

International Erosion Control Association Mountain States Regional Conference

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SOUTH PLATTE RIVER URBAN WATERS PARTNERSHIP

*Revitalizing the South Platte River from the Source to the City:
Transformation through Collaboration.*



<https://www.urbanwaters.gov/splatte/index.html>



Partnerships

Partnership for Sustainable Communities

<https://www.epa.gov/smartgrowth/partnership-sustainable-communities-five-years-learning-communities-and-coordinating>

National Drought Resilience Partnership

<http://www.drought.gov/drought/content/ndrp>

EPA/FEMA MOA

http://www.epa.gov/smartgrowth/fema_moa.htm

Urban Waters Federal Partnership

<https://www.epa.gov/urbanwaterspartners>

Green Infrastructure Collaborative

<https://www.epa.gov/green-infrastructure/green-infrastructure-collaborative>

Silver Jackets-USCOE supports state-led teams through Flood Risk Management Program

<https://silverjackets.nfrmp.us/>



EPA Region 8 Resources

- ◉ **Climate Adaptation/Sustainable Communities** *Laura Farris*
- ◉ **Disaster Recovery/Resiliency** *Rebecca Geyer*
- ◉ **Green Infrastructure** *Stacey Eriksen*
- ◉ **WaterSense** *Melissa Payan*
- ◉ **Energy Star** *Amanda Hong*
- ◉ **Green Building/Renewable Energy** *Tim Rehder*

WaterSense

<https://www.epa.gov/watersense>



- Promote water efficiency, including landscape irrigation
- Label qualifying products
- Encourage product innovation
- Decrease water use
- Water-Smart Landscapes Guide

Clean Water Act

Objective: “restore and maintain the chemical, physical and biological integrity of the Nation’s waters.”



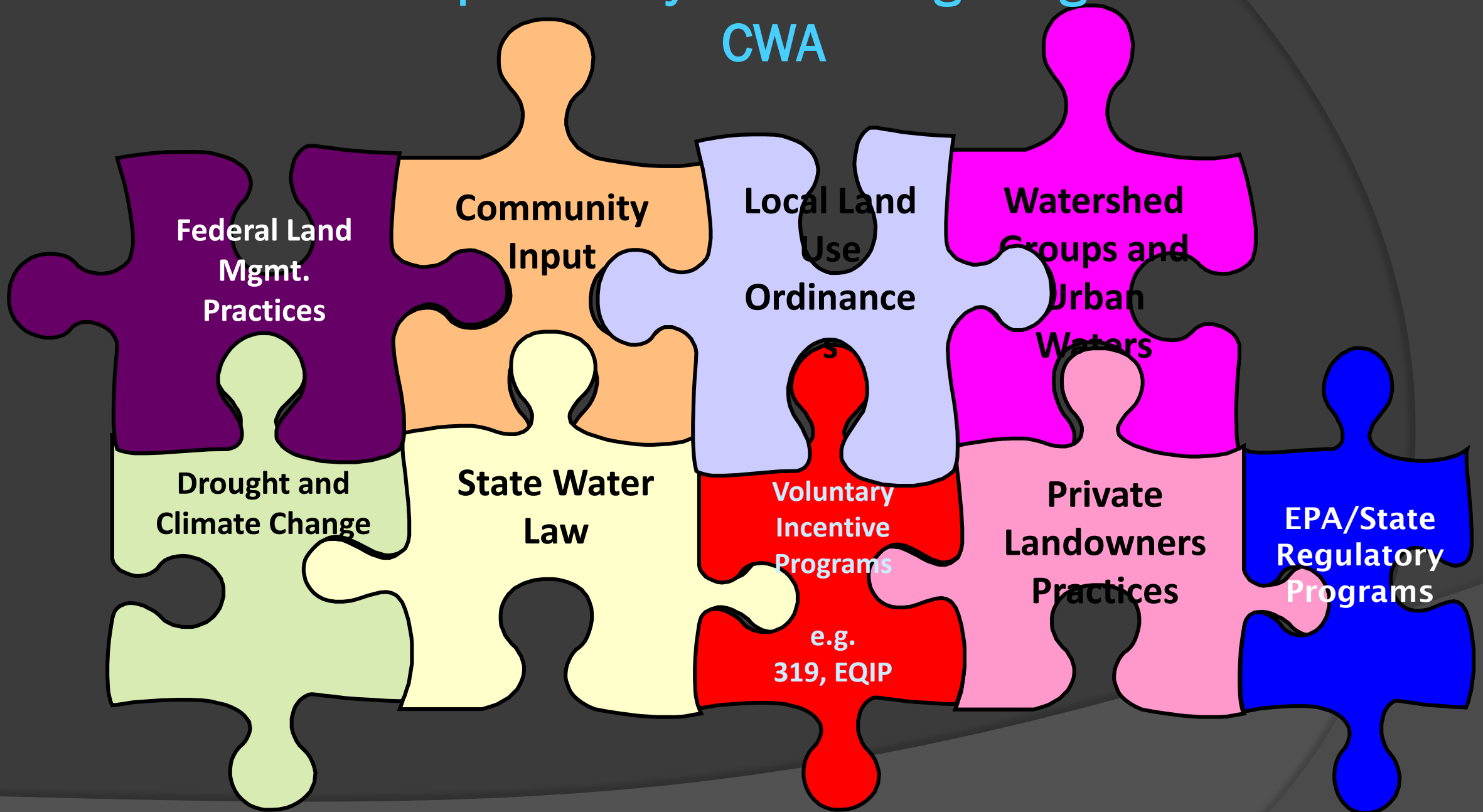
Interim goal: At the very least, make our waters “*fishable and swimmable*”

