GREENPRINT PARTNERS

Getting the most good out of green infrastructure

Vermont Climate Council
July 26, 2021

GREENPRINT PARTNERS

Today's Goals

1. Illustrate how equity goals can be directly integrated into the design and delivery of climate action strategies through the example of stormwater runoff management

2. Spark or validate ideas for you on better embedding equity in your climate action strategies.

Greenprint Partners is a green infrastructure delivery partner. We're on a mission to get the most good out of green infrastructure.

America's "grey" stormwater infrastructure is outdated and in disrepair.

Legacy sewer system design

772 cities have obsolete combined sewer systems that significantly impact water quality

Failure to make necessary upgrades

- "Below standard"
- "Approaching end of service"
- "Significant deterioration"
- "Strong risk of failure"
- **$70B needed over next 20 years**

Current highly centralized systems are inflexible

Concentrated risk = less flexibility to adapt and scale to changing conditions and circumstances; systems can be easily overwhelmed

Outdated water infrastructure pollutes our waterways and floods our neighborhoods.
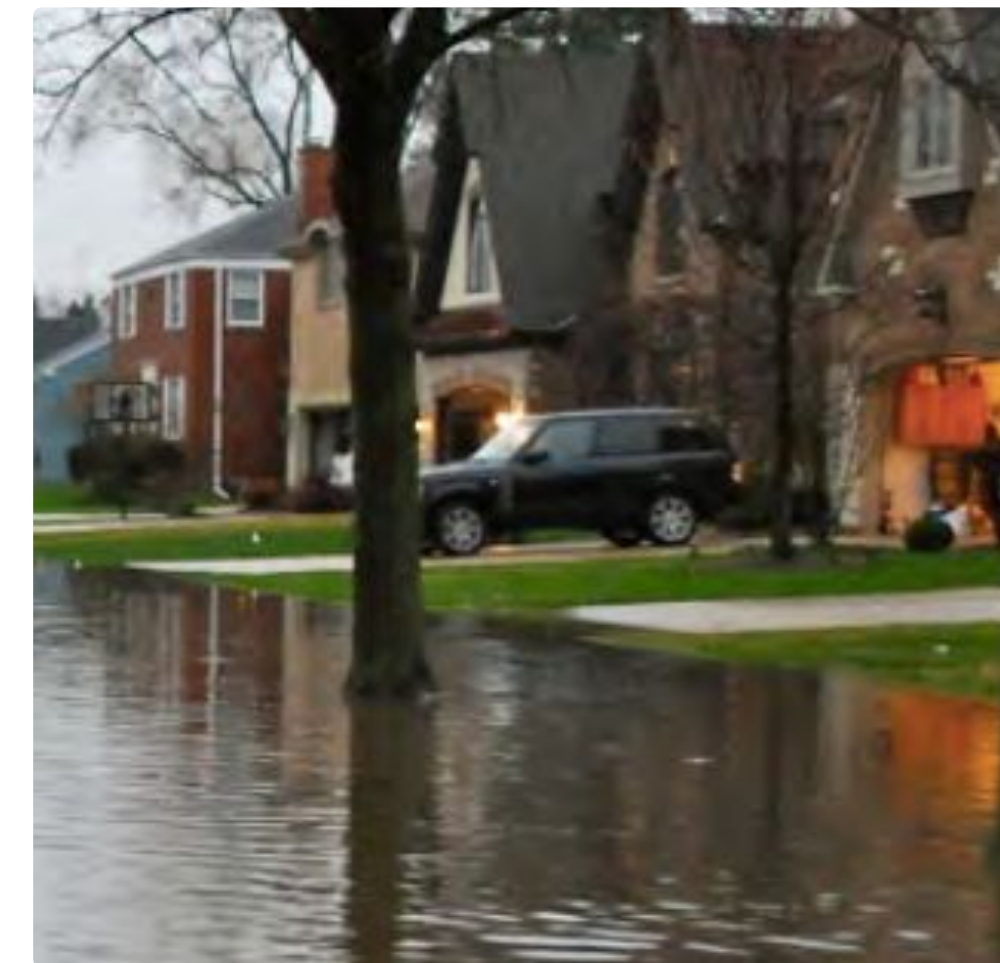

Stormwater runoff

Stormwater runoff is the number one cause of water quality impairment in urban areas

Combined sewer overflows

Sewer systems combining stormwater and sewage discharge billions of gallons of untreated sewage into our waterways annually

Urban flooding

Urban development and changing weather patterns are increasing flooding in streets, homes and businesses

Water pollution and flooding disproportionately impact low-income communities.

Lack of Investment

Less likely to have benefitted from investment in social, environmental and economic infrastructure that enables resiliency

Lack of Natural Resources

More likely to be located in areas prone to flooding and other hazards

Lack of Community Resources

Limited ability to prepare for, and respond to, water pollution, flooding and related damage

Green infrastructure is a multi-benefit solution.

