

GreenInfrastructure

Evaluation Framework

WHAT IS THIS FRAMEWORK?

The Green Infrastructure Evaluation Framework is an offering of NRPA's Great Urban Parks Campaign (GUPC). NRPA launched the GUPC in 2015 with the primary purpose of improving environmental and social outcomes in underserved communities through promoting and advancing green stormwater infrastructure projects within parks and developing resources and training for park, planning and other professionals to improve equity through green infrastructure.

This online Framework provides evaluation research, guidance, tools, references and downloadable worksheets to park and recreation agencies and other stakeholders who are directing green infrastructure (GI) projects in public parks throughout the country. The goal for the Framework is to prepare GI project leads to measure the many different impacts of green infrastructure in a way that is conscious of time, staffing and money. Over time, as more and more projects are evaluated, NRPA will collect data-based evidence and the body of research around GI impacts will become larger and more widely available. In turn, NRPA hopes that this diffusion of resources will lead to more GI projects nationwide, more measurement of project benefits, and so on.

WHAT IS GREEN INFRASTRUCTURE?

Green Infrastructure (GI) encompasses a wide array of stormwater management solutions, such as green roofs, trees, rain gardens and permeable pavement, that capture and infiltrate rain where it falls, reducing flooding and enhancing water quality. These projects improve the health of not only local waterways, but also the individuals and communities who reside nearby.



- 1 Bioswale
- 2 Stormwater trees
- 3 Permeable pavement parking lot
- 4 Porous asphalt basketball court
- 5 Rain garden
- 6 Protected habitat
- 7 Native trees
- 8 Retention pond/
Constructed wetlands
- 9 Cistern
- 10 Green roof

Green stormwater infrastructure (like the features highlighted here) in local parks is an efficient way to reduce flooding, improve water quality and wildlife habitat, provide opportunities for education and employment, increase biodiversity, access to nature and green space, and community resiliency, and much more. For more information and for an interactive version of this poster visit www.nrpa.org/greeninfrastructure.

Managing Stormwater Naturally!



WHAT BENEFITS RESULT FROM GREEN INFRASTRUCTURE?

The Framework focuses on how to measure the following benefits which may come from your project:

ENVIRONMENTAL BENEFITS	
WATER	Reduced flooding
	Enhanced water quality
HABITAT	Expanded & restored habitat
	Enhanced flora and fauna
AIR	Decreased air temperatures
	Enhanced air quality

SOCIAL BENEFITS	
SOCIAL COHESION	Enhanced community engagement
	Enhanced community socialization
	Enhanced recreation participation
PUBLIC SAFETY	Reductions in violent and nonviolent crime
COMMUNITY ACTIVATION	Community knowledge of GI
	Community use of GI on properties
	Underserved impacted
	Involvement in project planning
	Effectiveness of involvement process
	Community satisfaction with project

HEALTH BENEFITS	
PHYSICAL HEALTH	Enhanced access to physical activity
	Increases in physical activity
	Community use of GI feature
	Enhanced health outcomes over time
MENTAL HEALTH	Reduction in stress/anxiety

ECONOMIC BENEFITS	
WORKFORCE DEVELOPMENT	Job creation
	Job skills gained
	Training of community members
	Volunteer participation
	Direct investment into community
ECONOMIC DEVELOPMENT	Increased property values
	Spurred economic development

The following 11 GI features are covered in this Framework, and NRPA has classified them in three categories based on the benefits they may achieve from the above tables:

CATEGORY 1 GI FEATURES <i>(producing the greatest variety of environmental, health, social and economic benefits)</i>	CATEGORY 2 GI FEATURES <i>(producing more limited environmental benefits and some other limited benefits)</i>	CATEGORY 3 GI FEATURES <i>(producing mainly environmental benefits)</i>
Stream restoration	Bioretention features (bioswales, rain gardens, etc.)	Permeable pavements
Urban tree canopy	Vegetated buffers	Rainwater harvesting
Land conservation	Constructed wetlands	Impervious surface disconnections
	Vegetation management	
	Green roofs	

GI EVALUATION CHECKLIST

The Framework is divided into three core steps. Below are core tasks you should complete to effectively evaluate your GI project. Each step in the Framework has text, sources and a downloadable worksheet for you to create and execute your evaluation plan.

STEP ONE: DEFINE CLEAR BENEFITS & MEASURES

KEY STEP 1 ACTIONS

You will have clarity on your GI project and its anticipated benefits, and you will learn how to measure those benefits over time.

- Use this Framework's [Benefit Tool](#) to figure out what benefits your GI project will produce. If you have not yet decided on a particular feature for your project, you can use the same menu to explore features based on the benefits you and your community want to result from your work.
- Once you have decided on your GI project and associated benefits, use the [GI Benefit Measurement Tables](#) to learn how you will collect data connected to your anticipated benefits.

STEP TWO: COLLECT YOUR DATA

KEY STEP 2 ACTIONS

You will create a measurement plan showing what kinds of data you will be collecting, as well as how and when you will collect this data.

- Pick priority measures for your organization and community, as resource constraints may prevent you from collecting data on every single benefit that you want to measure.
- Outline when you will collect your data at four stages outlined by this Framework (see Step Two for more details).

STEP THREE: USE YOUR DATA

KEY STEP 3 ACTIONS

You will decide what to do with your collected data inside and outside your organization.

- Based on the data you've collected, replicate bright spots from your project and improve upon weaknesses to strengthen future projects and enhance your staff's GI knowledge
- Know your audiences for communicating your project's benefits, and create a Results Communication Plan for getting your message out to those stakeholders

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