Clean Water Act 101

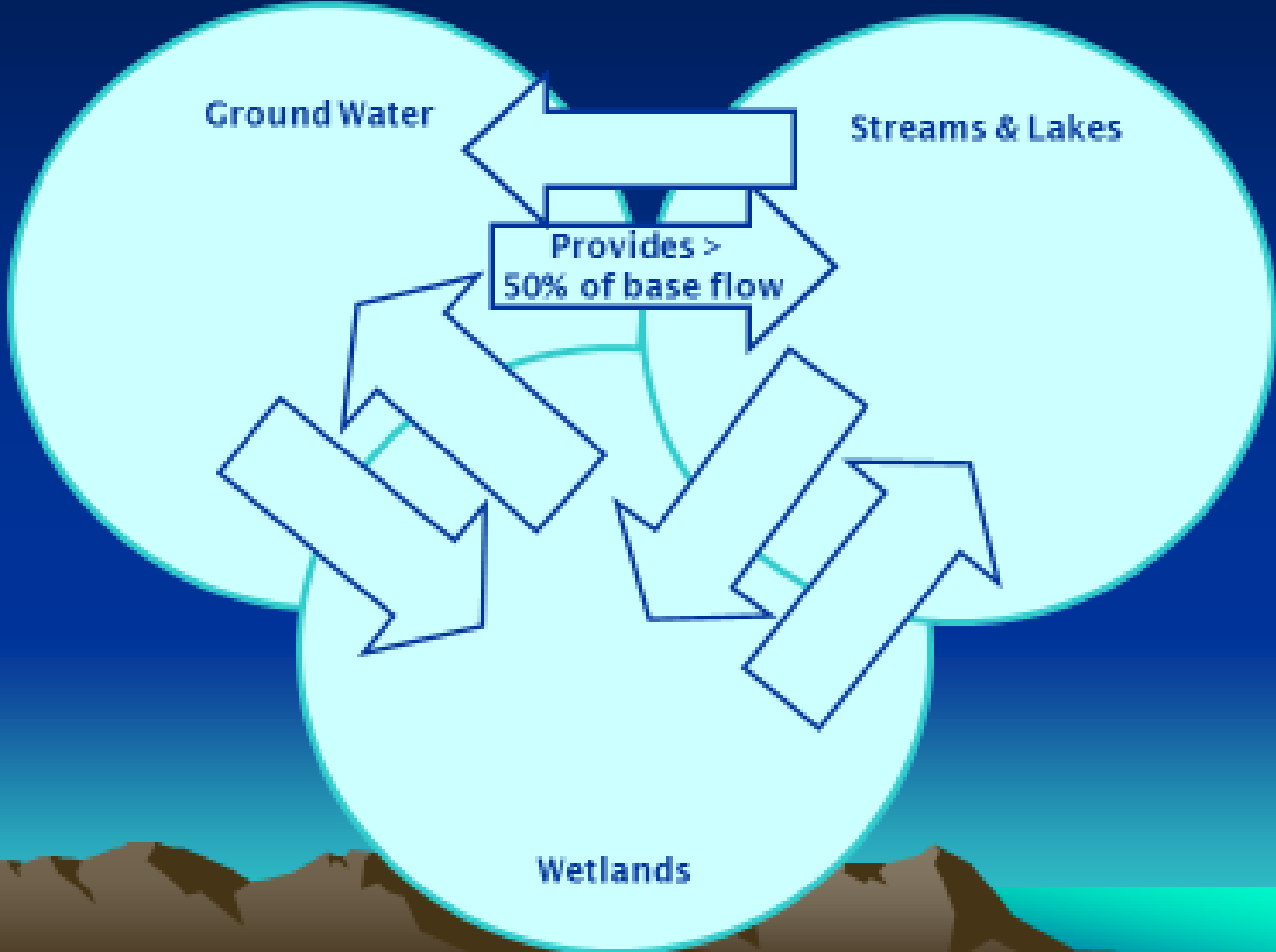
- The CWA has a holistic, ecological objective
- Is a problem-solving framework
- Partnerships are key to restoring and maintaining water quality



