

A Sustainable Approach to Financing Green Infrastructure

Georgia 319(h)-Funded Case Study

SESWA Annual Conference
October 15, 2015



Presentation Outline

- Georgia 319(h) grant program
 - Requirements
 - “Above & Beyond” NPDES
 - GI Projects in Urban Watersheds

- City of Roswell
 - Background
 - Elements of Shared Facility Program
 - Demonstration Area



GA 319(h) NPS Implementation Grant Requirements

- Reduce **nonpoint source (NPS)** pollution.
- Implement watershed-based plans that meet US EPA's Nine Elements of Watershed Planning.
- Locate project in one HUC 10 or smaller watershed.
- Cost-Share: 60% Federal / 40% Local Match.
- Maintain Qualified Local Government Status.
- **Verify "Above & Beyond" NPDES permits.**
- Target impaired waters of the State: 303(d) List.
- Result in measurable water quality improvement.

“Above & Beyond” NPDES Permits

Activities Do Not Count as Permit Compliance in Annual Report

Add to Specified Number Quoted in the NPDES Permit

- Permit itemizes nine septic system replacements.
- 319(h) grant to replace septic systems number 10 & up.

Fulfill Numerical Quota for No Specified Number in the NPDES Permit

- Permit describes unspecified numbers of signs, disposal stations, receptacles to address pet waste in areas of high pedestrian traffic, parks or picnic sites.
- 319(h) grant to install a specific numerical quota (3 signs, 300 bags, 3 bag stations, 3 receptacles).

Propose Completely New Activities Not Included in the NPDES Permit

- Permit proposes particular, feasible structural controls to reduce urban run-off pollution that do not include bio-swales.
- 319(h) grant to install bio-swales.

GI Projects in Georgia - Urban Watersheds

- **Urban Landscaping (UGA)**
- **East Jester's Creek Habitat Restoration (Clayton County)**
- **Bioretention Facility & Greenroof Pavilion (Alpharetta)**
- **CoastScapes & Green Growth Guidelines Update (UGA MAREX)**
- **Green Infrastructure Implementation (Clarkesville)**
- **GI (Hartsfield-Jackson Atlanta International Airport)**

Photos of Additional GI Projects



East Jester's Creek (Before)



East Jester's Creek (After)

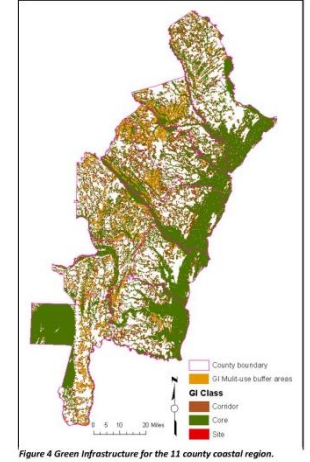


Figure 4 Green Infrastructure for the 11 county coastal region.

Coastal Guidelines



HJAIA Concept Design



Green Roof Pavilion (Alpharetta)



Pavers (Clarkesville)

Links

Section 319(h) FY15 Application & Guidance Documents

<http://epd.georgia.gov/section-319h-georgias-nonpoint-source-implementation-grant>

Georgia 305(b) / 303(d) List of Waters (2014)

<http://epd.georgia.gov/georgia-305b303d-list-documents>

Georgia Total Maximum Daily Loads

<http://epd.georgia.gov/total-maximum-daily-loadings>

Title 2 CFR Part 200 and Part 1500 (2014)

http://www.ecfr.gov/cgi-bin/text-idx?SID=cda0bdef668241883294f8587b2c1163&mc=true&tpl=/ecfrbrowse/Title02/2tab_02.tpl

