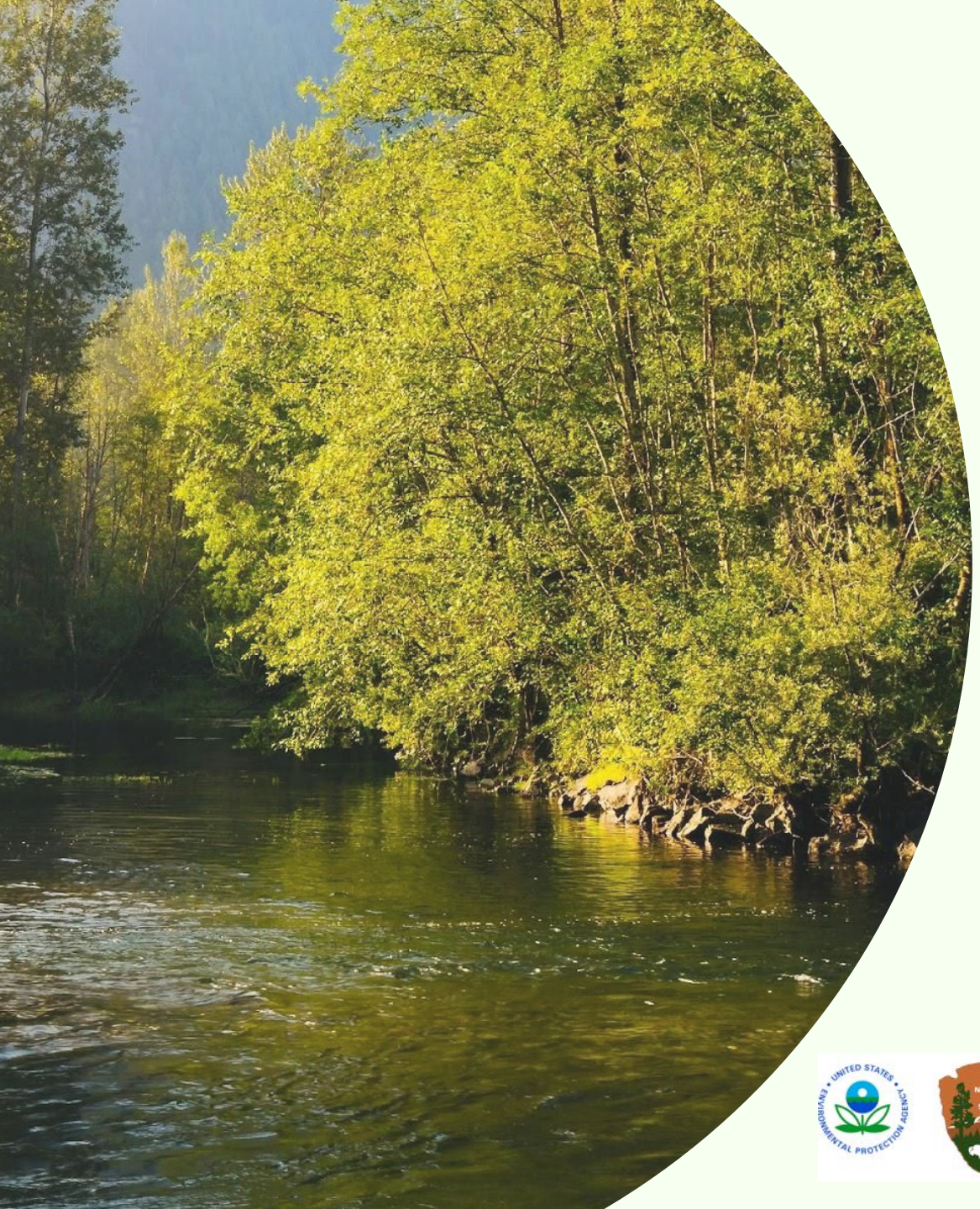

An Urban Waters Learning Network Session

Advancing Nature-Based Solutions Through Economic Valuation

February 25, 2026

URBAN WATERS LEARNING NETWORK

river NETWORK connecting people · saving rivers

GROUNDWORK USA

WELCOME!

Advancing Nature-Based Solutions (Part 1)

While you wait, please …

- Introduce yourself in the chat – name, organization, where you're calling from
- Use the chat box for questions
- Open the evaluation form now & give us feedback after the session!

ABOUT THE URBAN WATERS LEARNING NETWORK

We are a peer-to-peer network of people and organizations working to conserve, restore and revitalize America's urban waterways, supporting our members' work through tools, training, mentoring and financial assistance.