Partnerships are key for meeting the goals of the CWA



Water in the West: A Single Resource

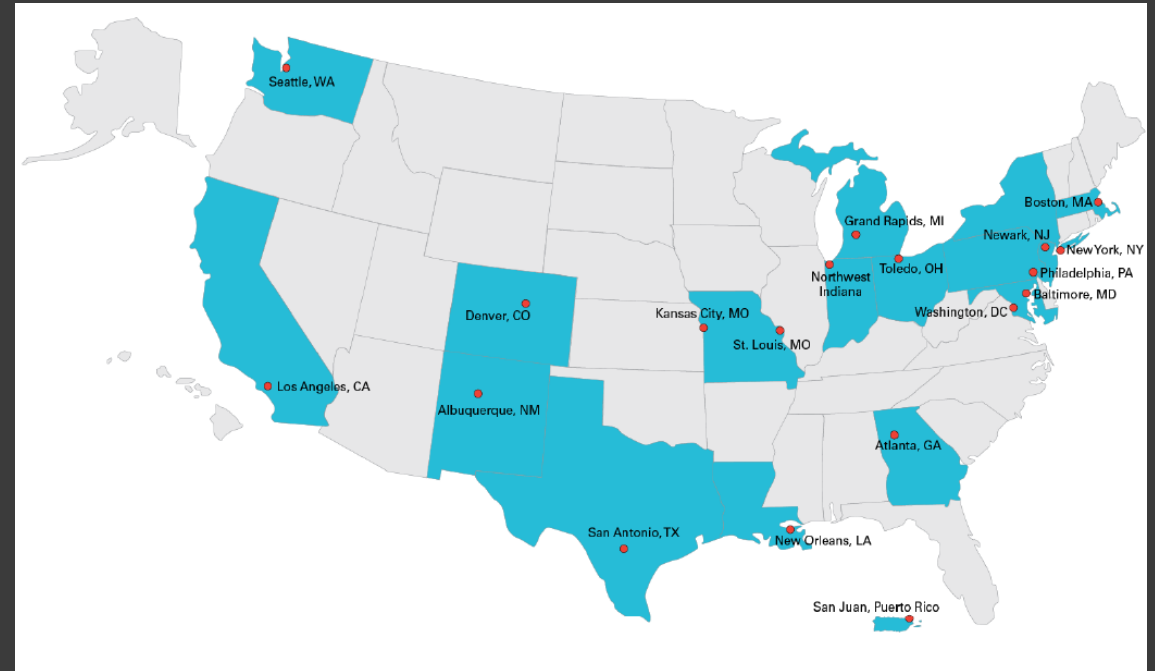


Urban Waters Federal Partnership

14 Agencies, Mission & Vision

*“The Urban Waters Federal Partnership will help urban and metropolitan areas, particularly those that are **underserved or economically distressed**, connect with their waterways and work to improve them.”*

“We will revitalize urban waters and the communities that surround them, transforming overlooked assets into treasured centerpieces and drivers of urban revival.”



One Big Happy Family!

14 Federal Partners + individual agencies



Why Urban Waters?

Right now in cities across the nation, urban waters are being threatened like never before. New and different environmental challenges are appearing everywhere The range of challenges we face are going to require both traditional and innovative strategies — and broad partnerships to address the local issues in our communities, and the national issues we all share.

- Lisa P. Jackson, EPA Administrator



Urban Waters Program

- Help communities, especially underserved ones
- Align fed government programs and investments
- Expand partnerships
- Build local capacity
- Find innovative ways to communicate environmental & economic potential of safe & clean urban waters



Working with Communities

- ⦿ Get out in the community, show up, & create relationships
- ⦿ Get to know the community and the partners in order to assess their needs
- ⦿ Work with other EPA programs to leverage EPA resources-integrate EPA's programs
- ⦿ Work with other Federal, State, local governments, nonprofits, educational institutions
- ⦿ Introduce groups that don't know each other to create synergies and minimize competition

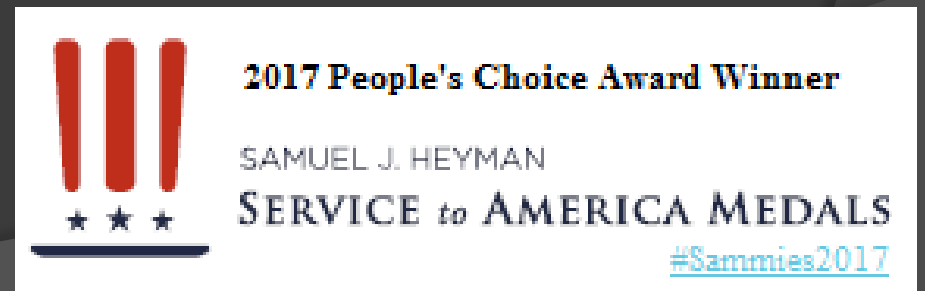
Small Impacts Add Up

- ⦿ Environmental impacts are concentrated in urban areas
- ⦿ Urban waters receive large amounts of pollution that affect drinking water quality and safety
- ⦿ Urban development often make waterways inaccessible to neighborhoods