Green stormwater infrastructure ("GSI") is the the use of vibrant natural systems to manage water where it falls.
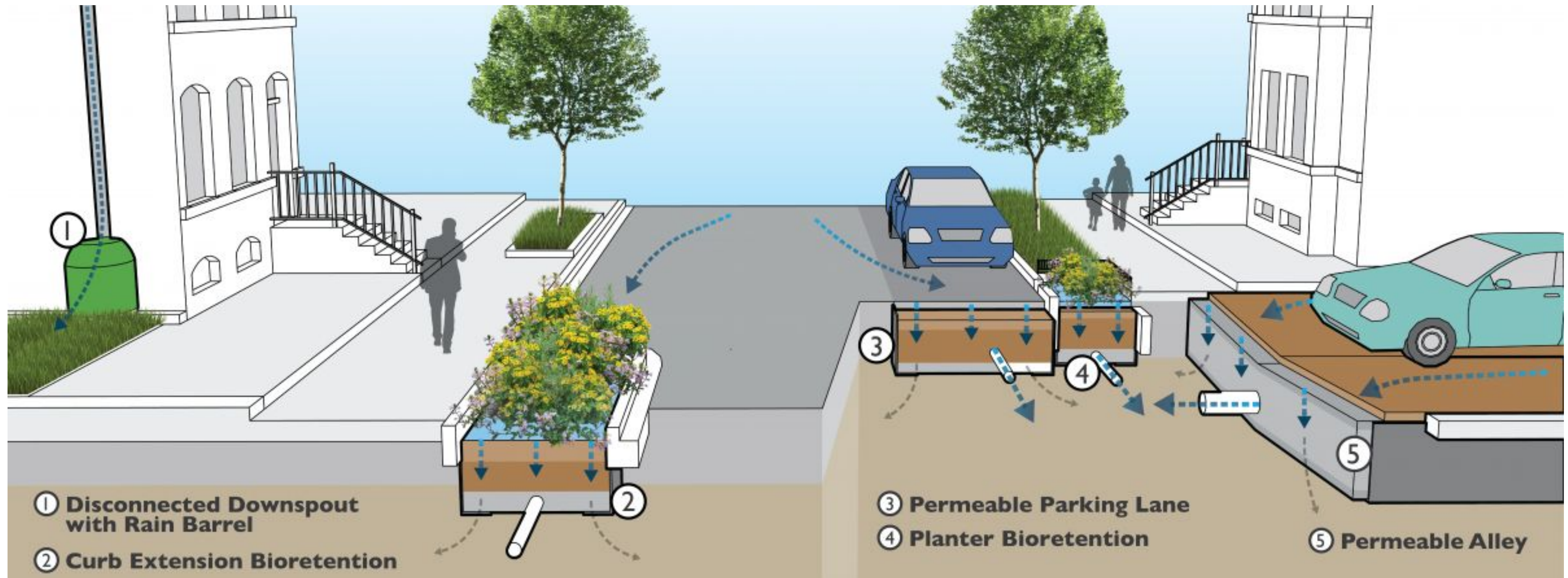

① **Disconnected Downspout with Rain Barrel**
② **Curb Extension Bioretention**
③ **Permeable Parking Lane**
④ **Planter Bioretention**
⑤ **Permeable Alley**

Image Credit: DC Water

Equity has become a national priority

BRIEFING ROOM

Executive Order On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government

JANUARY 20. 2021 • PRESIDENTIAL ACTIONS

And stormwater utilities are elevating equity as a priority in response.

Seattle Public Utilities

Community Centered Utility:

Achieving excellence in core service delivery, increasing affordability and accountability, improving investment value, enhancing public health and environment, ensuring service and racial equity and inclusion, expanding impact through strong partnerships.

New RainCity Partnerships Program
DRAFT PARAMETERS

- 5 years for pilot phase

- ~ $10M

- **Stormwater management performance targets**
  - area of impervious surface managed
    (up to defined water quality standards)
  - area of riparian area restored

- **community benefit performance targets**
  - Priority Hire/local hire + WMBE plan
  - business mentorship + paid internships
  - community is resourced to develop projects

- **two major project types:**
  - green infrastructure
  - riparian area restoration

EQUITY FRAMEWORK FOR GSI PRACTITIONERS

An Equity-Centered GSI Framework "In Progress"

Coming this Winter: A framework to guide GSI practitioners in decision-making and evaluation of equity-centered practices.

Logic models chart the course between vision and action.

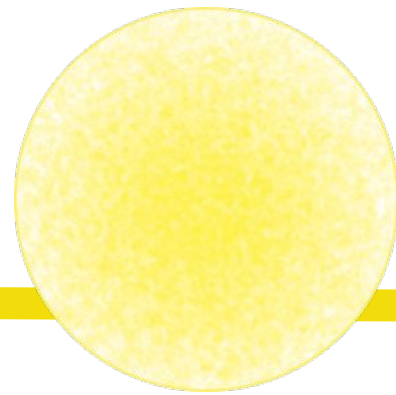| INPUTS	ACTIVITIES	OUTPUTS	OUTCOMES
2. Define where we're starting from.	**3. Define what we will do to achieve the vision.**	**4. Set goal-posts that matter.**	**1. Articulate a bold, shared vision.**

