



SOUTHWEST  
ENVIRONMENTAL  
FINANCE CENTER



# Green Infrastructure Webinar Series

## Webinar 5: Funding Green Infrastructure

Thursday, 24 April 2025

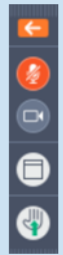
10:00am Mountain Time



# Logistics

## Using the control panel

### Opening the control panel



Show your control panel

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

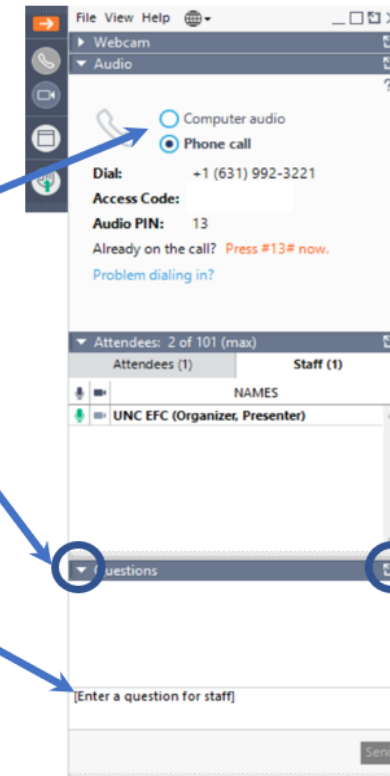
Toggle between full screen/window screen view


**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](mailto: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
<b>Funding Green Infrastructure</b>	<b>24 April 2025</b>
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. Funding as green Asset Management strategy
3. Overview of funding opportunities for green infrastructure
4. Resources
5. Question & Answer session with speakers



# Today's Speakers



**Shannon Sloane Pepper**

Water Utility Trainer and Specialist,



SOUTHWEST  
ENVIRONMENTAL  
FINANCE CENTER



**Mike Crowley**

Vice President,



Quantified<sup>®</sup>  
Ventures

# 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:





# Stormwater Infrastructure

Gray



Storm drain

Green



Permeable pavement  
+ rain garden

**Function:** Collect stormwater to prevent localized flooding on sidewalk and road

**Some co-benefits of permeable pavers + rain garden:**

- Filtration of water through soil beneath pavers
- Dispersed absorption – stormwater does not make it to wastewater treatment plant
- Space for public enjoyment, habitat



# Why Green Infrastructure?



**Climate Resiliency**



**Partnerships**



**Co-Benefits**



# How do you Value GI Co-Benefits?

- Increased habitat for wildlife
- Improved air quality
- Improved mental health of community
- Aesthetics
- Benefitting the watershed and everyone downstream
- Bioremediation – nature's treatment system
- Reduced burden on wastewater treatment plants
- Financial efficiency



Check out Webinar 2 of this series

# Funding is a Crucial Part of Green Infrastructure

- And not just **capital funding** to install GI, but **operations and maintenance funding** to keep it functioning.
- Very difficult to plan funding well if you don't understand asset management, and specifically...
  - **Life Cycle Costing**



Stormwater harvesting basin on Central New Mexico Community College's campus. *Photo: Arid LID Coalition*

## Asset Management Core Component:

**Life Cycle Costing**  
*Costs the asset  
will incur over its  
lifespan*

Costs can include: planning, design, acquisition, installation, maintenance, rehabilitation, replacement, retirement/disposal

Natural assets don't have some of these costs (won't be replaced)