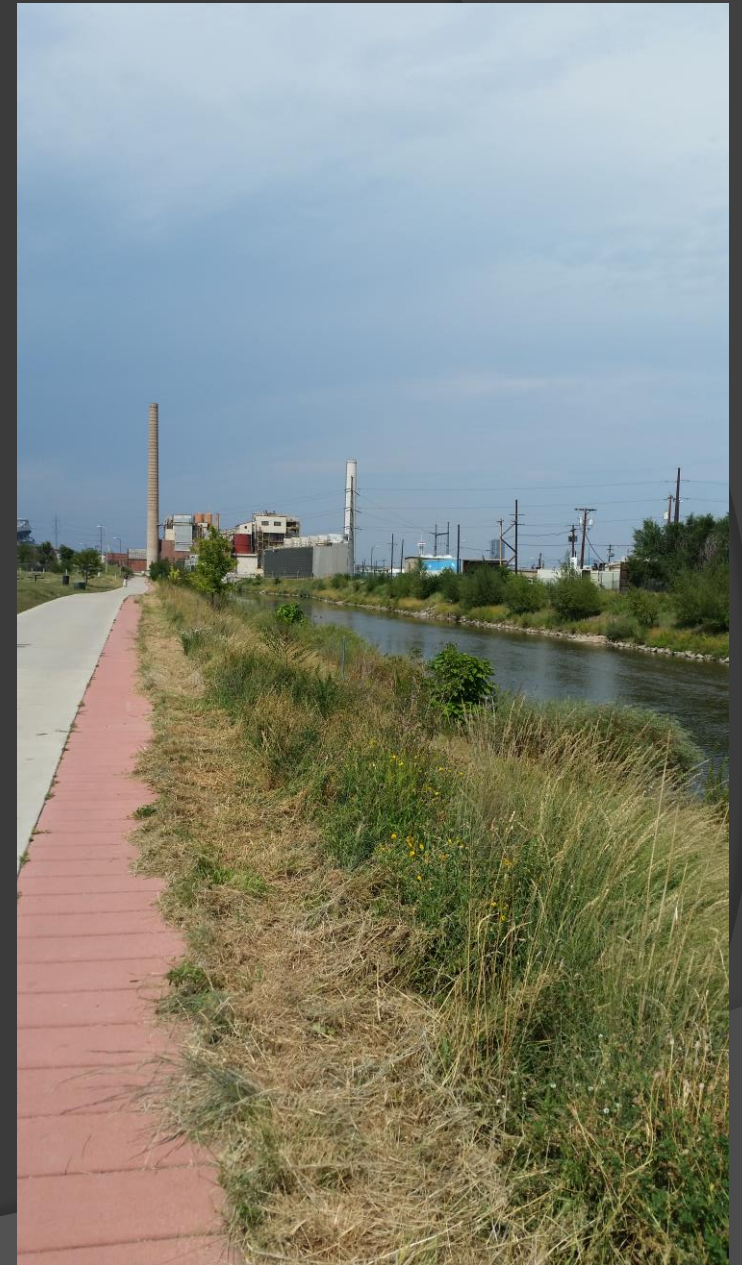
Sammie Award

- The UWFP Team were the 2017 Winner of the Samuel J. Heyman Service to America Medal in the People's Choice Category
- The "Sammies" are known as the "Oscars" of government service



Urban Waters Umbrella

- Urban Waters coordinator
- Source water protection program
- Volunteer monitoring coordinator
- Water quality standards program
- Total Maximum Daily Loads
- Monitoring coordinator
- Non point source pollution program
- Wetlands program
- Stormwater coordinator
- Environmental Justice program
- Laboratory
- Environmental Education program
- USFS, USGS, ATSDR, NPS



South Platte River Urban Waters Partnership

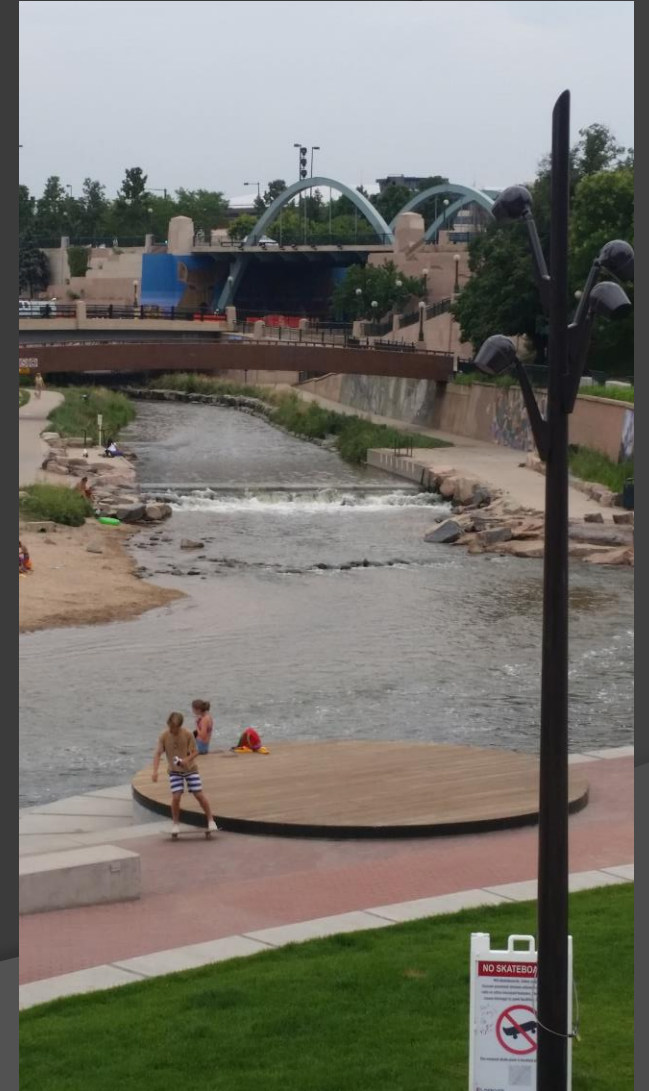
Collaborative effort of over 70 partners:

- Local, state, and federal agencies
- Non-profits
- Watershed groups
- Other stakeholders including businesses and academia
- Collective impact

Protecting/restoring lands and waters in the South Platte River Watershed

- From the Headwaters → Denver Metro Area → Eastern Plains
- One of seven original pilots launched in 2011

<https://www.urbanwaters.gov/splatte/index.html>



Leadership

Ambassador/Coordinator:

Sam Haas, Peak Facilitation Sam@peakfacilitation.com

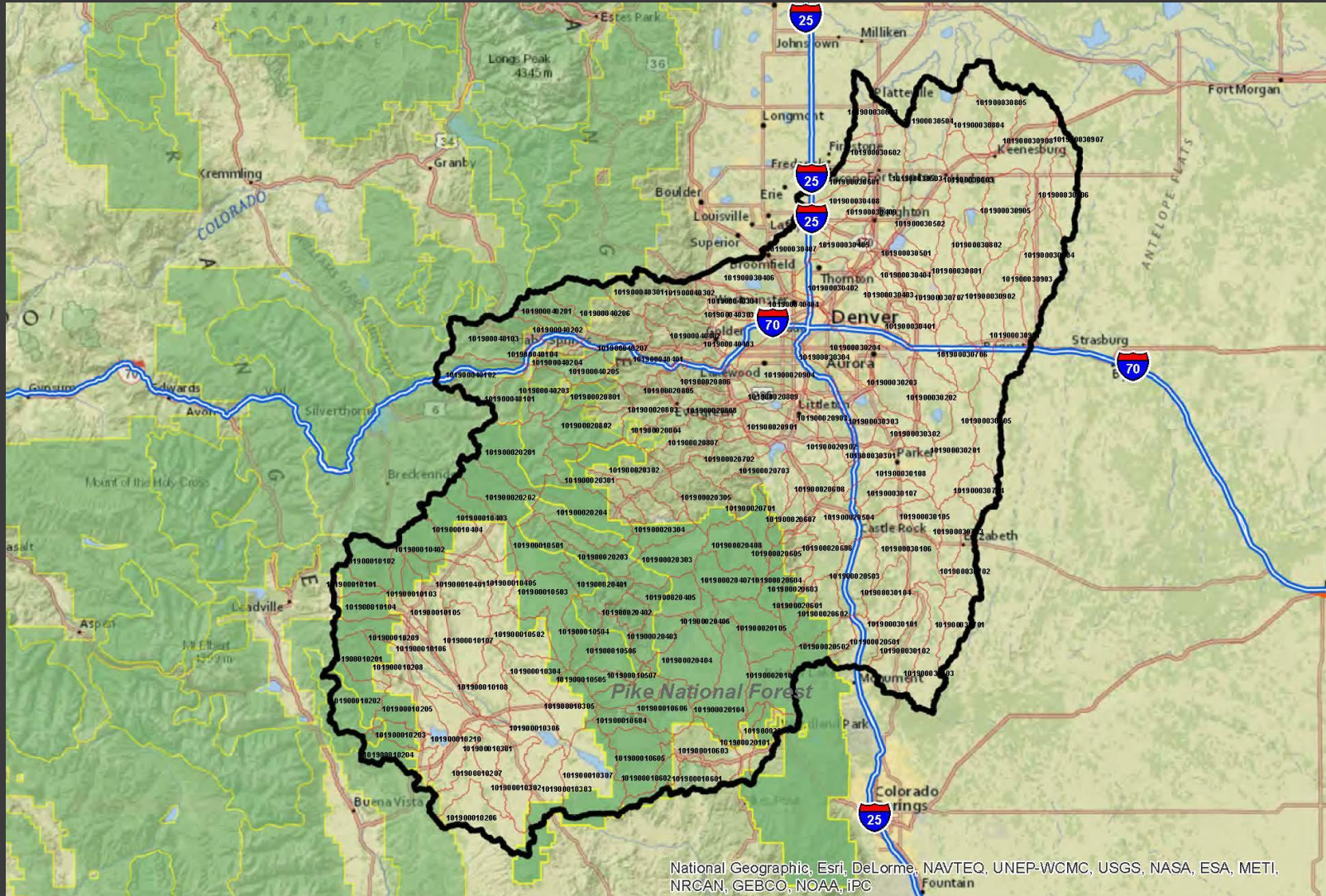
Advisory Committee:

Stacey Eriksen, USEPA Eriksen.Stacey@epa.gov

Sherry Fountain, USFS Sherry.Fountain@usda.gov

Weston Toll, CSFS Weston.Toll@colostate.edu

Focus Area



Why and How

Why: Environmental and Economic Health of the River

- Restore and protect urban waters
- Improve access to urban waters
- Increase awareness of the benefits of urban waters - public health, economic growth and quality of life
- Promote community revitalization

How: Collaboration, Collective Impact

- Increase communication and share expertise
- Look for resource efficiencies of all kinds
- Facilitate project funding
- Make the most of our economic tools and incentives
- Engage and serve the local communities



Our Mission

The South Platte River Urban Waters Partnership collaborates across jurisdictions and disciplines to engage communities, and to protect and restore the South Platte River from the headwaters to the Denver metropolitan area and watershed.



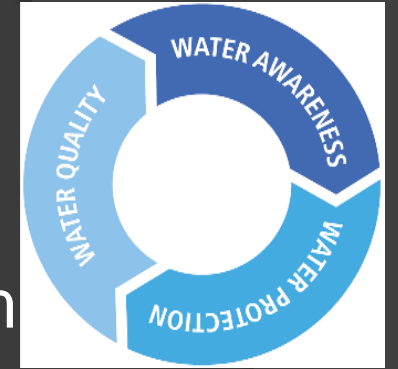
Our Goals

- ◎ Collaborate, educate and engage
- ◎ Connect people with water
- ◎ Protect and restore through leveraging resources
- ◎ Communicate achievements and share technical information



Strategies

- ① Developing Regional Information Resources (best management practices; water quality data, green infrastructure, and ecosystem benefits and services related to South Platte River and tributaries)
- ① Regional messaging for behavioral change
- ① Advance an interconnected network of ecological and green infrastructure for healthier waterways and for social and economic gains to adjacent communities
- ① Protect forests that provide drinking water supply



