



SOUTHWEST
ENVIRONMENTAL
FINANCE CENTER



Green Infrastructure Webinar Series

Webinar 3: Navigating the Green Infrastructure Policy Landscape

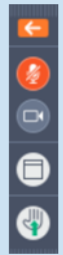
Thursday, 10 October 2024
10:00am Mountain Time



Logistics

Using the control panel

Opening the control panel



Show your control panel

All phones/microphones are muted for the duration of the webinar

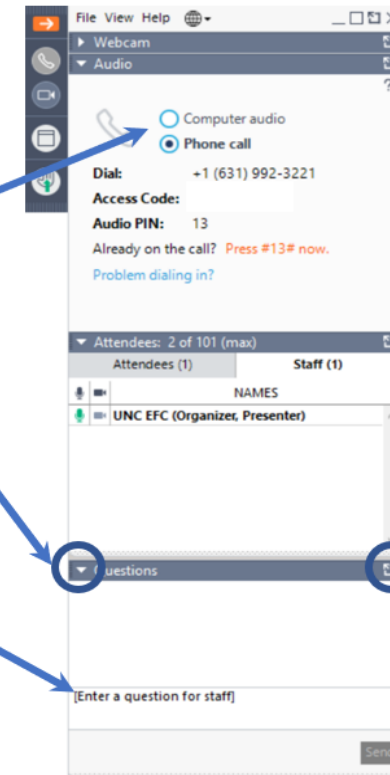
Toggle between full screen/window screen view


Audio: please choose between computer audio or phone call

If you do not hear audio right now, please check your speaker volume or enter #[your Audio PIN]# if using phone

Click  to open in Control Panel

Submit **questions** in the Questions box at any time, and press [Send]



Click  to open in separate box and resize

Certificate of Completion

This session has **NOT** been submitted for pre-approval of Continuing Education Credits, but eligible attendees will receive a certificate of attendance for their personal record.

To receive a certificate:

- You must attend the entire session
- You must register and attend using your real name and unique email address - group viewing credit will not be acceptable
- You must participate in polls
- Certificates will be sent via email within 30 days

If you have questions or need assistance, please contact smallsystems@syr.edu.

About Us

The **Environmental Finance Center Network (EFCN)** is a university- and non-profit-based organization creating innovative solutions to the difficult how-to-pay issues of environmental protection and water infrastructure.

The EFCN works collectively and as individual centers to address these issues across the entire U.S, including the 5 territories and the Navajo Nation. The EFCN aims to assist public and private sectors through training, direct professional assistance, production of durable resources, and innovative policy ideas.



Webinar Series Overview

| Title | Date |
|---|------------------------|
| Green Infrastructure 101 | 18 April 2024 |
| Equitable Green Infrastructure in a Changing Climate | 25 July 2024 |
| Navigating the Green Infrastructure Policy Landscape | 10 October 2024 |
| Asset Management for Green Infrastructure | 23 January 2025 |
| Funding Green Infrastructure | 24 April 2025 |
| Partnerships are Critical to Successful Green Infrastructure | 17 July 2025 |
| Building a Green Infrastructure Workforce | 16 October 2025 |
| Green Infrastructure Frameworks for Environmental Justice | 22 January 2026 |
| Source Water Protection and Watershed Planning for Wildfire | 16 April 2026 |
| Bridging the Gap: Integrating Land and Water Planning for Sustainable Futures | 16 July 2026 |

Overview of Today's Webinar

1. Brief recap: What is green infrastructure?
2. Albuquerque's GSI Policy Journey with Tammy Fiebelkorn
3. Green Stormwater Infrastructure National and State Policy Opportunities with Pete Hill
4. Resources
5. Question & Answer session with speakers

Today's Speakers



Shannon Sloane Pepper
Trainer and Technical
Assistance Provider



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Tammy Fiebelkorn
Albuquerque City Counselor,
District 7
Western Resource Advocates
Founder, Positive Links



Pete Hill
Senior Policy Advisor, Green
Infrastructure at
Environmental Policy
Innovation Center

About You!



Please
complete the
poll that pops
up on your
screen.



Quick Recap: Green Infrastructure

What makes green infrastructure such a compelling water management option for communities of all sizes?

Water/Wastewater/Stormwater Infrastructure

Gray:



Green:



Example: Gray & Green Stormwater Infrastructure

Gray



Sewer pipe

Green



Infiltration trench

Some co-benefits of infiltration trench:

- Filtration of water through soil
 - Plant & fungi uptake of pollutants
- Dispersed absorption – stormwater does not make it to treatment plant
- Space for public enjoyment, habitat

Function: Convey storm water away from roads/buildings

Why Green Infrastructure?



Climate Resiliency



Co-Benefits



Partnerships

Policy is a Crucial Part of Green Infrastructure



Policy **limits** what is possible in terms of what you build, and also **creates the space** for whatever you want to build

Albuquerque's GSI Policy Journey

Tammy Fiebelkorn

Albuquerque City Councilor, District

7



Albuquerque's Journey



Complete Streets
Ordinance

Integrated
Development
Ordinance

GSI incorporation
into Complete
Streets

Albuquerque's New GSI Policy



The diagram consists of two identical rectangular boxes with rounded corners, each with a dark blue header and a light gray body. The left box contains the word 'Included' and the right box contains the words 'Not Included'. Both boxes have a dark blue shadow behind them.

Included

Not
Included

The Definition that went through 12 revisions:

- 1 **SECTION 1. Chapter 6, Article 5, Part 6, Section 5 of the Revised**
- 2 **Ordinances of Albuquerque is hereby amended to insert a new definition in**
- 3 **§ 6-5-6-5 DEFINITIONS:**
- 4 ***ARID ADAPTED GREEN STORMWATER INFRASTRUCTURE.* A set of**
- 5 **practices adapted to arid and semi-arid climates that mimic natural processes**
- 6 **to retain and use stormwater. By promoting infiltration, evapotranspiration,**
- 7 **and healthy soils throughout the landscape, green stormwater infrastructure**
- 8 **preserves and restores the natural hydrologic cycle.**



What's actually required?

12 “§ 6-5-6-6 GENERAL POLICY.

13 The following complete streets principles shall apply to all projects on streets
14 that are within the jurisdiction of this ordinance. All applicable provisions that
15 further the concept of Complete Streets within the Development Process
16 Manual and the Capital Implementation Program must also be considered.