Meet the network and search our member map on our website!

urbanwaterslearningnetwork.org

OUR PRESENTERS

Olivia Molden, PhD

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Earth Economics

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Jeremy Hoffman, PhD

Director of Impact Evaluation & Community Science

Groundwork USA

February 25, 2026

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EARTH ECONOMICS

Jeremy Hoffman

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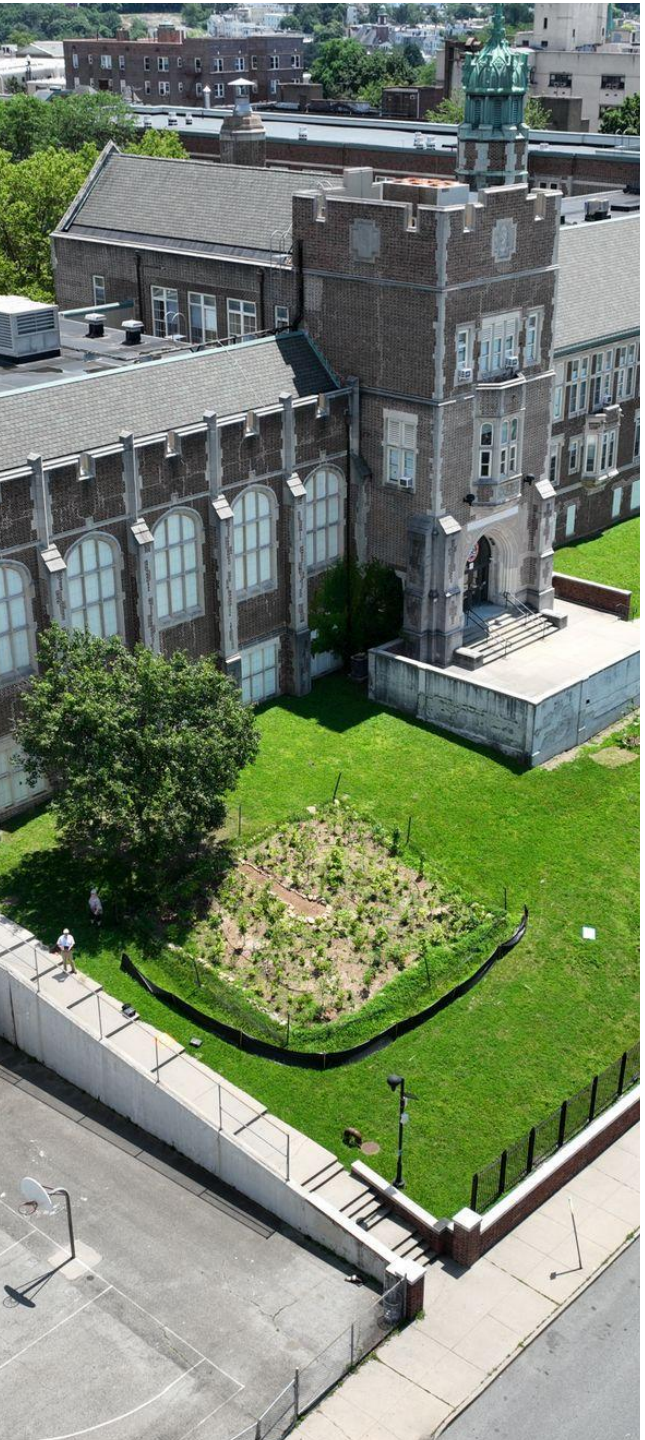


Agenda

1. Groundwork Network Projects
2. About ecological economics
3. About ecosystem services
4. Ecosystem Service Valuation
5. Valuation methods
6. Integrating into decision making

