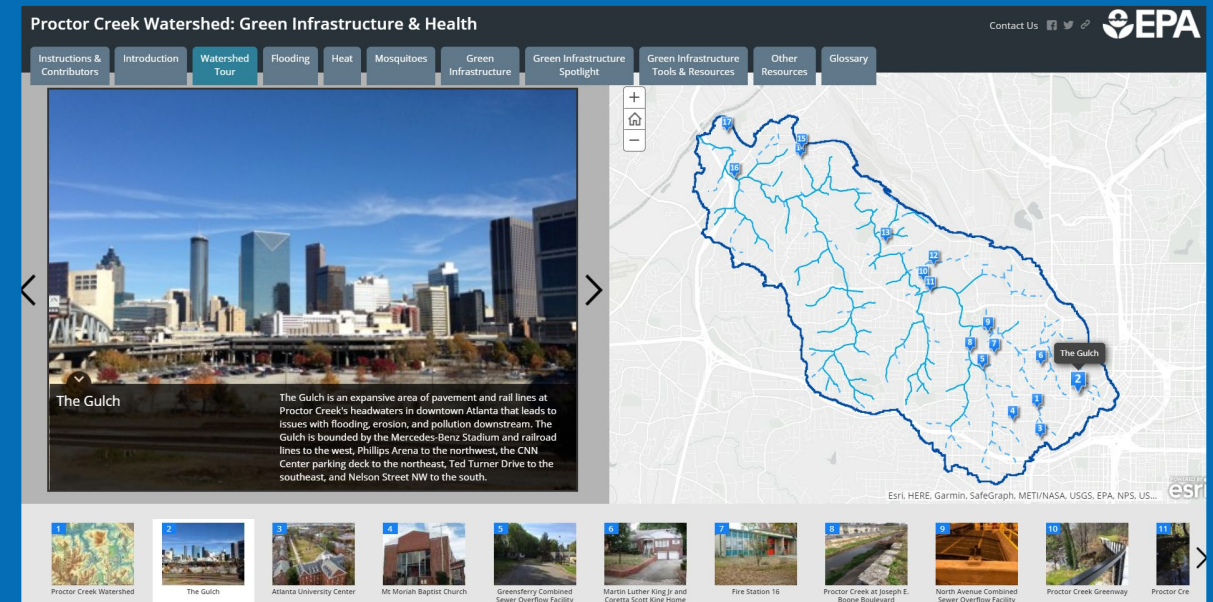


EPA Tools & Resources Webinar: Proctor Creek Watershed Story Map





Shannon Griffin

US EPA Office of Research and Development

April 21, 2021



Proctor Creek Watershed: Green Infrastructure & Health

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Instructions & Contributors Introduction **Watershed Tour** Flooding Heat Mosquitoes Green Infrastructure Green Infrastructure Spotlight Green Infrastructure Tools & Resources Other Resources Glossary

The Gulch

The Gulch is an expansive area of pavement and rail lines at Proctor Creek's headwaters in downtown Atlanta that leads to issues with flooding, erosion, and pollution downstream. The Gulch is bounded by the Mercedes-Benz Stadium and railroad lines to the west, Phillips Arena to the northwest, the CNW Center parking deck to the northeast, Ted Turner Drive to the southeast, and Nelson Street NW to the south.

1 Proctor Creek Watershed 2 The Gulch 3 Atlanta University Center 4 Mt Moriah Baptist Church 5 Greensferry Combined Sewer Overflow Facility 6 Martin Luther King Jr and Coretta Scott King Home 7 Fire Station 16 8 Proctor Creek at Joseph E. Boone Boulevard 9 North Avenue Combined Sewer Overflow Facility 10 Proctor Creek Greenway 11 Proctor Creek