17 (K) Arid adapted ‘Green stormwater infrastructure’ best practices shall be
18 designed and incorporated into road improvement, median, landscape buffer,
19 and bulb-out projects **to the extent practicable** to allow for stormwater
20 infiltration and landscape irrigation. Green stormwater infrastructure features
21 incorporated into Complete Streets Projects should include:

22 (1). Green stormwater features should be depressed to collect and filter
23 stormwater by biological processes and supply supplemental irrigation to
24 landscape plants.

rscored Material] - New
rough Material] - Deletion



More Requirements:

- ~~[Bracketed/Underlined]~~ 25 (2). For new roadways and roadways undergoing rehabilitation and
~~[Bracketed/Strikethrough]~~ 26 rebuilding, the grade of the roadway cross-section shall, to the degree feasible,
27 direct stormwater to the green stormwater features.
- 28 (3). Excess stormwater not infiltrated should be directed into the existing
29 storm drain system overflow catchment.
- 30 (4). To allow for maximum stormwater infiltration into the soil, to
31 generate healthy soils that enable and improve the biological filtering process,
32 organic mulch should be used in areas that do not have high flow rates and



More Requirements:

- 1 non-permeable fabric and other barriers that block infiltration should not be
- 2 included in green stormwater infrastructure.
- 3 (5). Green stormwater infrastructure shall be designed for ease of
- 4 maintenance by including a sediment trap or other best practice for the
- 5 collection and removal of debris, trash, and sediment.
- 6 (6). Other features, as needed, which meet the intent of Arid Adapted
- 7 Green Stormwater Infrastructure as defined in § 6-5-6-5.”



Building Blocks for GSI Policy



EXPERTISE



STAFF SUPPORT



PUBLIC SUPPORT



TIMELINESS



ELECTED OFFICIAL
SUPPORT

Building Political Support



Start early – go
slow



Show need



Work
collaboratively



Get bi-partisan
support

Albuquerque's Next Steps

Pilot project in District 7

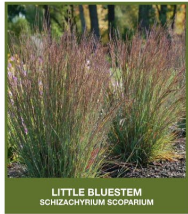
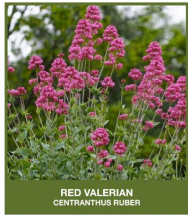
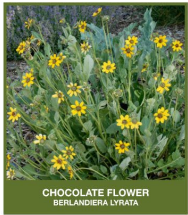
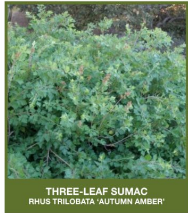
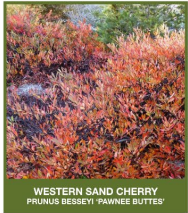
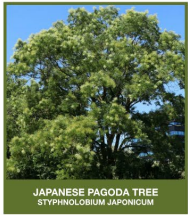
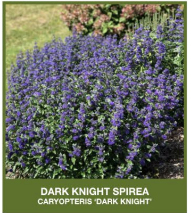
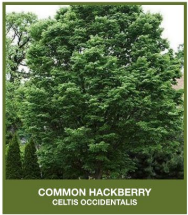
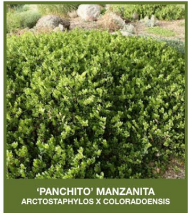
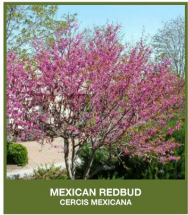
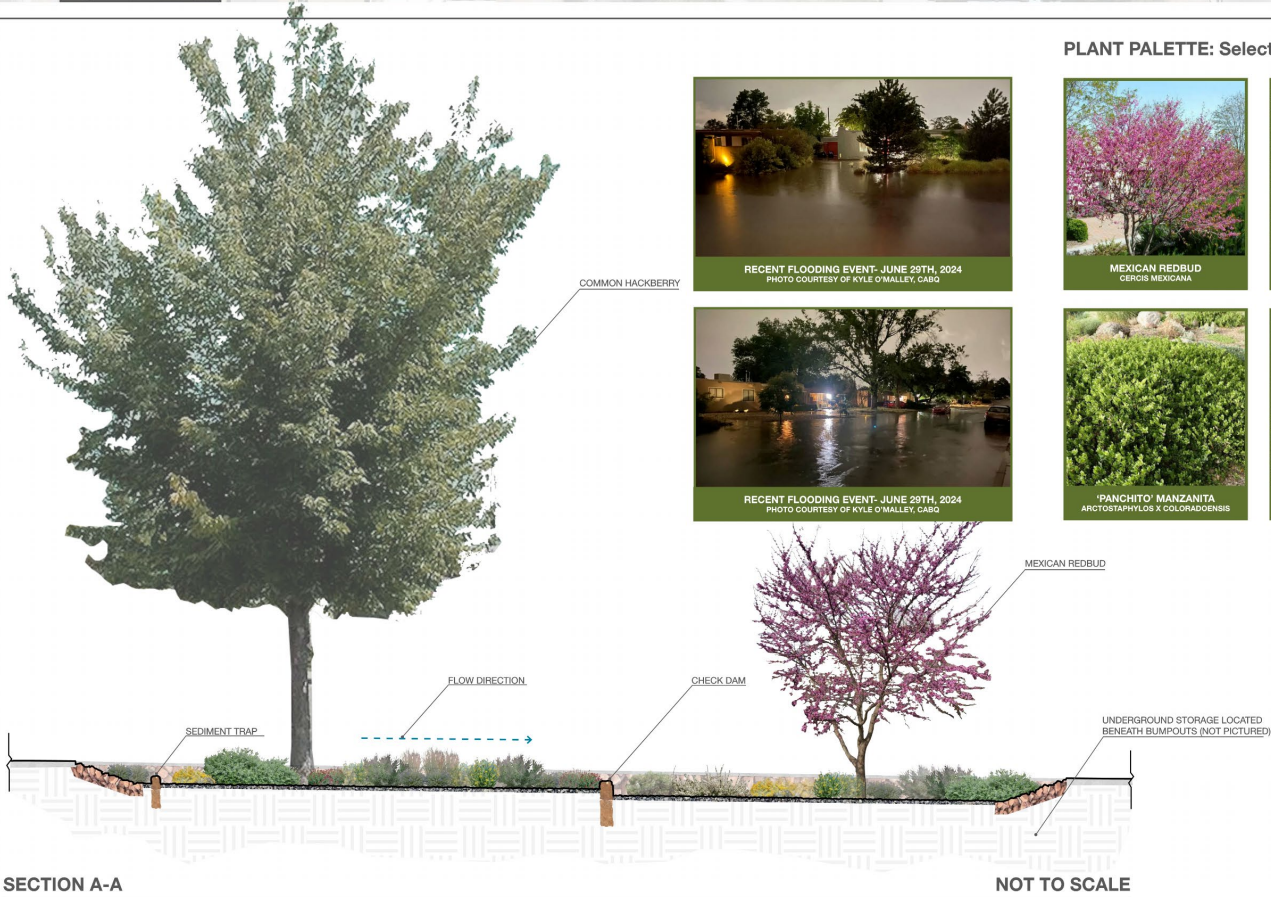
Revamp of existing bumpouts, etc.

GSI expert contract assistance

More policy needed



PLANT PALETTE: Selected by neighborhood during the previous stage of project planning.



