



Maximizing water management dollars while bringing transparency, equity, and multiple benefits



Morgan Shimabuku & Sarah Diringer
PNW AWWA
April 28, 2022



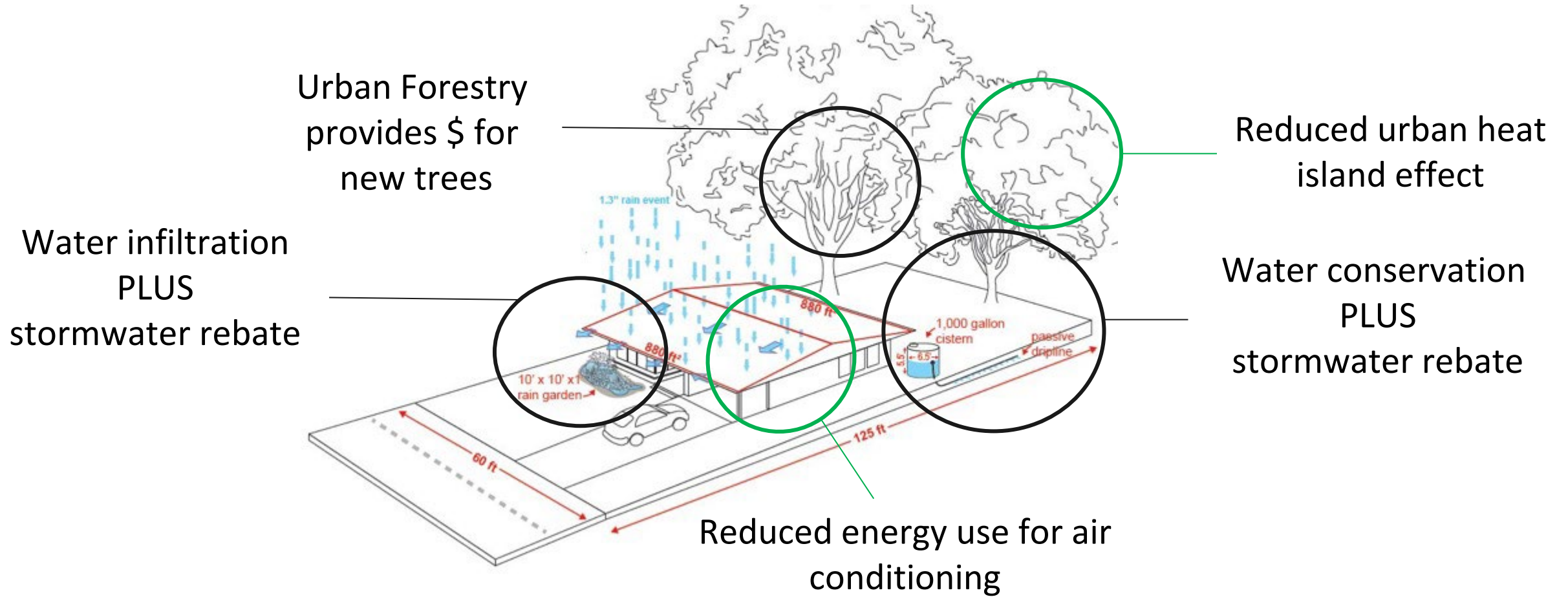
About the Pacific Institute

- Non-profit, 501(c)3, established in 1987
- Headquartered in Oakland, California, with research staff in other parts of U.S., and around the world
- Supported by foundation grants, government and private sector contracts, and individual donors
- **Mission:** Create and advance solutions to the world's most pressing water challenges

Presentation Overview

- Rainwater capture and water conservation rebates in Austin, TX
- Multi-benefit Framework
- Step-by-Step through the framework with an Eye for Equity
- Questions & Feedback

Multiple Benefits in Action: Rainwater Capture on Residential Properties in Austin, Texas



Multi-Benefit Framework

Step 1: Envision the project

Key Features

Modular and
Flexible

Step 2: Identify benefits and trade-offs to consider

Supports
Stakeholder
Engagement

Step 3: Characterize key benefits and trade-offs

Centers Equity

Step 4: Inform decision making

Who is this for?