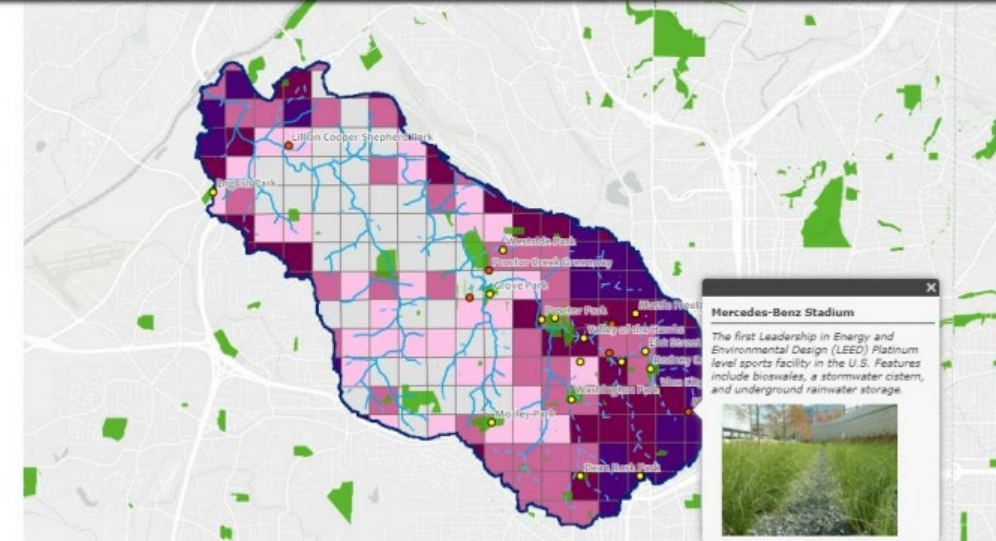
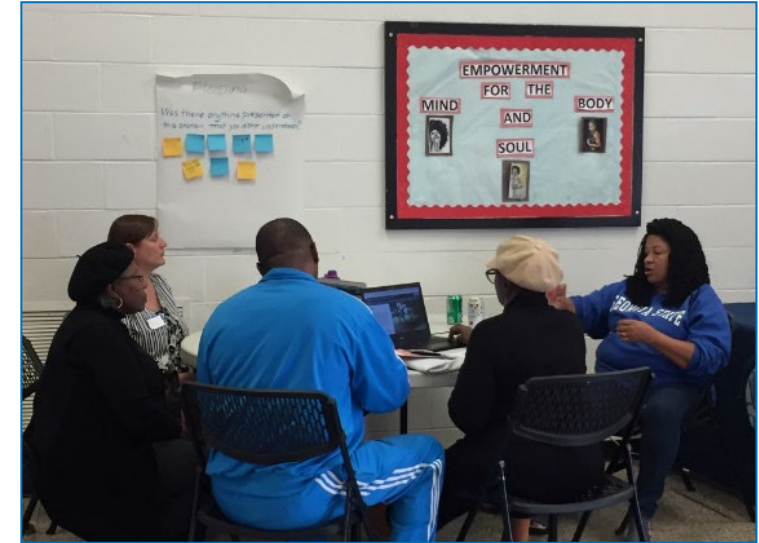
Problem

- Part of EPA's mandate is to restore and maintain watersheds and their aquatic ecosystems to protect human health, support economic and recreational activities, and provide healthy habitat for fish, plants and wildlife
- Substantial coordination and informed decisions and actions at the local and state levels are required to ensure this success
 - Strategies to involve impacted stakeholders are needed to inform and legitimize the decision-making process
 - Tools to share information and support participatory decision-making are essential