Benefits to Partners



- Access to technical resources and expertise
- Expanded and strengthened capabilities through networking and partnership opportunities
- Competitive edge through partnering for funding
- Learning through diverse perspectives on shared issues

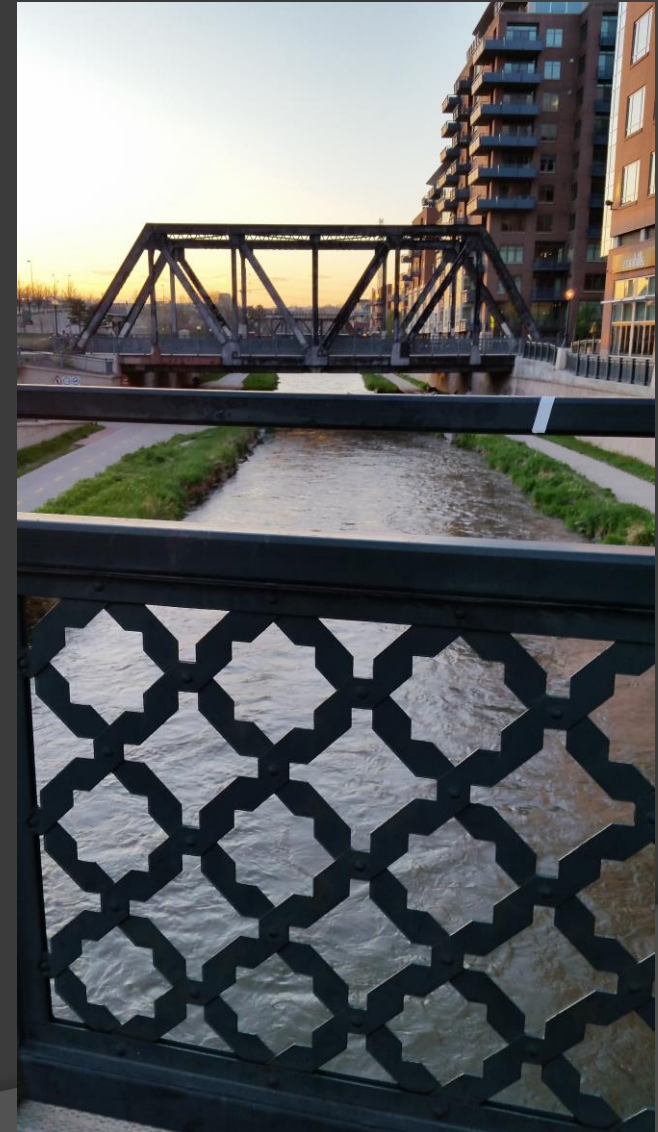
EPA Resources

- Urban Waters Small Grants
- Targeted Brownfields Assessments
- Brownfields Revitalization Funding contract support
- Brownfields Assessment, Cleanup, RLF, AWP, & job training grants
- EJ Small Grants, and funding support
- Regional discretionary, EOY funding
- Monitoring & Assessment Staff
- Laboratory Analysis
- Nonpoint source 319 funding to States
- SRF funding-green reserve projects
- Region 8 Coaching Network
- Toxicologist
- Other technical support
- Superfund and Site Assessment
- ATSDR



Issues of Concern

- Water Quality
 - E. Coli
 - Nutrients
 - Trash
- Stormwater
 - Green Infrastructure
 - Messaging to Change Behaviors
- Source Water Protection
 - Forest Treatment
 - Watershed Protection Projects



Geomapping

The screenshot displays the 'Urban Waters Mapper' web application. The browser address bar shows the URL '174.129.206.198/urbanwaters/index.html'. The page title is 'Urban Waters Mapper' with the subtitle 'revitalizing our urban waters and the communities that surround them'. The interface includes a 'Projects' sidebar on the left with a timeline from 2010 to 2014 and a list of project types such as 'Education, outreach, training, Green jobs (16)'. The main map area shows a topographic map of the Denver area with various colored markers representing different project types. A 'Project Details' popup window is open over a red marker, displaying the following information:

Exploring the Ecology of Your Local Landscape

Hands-on skill practice and exploration of watershed topics and human influences.

Date: 07/11/2013
Organization(s): Cherry Creek Stewardship Partners
Contact:
Email: casev@cherry-creek.org
Phone: 303-345-1675
Web Site: http://www.cherry-creek.org/upcoming_events_and_registration
Contact Organization: Cherry Creek Stewardship Partners

The right sidebar, 'Select Map Contents', lists various map layers including 'Water Monitoring Stations', 'Wetlands', 'Green Space', and 'Base data'. The Windows taskbar at the bottom shows the system clock as 1:19 PM on 9/13/2013.