Public sector water managers

Private sector consultants

Private sector/corporate actors

NGO and Community-Based Organizations



Outcomes of incorporating multiple benefits



Provide a more objective basis for comparing of water management options



Optimize investment of time, money, and resources



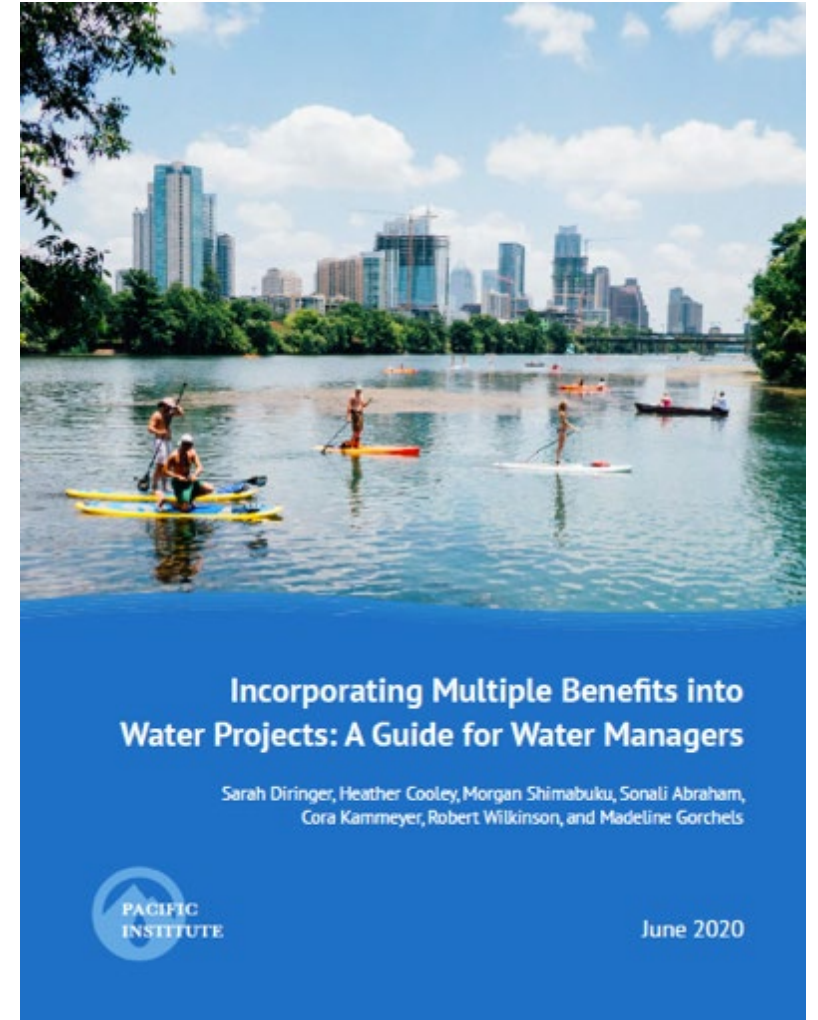
Identify opportunities to share costs



Building community support for a project or program



Increase equitable investments and mitigate adverse impacts





Step 1: Envision the project

Think broadly about the challenges and the solutions

Engage with stakeholders

Understand the decision-making process

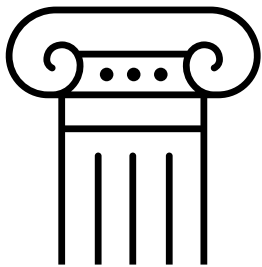
Examine equity throughout the process

Water management projects are not intrinsically equitable or inequitable. Instead, **we define equity as the just distribution of benefits and trade-offs among stakeholders.**

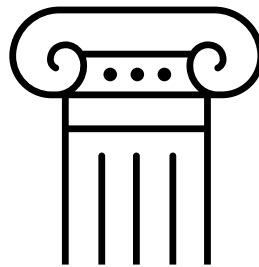
- Who are the beneficiaries of the project? Are the same stakeholders consistently receiving most of the benefits and/or incurring most of the cost?
- Can the project be adapted to reduce potential impacts on communities, maximize benefits for communities in need, and maximize benefits that reflect community values?
- What might prevent disenfranchised stakeholders from engaging in the process or project, and how can engagement, planning, and implementation address those roadblocks?