PUEBLO ALTO MILE HI GSI PILOT: PUEBLO ALTO NEIGHBORHOOD

JULY 27, 2024



Bohannon  **Huston**

groundworkstudio

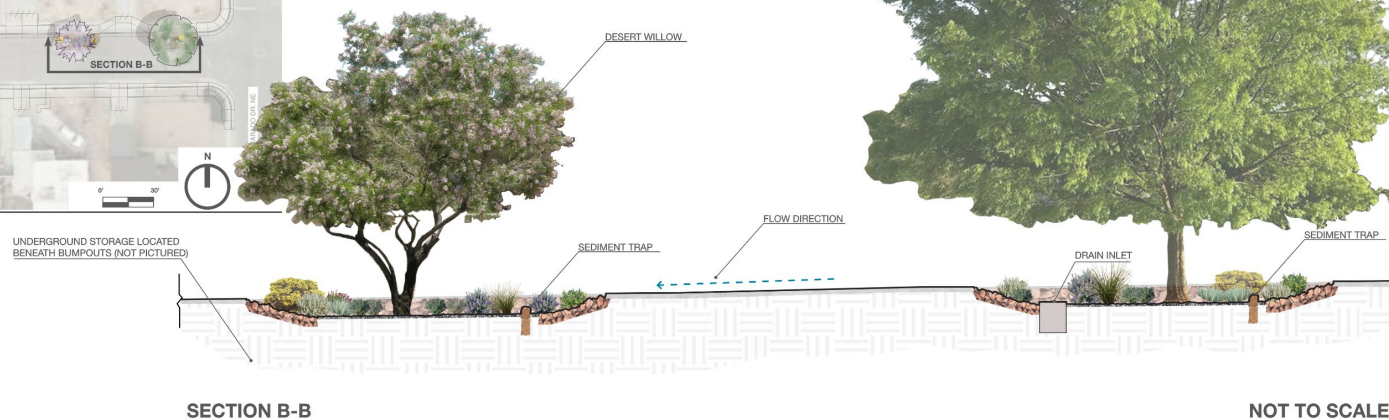




SITE PLAN



PLANT PALETTE: Selected by neighborhood during the previous stage of project planning.



PUEBLO ALTO MILE HI GSI PILOT: MILE HI NEIGHBORHOOD

JULY 27, 2024



Bohannon  Huston

groundworkstudio



Equity Matters

- Underserved Communities:
 - Geographic Locations
 - Climate Impacts
 - Inability to Fund Improvements
 - Need for Government Intervention

Additional Policy Needs



New
vs
Existing

Incentives
vs
Regulation

Public
vs
Private

Moving Forward



WORKING GROUP
FORMED



IDENTIFY NEEDS



INCREASE
FUNDING



ADDITIONAL
POLICY

Thank you!

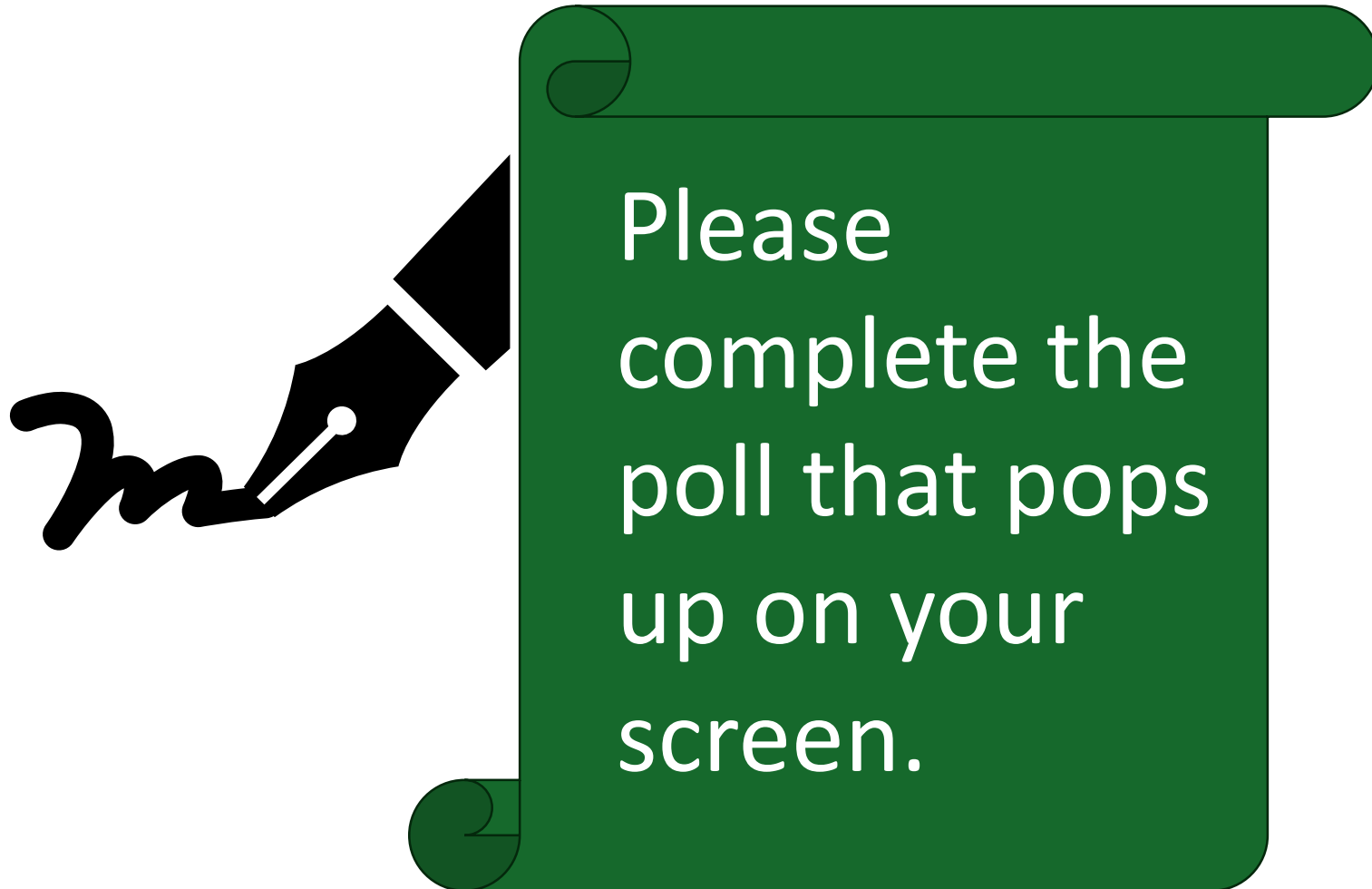
Tammy Fiebelkorn
Albuquerque City Councilor,
District 7

tfiebelkorn@cabq.gov

505-410-3884



Green Infrastructure Policy in your Area



Green Stormwater Infrastructure national and state policy opportunities

October 10, 2024



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We build policies that deliver
spectacular improvement in the
speed of environmental
progress.



