



Green infrastructure transforms communities.
We partner with cities to deliver more, better, for all.

Designing a Successful Retrofit Program
A GSI Developer's Perspective
May 10, 2019



INTRODUCING GREENPRINT PARTNERS

Greenprint Partners is a green infrastructure delivery partner that helps cities build high-impact, community-driven green infrastructure at scale.

We believe green infrastructure transforms communities.



MEET OUR TEAM

Management + senior advisors

SENIOR MANAGEMENT



NICOLE CHAVAS

CEO, Co-Founder
Investment Management



APRIL MENDEZ

Vice President, Programs,
Co-Founder
Community Development



LAURA KIMES

Vice President, Operations,
Co-Founder
Environmental Science + Policy



ROSE JORDAN

Vice President, Marketing +
Business Development
Marketing, Communications, + PR



JIM SPARBER, PE

Sr. Program Director
Stormwater Engineering



RYAN WILSON, ALSA

Sr. Program Director
Landscape Architecture

SENIOR ADVISORS

DAVE CHEN

Chairman of the Board
Chairman and Founder, Equilibrium Capital

JOHN LOCHNER

Senior Advisor
Energy and Water Industry Executive and Investor

HIGHLIGHTED INVESTOR

THE
KRESGE
FOUNDATION



THE
KRESGE
FOUNDATION



MISSION DRIVEN

Our experienced team believes that green infrastructure transforms communities, so we partner with cities to deliver more, better, for all.

KRESGE PARTNER

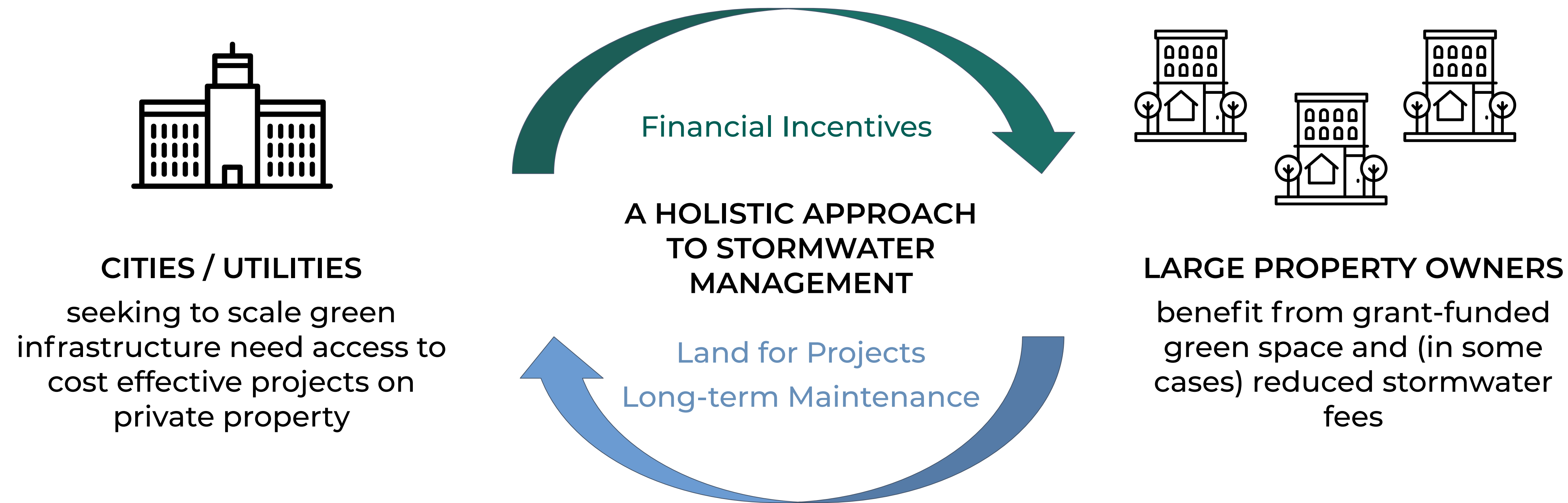
Kresge's Kim Dempsey stated that our "deep community engagement, commitment to achieving and measuring project co-benefits, and exclusive focus on low-income and climate-vulnerable communities" made it her favorite investment of 2017.