Groundwork Network Project Valuations

Summary of Economics Collaborations, 2023-2025

Project Highlights

01 USDA-Forest Service Valuation

02 Greening Lower Price Hill (OH)

03 Valuing Urban Microforests (NJ, NY)

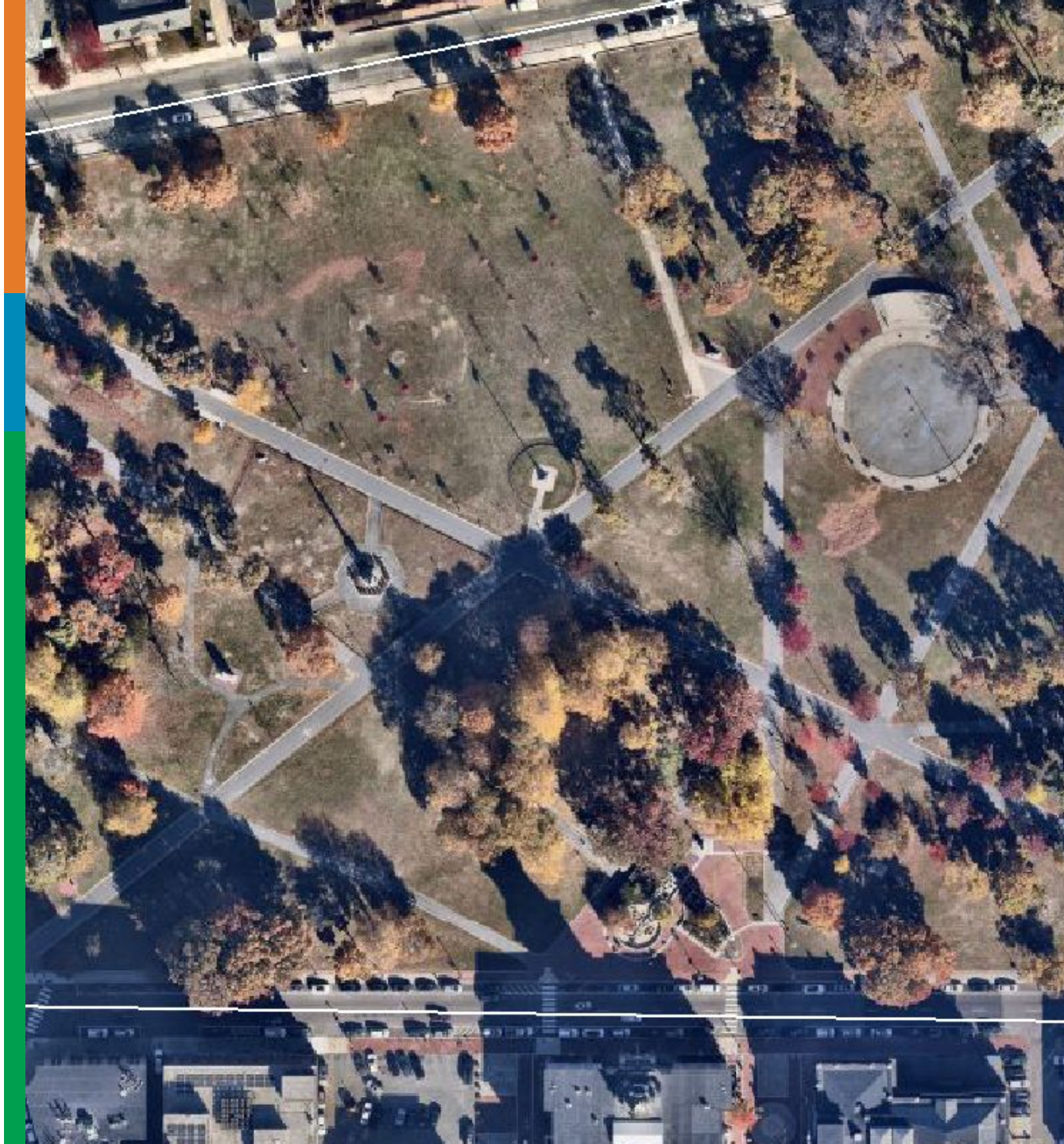
04 Hyperlocal stormwater BMPs (NY)

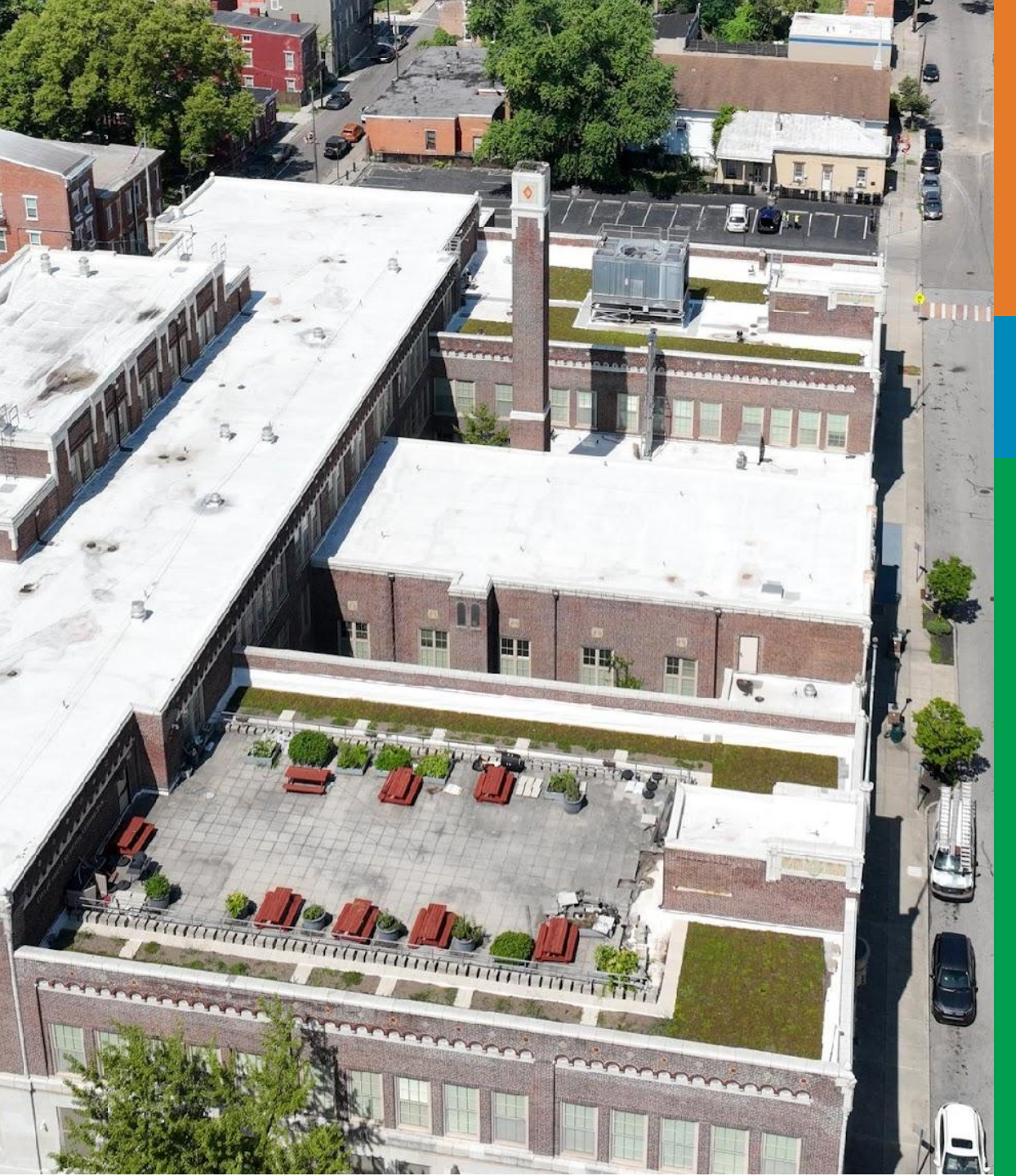
05 Sustainable Flood Defense (CA)