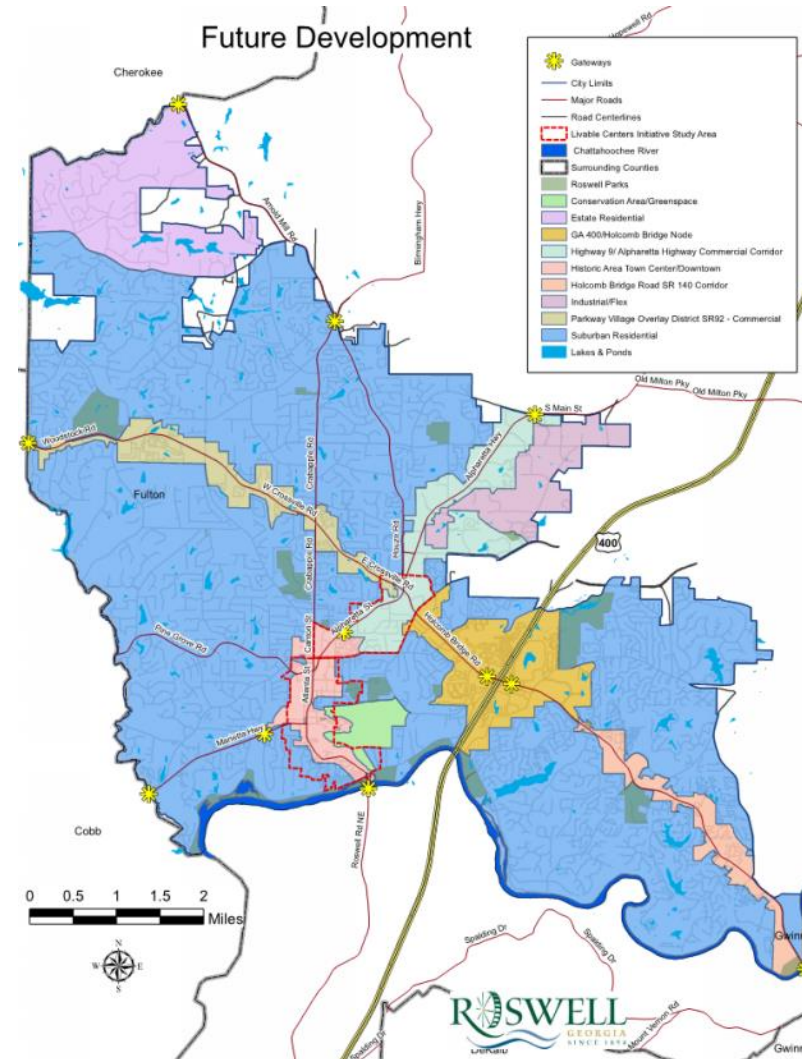
City of Roswell - Background

- Streams not meeting water quality standards
- Strong Development/Redevelopment Demand
- Land is at a premium - stormwater ponds, BMPs take up valuable real estate
- Stormwater infrastructure lacking or aged
- These market and environmental pressures led the City to propose program



Shared Stormwater Facility Program

- City installs pervious pavers in ROW with stormwater treatment
- Developers can buy into storage and infiltration treatment
- Program will meet City goals and provide option for developers
- Program a WIN-WIN



Shared Stormwater Facility Program: Goals

City applied for USEPA 319(h) grant to address stormwater issues while improving water quality and quality of life

Major Grant Goals:

1. Install a green infrastructure demonstration area of pervious street pavers with gravel storage to treat stormwater runoff
2. Create a sustainable, self-funding Shared Facility program within the Hog Waller watershed



Green Infrastructure

- “...green infrastructure refers to stormwater management systems that mimic nature by soaking up and storing water.” USEPA
- GEORGIA STORMWATER MANUAL being updated to include Green Infrastructure practices and programs



Shared Stormwater Facility Program: Benefits

Benefits to City

- City preferred stormwater treatment
- City maintains
- Minimize numerous ponds on individual parcels
- Potential to improve transportation connection
- Implements shared facility policy

Benefits to Developer

- New option for stormwater treatment
- Similar cost to on-site treatment
- Cost sharing of facility
- Site more fully utilized
- Construction cost avoidance
- City maintains
- Minimize impact to neighbors



Shared Stormwater Facility Program: Legal/Financial

Financial

City – will set up a separate fund to receive payments and fund projects

Developer – will purchase treatment volume

Proposed:

- Fee based on impervious area
- Negotiated fair market value / construction cost avoidance / set fee
- Include long term maintenance

Legal

Revise Section 7.2.4 - Post-Development Stormwater Management Performance Criteria, to include in-lieu fee option

Examples available in Georgia and elsewhere



Shared Stormwater Facility Program: Application/Location

Application Process

- Program discussed during permit review meeting
- Existing City Facilities
- New Facilities Can Be Proposed
- Application to Purchase Treatment Capacity
- Log of Available Capacity at Shared Facilities

Location

Current

- Demonstration area in Hog Waller Creek Tributary

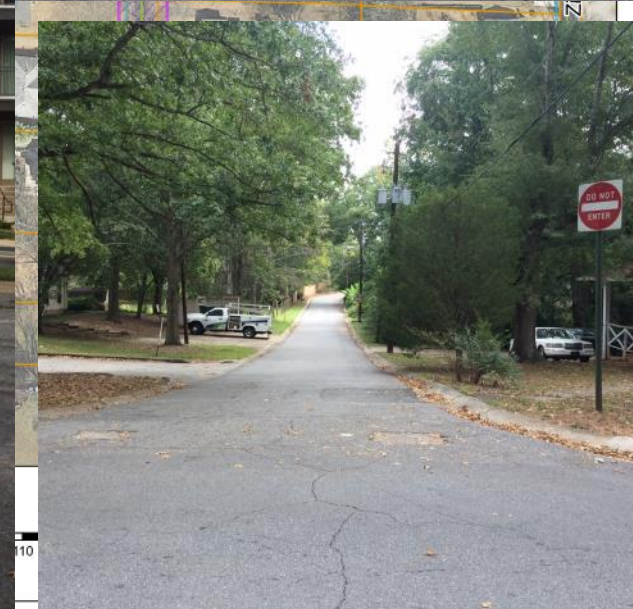
Future

- Low traffic, low volume streets
- Parking lots, alleys, back roads
- Consistent look/standard
- RDOT developing policy