STRUCTURED FOR IMPACT

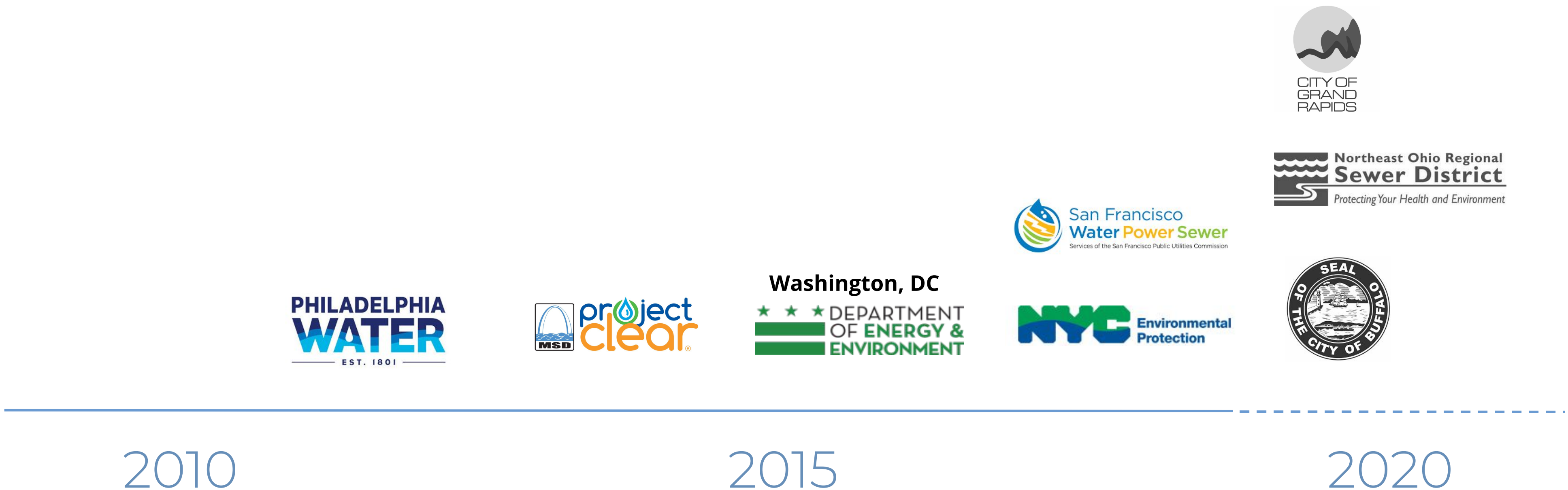
We are a certified Women's Business Enterprise (**WBE**) and a certified **B Corporation**, meaning we outperform our peers on environmental responsibility, social impact, employee well-being, and governance accountability.

What are 'Green Infrastructure Incentive' (GI2) Programs?

Water utilities offer **financial incentives** for large property owners to install green stormwater infrastructure that meets utility specifications.



Growing adoption of Gl2 program model



**ESTABLISHED
MODEL**

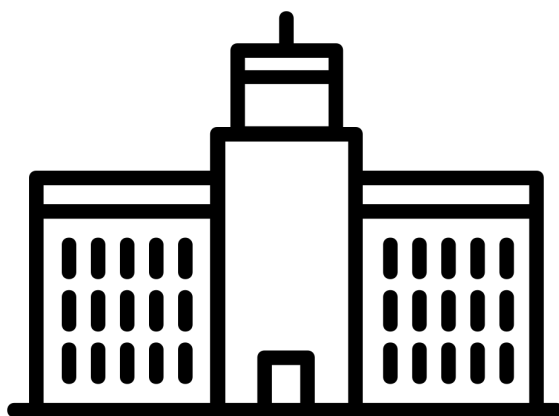
Energy utilities have successfully relied on ratepayer incentive structures for decades to meet energy efficiency (EE) regulations.