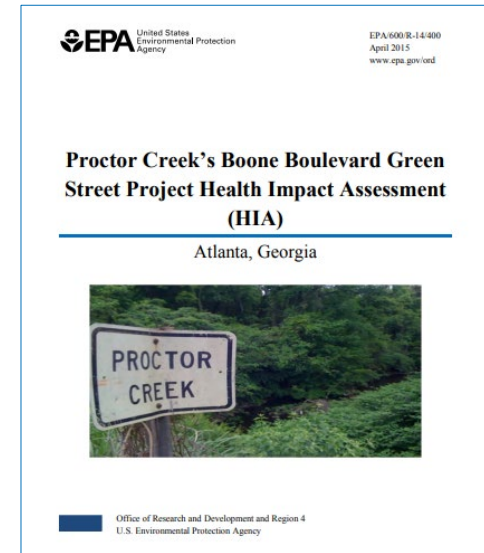
Approach

- Community driven approach improves engagement and collaboration
 - Build trust, create social capital, and harness collective genius to help make better decisions
- Story maps provide an interactive online format for digital storytelling
 - Combine maps with narrative text, images and multimedia content to convey information and help connect with, inform and engage viewers
- Case study example: [Proctor Creek Watershed Story Map](#)



Background and Purpose

- Proctor Creek (Atlanta, GA) watershed consists of 38 neighborhoods
 - Many economically disadvantaged and underserved areas
- Priority *Urban Waters Federal Partnership* location
 - History of frequent flooding, stormwater runoff, pollution from illegal dumping, and sewer overflows from Atlanta's combined sewer system
- Proctor Creek Boone Blvd Green Street Health Impact Assessment (HIA; 2015)
 - Brought health considerations into evaluating proposed sites for implementing green infrastructure (GI) in the watershed
 - GI is a practice that uses plants, soils, and other natural features to manage wet weather impacts and reduce and treat stormwater at its source
- **Story map** to examine **solutions** using GI throughout the watershed
 - Provides resources that are **transparent, accessible, and useful** to community members and stakeholders



Story Map Team and Community Engagement

- **Community Leadership Team**
 - West Atlanta Watershed Alliance, Urban Waters Federal Partnership Ambassador, representatives from 2 Proctor Creek Neighborhood Planning Units (NPU), Proctor Creek Stewardship Council, and Community Improvement Association
- **EPA Region 4 Urban Waters Small Grantee**
 - ECO-Action, Inc.
- **EPA Region 4 and Office of Research and Development technical staff**
- **Pegasus Technical Services, Inc.**



Demonstration and Supporting Materials

Link to the Proctor Creek Watershed Story Map, Fact Sheet, and Project Description are at:

<https://www.epa.gov/healthresearch/health-impact-assessments>



EPA science in ACTION
www.epa.gov/research INNOVATIVE RESEARCH FOR A SUSTAINABLE FUTURE

**Proctor Creek Watershed Story Map:
The Intersection of Green Infrastructure and Health**
The Story of Atlanta's Proctor Creek Watershed

What is the Proctor Creek Watershed Story Map?
The Proctor Creek Watershed Story Map is an easy-to-use interactive online tool that combines maps with narrative text, images, and multimedia content to convey information as a story and inform and connect with viewers. This community-driven Story Map shares important information about the Proctor Creek watershed in Atlanta, Georgia and the role that green infrastructure can play in the community.

Why did EPA create the Proctor Creek Watershed Story Map?
Part of EPA's mandate is to restore and maintain watersheds and their aquatic ecosystems to protect human health, support economic and recreational activities, and provide healthy habitat for fish, plants and wildlife. However, it takes coordination and informed decisions and actions at the local and state levels to ensure this success. The Story Map was developed as a community-led collaboration with Proctor Creek residents and stakeholders along with EPA Region 4 Office and Office of Research and Development in an effort to: 1) provide the Proctor Creek community information in a meaningful way to engage them as stewards of their watershed, and 2) aid the community in future decision-making that will protect this watershed.