What we work



Water Equity



Restoration



Technology



Endangered Species



Procurement



Agriculture

Agenda

1. What is national/state GSI policy?
2. Drivers of GSI implementation
3. Where we are now
4. Opportunities to boost GSI
5. What might constitute national GSI policy?

What is national/state GSI “policy”?

Decisions on project implementation and ease of implementation mostly decided on a local level

Current policy levers boil down to

- Regulation/consent decrees
- Administrative rules and priorities
- Funding (state and federal)

Mountains of case studies, technical assistance/guidance, encouragement, aspirational and inspiration

NATURE-BASED SOLUTIONS RESOURCE GUIDE 2.0

COMPENDIUM OF FEDERAL EXAMPLES,
GUIDANCE, RESOURCE DOCUMENTS,
TOOLS, TECHNICAL ASSISTANCE, AND
FUNDING PROGRAMS

DECEMBER 2023



Drivers of implementation - regulatory & admin rules

STRONG

1. CSO consent decrees (DC, Philly, Cincinnati, Lancaster, Peoria, etc..)
2. A few TMDLs (Chesapeake Bay the star....)

WEAK

1. MS4 permits (focus on 6 required elements - lots of necessary housekeeping, little appetite for retrofits)
2. 10% Green Project Reserve for CWSRF (encourages state to hit 20%)
*"subject to available projects",
"GI, Water and energy efficiency,
and other env. beneficial
projects"*

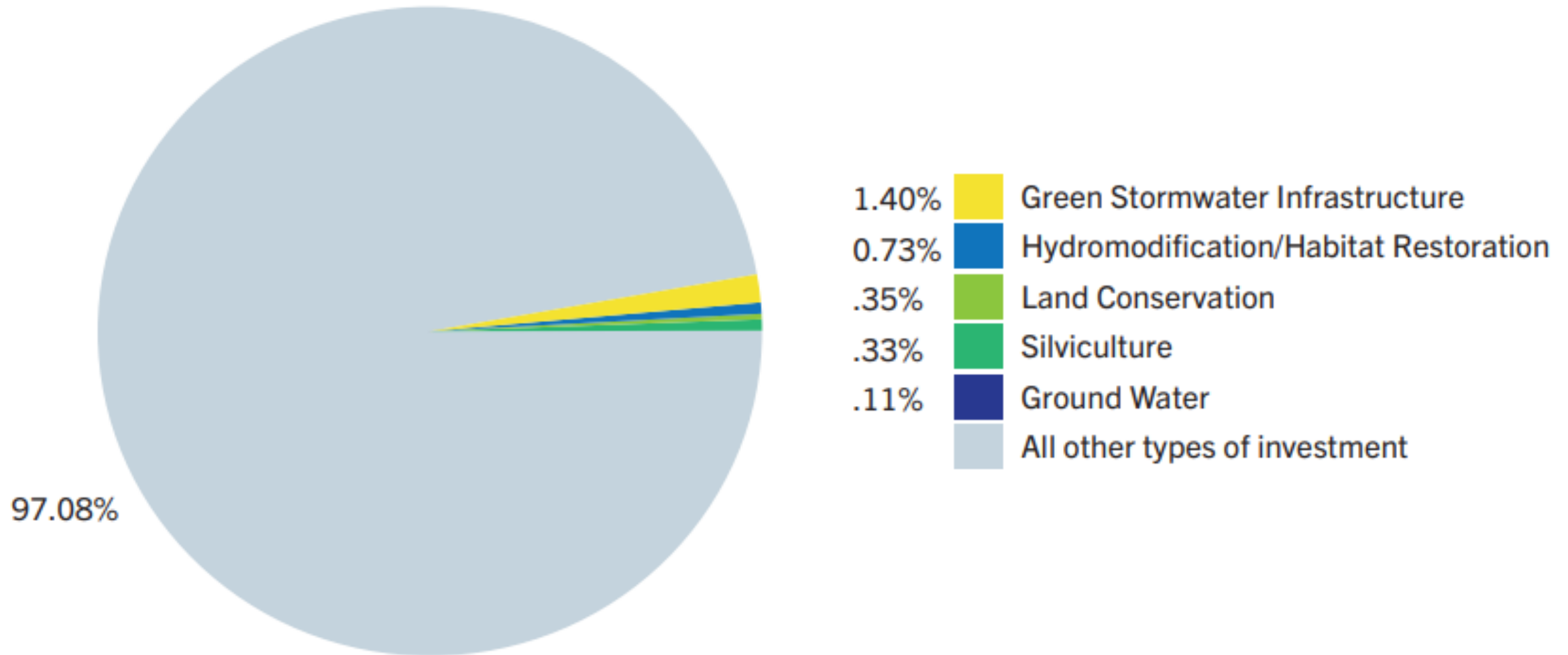
Federal Funding (2024)

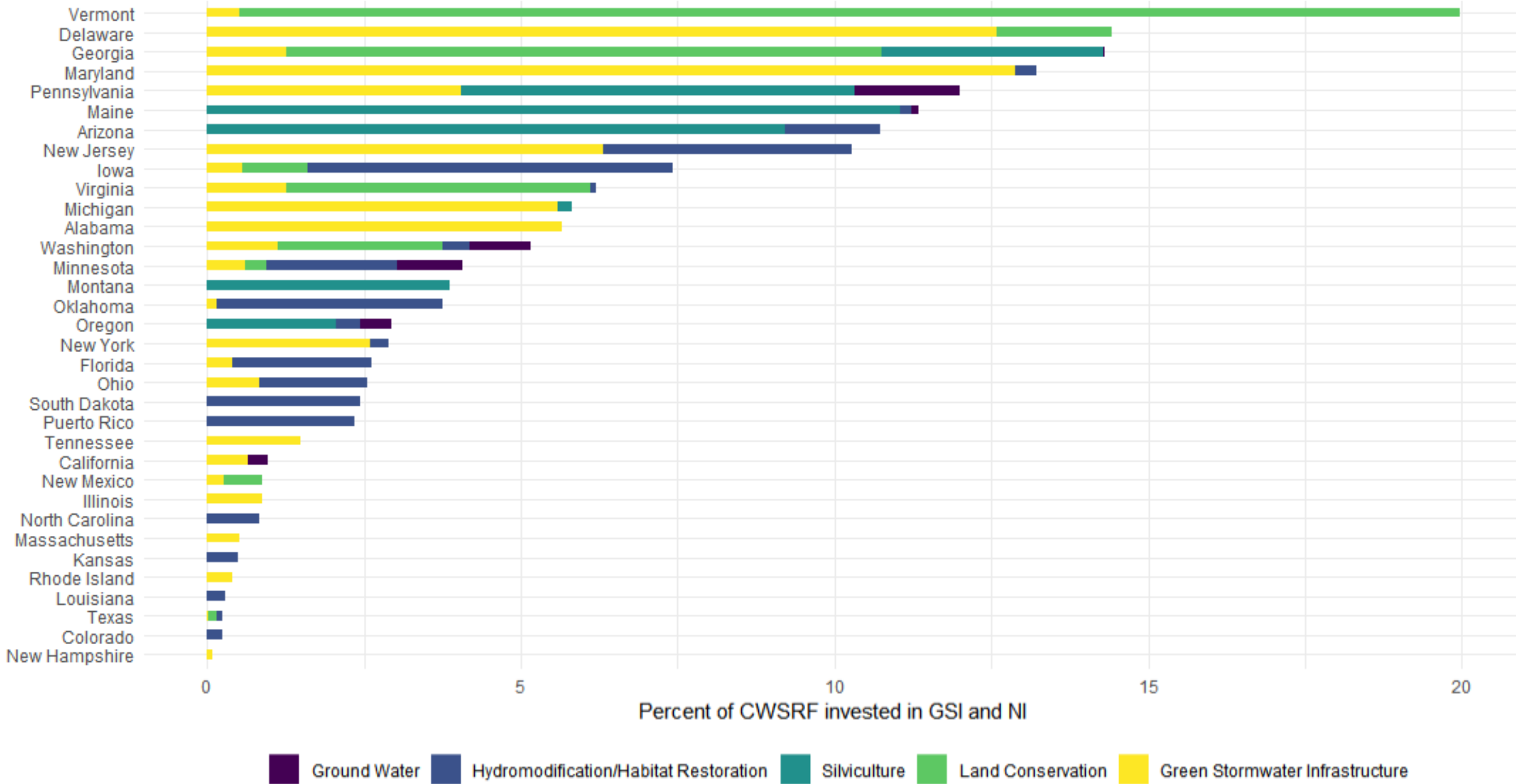
| | |
|---|--------|
| EPA Overflow and Stormwater Grants: | 41M |
| CWSRF (BIL supplemental): | 2,403M |
| Community Change Grants (EPA): | 2,000M |
| FEMA Building Resilient Infr. and Comm. | 880M |