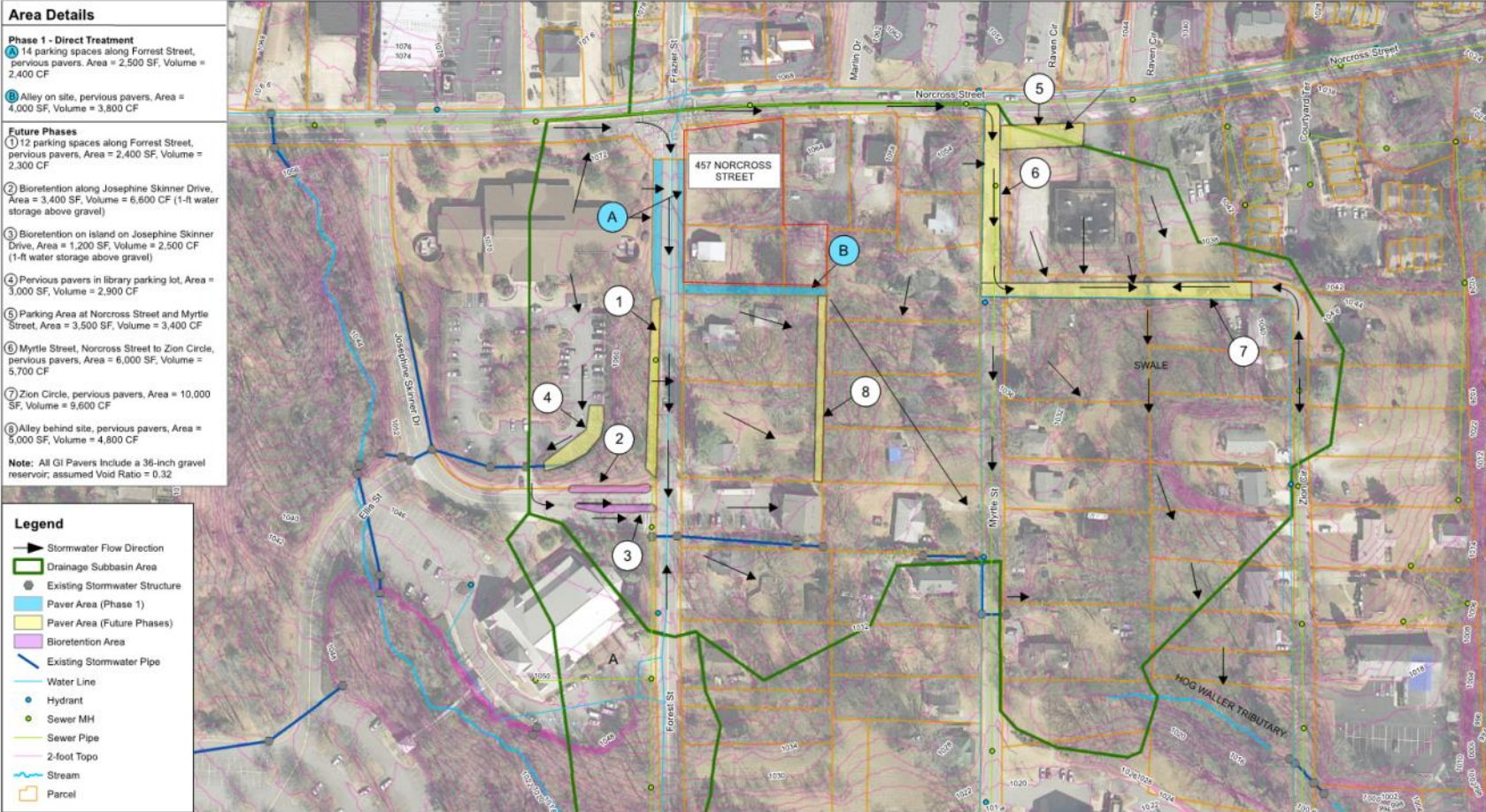


Potential Demonstration Area

- Myrtle Street to Zion Circle
- North Section of Zion Circle
- City Street and ROW
- Attractive Gateway
- Pavers, Planter
- Educational Sign
- Street Views of C
- consistent look