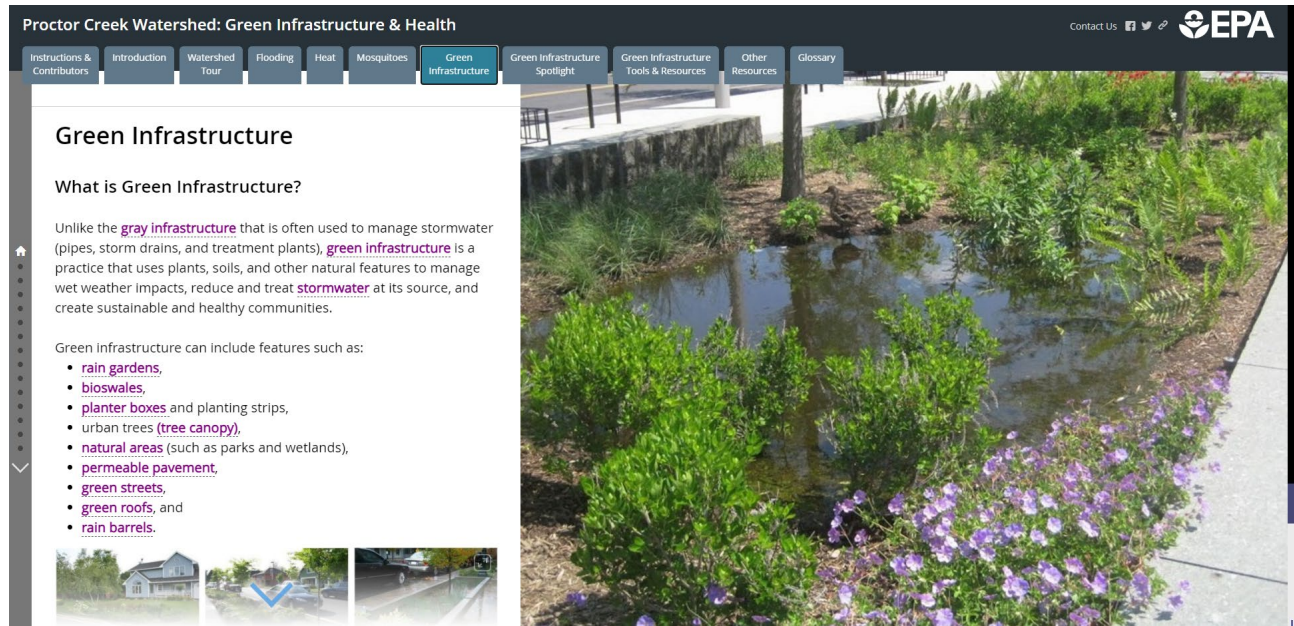
Why focus on the Proctor Creek Watershed?
Proctor Creek is an impaired waterway that experiences several overlapping environmental issues. The watershed has been troubled by frequent flooding, erosion, stormwater runoff, and pollution from illegal dumping. In addition, sewer overflows from the city's combined sewer system, which carries both sewage and rainwater, and its sanitary sewer system, designed to carry sewage only, have impacted the creek. The Proctor Creek watershed is home to more than 38 neighborhoods, including some of the most economically-disadvantaged and underserved areas in Atlanta. Residents and stakeholders are taking action to turn around decades of neglect and disinvestment and to help restore the watershed and protect its residents.

What information is featured in the Story Map?
This Story Map explores community-identified concerns, such as flooding and water quality, urban heat islands, mosquitoes, and health, and considers the potential for green infrastructure to address those concerns. The Story Map examines the proposed expansion of green infrastructure throughout the Proctor Creek watershed, evaluates the potential impacts of this expansion on environmental and public health, and highlights areas in the Proctor Creek community that may benefit from green infrastructure practices (Figure 1). In addition to examining the intersection of green infrastructure and health, the Story Map also provides resources about demographics and health in Proctor Creek and addresses additional concerns raised by the community, including illegal dumping of trash and tires, toxic releases to land, and brownfields.

Photos provided by the Conservation Fund



To learn more about the Proctor Creek watershed, visit EPA's Urban Waters Proctor Creek website.