We begin with equity outcomes that GSI can influence
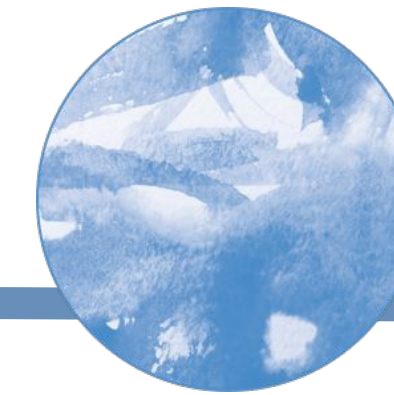
In a logic model, we call this: OUTCOMES

Community

1. Representation in public decision-making
2. Employment, income, and intergenerational wealth
3. Safety and security through reduced crime
4. Physical, emotional, cognitive health support thriving

Ecological

1. Air quality improvement
2. Biodiversity
3. Heat island temperatures
4. Greenhouse gas reduction
5. Energy use reduction

Performance

1. Volume managed
2. Flood/ponding reduction
3. Water quality improvement

Next we identify what we're starting with.

In a logic model, we call this: INPUTS

Existing Conditions

The current state of equity in the outcome areas that GSI can influence

Human Resources

Staff

Consultants

Volunteers

Social Infrastructure

Organized groups such as nonprofits, block clubs, businesses, schools, and congregations, that have community trust and effective operations to engage communities
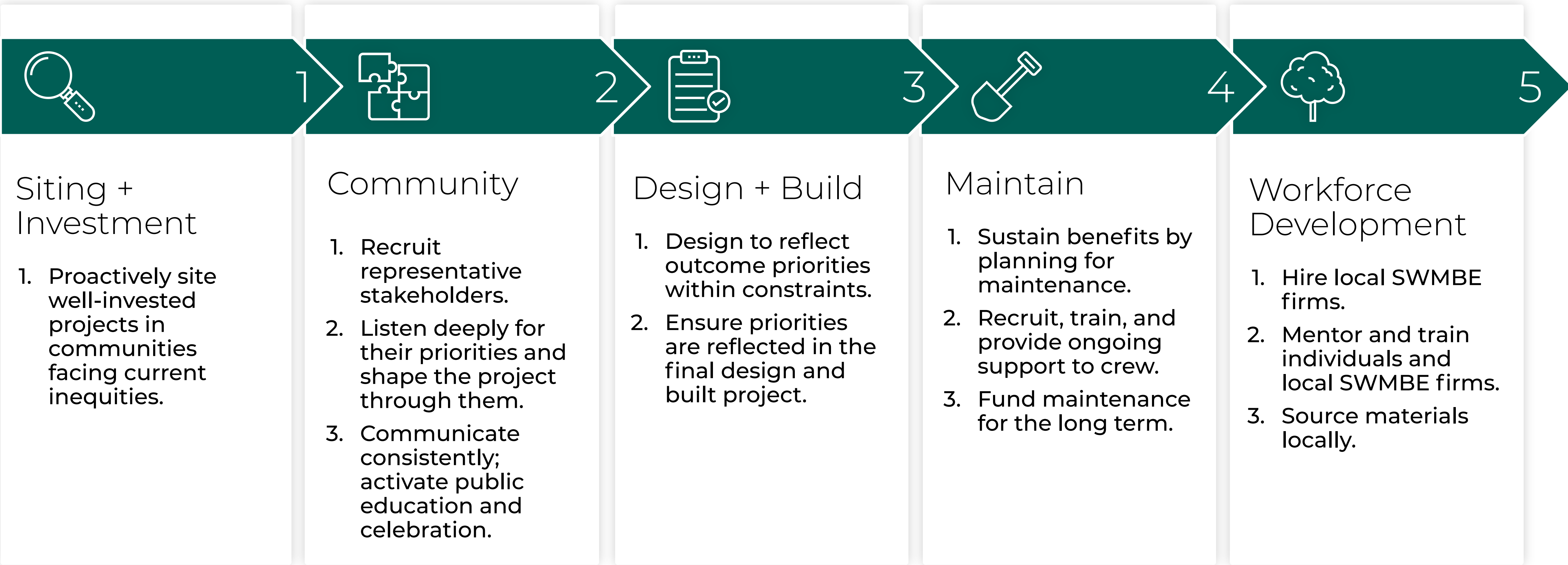
Funding