USDA-Forest Service Valuation (2025)

Groundwork Network - In progress

- The Groundwork Network will plant 2,633 trees across 15 cities in 12 states through the USDA-FS.
- Projected 20-year ecobenefits valued at ~$200M
- Trees significantly reduce the heat-island effect & public health burden
- Project is cost-effective, returning ~$35 for every $1 invested





Greening Lower Price Hill (2024)

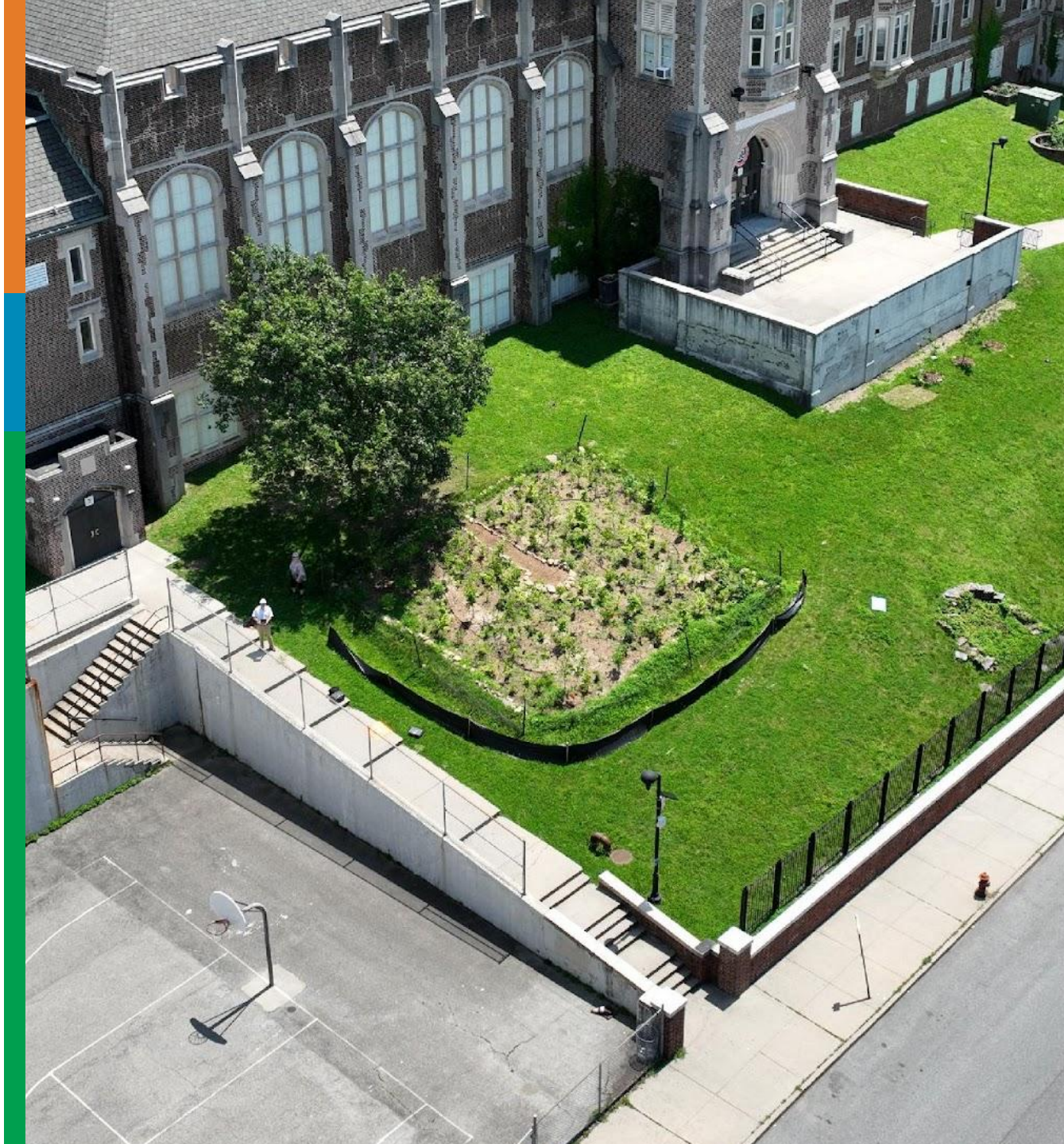