GSI is an eligible project type or strategy for all -

If 5% were spent on GSI, that's 266M/year!

Low percentage of SRF \$ are used for nature-based infrastructure





Is GSI the “spice” that sits on the shelf?



Biorention

Green Roofs

Permeable pavers

Cisterns



Where are we now?

1. Some very impressive (sometimes very expensive) examples that don't always translate to many parts of the country.
2. Unevenly distributed GSI
3. Subset of urban GSI evangelists

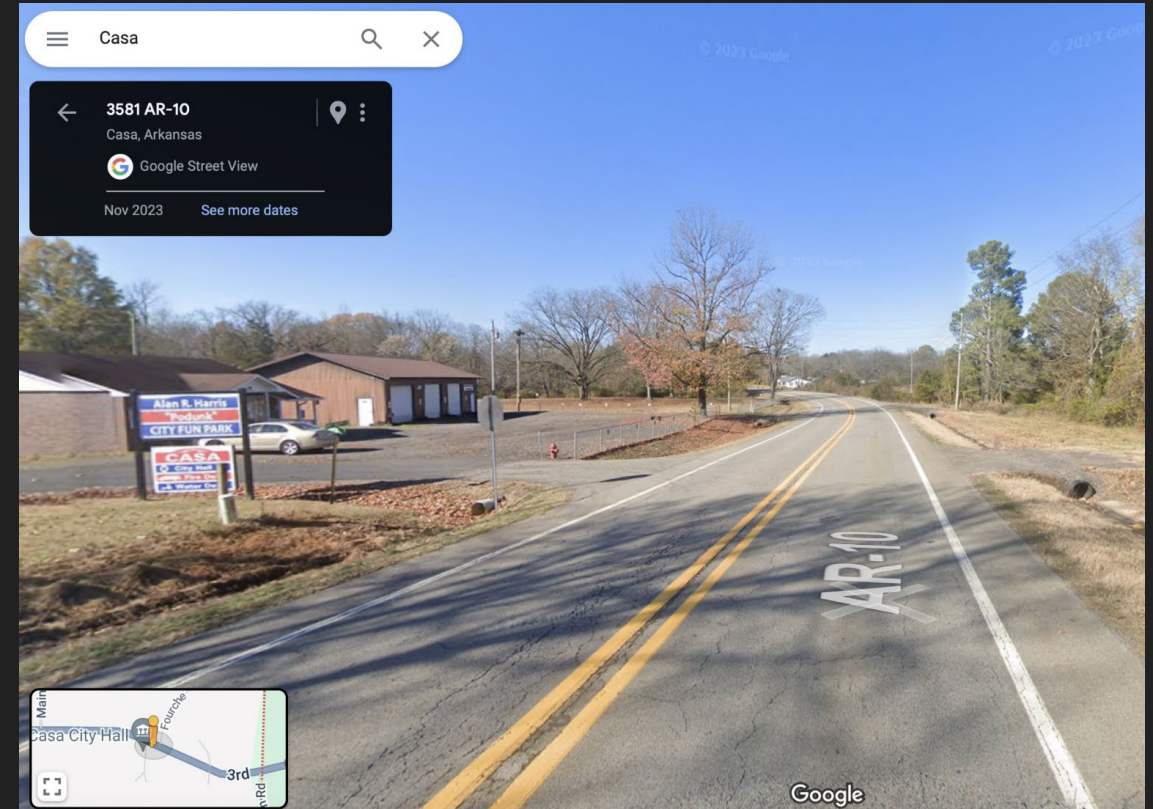


GSI in vastly different contexts



Image Source: [Northlake Commons | Weber Thompson](#)

Seattle Public Utilities “beyond code”



Casa, AR - pop. 171
regular flooding

Things EPIC is doing to expand the reach of GSI

1. Engaging with state SRF programs, influencing state administrative prioritization criteria

The screenshot displays the River Network website interface. On the left is a blue sidebar with the following sections:

- River Network** (with logo)
- YOUR GROUPS** (with a dropdown arrow and a search bar)
- SUGGESTED GROUPS** (with a "View all" button):
 - SRF State Advocates Forum
 - Equitable Development (UWLN)
 - River Network
 - Litter Free Waterways Network
 - Colorado Watershed Planning Learning Network
 - Leaders of Color Network
- CONVERSATIONS** (with a plus icon):
 - Reach out to members and spark a conversation!
 - [Start a new chat](#)

The main content area on the right features a search bar at the top: "Search in River Network". Below it is a navigation bar with tabs: Discussion, Poll, Event, and Opportunity. The "Discussion" tab is active.

The main content area displays a form for creating a new discussion:

What's this about?
What would you like to say?

Below the form is a rich text editor with icons for bold (B), italic (I), underline (U), heading (H1, H2, H3), bulleted list, numbered list, link, emoji, image, video, and a share icon. There are "Cancel" and "Post" buttons.

