Credit: City of Wilmington. (2013)

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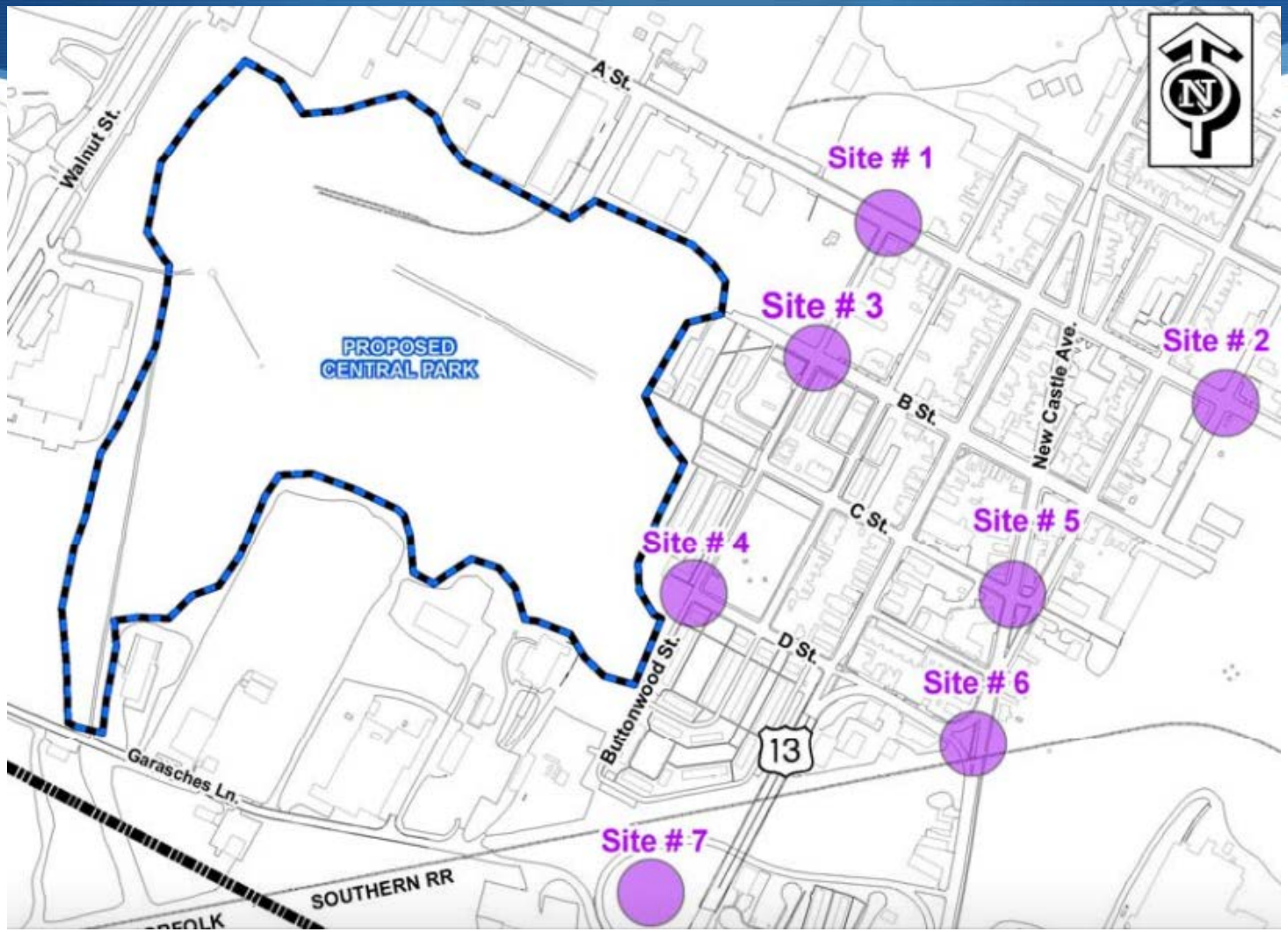
Chronic Flooding Locations



Source: Rummel, Klepper & Kahl, LLP. (2006) South Wilmington Drainage Study

Existing Flood Abatement Solutions

- Improvement to existing infrastructure
  - Cleaning
  - Inspection
  - Maintenance Repairs
- Construction of new infrastructure
  - Design and build of “Wetlands Park”
  - Separate storm and sewer pipes

Source: City of Wilmington (2013)