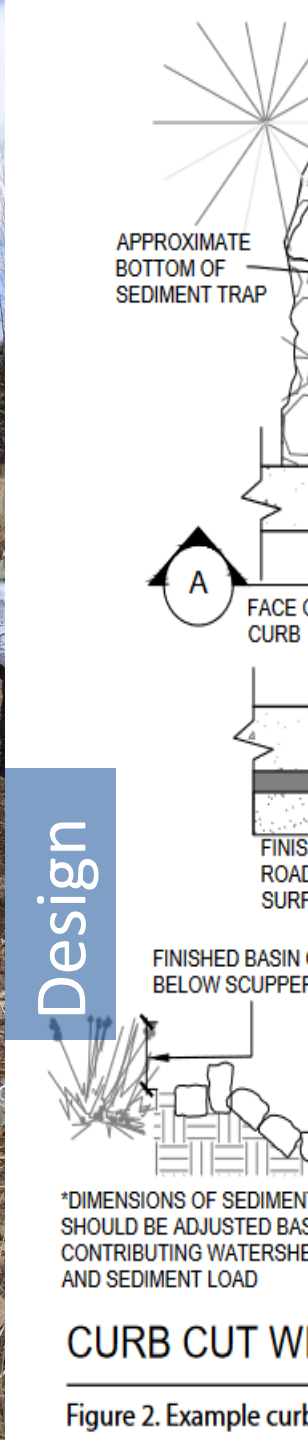


What is a green asset's life cycle?