U.S. Environmental Protection Agency
Office of Research and Development



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Green Infrastructure

What is Green Infrastructure?

Unlike the **gray infrastructure** that is often used to manage stormwater (pipes, storm drains, and treatment plants), **green infrastructure** is a practice that uses plants, soils, and other natural features to manage wet weather impacts, reduce and treat **stormwater** at its source, and create sustainable and healthy communities.

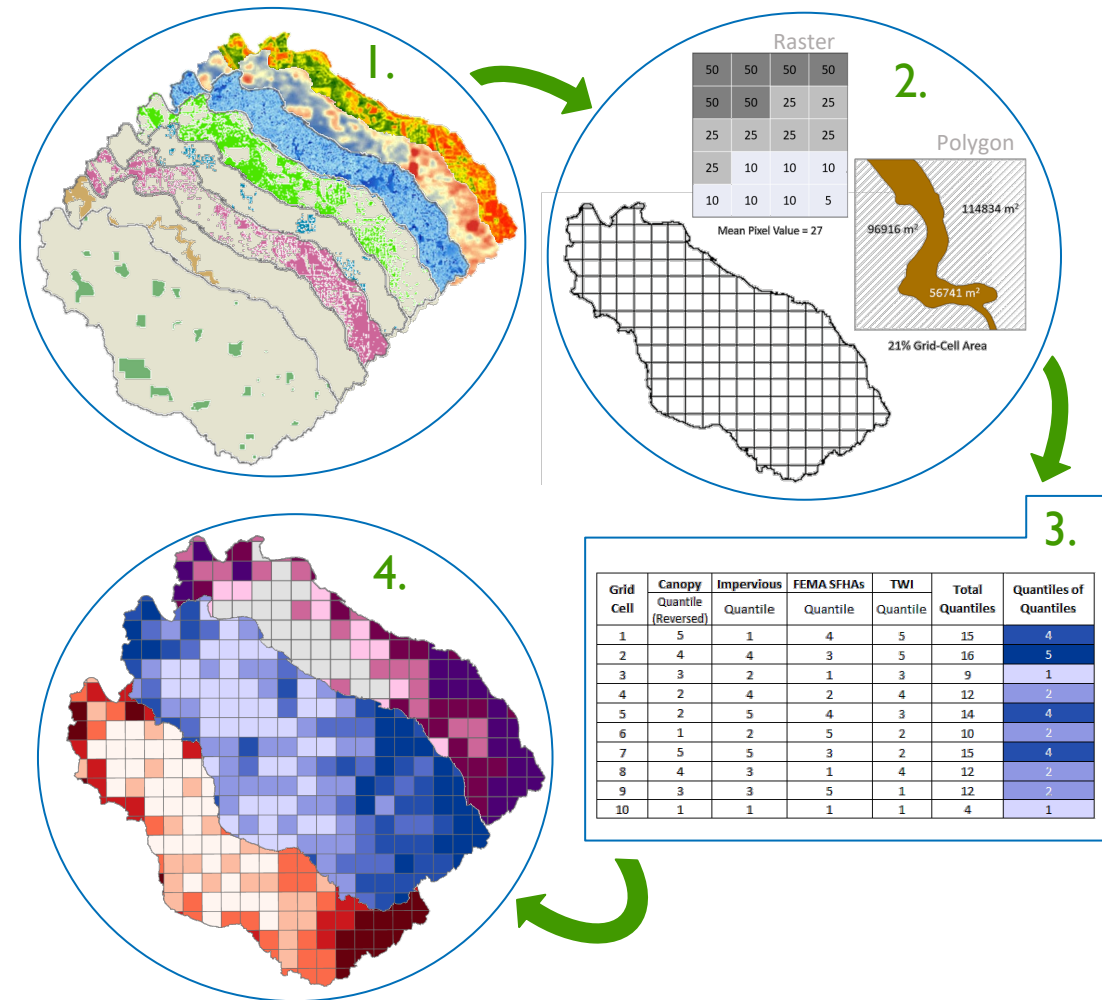
Green infrastructure can include features such as:

- **rain gardens,**
- **bioswales,**
- **planter boxes** and planting strips,
- **urban trees (tree canopy),**
- **natural areas** (such as parks and wetlands),
- **permeable pavement,**
- **green streets,**
- **green roofs,** and
- **rain barrels.**

Spatial Analysis Component

- Methodology based on [The Patterns of Pollution: A Report on the Demographics of Pollution in Metro Atlanta](#)
- Multi-step process
 - Gather or generate data related to heat and flooding
 - Create fishnet grid and calculate average raster pixel value or polygon percent area of each metric for each fishnet grid cell
 - Classify grid counts into quantiles and rank them based on their positive or negative relationship to flooding and heat
 - Create maps of flooding (blue), heat (red), and combined (purple) quantiles
- Results described in Flooding, Heat, Green Infrastructure, and Green Infrastructure Spotlight tabs of story map



Results

- The Proctor Creek community can use the story map as an important decision support tool
 - Equips residents with knowledge to advocate for a healthier, more sustainable community
 - Provides a common base of information for:
 - Understanding issues identified by community members and how these concerns impact health
 - Helping the community prioritize financial resources for sustainability and revitalization projects
 - Improving collaboration and information sharing among local community organizations and government agencies
 - Identifying areas that may benefit most from GI practices



Impact

- Reinforces *Urban Waters Federal Partnership* goals
 - Protect and restore America’s urban waters
 - Reconnect communities to their urban water environments
- Supports EPA’s Sustainable and Healthy Communities (SHC) Research Program
 - Advance knowledge, resources, and tools to achieve a healthy and resilient environment
- Highlighted in EPA’s FY2020 Annual Environmental Justice Progress Report
- Serves as a model approach to problem solving that ALL communities can use to address environmental and public health concerns in a collaborative, innovative, and sustainable way



“[The Story Map] also offers tools that community members can pursue, in collaboration, with government and other stakeholders to help achieve a swimmable, fishable, playable Proctor Creek and a restored community and people.” – West Atlanta Watershed Alliance, Co-Founder and Board Chairperson Na ’Taki Osborne-Jelks

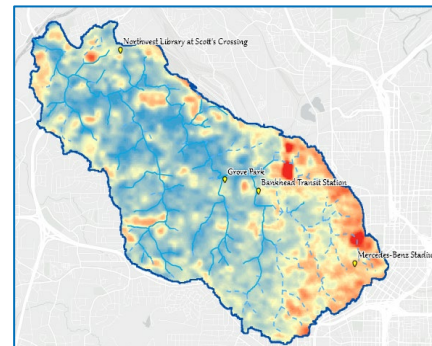
Take Home Messages

1. This is a **story map**
 - Interactive, online tool combines maps with text and images to tell a story and connect with viewers
2. This is a **community-driven** story map
 - EPA and community members collaborated to tell the story of Proctor Creek from the community's perspective
3. Highlights the **health benefits** of **green infrastructure**
 - Uses the power of maps to show role green infrastructure can play in addressing community-identified health concerns
4. Serves as a **model approach** to solving environmental and public health challenges that involves communities in decision-making

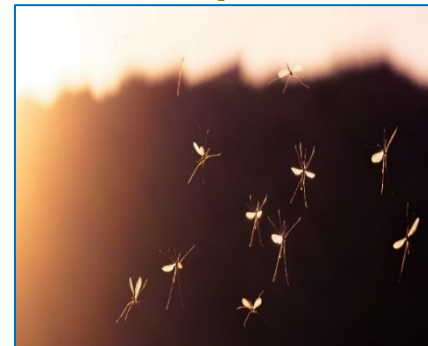
Flooding



Urban Heat Islands



Mosquitoes



Green Infrastructure



Acknowledgments

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- Anna Truszczynski



- **City of Atlanta Department of Watershed Management**

- Cristi Bickham
- Mikita Browning
- Todd Hill
- William Horton
- Tanisha Lawson
- Julie Owens
- Susan Rutherford



THANK YOU!