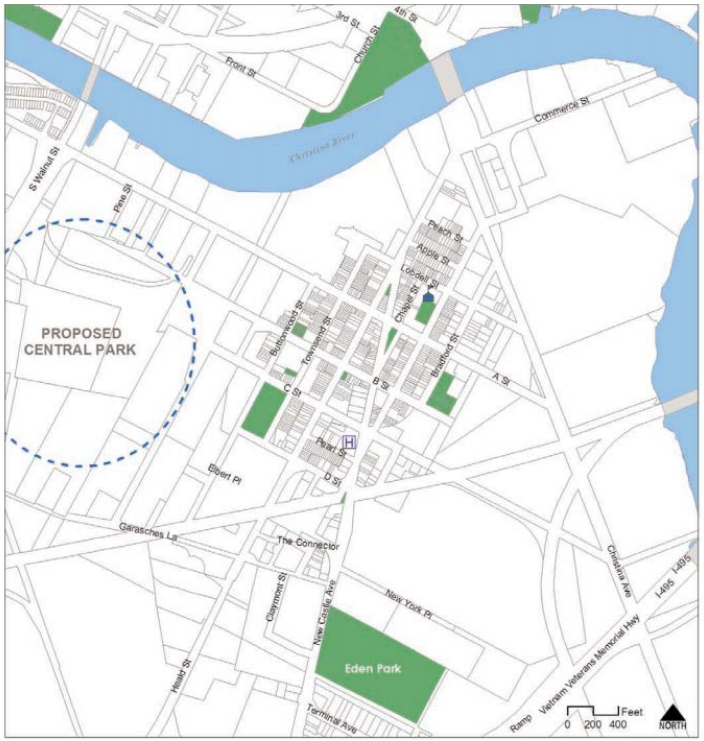
Supporting Community Priorities

The South Wilmington Special Area Management Plan (SAMP) identified the following priorities:

- Use a network of open spaces, swales, and ponds to promote natural flood retention and water restoration.
- Increase availability of green space and other recreational amenities.

Need for Adequate Green Space

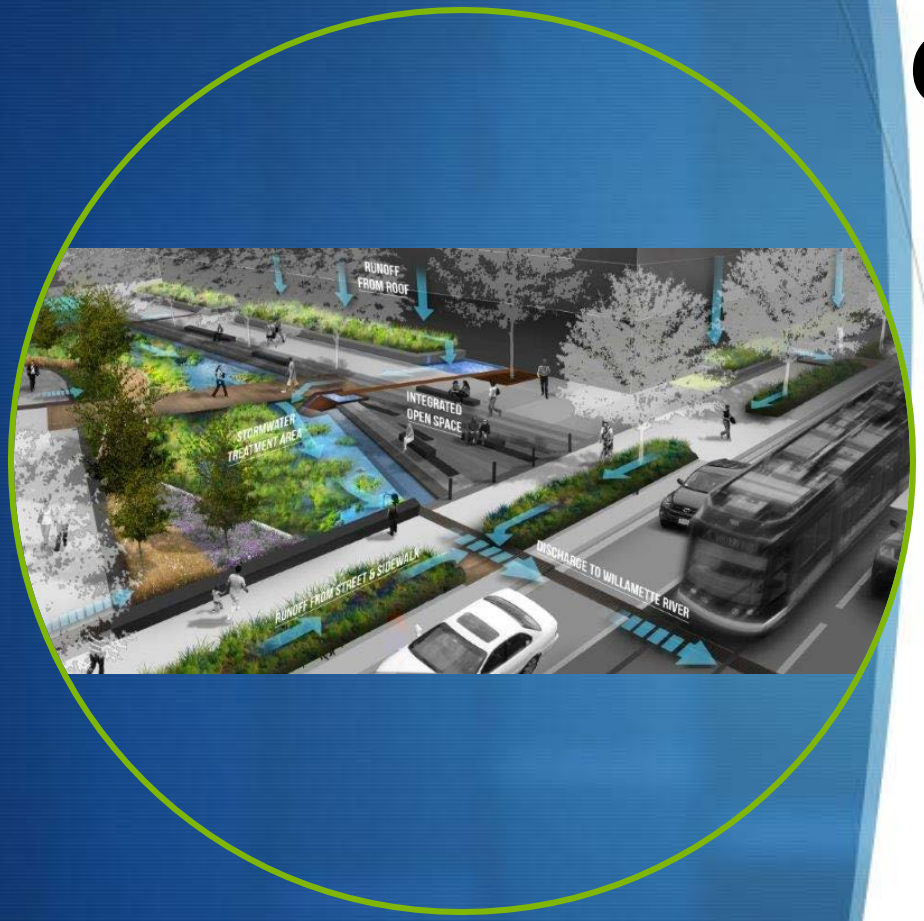
Brownfield Sites



Green Space

Source: South Wilmington Special Area Plan

Community-Driven Green Infrastructure



Project Vision: A knowledgeable community where residents are empowered to make constructive change in their urban watershed through sustainable development practices.

Project Objective: The community and CAC engages in a collaborative learning and management process to develop a local greening plan.

Project Outcome: A green infrastructure feasibility report that includes conceptual designs as well as quantitative evaluation of mitigation effects.

Project Task

Task 1: Background Research and Site Visits

Task 2: Community Meeting

Task 3: Identifying Greening Initiatives

Task 4: Follow-up Community Meetings

Task 5: Reporting and Presentation

Community Engagement

- Establish Core Project Stakeholder Group
- Identify Green Infrastructure Scenario Modeling Tools
  - Green infrastructure assessment tools will be used to educate residents about the benefits of different strategies.
  - Low Impact Development Rapid Assessment (LIDRA) model is a planning tool for comparing the cost effectiveness of reducing runoff with different green infrastructure technologies
- Develop Green Infrastructure Evaluation Criteria and Scoring Matrix

Criteria for Selecting Interventions	Possible Mechanism	
	Amend existing zoning ordinances to conserve open space areas	Develop community rain barrel program
Feasibility		
Sustainability		
Produce short-term and long-term impact		
Flood-Abatement Efficiency		
Affects majority of community members		
Empowers the community		
Possibility for integration into existing services		

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