US Water Alliance: Pillars of Water Equity

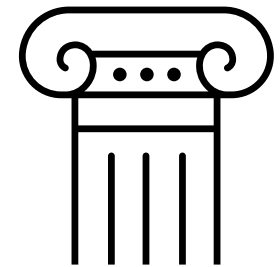
Ensure all people have access to clean, safe, affordable water service.



Maximize the community and economic benefits of water infrastructure investment.



Foster community resilience in the face of a changing climate.



Recode's DEI research

Impacted Community Members	Water-specific equity consideration and antidotes
People Living with Low Income(s)	Targeted for development, but may be displaced; difficulty paying utility bills
People of Color	Historic and present disinvestment in POC-dominated communities
People who are Indigenous/Native	Lack of self-determination and control of natural resources; funding barriers due to complex legal relationship to US; interest in environmental quality in areas beyond their current-day existence (e.g., beyond a reservation)
People who are female-bodied and/or women	Impacts to pregnant people, as primary care-givers in most homes, are most likely to leave workforce to deal with impacts of poor water access
People who are transgender	Access to sanitation is a safety issue
People who are houseless	Access to water and sanitation is limited or non-existent
People whose second language is English	Emergency messages only in English; Assistance programs not offered in multiple languages
People who rent their housing	Often do not pay water bills directly, but risk shutoff if landlord fails to pay; lack control over replacement of fixtures, appliances, and piping



Step 2: Identify benefits and trade-offs to consider

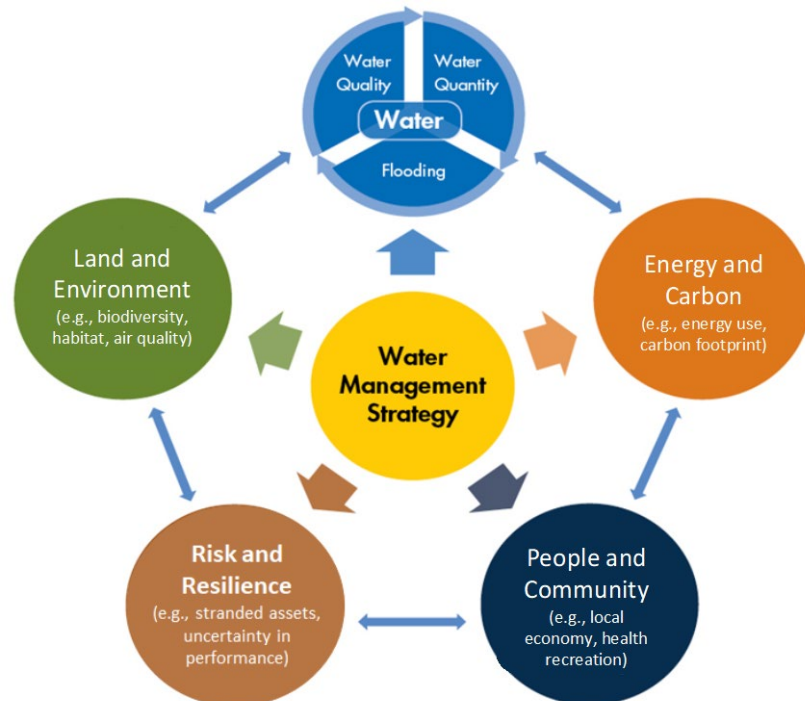
Cast a wide net of benefits and trade-offs

Connect benefits with the beneficiaries

Identify key benefits to evaluate further

Benefit

Outcome of water project or program, often perceived as a positive (or beneficial) outcome on a system level.