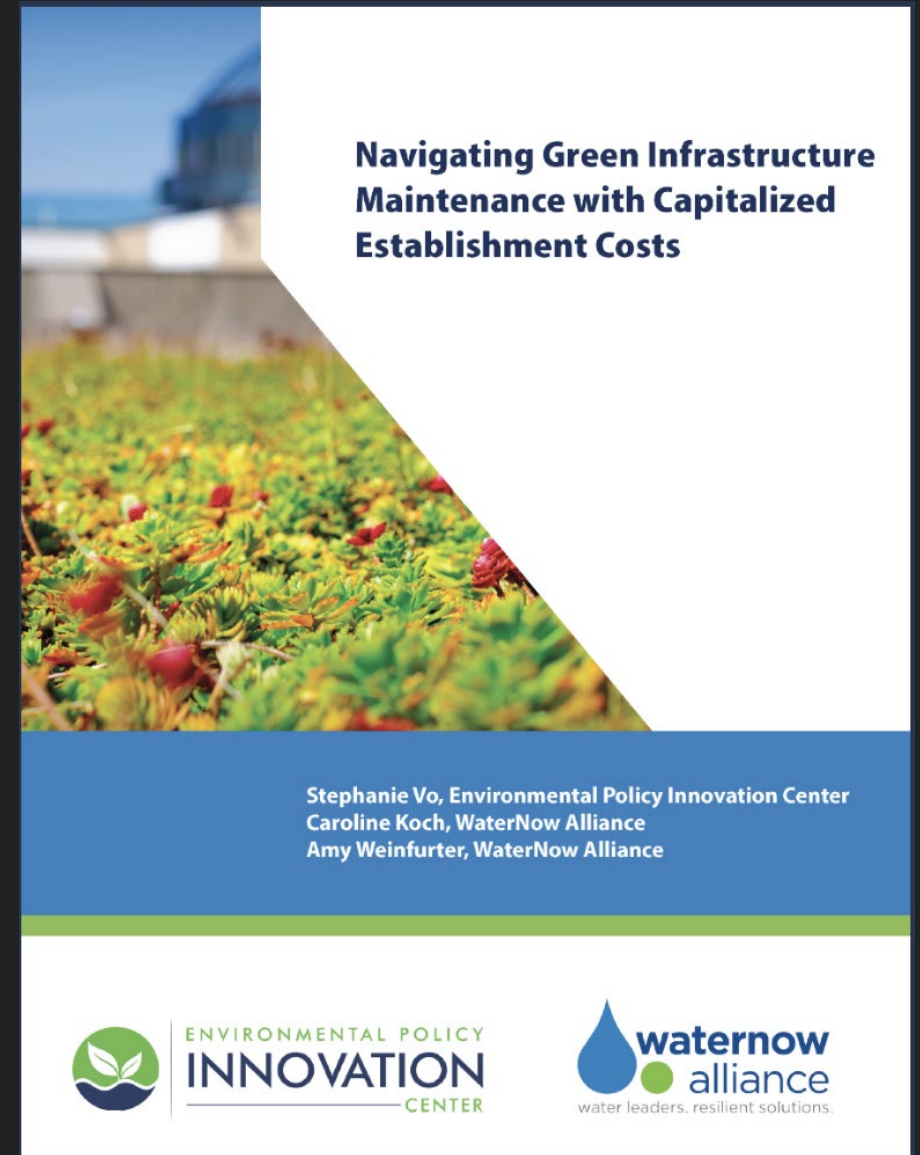
Below the form, there is a section titled "Highlighted Posts" with a counter of 2. It shows two posts:

- Jenna Voss** (Alliance for the Great Lakes) - 17 Sep 2024:
This IUP season - how's it going?
Many of us have engaged SRF state administrators and submitted Intended Use Plan (IUP) comments this season. If you have, how did the experience go for you?
[Read More](#)
2 reactions
- Sapna Mulki** (EPIC) - 22 May 2024:
Intended Use Plans (IUP) Tracker is Available!
IUP season is upon us and we're tracking their release and other vital information [here!](#) At the next office hour on June 4 at 11 a.m. EST, we will
[Read More](#)
3 reactions

At the bottom of the main content area, there is a row of member avatars and a "View all 221 members" link.

Things EPIC is doing to expand the reach of GSI

2. Lifting up ways to incorporate maintenance into capital costs



Things EPIC is doing to expand the reach of GSI

3. Supporting the development of Community-Based Public- Private Partnerships (CBP3s)



Washington State Standing Up Community-Based Public-Private Partnerships for Green Stormwater Projects

May 8, 2024

Things EPIC is doing to expand the reach of GSI

4. Lifting up best state practices that support GSI



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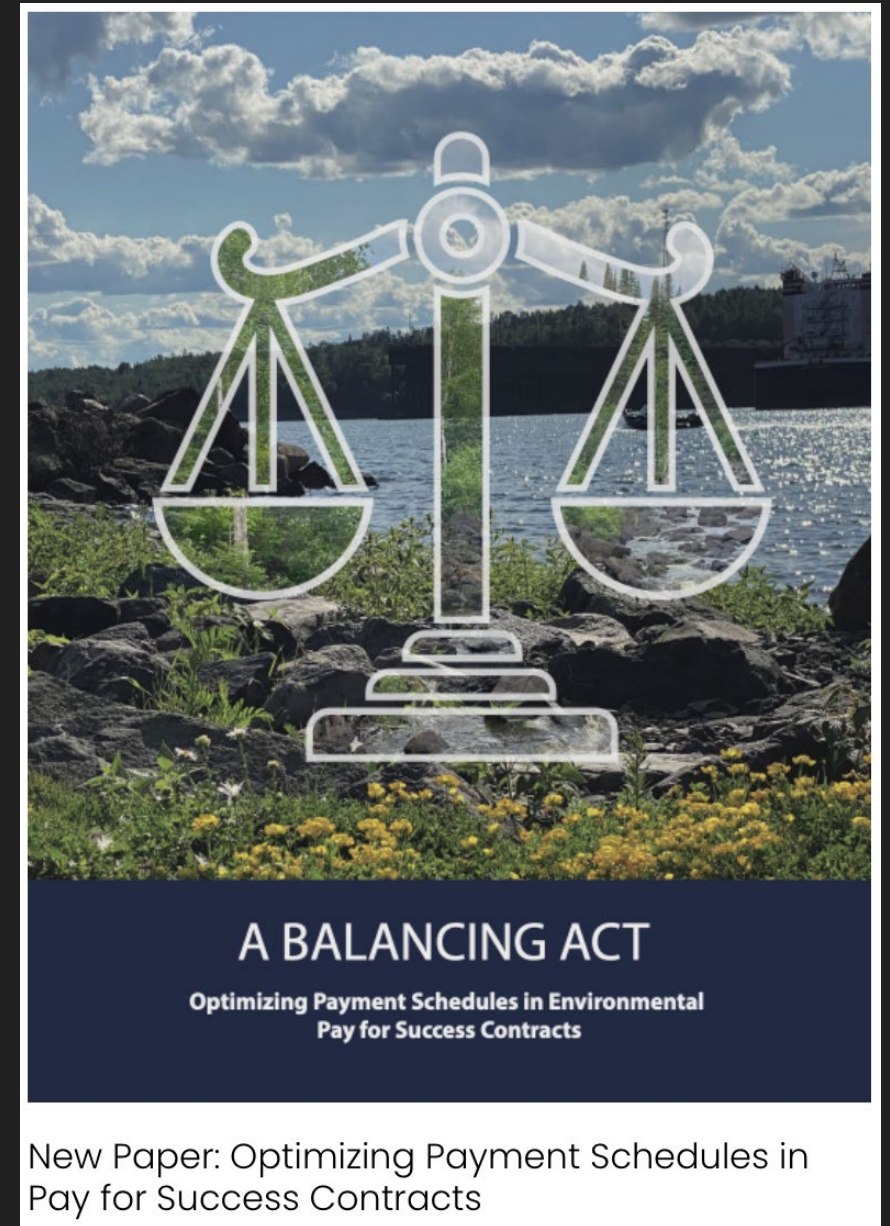
[green infrastructure](#) - [news](#) - [water infrastructure](#) - [water policy](#) - [water technical assistance](#) Aug 21 - Written By Pete Hill