# Planning



# Design

Figure 2. Example curb cut



# Construction



# Operation



# Maintenance



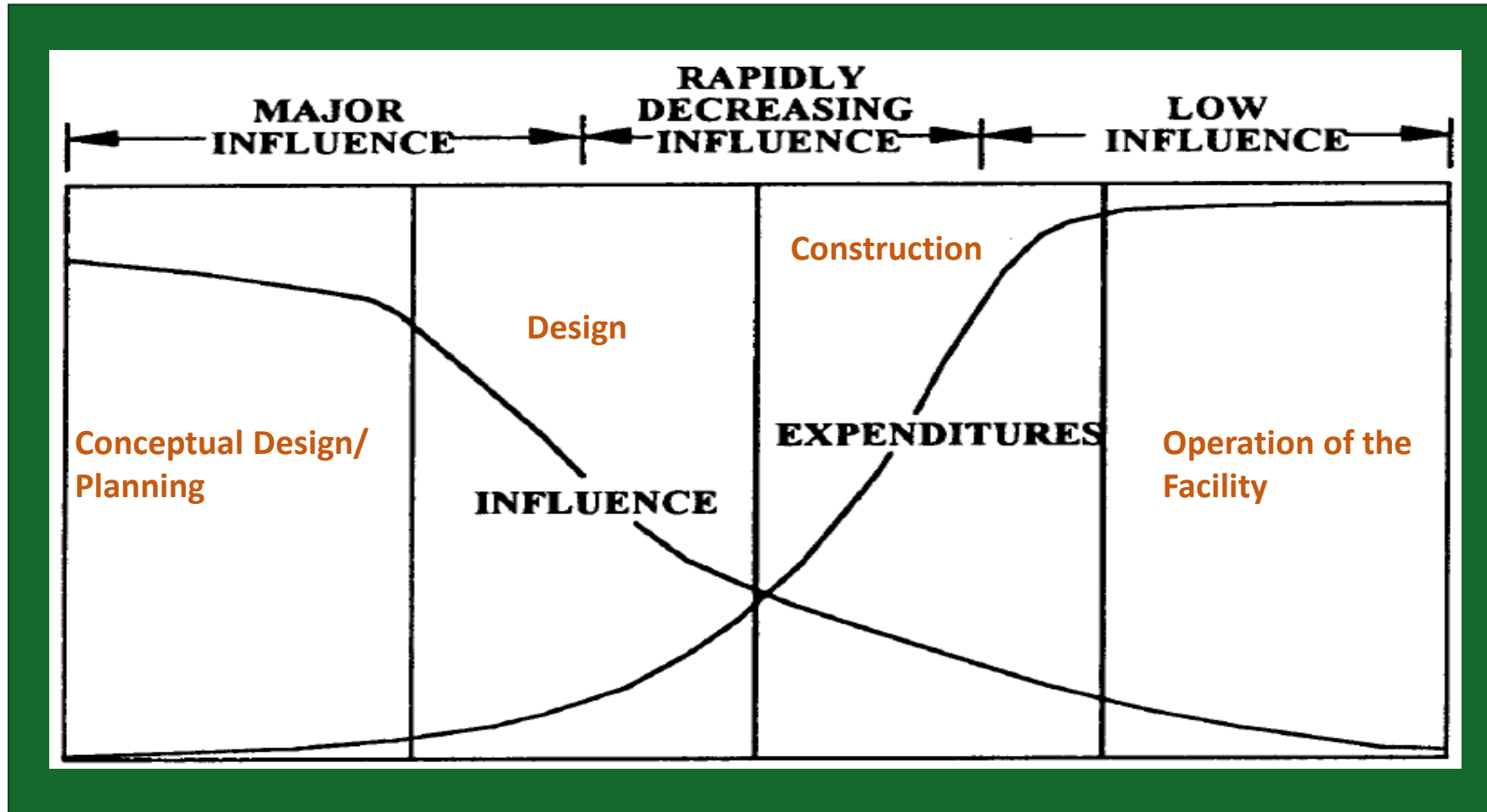
# Repair / Rehabilitation



# Replacement / Decommissioning



# An Asset's Life Starts During the Planning Phase



Source: Gibson and Hamilton (1994) Analysis of pre-project planning effort and success variables for capital facility projects. Construction Industry Institute Source Document 105.

## Asset Management Core Component:

### Long-Term Funding

*The money you  
need to get it all  
done*

In order to maintain the desired level of service for the lowest life cycle cost, a system must have a sustainable, long-term funding strategy.