Groundwork ORV - Completed

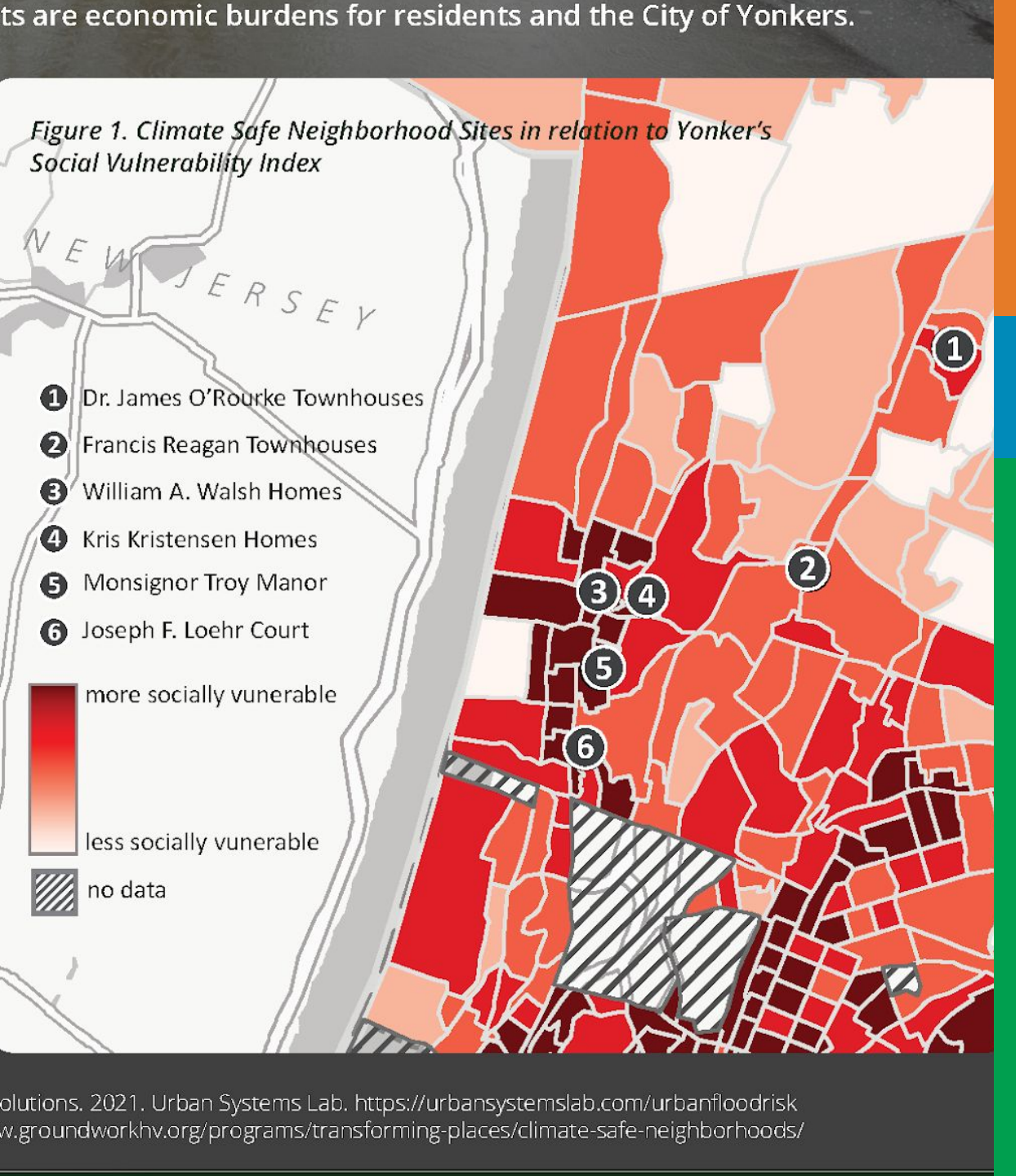
- Groundwork ORV installed a 5,000 square foot green roof and planted 66 trees in the Lower Price Hill neighborhood.
- Green roof provides unique educational benefits to the students ($3K per year value).
- Trees provide significant heat health resilience over their lifespan (~$5M value)
- Both were cost-effective, providing an average of ~$58 in benefits for every $1 spent.