Examples of GI2 across the country.

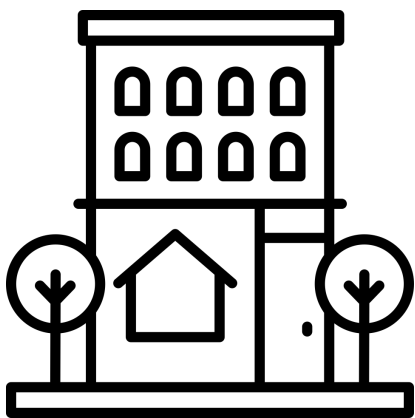


GSI INITIATIVE	Green City, Clean Waters	Project Clear	Sewer System Improvement Program	Priv. Property Stormwater Incent.
GI2 PROGRAM	SMIP, GARP	Rainscaping Large Scale Grant	GI Grant Program	Private Property Retrofit Incentive
YEAR STARTED	2012	2015	2019	2019
TOTAL GI2 BUDGET	\$550M	\$100M	TBD	\$53M*
ANNUAL BUDGET	\$25M	\$5M+	\$4M+ (Pilot)	\$10M+
INCENTIVE LEVEL	\$150K - \$200K	\$180K	\$765K	\$250K
BILL CREDIT	Up to 80%	N/A	N/A	N/A
ANNUAL ACRES	50	25	TBD	40

GI2 programs roles and responsibilities.



UTILITY



LANDOWNER

ROLE

Design, administer, and manage program.

Supply the land, co-design, and maintain installations.

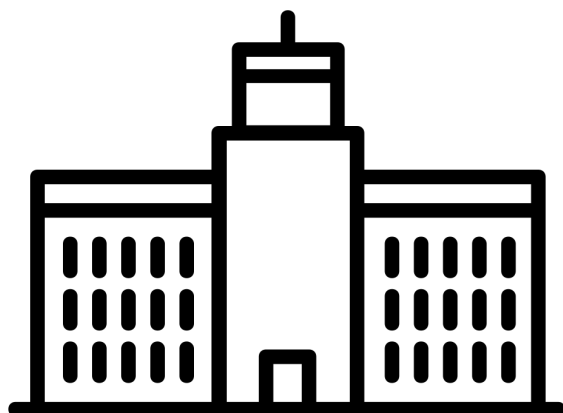
BENEFITS

Meet regulatory requirements efficiently; drive value to ratepayers.

Access full benefits of GSI on private property at no cost.

THE DEVELOPER ROLE

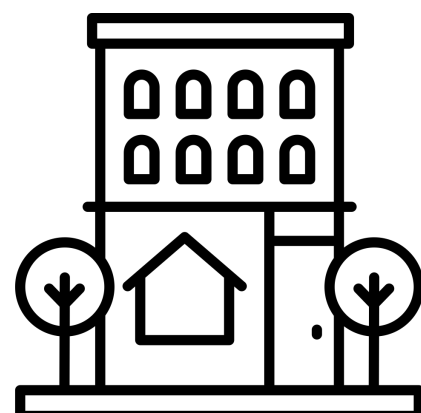
Developers absorb risk and complexity, adding expertise, capacity, and financing.



