

WHY GREEN STORMWATER IN PARKS IS A WIN-WIN FOR URBAN RESILIENCE

Making the Case for Nature-Based Solutions to City Leaders



Utilizing urban parks and green spaces for the management of stormwater using nature-based (or green) infrastructure has many public benefits. For example, it can:

- » Help protect increasingly vulnerable communities during large-scale weather events.
- » Save cities money by reducing the impacts of flooding.
- » Improve public health by protecting water quality and adding green space that keeps cities cooler and can be used for outdoor activities.
- » Advance environmental justice by benefiting historically underserved communities that lack adequate infrastructure and green space.
- » Provide a prime opportunity for workforce development to fill the gap in green infrastructure maintenance skills.
- » Transform how governmental agencies work together and serve their communities, and access new funding opportunities.
- » Build trust between community stakeholders and government (when its benefits are effectively implemented and communicated) and inspire more support for nature-based solutions at all levels.

What Is Green Stormwater Infrastructure?

Green stormwater infrastructure (GSI) manages stormwater runoff by using natural processes. Traditional “gray” infrastructure—gutters, sewers, and tunnels—moves water away from buildings but can contribute to flooding, pollution, and urban heat. In contrast, nature-based solutions like GSI use plants, soils, and permeable surfaces to manage and store stormwater where it falls naturally. GSI has the potential not only to mitigate flooding and pollution but also to increase green spaces, boost climate resilience, and create green jobs.¹



“Gray” infrastructure can contribute to flooding, pollution, and urban heat

Green stormwater infrastructure manages runoff naturally, reducing flooding and pollution while enhancing urban resilience, creating green spaces, spurring jobs, and improving public health.



Green stormwater infrastructure in parks creates multiple benefits (credit: City of Atlanta)

¹ U.S. Environmental Protection Agency. (2024). Green Jobs in Your Community. <https://www.epa.gov/G3/green-jobs-your-community>

Why Put Green Stormwater Infrastructure in Parks?

As storms become more intense and unpredictable, our infrastructure must adapt. Parks, which are among the largest green spaces in cities, have great potential for GSI. In addition to promoting public recreation and social cohesion, parks can mitigate extreme heat, and manage flooding and stormwater runoff. By working with nature, GSI in parks helps reduce flooding and its financial impacts while enhancing biodiversity and protecting ecosystems. It can improve public health outcomes by filtering air and water pollution, reducing urban heat, and creating new green spaces, all of which can also lower healthcare costs related to respiratory and heat-related illnesses.²

Tapping the Potential Benefits

However, parks are often underused for GSI because of a lack of shared vision and priorities among public agency leaders. More structural and technical implementation challenges include separate funding sources for parks and water projects, silos between parks and water agency planning and operations, policies and regulations that are unsupportive of interagency collaboration, skepticism about nature-based solutions, limited green infrastructure maintenance skills, and the complexity of engaging communities, especially those that are historically disadvantaged, in infrastructure projects. By fostering better collaboration

between parks and water agencies on funding, community engagement, planning, capital projects, and maintenance, cities can fully tap into parks' potential for GSI and create a win-win for urban resilience, as well as operational efficiency and fiscal savings.

How Can Green Stormwater Infrastructure in Parks Promote Social Equity?

Historically, discriminatory policies have limited park and housing access for racial and ethnic minorities, immigrant groups, and low-income families, leaving these communities with less green space and greater exposure to flooding, extreme heat, and pollution. GSI projects in existing or new parks in these communities can address environmental justice needs, create jobs, and improve public health disparities. Additionally, GSI in parks can raise nearby property values by reducing the threat of flooding and creating new community amenities, which generates wealth-building opportunities for landowners and boosts local tax revenues.³ However, it is crucial to pair these infrastructure improvements with community stabilization and economic development strategies to prevent displacement as property values rise, as well as secure long-term funding for maintaining this critical infrastructure.



In partnership with the US Water Alliance and the Green Infrastructure Leadership Exchange, City Parks Alliance has been working with a cohort of parks and stormwater agency leaders from eight cities across the U.S. to inform how to increase collaboration between the parks and stormwater management sectors and address historic inequities. Cohort cities include Atlanta, Boston, Houston, Milwaukee, Pittsburgh, Raleigh, Seattle, and Tucson. Learn more about the initiative and discover all our resources at www.cityparksalliance.org/stormwater.

Parks are natural places to put green stormwater infrastructure.

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² U.S. Environmental Protection Agency. (2024). Environmental Benefits of Green Infrastructure. <https://www.epa.gov/green-infrastructure/environmental-benefits-green-infrastructure>

³ Center for Neighborhood Technology. (2020). Green Stormwater Infrastructure Impact on Property Values. <https://cnt.org/publications/green-stormwater-infrastructure-impact-on-property-values>