Possible Future Phases of Stormwater Facilities in one sub-basin



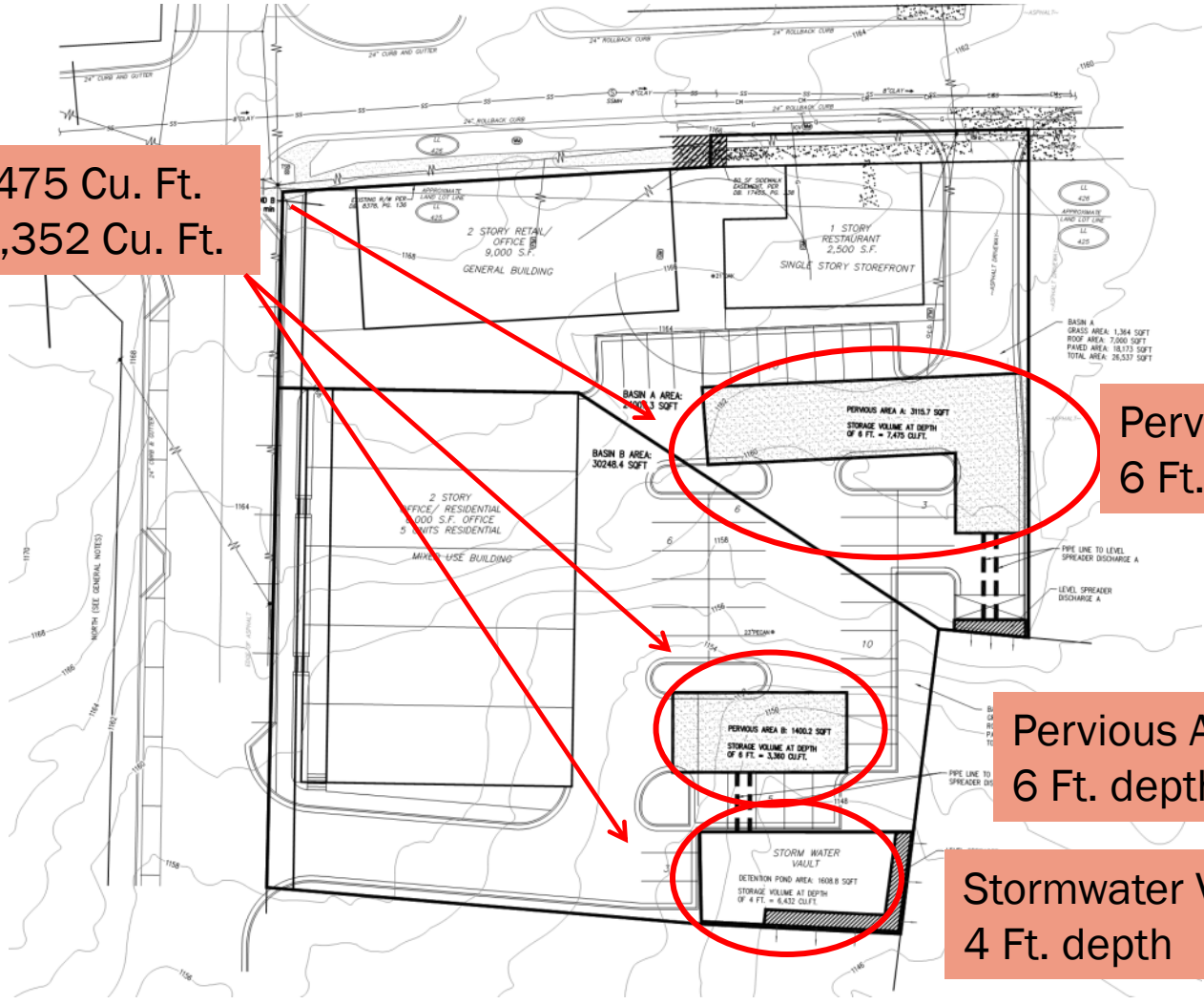
Potential Green Infrastructure Demonstration Areas

Green Infrastructure BMP Revolving Fund Project



Example Demonstration Area: Original Stormwater Treatment Concept

Basin A - 7,475 Cu. Ft.
Basin B - 8,352 Cu. Ft.