UTILITY



DEVELOPER

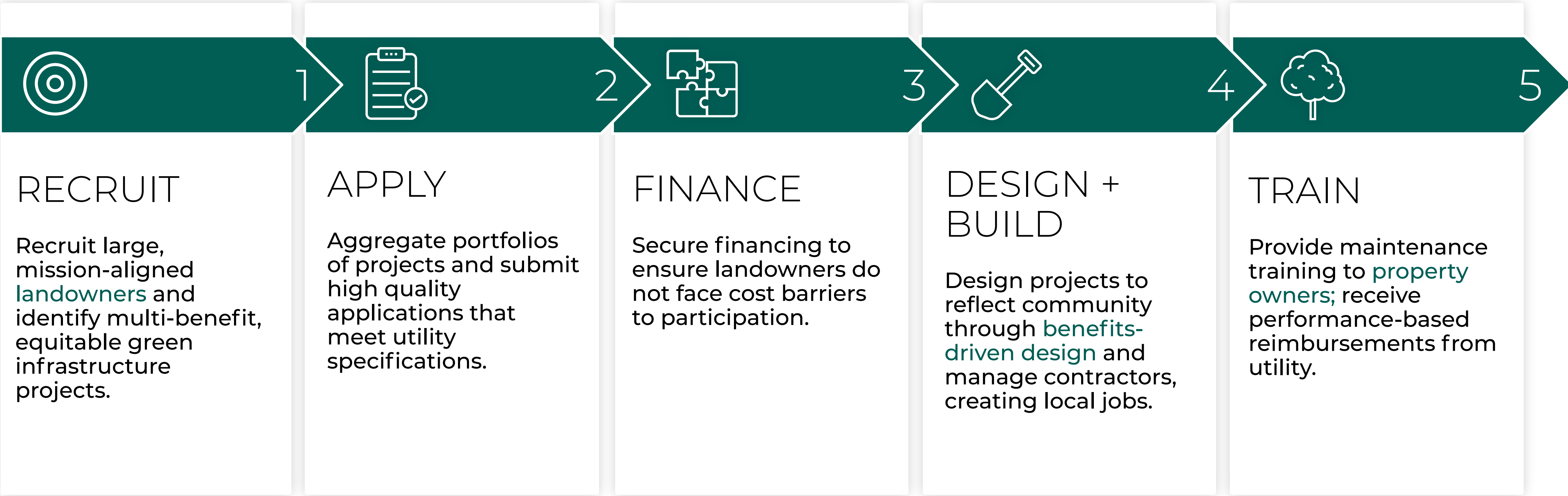


LANDOWNER

ROLE	Set vision, structure, goals, and budget, and manage program.	Originate, develop, and deliver projects.	Supply the land and maintain installations.
BENEFITS	Meet regulatory requirements efficiently; drive value to ratepayers.	Grow businesses within a niche market.	Access full benefits of GSI on private property at no cost.

GREENPRINT'S DEVELOPER ROLE

Greenprint specialized in helping anchoring institutions in low-to-moderate income communities access high impact projects at no or little cost.