O&M

Internal  
Funds

Rates

Taxes

Fees

Reserves

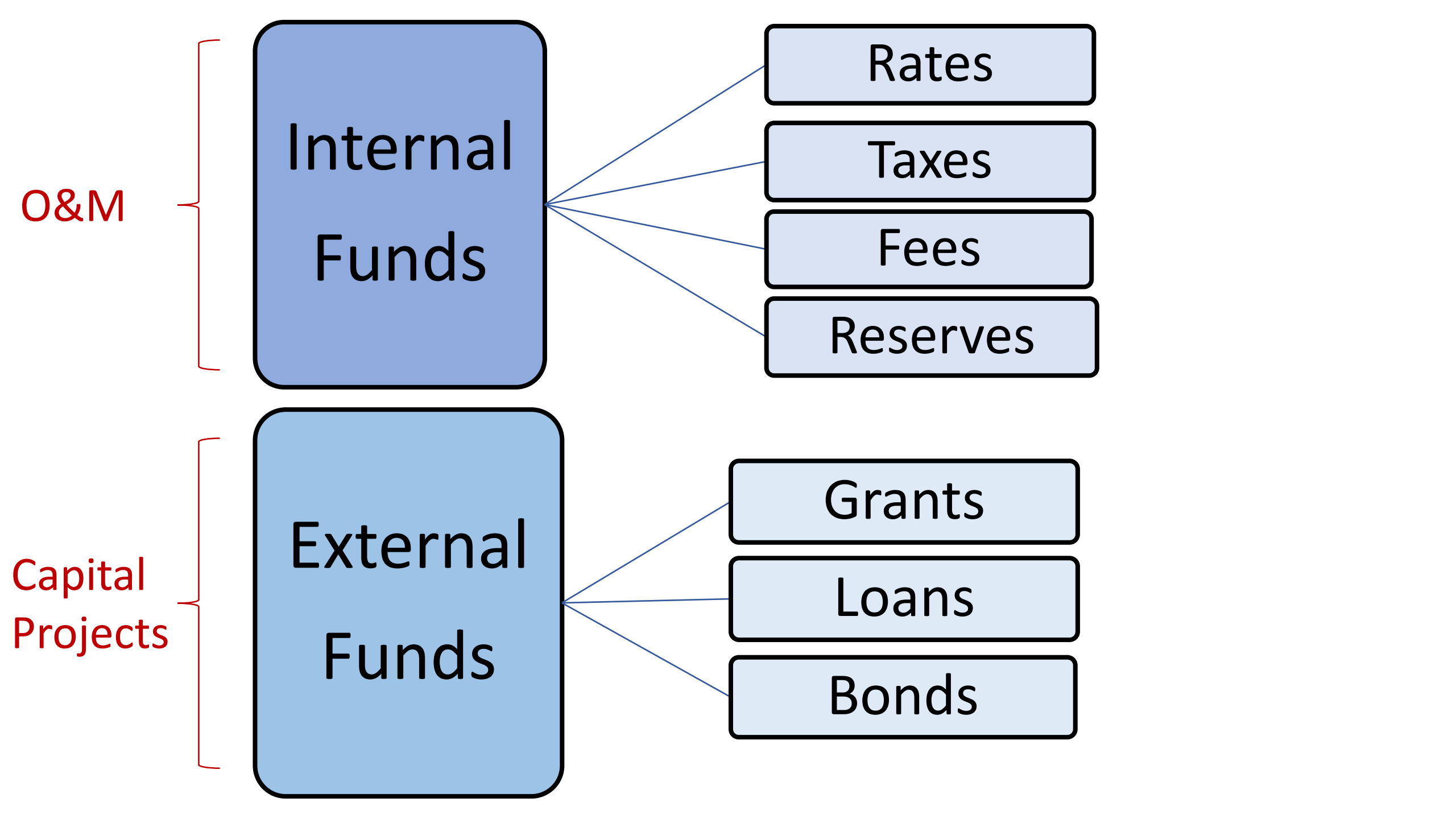
Capital  
Projects

External  
Funds

Grants

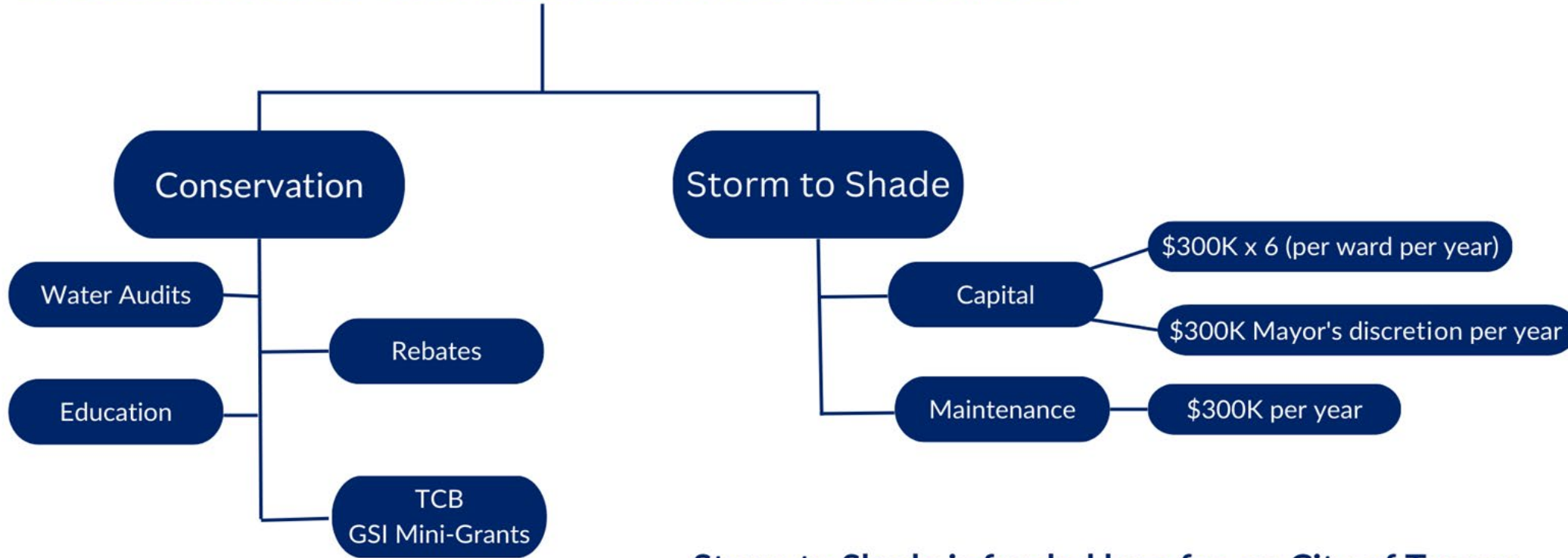
Loans

Bonds





# Conservation and Stormwater Resources



Storm to Shade is funded by a fee on City of Tucson utility bill based assessed at .13 per CCF averaging \$1 per month for the average household.