Trade-off

Two types of trade-offs

- Negative outcomes (i.e., costs): impacts to communities and the environment. Mitigate impacts where possible or decline to implement project.
- Mutually exclusive benefits: balance benefits for stakeholders (requires consensus)

Source: Pacific Institute (2020) "Incorporating Multiple Benefits into Water Projects: A Guide for Water Managers."



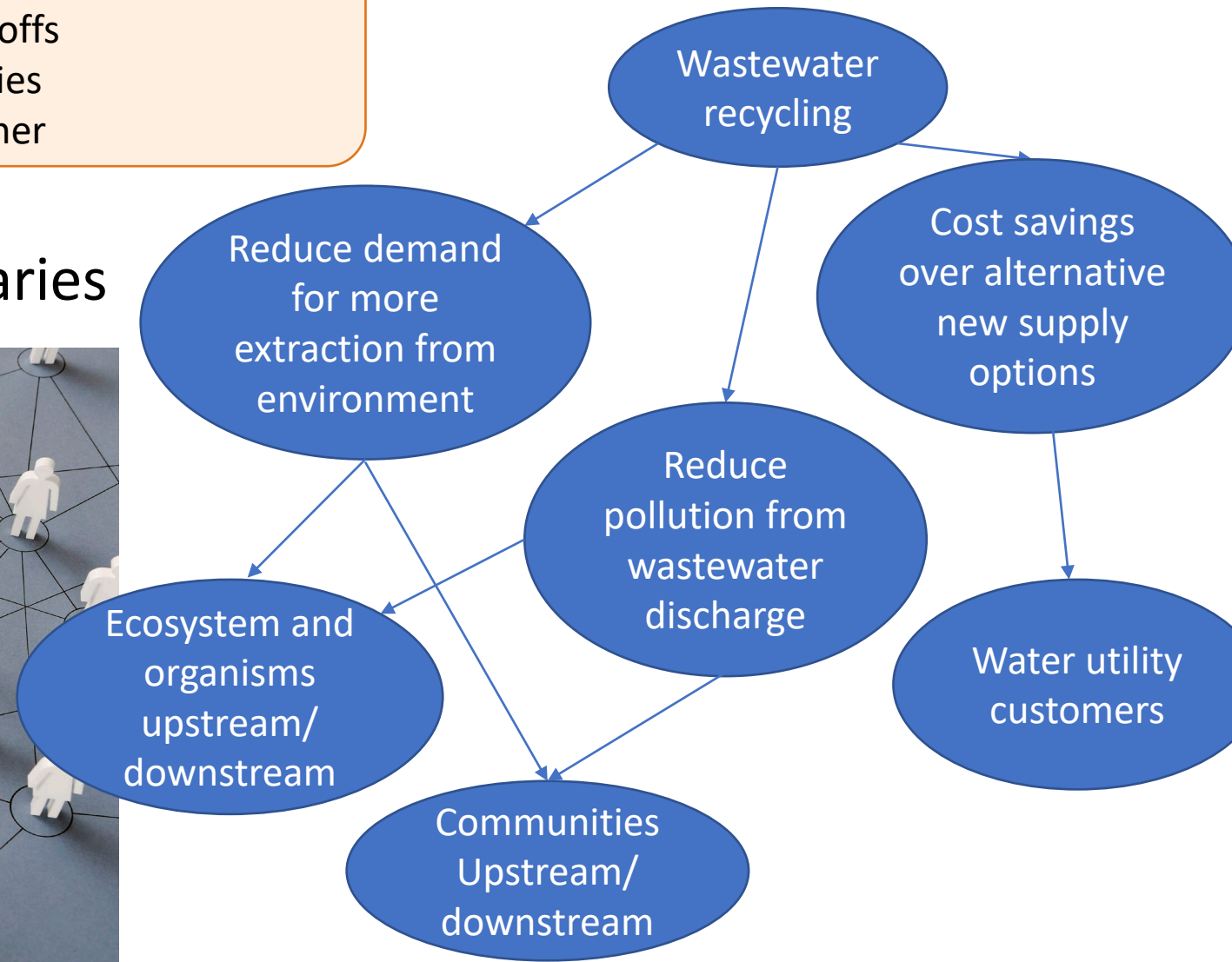
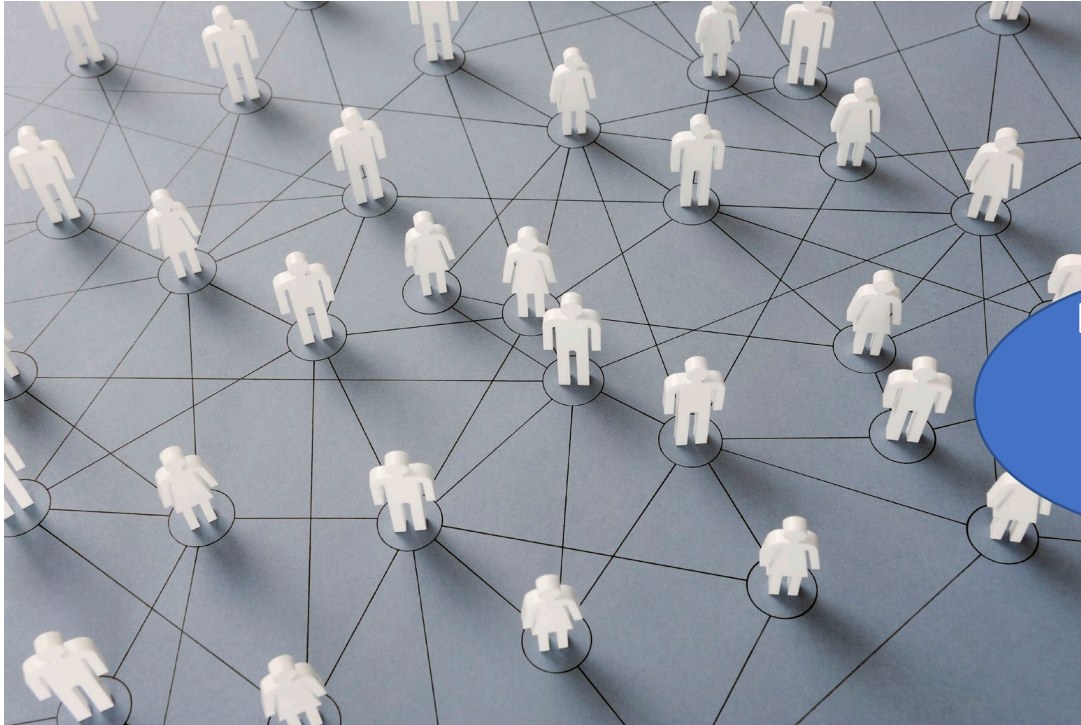
Step 2: Identify benefits and trade-offs to consider