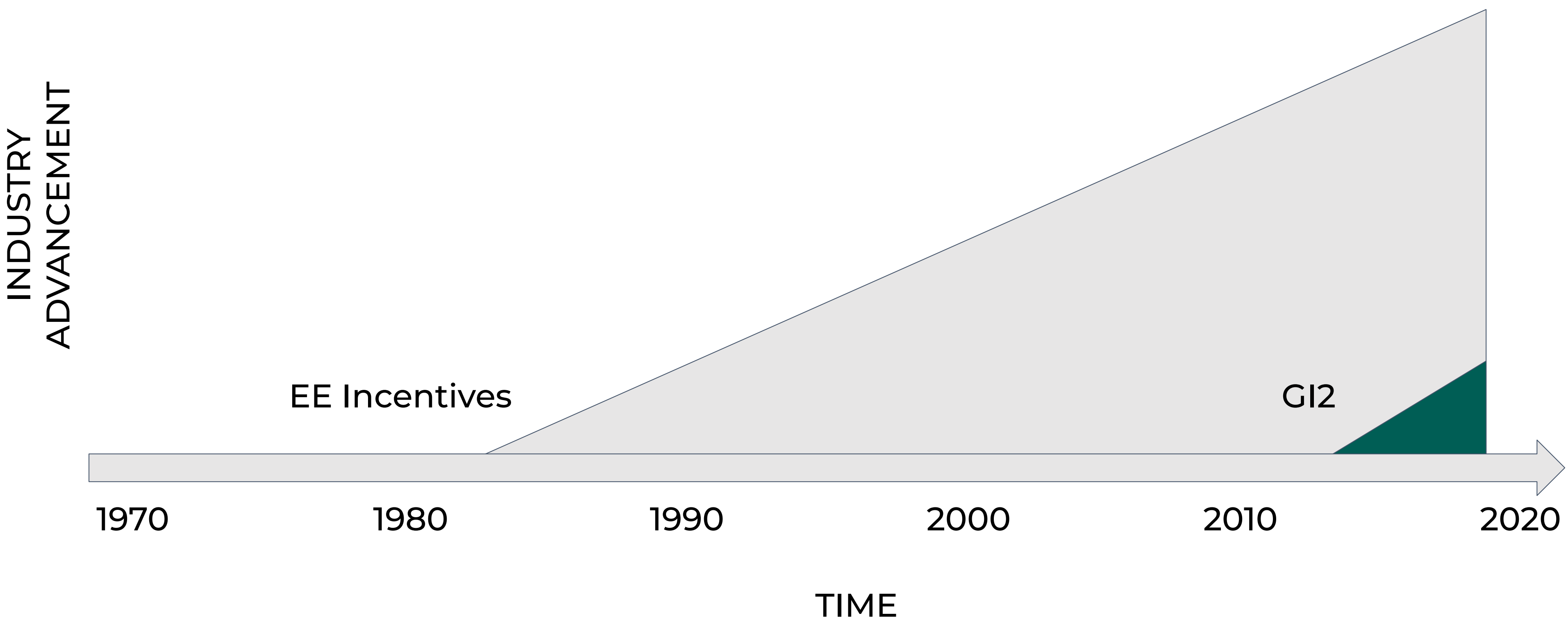


KEY TOPICS

Greenprint has researched grant-based GI2 program across the country and identified practices that encourage developers to enter and help drive strong projects.

- | | | | |
|---|------------------|---|------------------------|
| 1 | Goals + Budget | 4 | Project Specifications |
| 2 | Incentives | 5 | Delivery Team |
| 3 | Target Audiences | 6 | Maintenance |

Energy efficiency incentive programs can offer decades of learning, growth, and development.



Energy efficiency and GSI represent parallel industries.

Water utilities can draw on two decades of energy efficiency industry best practices.

UTILITY INDUSTRY TRENDS	ENERGY EFFICIENCY (30+ years)	GSI (5+ years)
Utility led	✓	✓
Utility shifting from commodity to wrap-around service provider	✓	✓
Market driver: regulation and public benefit	✓	✓
Regulatory compliance through: distributed infrastructure	✓	✓
Structure: incentive programs, targeted to ratepayer groups	✓	✓
Benefits: Ratepayer funded programs deliver strong ROI and drive tangible value back to customers, often including savings on monthly bills	✓	✓
Critical success factor: strong industry collaboration and cross-boundary learning	✓	✓

Set GI2 program goals.

PWD	MSD	SFPUC	ENERGY INDUSTRY	OUR INSIGHT
Use green spaces to capture over one-third of the stormwater runoff from impervious surfaces by 2036, reducing stormwater pollution in waterways. See 2011 Green City Clean Waters Program Summary for full goals	Invest \$100 million in rainscaping projects, with an overall goal of reducing combined sewer overflows to the Mississippi River.	Invest \$40M+ to reduce runoff entering sewer system and improve system performance while providing co-benefits such as non-potable reuse, groundwater recharge, and workforce development.	Energy utilities are focusing more on programs that lead to full market transformation that reshapes industries for the long term.	When setting goals, define clear metrics that drive success. Think beyond gallons and greened acres, to co-benefit achievements, uptake, equity, and, ratepayer engagement.