Dedicated

Potential

Operational Infrastructure

Software

Workflows

Decision-making processes
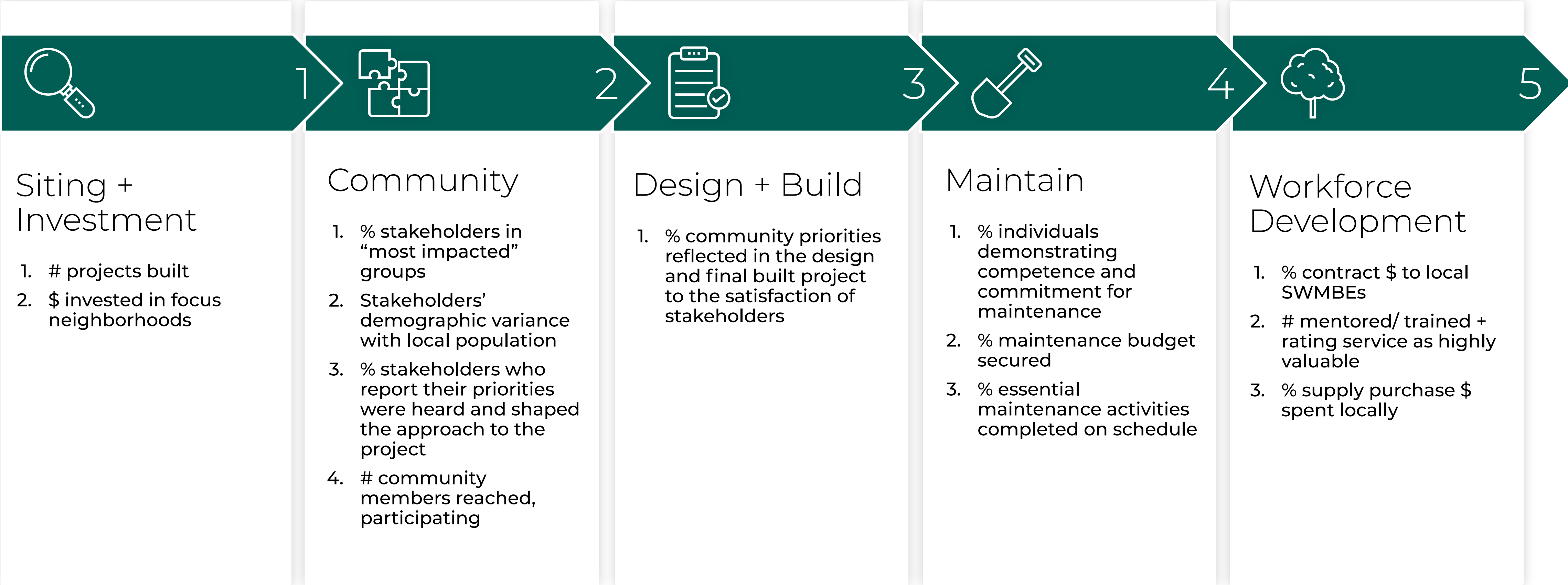
Communications processes

Define what we will do to achieve the vision.

In a logic model, we call this: ACTIVITIES

Siting + Investment

1. Proactively site well-invested projects in communities facing current inequities.

Community

1. Recruit representative stakeholders.
2. Listen deeply for their priorities and shape the project through them.
3. Communicate consistently; activate public education and celebration.

Design + Build

1. Design to reflect outcome priorities within constraints.
2. Ensure priorities are reflected in the final design and built project.

Maintain

1. Sustain benefits by planning for maintenance.
2. Recruit, train, and provide ongoing support to crew.
3. Fund maintenance for the long term.

Workforce Development

1. Hire local SWMBE firms.
2. Mentor and train individuals and local SWMBE firms.
3. Source materials locally.

Finally, set goal posts that matter.

In a logic model, we call this: OUTPUTS

1	2	3	4	5

Siting + Investment

1. # projects built
2. $ invested in focus neighborhoods

Community

1. % stakeholders in "most impacted" groups
2. Stakeholders' demographic variance with local population
3. % stakeholders who report their priorities were heard and shaped the approach to the project
4. # community members reached, participating

Design + Build

1. % community priorities reflected in the design and final built project to the satisfaction of stakeholders

Maintain

1. % individuals demonstrating competence and commitment for maintenance
2. % maintenance budget secured
3. % essential maintenance activities completed on schedule

Workforce Development

1. % contract $ to local SWMBEs
2. # mentored/ trained + rating service as highly valuable
3. % supply purchase $ spent locally

INPUTS	ACTIVITIES	OUTPUTS	OUTCOMES
Existing Conditions Social, economic, ecological	Siting and Investment	1. # projects built in focus areas 2. $ invested in focus areas	**Community** 1. Representation in public decision-making 2. Employment, income, and intergenerational wealth 3. Safety and security through reduced crime 4. Physical, emotional, cognitive health
Human Resources Staff, consultants, volunteers **Social Infrastructure** Community networks and existing trust level	Community Representation, Ownership, and Engagement	1. % stakeholders in impacted groups 2. Stakeholders' demographic variance with local population 3. % stakeholders who report their priorities are reflected 4. # community members participating	
Funding Dedicated, potential	Design and Build for Community, Ecology, and Performance Priorities	1. % community priorities reflected in the final product to the satisfaction of stakeholders	**Ecological** 1. Air quality improvement 2. Biodiversity 3. Heat island temperatures 4. Greenhouse gas reduction 5. Energy use reduction
Operational Infrastructure Software, workflows, decision-making processes, Communications processes	Maintain for Community, Ecology, and Performance Priorities	1. % individuals demonstrating competence and commitment for maintenance 2. % maintenance budget secured 3. % essential maintenance activities completed on schedule	**Performance** 1. Volume managed 2. Flood/ponding reduction 3. Water quality improvement
	Workforce Development and Local Sourcing	1. % contract $ to local SWMBEs 2. # mentored/trained + rating service as highly valuable 3. % supply purchase $ spent locally	

Access this full discussion draft at **http://bit.ly/EquityGSI**

CASE STUDIES

RETROFITTING PRIVATE PROPERTIES WITH GSI

Supporting dozens of community anchor institutions from coast to coast to retrofit their properties with utility incentives.