“Too many communities whose residents are predominantly of color, Indigenous, or low-income continue to suffer from disproportionately high pollution levels and the resulting adverse health and environmental impacts... We must do better. This will be one of my top priorities as administrator, and I expect it to be one of yours as well.”

- EPA Administrator Michael S. Regan

April 7, 2021

“Lifting up these communities makes us all stronger as a nation and increases the health of everybody.”

- President Joseph R. Biden, Jr.

January 27, 2021



Contact

Shannon Griffin

Biologist

US EPA Office of Research and Development

griffin.shannon@epa.gov

513-569-7174

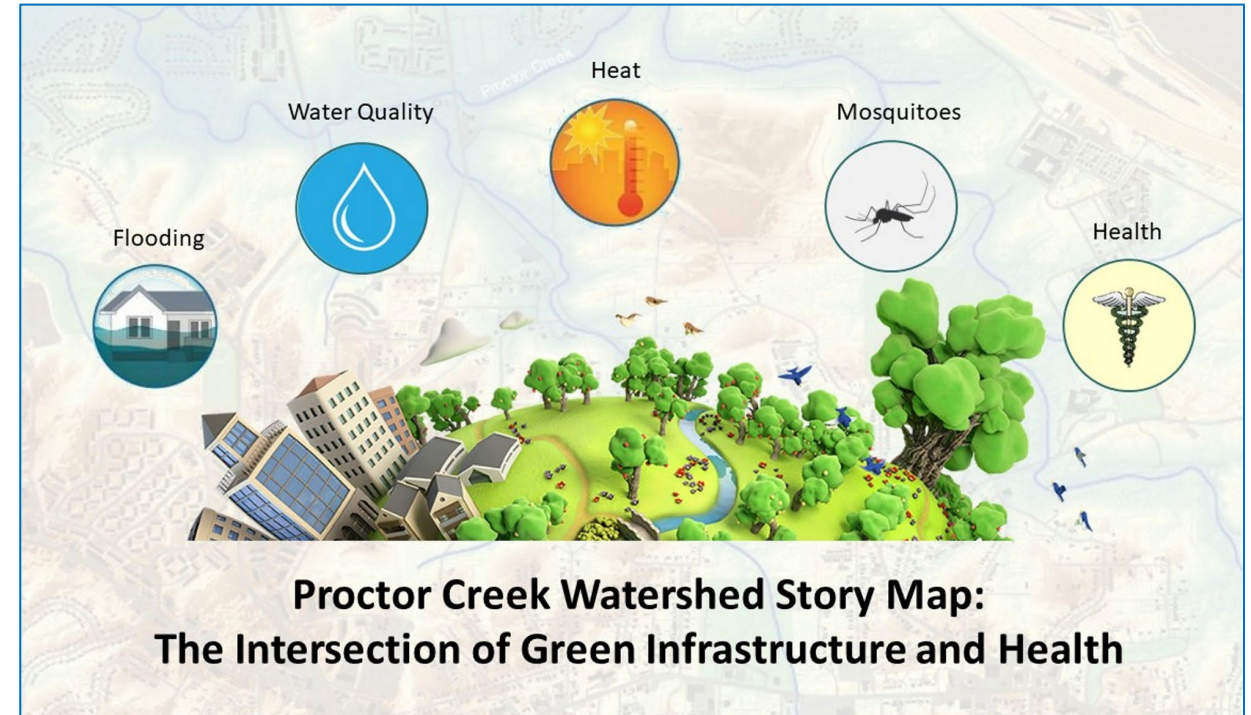
Camilla Warren

Environmental Engineer

US EPA Region 4

warren.camilla@epa.gov

404-562-8519



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