Ask a GSI Developer

“SFPUC is the first utility to concretely mention co-benefits in their topline goals for the program; this emphasis on co-benefits drives developers toward greater impact.”



Nicole Chavas, CEO

Set GI2 program budget.

PWD	MSD	SFPUC	ENERGY INDUSTRY	OUR INSIGHT
<ul style="list-style-type: none">• Total Budget: \$550M• Annual Budget: \$25M• Primary Funding Source: Parcel Based Billing Stormwater Fee Model (based on impervious surface).	<ul style="list-style-type: none">• Total Budget: \$100M• Annual Budget: \$10M+• Primary Funding Source: user fees (also exploring State and federal funds, bonding, and any other public and private financing).	<ul style="list-style-type: none">• Total Budget: ~\$40M• Annual Budget: \$4M (during pilot)• Funding Source: Sewer System Improvement Program (SSIP) funding	EE budgets are funded by ratepayers (usually a part of their electricity bill) and thought of as an investment rather than a cost. We all pay for it and we all share in the benefits.	GASB62 now enables utilities to consider GSI investment and rebate programs as capital assets vs. operating assets, enabling utilities to roll out bigger programs today for long term sustainability.

Ask a GSI Developer

“The larger the financial commitment of the utility, the more quickly qualified, experienced developers will invest in operations in your market. Upfront investment pays off in the long-term.”



Laura Kimes, VP, Operations

Establish GI2 incentives.

PWD	MSD	SFPUC	ENERGY INDUSTRY	OUR INSIGHT
<ul style="list-style-type: none">• Developer: max of \$200K/Greened Acre• Landowner: Up to 100% project reimbursement. Up to 80% stormwater bill savings.• Results: competition for funds; program fully subscribed.	<ul style="list-style-type: none">• Developer: \$180K / Greened Acre• Landowner: Up to 100% project reimbursement.• Results: Too early to analyze.	<ul style="list-style-type: none">• Developer: \$765K / Greened Acre (\$2M project cap)• Landowner: Up to 100% project reimbursement.• Results: Too early to analyze.	Electric utilities create targeted incentive levels and types for each segment of the market (e.g., downstream, midstream, and upstream incentives, ratesetting, and on-bill financing).	The market is not yet ready for partial incentives, so build local construction prices and developer 'soft' costs (~25% of project cost) into reimbursement rates; allow for higher cost high impact projects.

Ask a GSI Developer

“Last year, PWD’s well established program and opportunity for ratepayer savings attracted \$50M in competitive applications, of which the top \$25M were awarded.”



Hannah Grooms, P.E., Stormwater Engineer

Decide how to pay incentives.

PWD	MSD	SFPUC	ENERGY INDUSTRY	OUR INSIGHT
Reimbursement stages <ul style="list-style-type: none">• Survey / Base Maps• Design milestones• Pre-purchase materials• Construction at 30%, 60%, and 100%• Construction inspection, record drawings, closeout	Funds are disbursed on a cost-incurred basis and supported with original receipts verifying costs.	Payment stages: <ul style="list-style-type: none">• Grant Agreement execution (20%)• 100% design (70%)• Final approval of the constructed project (10%)	Moving toward midstream and upstream incentives that are built into the final product so that end-users do not face barriers inherent in navigating rebate processes.	Failure to ensure equitable distribution and engage low and moderate income communities can create backlash and miss opportunities for GSI where it is needed most.

Ask a GSI Developer

“Reimbursement-based programs run the risk of precluding disadvantaged landowners and businesses from participation unless developers can float all costs.”



Jim Sparber, P.E., Civil Engineer

Define target landowners/geographies.