Community anchor property retrofits center equity

EQUITY-CENTERED SITE SELECTION

We prioritize community anchor sites primarily in low income neighborhoods and communities of color where stormwater challenges and environmental injustices often intersect.

COMMUNITY ACTIVATION

We center the community in every project by putting them in the driver's seat on project design, building knowledge and awareness through workshops, storytelling, and public celebration. They also take on long-term maintenance so we equip them with hands-on training and guides to build their capacity to care for their new amenities.

BENEFITS-DRIVEN DESIGN

We prioritize the benefits that matter most to the community in the design of the new landscape, not just the stormwater performance that the utility is seeking. They may want solutions to physical challenges like parking lots that are in disrepair or improve well-being for their community by creating outdoor space for reflection and learning, calming traffic, or improving air quality and biodiversity.

RESULTS

23
GSI developments currently in design, construction, and maintenance across 7 cities, with 20 more in pre-development.

75%
of projects are located in low income census tracts

90%
of projects are located in communities of color

100%
Designed in partnership with representative stakeholders to maximize their prioritized co-benefits.

COMMUNITY-FIRST GSI MASTER PLAN | YOUNGSTOWN, OHIO
A collaboration with dozens of local partners and 150+ community members to develop community-benefits driven GSI master plan.

Community co-creates the master plan to reflect their priorities

LOCAL PARTNERSHIPS

Identified a local community organizing partner which helped train an Action Team of 20 volunteers to lead campaign efforts.

Established working relationships with City and local nonprofit leaders.

Secured grants from three local foundations.

COMMUNITY EDUCATION

Launched a citywide #GreenisGood social media and PR campaign which secured 80K+ Facebook impressions and hundreds of thousands of media impressions.

Led two green infrastructure tours.

Educated residents at local fairs, festivals, and concerts.

COMMUNITY AUTHORSHIP

Created and led a Stakeholder Advisory Group through which a group of committed leaders provide guidance and liaise with the community.
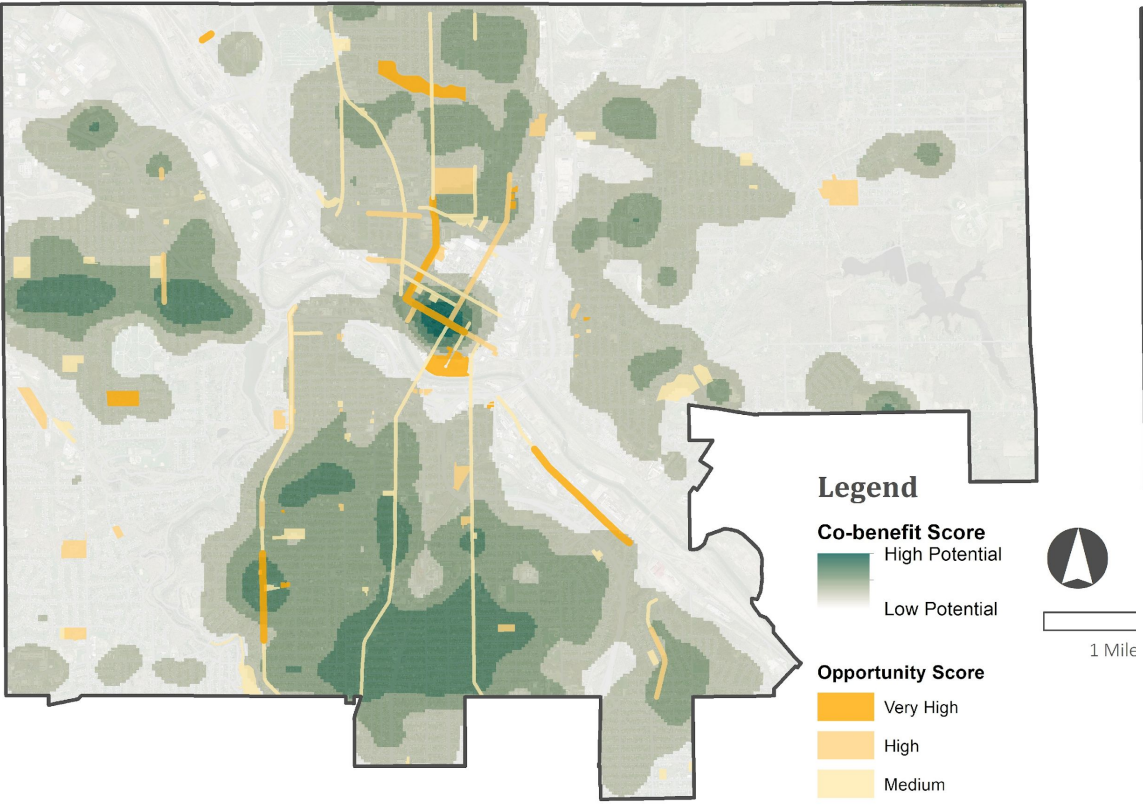
Hosted a community workshop series that attracted 150+ residents, and surveyed the community about the types of GSI they hope to see.