Cast a wide net of benefits and trade-offs

Connect benefits with the beneficiaries

Identify key benefits to evaluate further

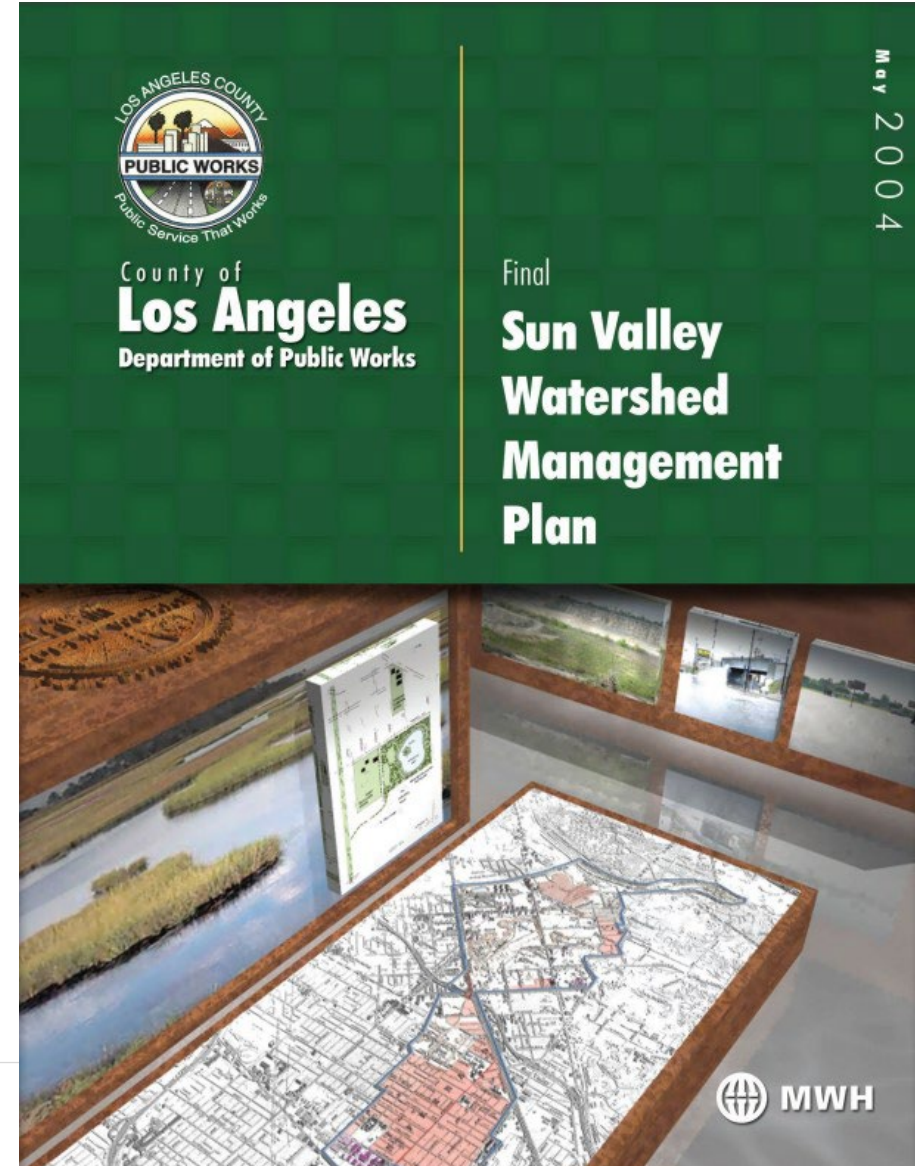
Connect Benefits with Beneficiaries



Source: Pacific Institute (2020) "Incorporating Multiple Benefits into Water Projects: A Guide for Water Managers."

Multiple Benefits in Action: Sun Valley Watershed

- Water Issue: Flooding
- Solution: Urban green space/park for stormwater capture
- Convened stakeholders who identified community values to be considered: water conservation, recreation, wildlife, and pollution mitigation
- These were incorporated in the Sun Valley Watershed Management Plan, and used to evaluate project options



Step 3: Characterize key benefits and trade-offs

Set boundaries and baseline

Examine uncertainty

Determine appropriate metrics and evaluate

How project-specific is the information?

Project-Specific
Information

Comparable
Strategy and/or
Geography

General

Qualitative

Quantitative

Monetized

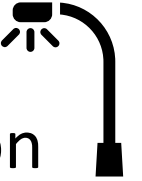
Can the benefit or trade-off be valued?