Urban Waters Mapper Project Categories

- ⦿ Water access, trails, recreation, parks, open space
- ⦿ Education, outreach, training, green jobs
- ⦿ Research and monitoring
- ⦿ Water quality improvements
- ⦿ Forest restoration/protection
- ⦿ River/stream/wetlands restoration/conservation/flood protection
- ⦿ Green infrastructure/low impact development for stormwater
- ⦿ Trash cleanup and invasive species removal
- ⦿ Other projects

Systems Thinking Project

- ③ *Component parts of a system can be best understood in the context of relationships with each other & with other systems, rather than in isolation (ecosystems, organizations)*
- ③ Evaluation of partner expertise and projects
 - ID leverage points
 - ID gaps, duplications and opportunities for synergies
 - Assist in establishing priorities and focus areas
- ③ Feed into Strategic Planning

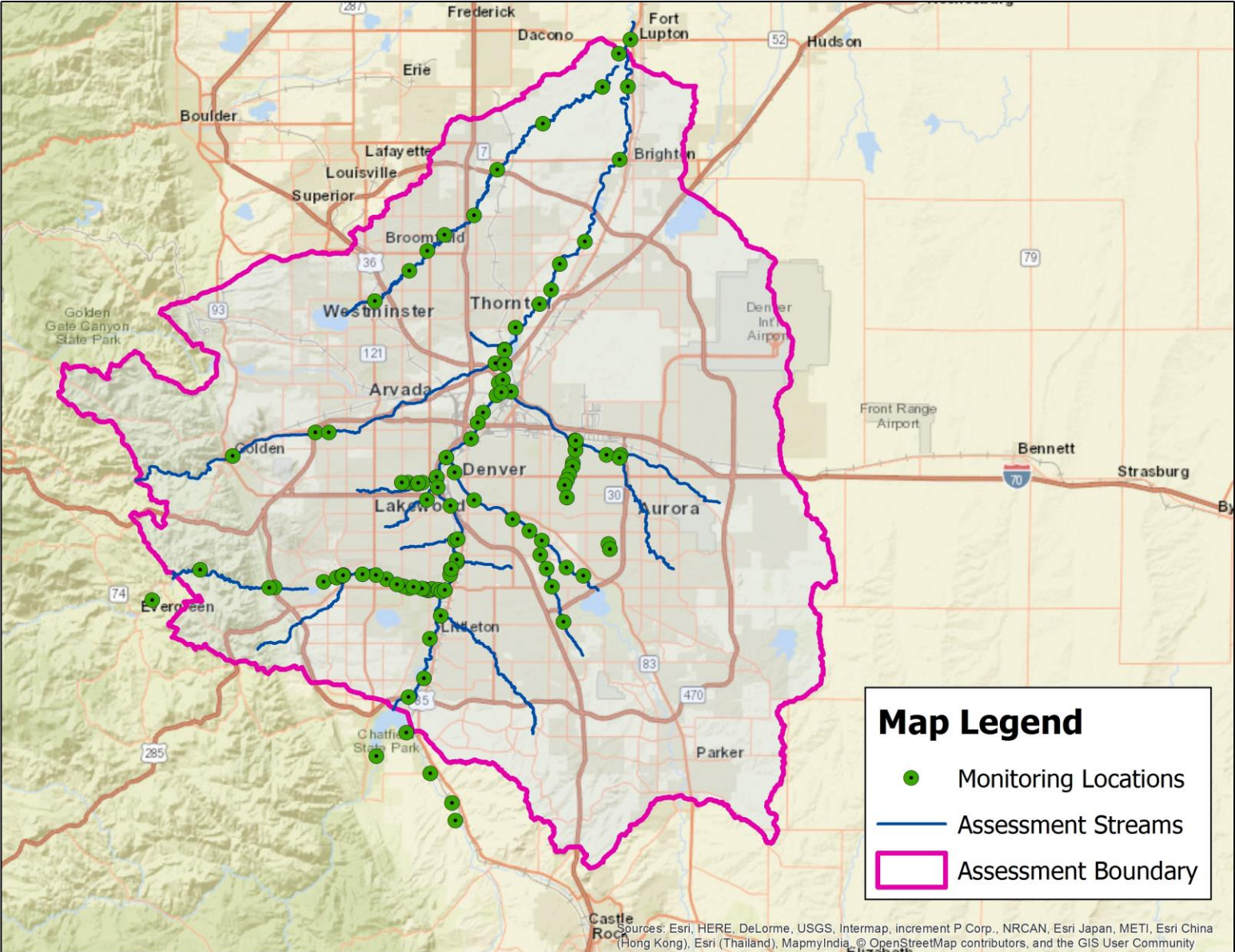
Water Quality Assessment Tool



<http://www.exploremetrodenverwaterquality.org/>

The South Platte Urban Waters Partnership is excited to present the updated water quality assessment tool for exploring the health of rivers and streams in the Denver metro area. This online tool combines data from 2009 through 2015 for pollutants including *E. coli*, contaminants of emerging concern, total dissolved and suspended solids, selenium, and nutrients. Use maps, graphs and narratives to explore water quality in the South Platte River basin. Take the tool into the field with the new mobile application and learn how you can protect water quality!

Assessment Boundary



Key Objectives

"create a streamlined and intuitive web application that makes water quality data accessible to both decision makers and the general public"



What is the Metro Denver Water Quality Assessment Tool (WQAT)?