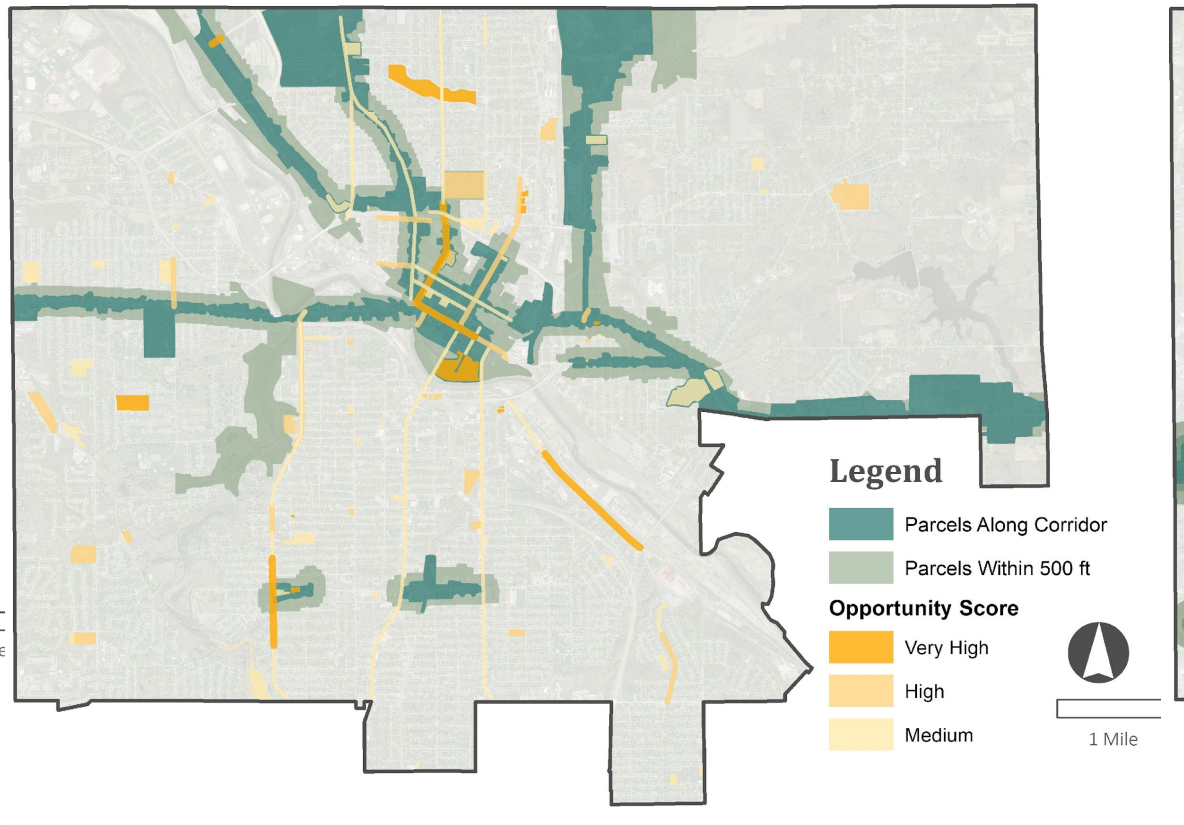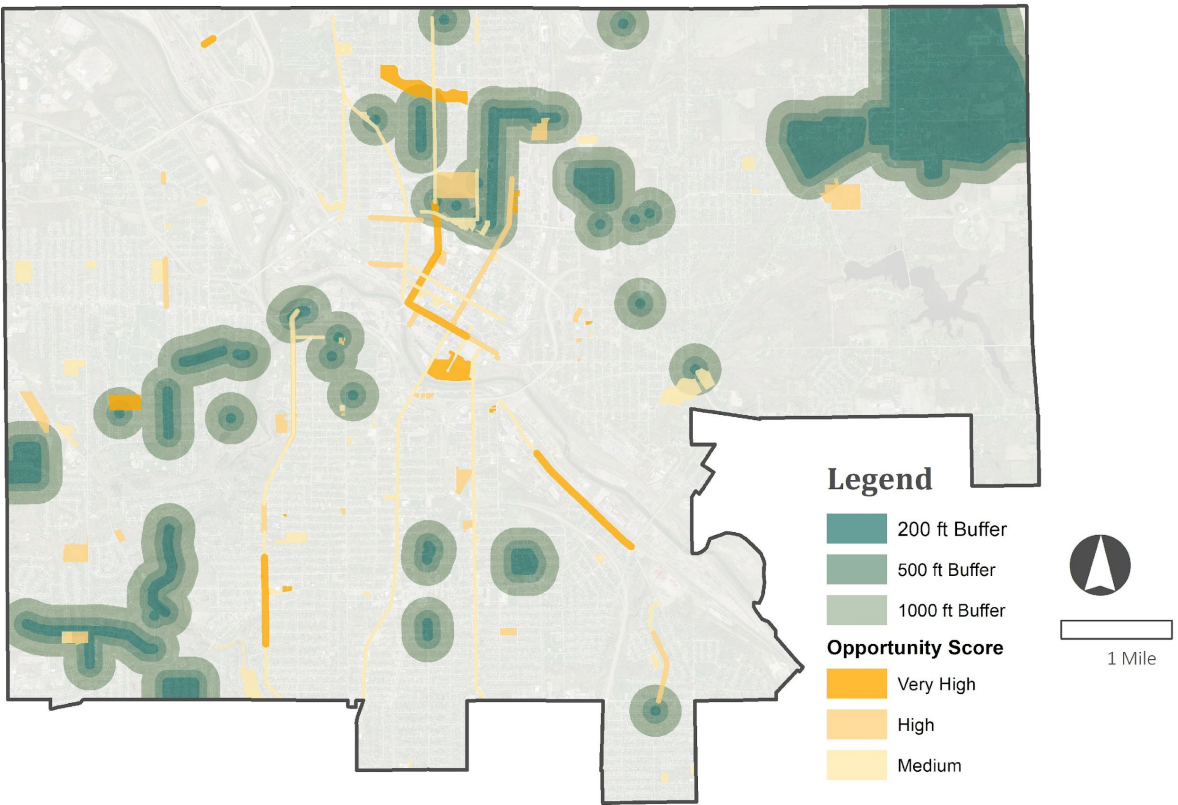# The resulting plan intersects technical