Take a hike: What states are doing to support more green stormwater infrastructure through planning and funding

Things EPIC is doing to expand the reach of GSI

5. Tracking the results of alternative contracting arrangements

Some have been shown to reduce unit costs for stormwater capture and treatment (Anne Arundel County, MD)



What might comprise elements of a national GSI policy?

Establishment of GSI reserve for major federal pots of funding (would require that Congress stipulate this in funding appropriations).

5% of funding stream reserved for GSI with target of distributing 50% in Disadvantaged Communities (DACs)

Commitment of states to prioritize GSI by stipulating similar targets (ie..2022 [Maryland Conservation Finance Act](#))

What national GSI funding policy would drive the local changes needed to make GSI easier?

Workforce Development & Integration of GSI into standard workforce development funding streams

Local business support and training

Local code and ordinance updates

Stormwater Utility existence

Econ. development/beautification plans must include GSI

Integration of GSI master plan into local TMDLs for lakes/rivers

**will look different in small/large communities*





Workforce
Development

Local
redevelopment
plans codify GSI

Local code updates

Stormwater Utility existence

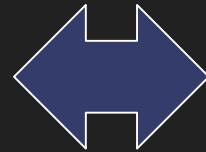
Incentivizing local policy changes with funding

Local policy changes to support GSI

Often not enforceable requirements but rather best practices specific to community

Amenable to rating system (ie..1-5)

Critical to achieving co-benefits of GSI (workforce, community health, economic)



Federal funding

Tying level of federal cost-share to these policy changes will only increase effectiveness of federal \$

Beyond “check marks” to evaluating ability to deliver quality GSI

Can drive communities to make often challenging tweaks

Community GSI rating system

| GSI support rating system | Points based upon completeness |
|--|---------------------------------------|
| GSI integrated into workforce development pgms. | 0-15 |
| Local business training in GSI techniques | 0-15 |
| Local code and ordinance updates | 0-15 |
| Stormwater Utility formation | 0-15 |
| Economic development plans codify GSI | 0-15 |
| TMDL implementation plans integrating GSI | 0-15 |
| <i>Percentage of federal cost-share</i> | 90 |

Questions?

pete@policyinnovation.org

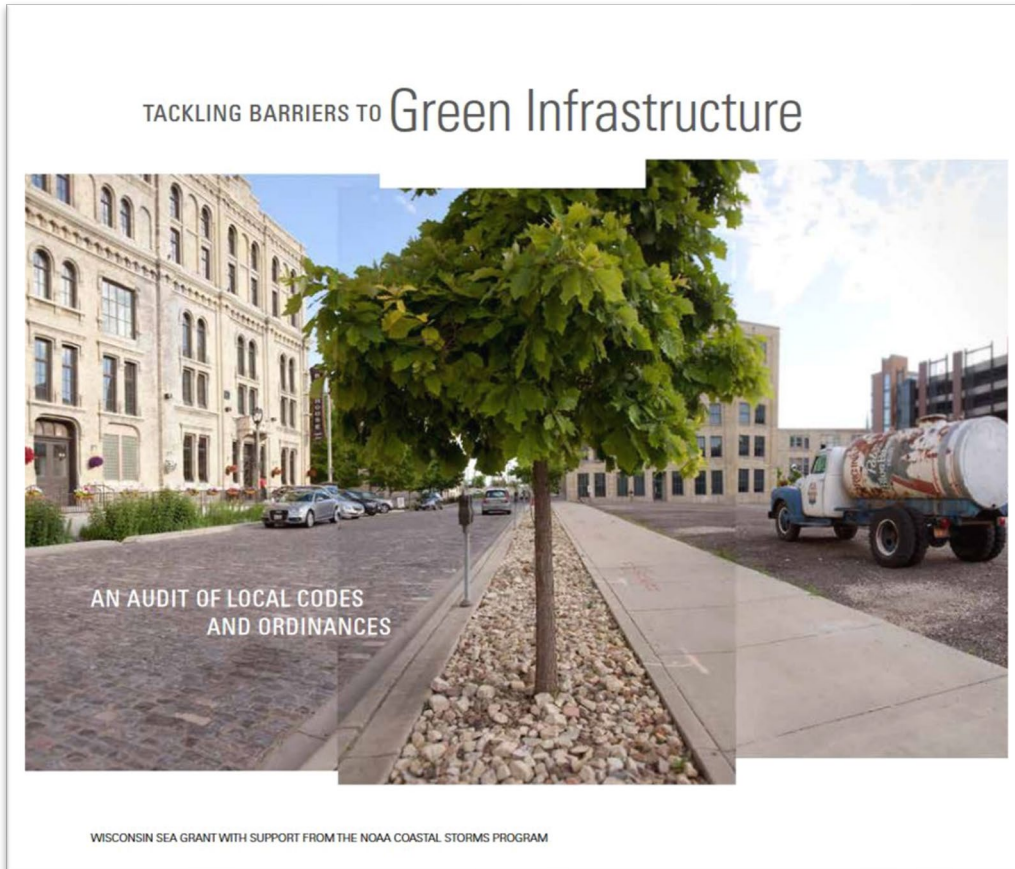


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Additional Resources



Tackling Barriers to Green Infrastructure: An Audit of Local Codes and Ordinances



COMMUNITY SCOPING WORKSHEET

Investigating concerns about or objections to green infrastructure can help you understand why a community may be hesitant to implement green infrastructure. A dialogue about these issues can give you critical information regarding the community's experience with green infrastructure.