**Storm  
to Shade**

City of Tucson Green Stormwater  
Infrastructure Program



**Chubasco  
a Sombra**

Programa de Infraestructura Verde  
de la Ciudad de Tucson



**Storm  
to Shade**

City of Tucson Green Stormwater  
Infrastructure Program

**To truly claim an “equity approach,”  
we have to make sure our GSI  
investments are installed *with*  
dedicated maintenance capacity.**

**Building without dedicated  
maintenance capacity may leave  
communities with another type of  
burden.**

# Maintenance Capacity:

- \$  
Do you have the funds to pay people to maintain your green infrastructure?
- Knowledge  
Does the staff know how to maintain green infrastructure, specifically?
- Systems  
Do you have a way to track maintenance and **asset condition** over time?





# Asset Management System | Position

- **Physical location where GSI assets sit within others’ jurisdictions**
- **Report on costs for assets located within other departments’, divisions’, and partner entities’ land.**

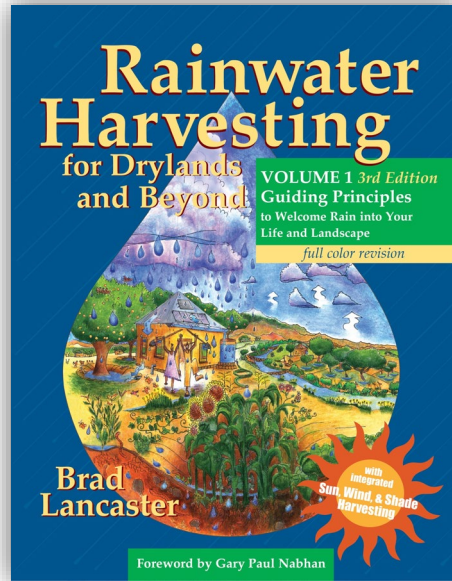
<u>Storm to Shade Program GSI</u> <u>EAM Positions</u>	
Street, GSI	Police, GSI
Parks, GSI	Fire Station, GSI
Ward Office, GSI	Housing (HCD), GSI
Well Site, GSI	TUSD Facility, GSI
Pima County FCD, GSI	Misc. COT Facility, GSI

Ward	FY2024
1	\$57,965
2	\$0
3	\$114,732
4	\$24,191
5	\$50,588
6	\$140,565
<b>Total</b>	<b>\$388,041</b>

	EAM POSITION	
	Street, Parks, Ward Office	Pima County RFCD
<b>FY23</b>	\$231,405	\$8,951
<b>FY24</b>	\$379,499	\$48,018

# Starting at the Neighborhood Scale with GI Pilot Projects

- “Pilot projects show us how to do what we don’t know how to do.”
- Funding, Feasibility Analyses



Dunbar Springs Neighborhood in Tucson, AZ. All plants in this photo are planted in stormwater basins along the road and sidewalk.