performance opportunities with community priorities
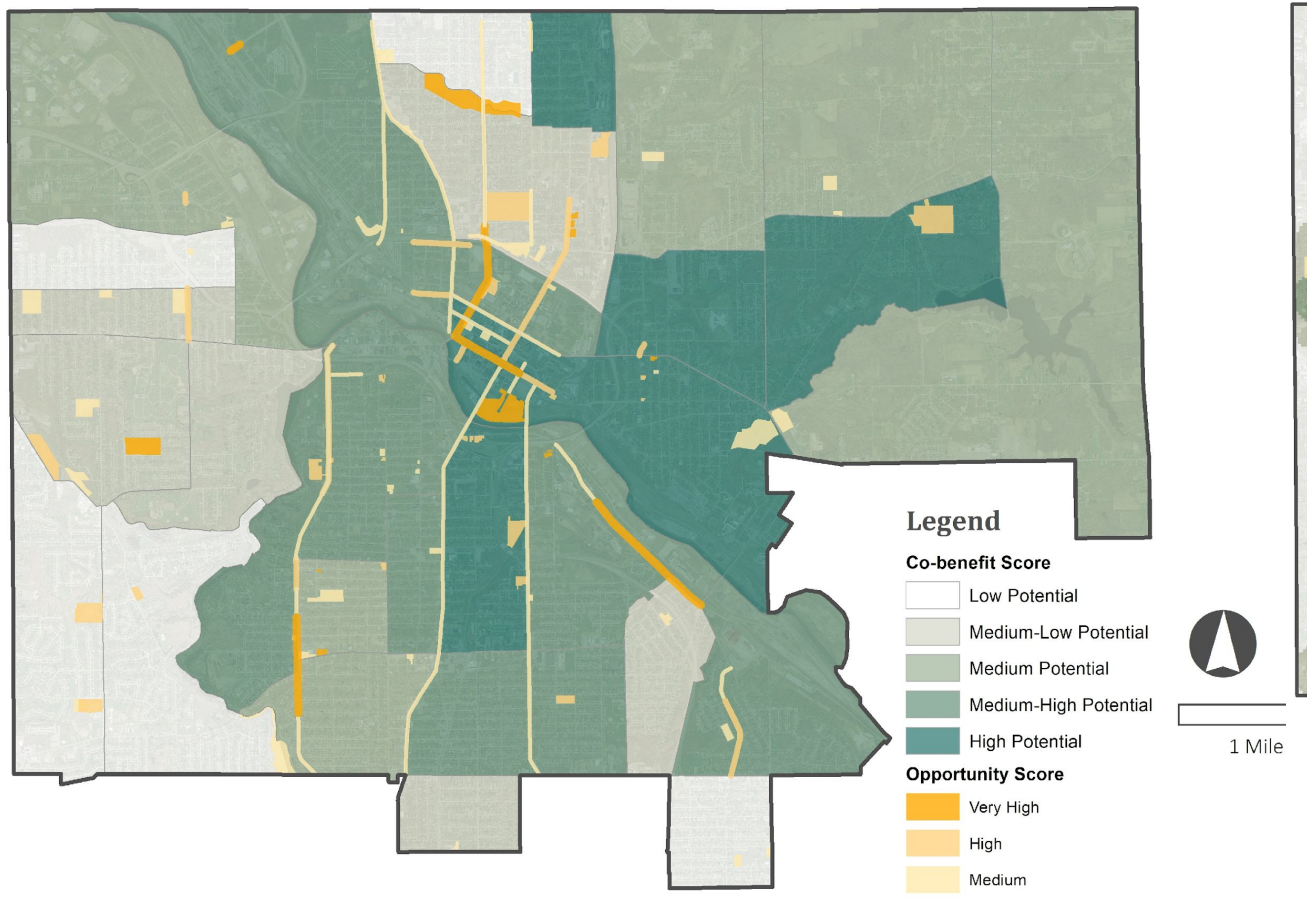
VERMONT GREEN SCHOOLS INITIATIVE