Valuing Urban Microforests

Groundwork Elizabeth, Hudson Valley, & Rhode Island

- Groundwork Elizabeth has been planting microforests since 2021
- Groundwork Hudson Valley completed the Obama School for Social Justice microforest in 2024
- Groundwork Rhode Island established two microforests in 2025
- On average, these microforests provide ~$12 in benefits for every $1 invested.





Hyperlocal Flood Mitigation (2023)

Groundwork Hudson Valley - Completed

- Groundwork Hudson Valley installed bioretention gardens, native trees, and restored grasslands at 6 MHACY properties
- Bioretention provides $179,000 of benefits per acre per year, primarily in avoiding stormwater management
- Trees provide $750 of benefits per tree per year at maturity, mostly by mitigating heat
- Local lived experience noted reducing basement flooding

Sustainable Flood Defense (2025)

Groundwork San Diego-Chollas Creek - In Progress

- Groundwork will dechannelize and restore ¼ mile of the Chollas-Creek watershed, build a one acre park & a ½ mile of trail, plant 102 new trees, and restore two acres of riverbank habitat.
- The restoration will provide ~$58M in community benefits by 2050
- This project is cost-effective, returning $4.83 for every $1 invested.

s.com/2021/04/27/nature-and-art-at-chollas-creekside-park/

Figure 2. Economic Contributions of Dechannelization

"...having a 3rd party validate the impact of our work really goes a long way–and further than if we were to somehow do that research ourselves."

-Thad Winkle, Deputy Director, Groundwork San Diego

Takeaways

01

Groundwork projects are cost-effective, hyperlocal climate resilience solutions.

02

Collaborations with Earth Economics have enabled Groundwork Affiliates to estimate and verify their impact.

03

Careful documentation of project dimensions, deliverables, and costs is key to valuation success.

Ecological Economics

Ecological Economics

Definition

Ecological economics examines the interactions between human and natural systems, emphasizing the holistic consideration of social, economic, and environmental factors in decision-making and policy development.

Ecosystem Services

Ecosystem Services

Definition

Ecosystem services are quantifiable benefits humans receive from nature.