PWD	MSD	SFPUC	ENERGY INDUSTRY	OUR INSIGHT
<p>Defines their target as larger landowners with high imperious acreage in the CSO area.</p> <p>PWD offers a map of high-impervious surface landowners in the CSO area.</p>	<p>Defines their target as landowners in the CSO area.</p>	<p>Defines priority areas based on equity goals; offers a mapping feature to help developers identify high-priority targets.</p>	<p>Offers robust tools and information to connect eligible ratepayers to energy efficiency service providers.</p>	<p>Utilities benefit when they offer developers tools that make it easy to zero in on best-fit property owners.</p>

Ask a GSI Developer

“Tools like SFPUC’s ‘Grant Program Web Map’ accelerate the pace of getting to high-quality projects and reduces the pre-development investment required.”



Rose Jordan, VP of Marketing and Business Development

Develop GI2 program guidelines.

PWD	MSD	SFPUC	ENERGY INDUSTRY	OUR INSIGHT
<p>The Stormwater Grants Application Guide guides readers through</p> <ul style="list-style-type: none">• Pre-application• Application• Post-application and award• Implementation• Post Construction	<p>The Annual Call for Applications guides readers through</p> <ul style="list-style-type: none">• Background, eligibility and requirements• Application and evaluation criteria• Award and Disbursement	<p>The Grant Program Guidebook guides readers through</p> <ul style="list-style-type: none">• Pre-application• Application• Grant award• Design/Construction• O+M	<p>Account reps guide a customer through the process; availability of trainings etc for contractors (and developers) supporting the industry</p>	<p>Understand that one-size-fits all program guidance may not serve all audiences. Typically LMI audiences require targeted program guidance to ensure they can participate.</p>

Ask a GSI Developer

“Most markets require developers to take on all pre-development risk; we like to see thorough and transparent guidelines and scoring rubrics that allow us to efficiently identify opportunities.”



Yana Genchanok, P.E., Civil Engineer

Develop your team.

Publicly Managed	Hybrid	Privately Managed	ENERGY INDUSTRY	OUR INSIGHT
PWD, MSD, and SFPUC manage their GI2 programs in-house. PWD has 100 staff in the following units: collectors systems, construction, stormwater operations, stormwater plan review, water/sewer design, water conveyance.	Many utilities may benefit from managing parts of their program in house, and outsourcing other aspects to prevent escalating long-term staff costs.	NYC DEP released an RFP for a private partner to administer the full GI2 program for a 5 year term, including program design, launch and management.	A large percentage of energy utilities rely on private sector partners to manage program portfolios; management contracts go out for bid every 3-5 years; utility still maintains their own brand and works in lockstep	Private sector partners can fill capacity gaps, absorb project and budget risk, and bring multi-market knowledge to benefit the program.

Ask a GSI Developer

“Regardless of how much of the program is managed in house, developers can still play a role absorbing risk and complexity, and adding expertise, capacity, and financing.”



April Mendez, VP of Programs

Maintain the project long-term.

PWD	MSD	SFPUC	ENERGY INDUSTRY	OUR INSIGHT
<ul style="list-style-type: none">• Require landowner to sign a contract with PWD with 45 year maintenance commitment.• Requirement stays with the property deed in the case of transfer.	<ul style="list-style-type: none">• Require landowner to sign a contract with MSD with permanent maintenance commitment.• Requirement stays with the property deed in the case of transfer.	<ul style="list-style-type: none">• 20-year term• Annual maintenance report• 20-year deed restriction• Recovery of grant funds for failed and non-compliant projects	Offers “Strategic Energy Management” cohorts of similar customers who support each other and share resources in more complex programs.	Require a long-term maintenance contract, but provide centralized training, contractor matchmaking, and clear funding sources to help support long-term maintenance.

Ask a GSI Developer

“Unsupported long-term maintenance commitments are the number one reason why landowners opt out of participation in GI2 programs.”



Ryan Wilson, Landscape Architect



APRIL MENDEZ

Vice President, Strategy

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