Administering a Block Grant Program that will support 47+ Vermont Public Schools to design green stormwater solutions.

Goal: equitably comply with Three Acre General Permit and improve Lake Champlain water quality.

VERMONT GREEN SCHOOLS INITIATIVE

EQUITABLE DISTRIBUTION

Block grant ensures public schools have the support needed to meet stormwater regulatory requirements to achieve greener, cooler spaces.

An analysis led by the **Trust for Public Land** will rank schools by equity criteria to help program team understand where additional supportive assistance may be needed.

COMMUNITY CAPACITY-BUILDING

By design, this initiative supports schools in leveraging their existing partners, honoring the local nonprofits and local design firms that have already been working with them.

Additionally, it resources Lake Champlain Sea Grant to provide community education.

EQUITABLE CONTRACTING

We have set goals for DBE participation and are proactively designing the procurement documents, outreach, and prospective contractor support to achieve them.

GOAL 1

GSI staff understand equity and are committed and equipped to advance it through their work.

Institutionalizing equitable practices is impossible without a shared commitment among the team to and the capabilities needed to collectively evolve culture, policies, and practices.

WHY?

HOW?

1 Articulate and model a clear commitment to supporting the team to do internal work to understand and develop capabilities and commitments for advancing equity.

2 Create safe spaces for team members at all levels to learn about equity and dialogue honestly about it conceptually, professionally, and personally.

3 Facilitate a collective internal process to create and adopt shared action plan for improving internal readiness. Implement the plan with key reflection points for team and individual staff development.

27

GOAL 2

Community members are essential partners and participants in all GSI program, policy, and project development.

One of the most fundamental actions practitioners can take is to meaningfully engage representative community stakeholders throughout GSI planning and delivery.

WHY?

HOW?

1 Develop and maintain a community engagement plan that combines historical input with refreshed input from representative community voices.

2 Engage community stakeholders as essential partners in the *upfront* planning and design of as many GSI program plans, policies, and projects as possible.

3 Engage community stakeholders as essential and informed partners, building trust and managing change through *consistent* engagement and communication.

28

GOAL 3

Project selection approach and investment levels proactively consider potential to advance equity.

One of the most powerful ways of advancing equity is through direct investment in communities experiencing inequity. Siting and planning is a phase where this discussion should take place.

WHY?

HOW?

1 Prioritize siting GSI in areas with the greatest potential to advance equity, co-creating the project siting approach with community input.

2 Develop project budget levels and funding decisions that take into account the potential equity improvement value of a project and the resources needed to realize that potential.

29

GOAL 4

Gentrification and displacement risk are proactively addressed in all GSI program, policy, and project development.

Low income communities and communities of color deserve to benefit from GSI without fear of being displaced by its installation.

WHY?

HOW?

1 Where gentrification / displacement may be a real / perceived risk, proactively engage in risk mitigation dialogue with the impacted community; include experts in the conversation.

2 Develop an anti-gentrification and displacement plan for each program and project.

3 Create an approach to evaluating the extent to which GSI projects may have contributed to gentrification / displacement.

4 Catalyze multi-agency conversations about the role that policy plays in combating green gentrification.

GOAL 5

GSI projects are designed, constructed, and maintained to provide lasting community benefit

Different types of green infrastructure contribute to different social and environmental co-benefits. And design can have significant economic, cultural, and displacement impacts.

WHY?

HOW?

1 Center community members as essential partners and participants in the design and development of all GSI projects.

2 Refine and apply technical design standards to articulate and prioritize design choices that advance equity..

3 Ensure that construction quality delivers on the benefits and priorities that were agreed to with impacted community stakeholders.

4 Minimize and communicate construction-related disruptions in a way that builds trust and relationship with impacted community members.

5 Develop a plan and budget for maintenance early in the design phase.

31

GOAL 6

GSI procurement, employment, and workforce development practices build economic stability and wealth for underinvested communities.

GSI involves significant investment in a local workforce and assets, and is especially accessible to new workers through job training and other workforce development strategies.

WHY?

HOW?

1 Identify and develop an action plan to eliminate barriers for SWMBE firm, local, and hyper-local hiring and sourcing.

2 Assess current % of supply purchases that source from local firms and develop and implement an action plan to increase over time.

3 Create or improve a GSI workforce development program with a clear understanding of the barriers that prevent disadvantaged populations from accessing employment in the water sector, recruitment and program models that are most effective at overcoming those barriers, and sufficient resources to effectively recruit for, run, and evaluate a best practice program.

GOAL 7

GSI policy and program design, management, and reporting proactively elevate and drive transparency around equity

Equity planning should be built into program design and policies upfront to avoid uphill battles of retrofitting an existing program to become more equitable.

WHY?

HOW?

1 Compare the potential equity value of program and policy options to select equity-centered models.

2 Build equity planning into program design upfront to avoid the uphill battle of retrofitting an existing program to become equitable.

3 Develop and implement a public reporting plan that shares program and project results, with explicit transparency on 1) activities undertaken to proactively advance equity, 2) results to date, and 3) work yet to be done.

Application

1. What ideas has this sparked or validated for you on better embedding equity in your climate action strategies?

2. What recommendations do you have for what we might include in the final Framework (or other forms of support) based on your experience?

Planning, Siting, and Investment

Program Design

Project Design

Engage your team in a conversation about how your work is designed to center equity; help is available whenever you get stuck.

Community Representation, Ownership, and Engagement

Construction, Maintenance, and Workforce Development

Gentrification and Displacement

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