Natural capital

Forests and watersheds

Ecosystem function

Water filtration

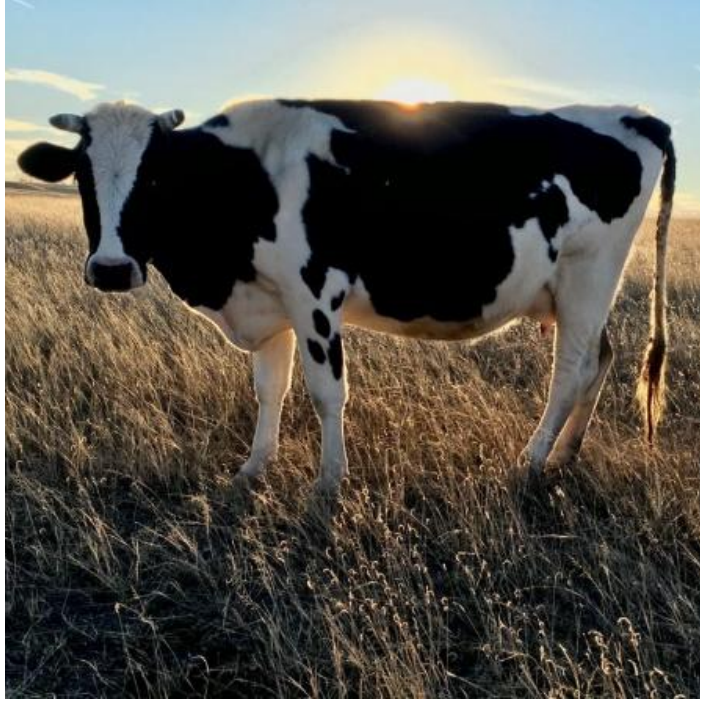
Ecosystem goods and services

Potable water

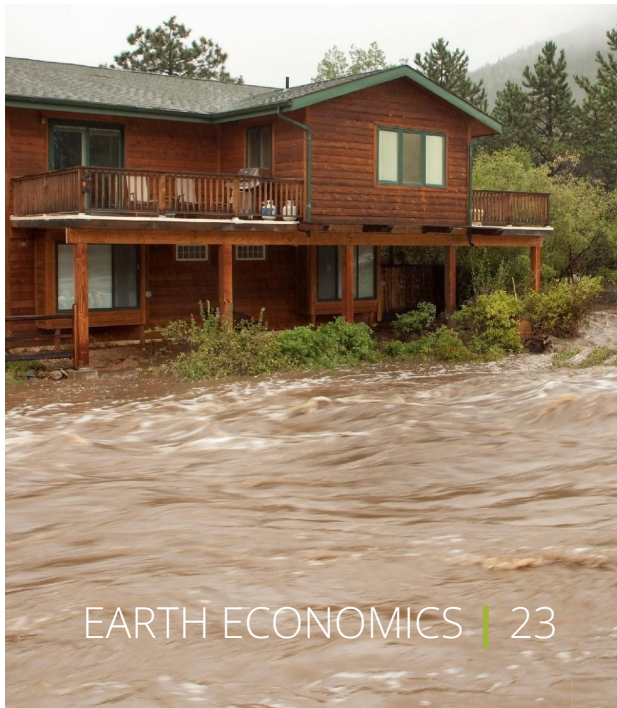
Ecosystem Service Categories

- Provisioning
- Regulating
- Supporting
- Community

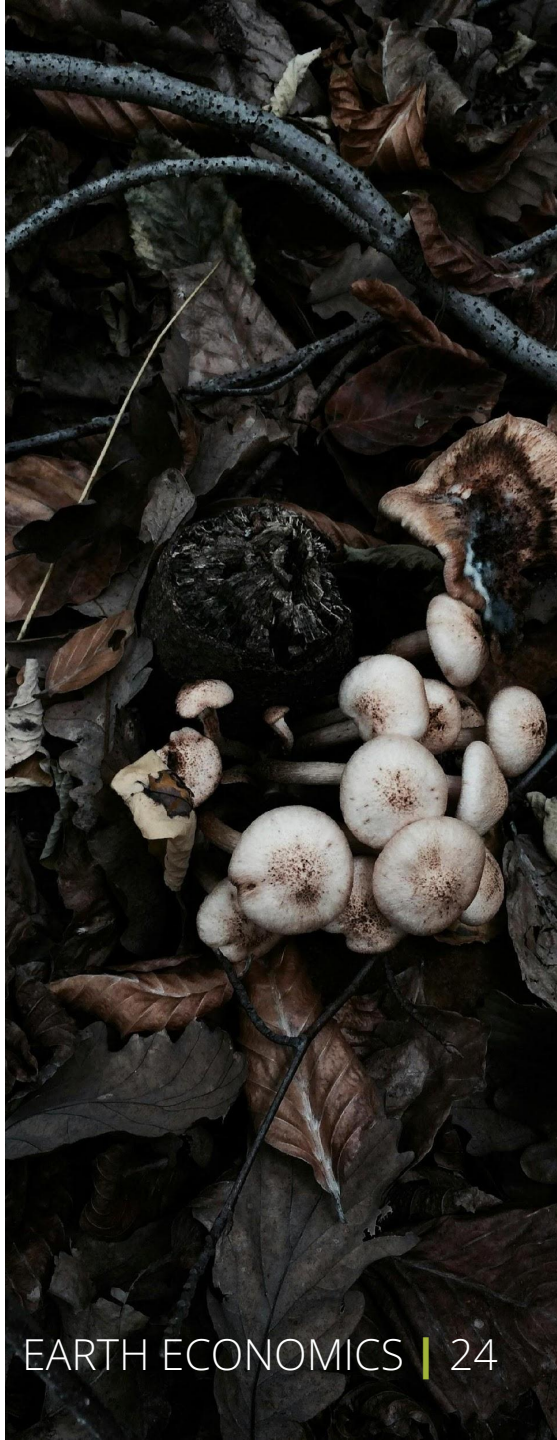
Provisioning services are **tangible goods** we obtain from nature.



Regulating services are benefits nature provides by **moderating environmental conditions.**