Step 3: Characterize key benefits and trade-offs

Set boundaries and baseline

Examine uncertainty

Determine appropriate metrics and evaluate



Spotlight on Gentrification

Measuring and Evaluating People and Community Benefits and Tradeoffs

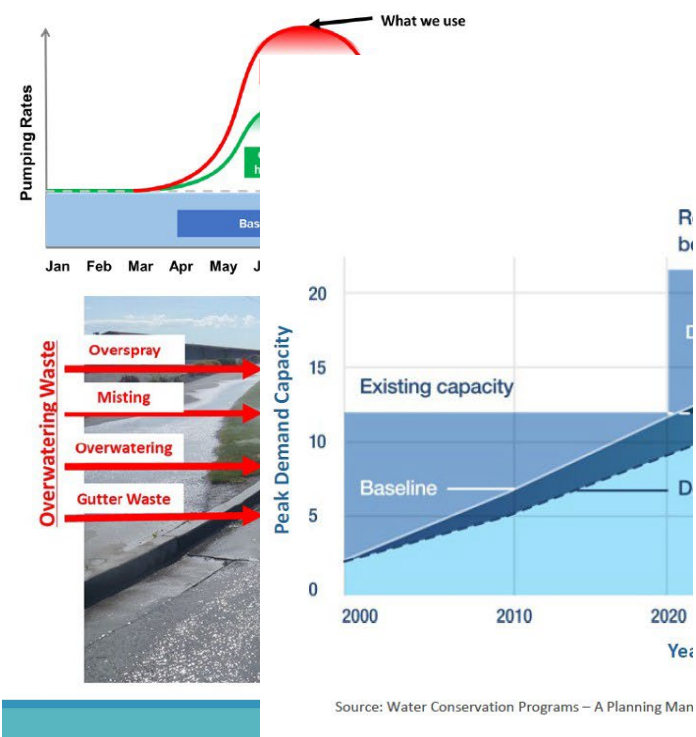
- Local Economy
- Access to high quality jobs
- Health and well-being
- Education
- Recreation
- Aesthetics
- Household affordability



Step 4: Inform decision making

Communicate clear information to the public and your decision makers

Example:
Water Resource Collaboration
Group 2021 Water Conservation
Recommendations for the City
of Spokane



Economic Impact of Recreation

Few cities can claim a natural asset that puts the business district in touch with fishing, biking, hiking, and paddling within face-washing distance of a thundering waterfall. A healthy Spokane River supports a thriving recreation industry.

A study by ECONorthwest quantified the economic impacts of the Centennial Trail, a nearly 40-mile paved trail located in Spokane County in eastern Washington. It follows the Spokane River and extends from the Washington/Idaho border, through Liberty Lake, City of Spokane Valley, City of Spokane, Riverside State Park, and Nine Mile Falls. Washington State Park visitor statistics estimate that approximately 1.5 million pedestrian and biking trips occur on the Centennial Trail every year, many of which are likely repeat users, such as commuters or neighborhood residents.

Trail users support local economies by spending money on transportation, lodging, and equipment. An economic model of local economies was used to produce estimates of the total economic contributions and jobs supported by the Centennial Trail. These results include both the direct impacts of spending, as well as the indirect and induced impacts of increased local economic activity.

A clean, healthy river provides residents much needed refuge from summer heat. The dozens of public access points along the river offer Spokane area residents and visitors equitable access to the river and the health benefits it provides.



Summary of Annual Economic Impacts
Supported by the Spokane Centennial Trail

IMPACT TYPE	VALUE
Economic Contribution	\$1.7 million
Total Labor Income	\$594,000
Total Jobs	22
Health Savings	\$1.6 million
Recreational-Use Value	\$12 million
Property Values	\$23.7 million

Source: ECONorthwest

Values are realized annually

Questions? Feedback?





Thank you!