# Mike's presentation

# Additional Resources





# *The Value of Green Infrastructure: A Guide to Recognizing Its Economic, Environmental and Social Benefits*

## **The Value of Green Infrastructure**

**A Guide to Recognizing Its Economic, Environmental and Social Benefits**



© Center for Neighborhood Technology 2010



### **Reduced Water Treatment Needs**

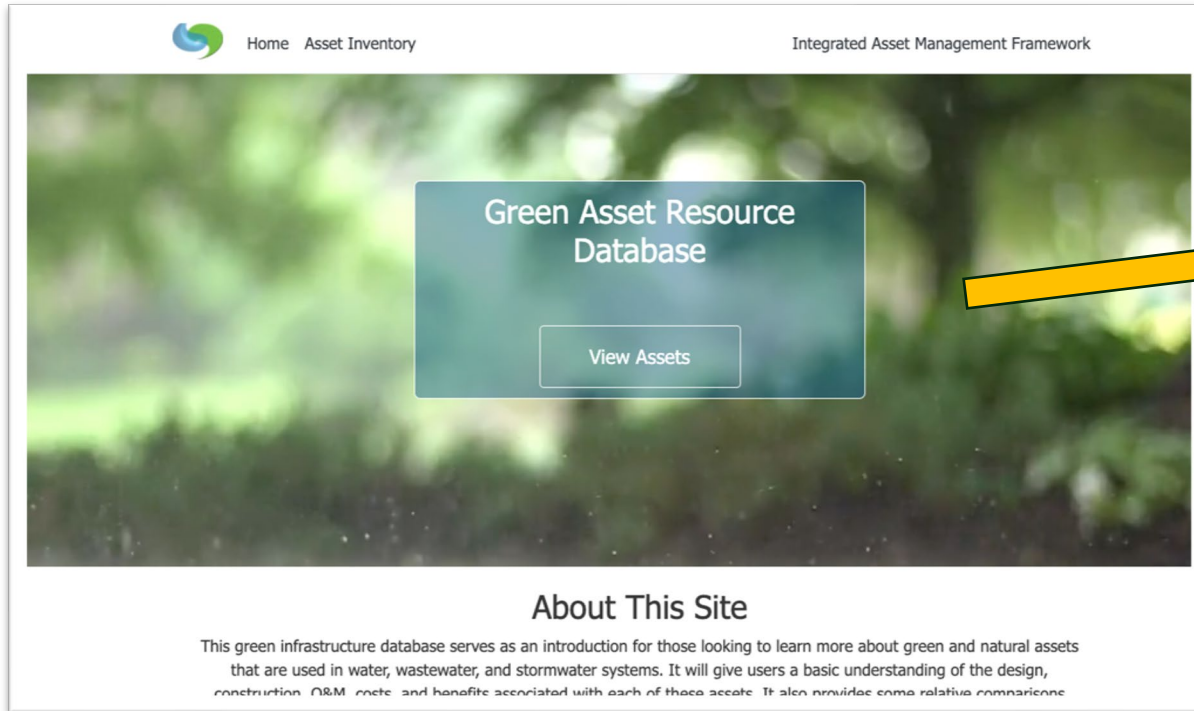
For cities with combined sewer systems (CSS), stormwater runoff entering the system combines with wastewater and flows to a facility for treatment. One approach to value the reduction in stormwater runoff for these cities is an avoided cost approach. Runoff reduction is at least as valuable as the amount that would be spent by the local stormwater utility to treat that runoff. In this case, the valuation equation is simply:

$$\text{runoff reduced (gal)} * \text{avoided cost per gallon (\$/gal)} \\ = \text{avoided stormwater treatment costs (\$)}$$




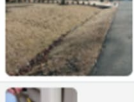
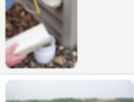

<https://cnt.org/publications/the-value-of-green-infrastructure-a-guide-to-recognizing-its-economic-environmental-and-social-benefits>



# 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 'Reset Filters' button. The table lists six assets with their respective images, names, asset types, construction ranks, O&M difficulties, and 'View' buttons.

	Name	Asset Type	Construction Rank	O&M Difficulty	Action
	-- Select --	-- Select --	-- Select --	-- Select --	Reset Filters
	Bioretention Areas	Enhanced	2	2	<a href="#">View</a>
	Blue Roof	Engineered	3	3	<a href="#">View</a>
	Constructed Wetlands	Natural	5	2	<a href="#">View</a>
	Curb and Gutter Elimination	Engineered	2	1	<a href="#">View</a>
	Downspout disconnection	Engineered	1	N/A	<a href="#">View</a>
	Drainage Ditch or Channel	Enhanced	2	2	<a href="#">View</a>

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

# Question & Answer Session



# 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



*Please fill out the survey for this webinar!*



# Thanks for attending!

Next webinar in our Green Infrastructure Series:

**The Power of Partnerships for Green Infrastructure**

**July 17, 2025**

**Shannon Sloane Pepper**  
Webinar Series Host

[spepper@unm.edu](mailto:spepper@unm.edu)



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