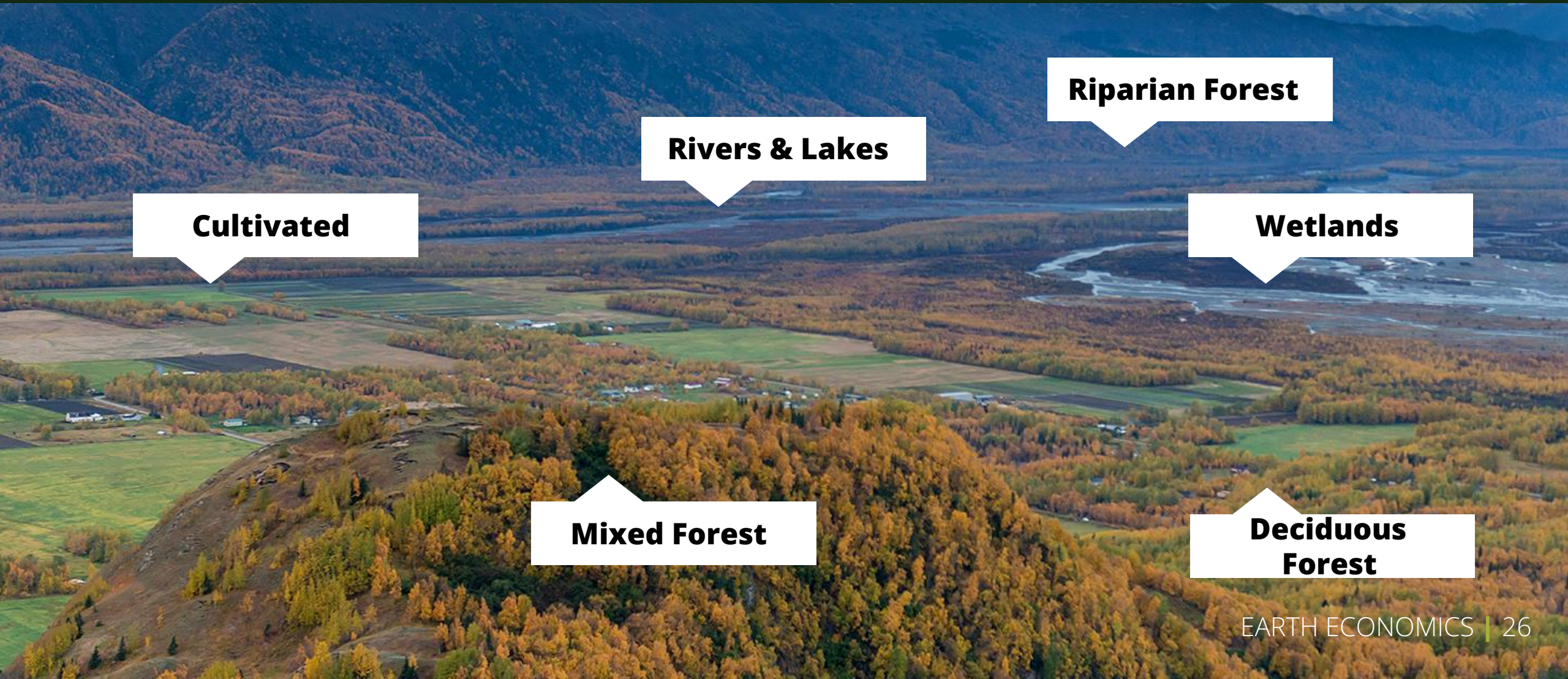


Supporting services **underlie the natural processes** that make all other ecosystem services possible.



Community services are the **non-material benefits** we gain from nature.

Ecosystem Services Examples



Ecosystem Services Examples

Cultivated

Access to local foods
Local jobs/livelihoods
Tourism
Development buffers
Migratory bird habitat

Rivers & Lakes

Drinking water supply
Migration corridor
Migratory bird habitat
Fish habitat
Recreation
Scenic views

Wetlands

Water storage
Wildlife and bird habitat
Salmon nursery
Water filtration
Flood control
Wildfire mitigation

Groundwork San Diego Results

Nature-based solutions improve **community well-being**

Landcover type	Ecosystem services	Annual value
Grass/lawn	Aesthetic, air quality, climate stability, water capture	$3,700
Park	Consumer surplus, avoided healthcare expenditures	$77,000
Trails	Consumer surplus, avoided healthcare expenditures	$58,000
Shrubs	Air quality, climate stability	$30
Trees	Urban heat island mitigation, air quality, water capture, climate stability, aesthetic	$1,820,000

Ecosystem Services Valuation

Why do we value nature?

Nature's values are often invisible in economic decisions.

When the value of nature is better understood, we can make more effective decisions.

It strengthens the case for restoration and protection.

How do we value nature?

Primary Methods

Gathering information directly from the source

- Surveys / Interviews
- Observing behavior
- Running experiments / tests

Secondary Methods

Using information already collected

- Reviewing academic studies
- Analyzing government statistics

How do we value nature?

Secondary Valuation Methods

Benefit transfer: use of a value estimate in a location other than the one where it was published

What is nature's value used for?

Raising awareness

Securing funding

Weighing benefits and costs

Making land use decisions

Supporting policy

Groundwork San Diego Results

Stream restoration and park construction are **cost efficient**

Landcover type	Present value benefits	Present value costs	Benefit-cost ratio
Stream restoration	$45.76m	$10.42m	4.39
Park	$12.24m	$1.58m	7.75
Total	$58m	$12m	4.83

Breakout

Think of a nature-based solution you are advancing, what benefits do you wish you could measure?

What would you do with that information?

Share your ideas in your breakout room and through filling out two quick questions via Mentimeter (via link in chat or on your phone with this QR code).

Takeaways

- Record project data
- Determine purpose and audience considering project stage and needs
- Collect stakeholder comments
- If valuation is not possible, describe impacts
- OMB guidance, i-Tree, EPA resources, inVEST, ARIES

Join us for session 2!

Communicating the Real Value of Nature-Based Solutions

March 18

2-3 pm ET

This second session focuses on tools and strategies for applying and communicating ecological economics with advocacy and evaluation outcomes in mind.

Thank you!

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EARTH ECONOMICS
Better decisions, naturally

GROUNDWORK USA
CHANGING PLACES CHANGING LIVES

BEFORE YOU GO

- ✔ Tell us what you think –fill out the evaluation survey
- ✔ Join us for Session #2, *Communicating the Real Value of Nature-Based Solutions (Wed., 3/18, 2-3pm ET)*
- ✔ River Rally 2026 registration is open!
- ✔ Join the Urban Waters Learning Network

THANK YOU!

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