Morgan Shimabuku

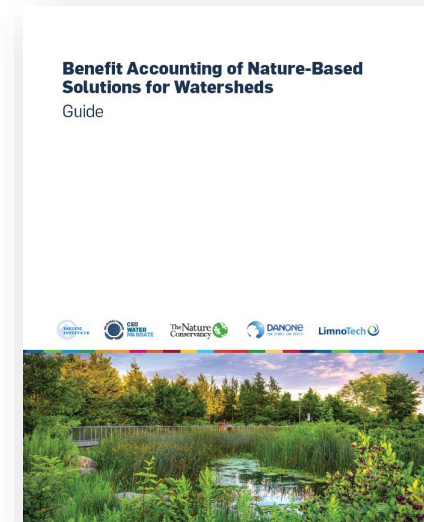
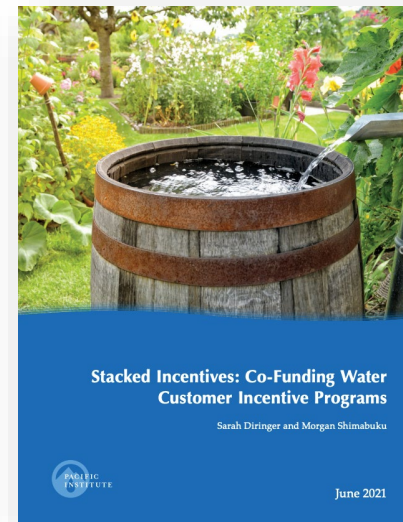
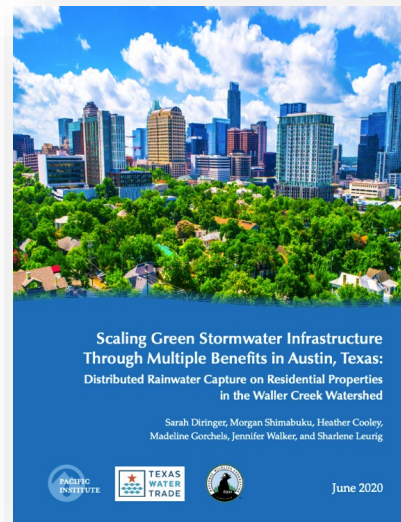
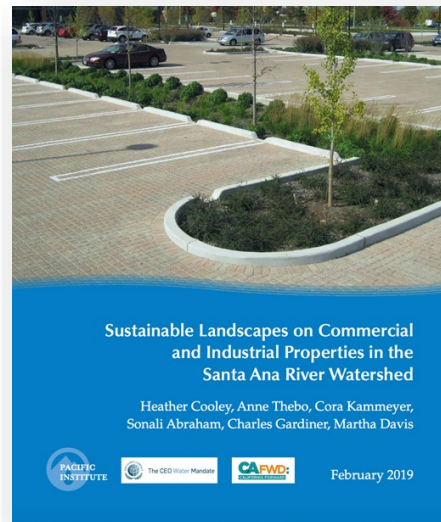
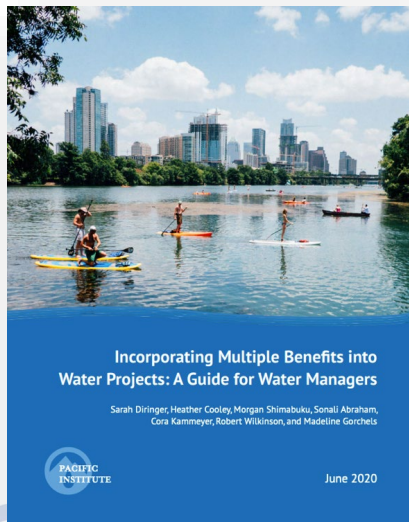
Research Associate

mshimabuku@pacinst.org

www.pacinst.org

Links to Resources

- pacinst.org/multiplebenefits
- <https://pacinst.org/multi-benefit-resource-library/>
- NBS Benefit Accounting Guide:
<https://ceowatermandate.org/resources/benefit-accounting-of-nature-based-solutions-for-watersheds-guide-2021/>



Links to Resources

- US Water Alliance Equity Resources:
<http://uswateralliance.org/initiatives/water-equity>
- Recode's DEI research: <https://www.recodenow.org/diversity-equity-inclusion-in-water-systems/>

“Stacked Incentives” are customer incentive programs that are co-funded by two or more separate entities.

Rebates and Discounts



Technical Assistance



Educational Programs



Contributing to Water Equity

- Increasing total incentive or reaching more customers
- Reducing burden of engaging with incentive programs
- Engaging historically “hard-to-reach” customers



Evaluating the Benefits of Stormwater Capture