Community Planning

1. Has a comprehensive plan been adopted for the community?
☐ Yes ☐ No

If yes, how are the community's natural resources addressed in the comprehensive plan? _____

If yes, is there specific attention to the community's water resources in the comprehensive plan?
☐ Yes ☐ No

If yes, is green infrastructure implementation listed as a key element for implementation?
☐ Yes ☐ No

2. Has your community taken part in the development of a watershed restoration or other similar plan?
☐ Yes ☐ No

3. Does the community's hazard mitigation plan identify green infrastructure as a mitigation activity?
☐ Yes ☐ No

Natural Assets

1. What are the natural resources of your community?

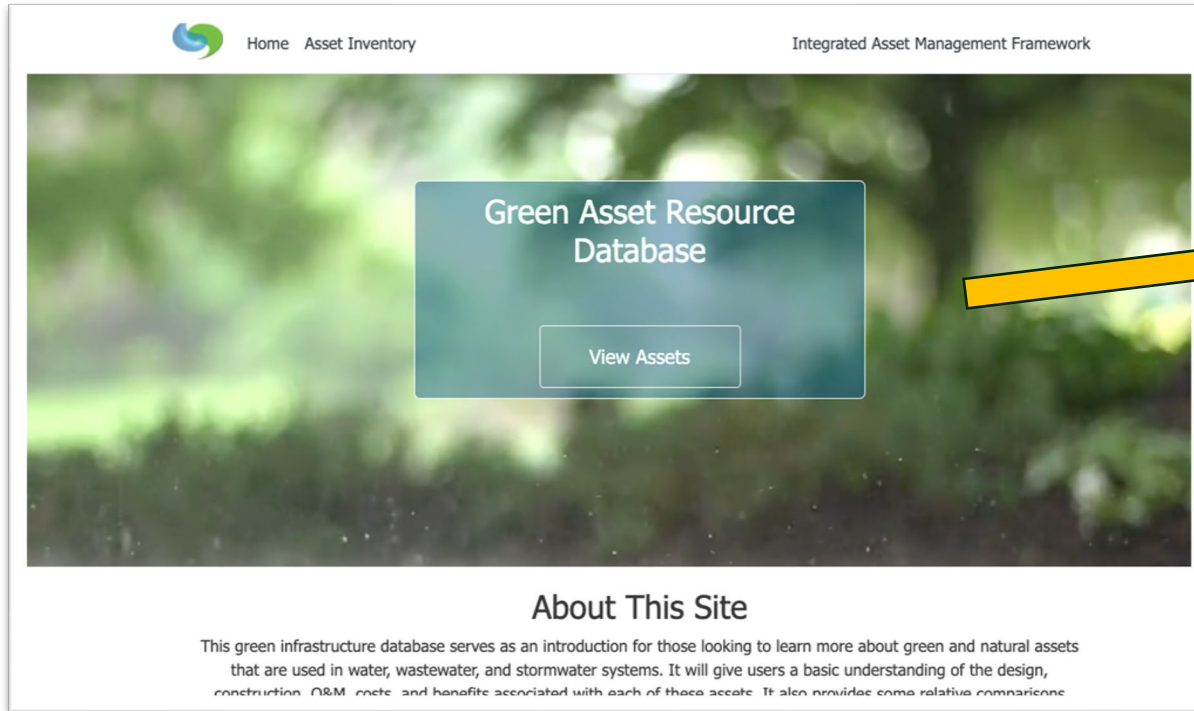
- ☐ Rivers
☐ Streams
☐ Lakes
☐ Public or private property with water frontage
☐ Other important natural areas

2. Are those natural resources incorporated into the community's culture, such as for events?
☐ Yes ☐ No

If yes, how? _____

<https://www.seagrant.wisc.edu/our-work/focus-areas/coastal-communities/green-infrastructure/policy>

Integrated Asset Management Framework & Green Asset Resource Database



The screenshot shows the 'Green Asset Resource Database' table. It includes a search bar, a 'Show 10 entries' dropdown, and a table with columns for Name, Asset Type, Construction Rank, O&M Difficulty, and Action. The table lists six assets: Bioretention Areas, Blue Roof, Constructed Wetlands, Curb and Gutter Elimination, Downspout disconnection, and Drainage Ditch or Channel. Each row has a 'View' button in the Action column.

Green Asset Resource Database

Show 10 entries Search:

| Name | Asset Type | Construction Rank | O&M Difficulty | Action |
|-----------------------------|------------|-------------------|----------------|----------------------|
| Bioretention Areas | Enhanced | 2 | 2 | View |
| Blue Roof | Engineered | 3 | 3 | View |
| Constructed Wetlands | Natural | 5 | 2 | View |
| Curb and Gutter Elimination | Engineered | 2 | 1 | View |
| Downspout disconnection | Engineered | 1 | N/A | View |
| Drainage Ditch or Channel | Enhanced | 2 | 2 | View |

<https://swefcapps.unm.edu/gardb>

Questions?



Green Infrastructure Webinar Series

Join us for this 10-part webinar series focused on the financial, managerial, and technical aspects of green infrastructure. Experienced practitioners, policy and funding experts, as well as academics, will discuss the opportunities and challenges facing the implementation of green infrastructure. These informative sessions will be offered quarterly, from April 2024 to July 2026.

Series Host: Shannon Pepper, Research Scientist, Southwest Environmental Finance Center

Green Infrastructure 101

April 18, 2024 | 12:00-1:00 EDT

[Watch Here](#)

Equitable Green Infrastructure in a Changing Climate

July 25, 2024 | 12:00-1:15 ET

[Register Now](#)

Navigating the Green Infrastructure Policy Landscape

October 10, 2024 | 12:00-1:15 ET

[Register Now](#)

Asset Management for Green Infrastructure

January 23, 2025 | 12:00-1:15 ET

[Register Now](#)

Funding Green Infrastructure

April 24, 2025 | 12:00-1:15 ET

[Register Now](#)

Power of Partnerships in Green Infrastructure

July 17, 2025 | 12:00-1:15 ET

Registration TBA

Building a Green Infrastructure Workforce

October 16, 2025 | 12:00-1:15 ET

Registration TBA

Green Infrastructure Frameworks for Environmental Justice

January 22, 2026 | 12:00-1:15 ET

Registration TBA

Source Water Protection & Watershed Planning in the Face of Wildfires

April 16, 2026 | 12:00-1:15 ET

Registration TBA

Bridging the Gap: Integrating Land & Water Planning for Sustainable Futures

July 16, 2026 | 12:00-1:15 ET

Registration TBA



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Current series flyer in
your “Handouts” tab

+ 2 In-Person Workshops in Albuquerque:

- Finding Allies and Building Relationships, Part 1
Spring 2025
- Finding Allies and Building Relationships, Part 2
Spring 2026



Please fill out the survey for this webinar!



Thanks for attending!

Next webinar in our Green Infrastructure Series:

Asset Management for Green Infrastructure

January 23rd, 2025

Registration is open!

Shannon Sloane Pepper

Webinar Series Host

spepper@unm.edu



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