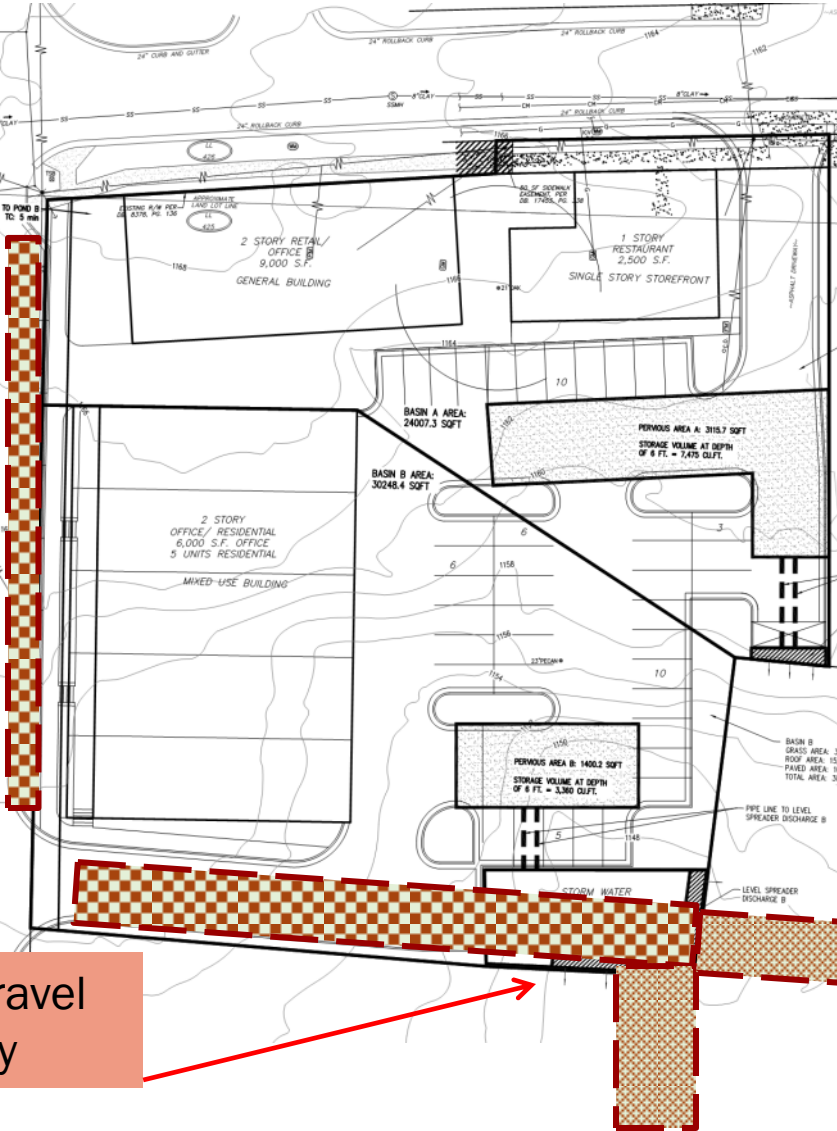
Pervious Area
6 Ft. depth

Pervious Area
6 Ft. depth

Stormwater Vault
4 Ft. depth

Example Demonstration Area: Shared Stormwater Facility Concept

Pervious pavers with gravel storage below on-street parking

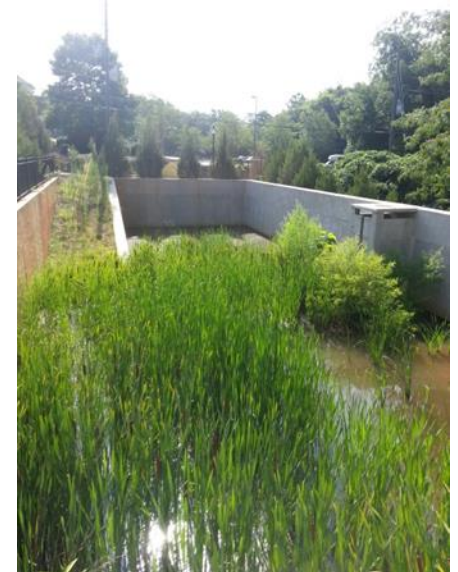


Future alley extension

Pervious pavers with gravel storage under new alley

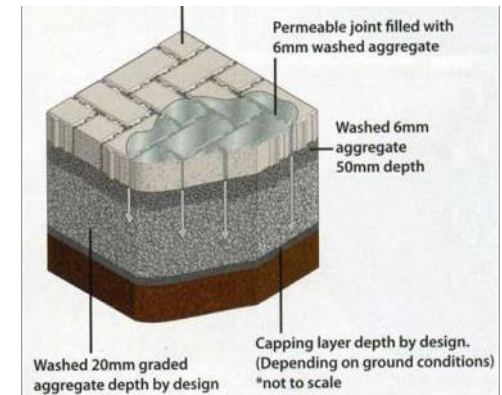
Shared Stormwater Facility Program: Developer Perspective

- More Value from Site
- Stacked Uses
- Project Yield
- Site Flexibility
- Overall Community Benefit



Shared Stormwater Facility Program: Communication Plan

- Internal workgroup
 - Public Works/ Environmental
 - Community Development
 - Roswell DOT
- Stakeholder meetings
 - Meeting #1 – Sept. 21, 2015
 - Meeting #2 - tbd
- Brochure
- Website
- Site tours – demonstration area



Questions?

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