Exploration of select contaminants in the Denver Metro area from 2009 - 2014

Open source technologies

Main components

- Storyline
- Interactive Map
- Data Explorer

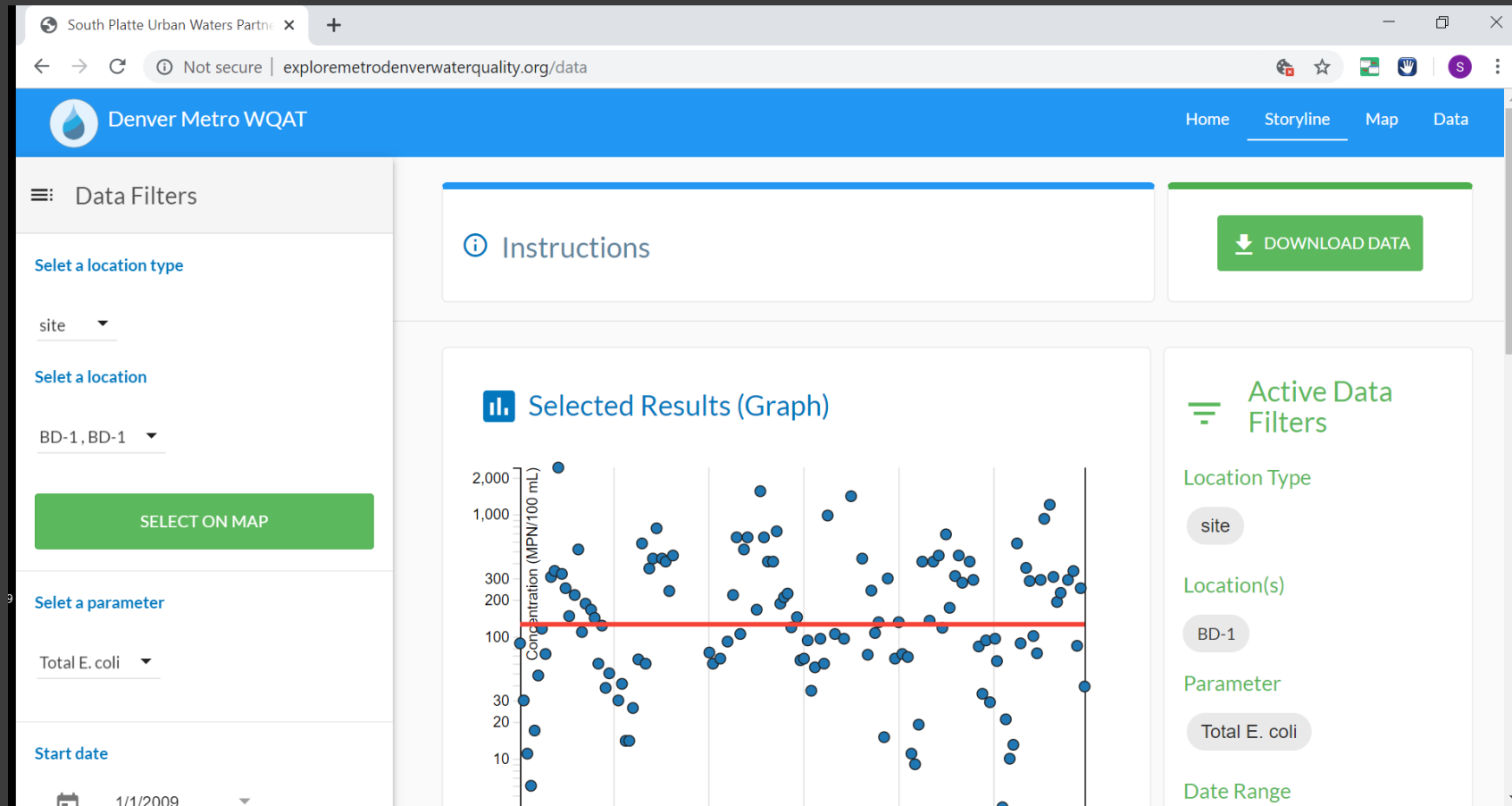


Denver Metro WQAT



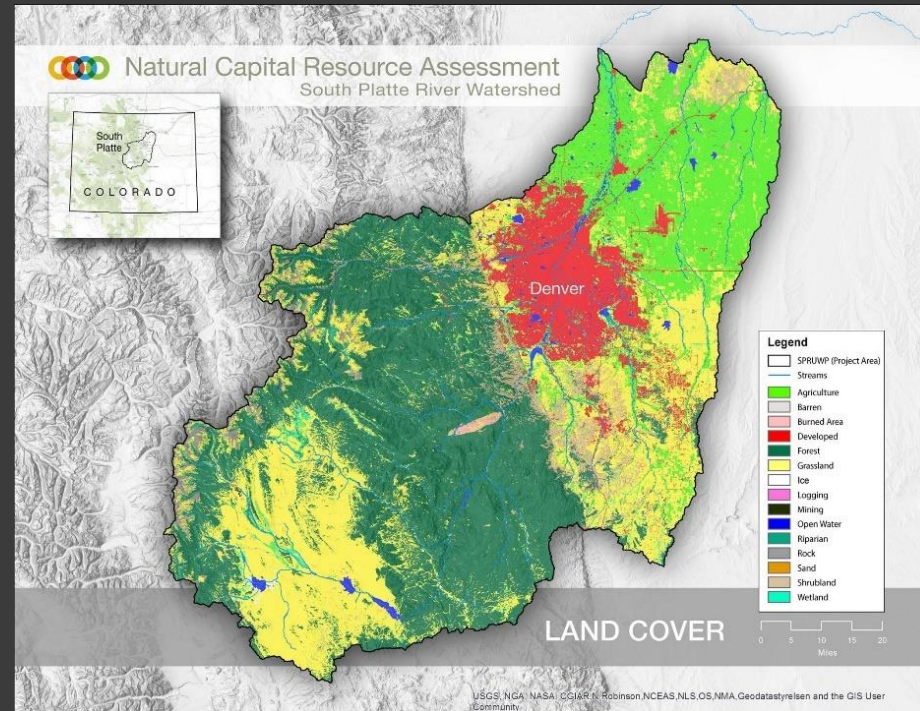
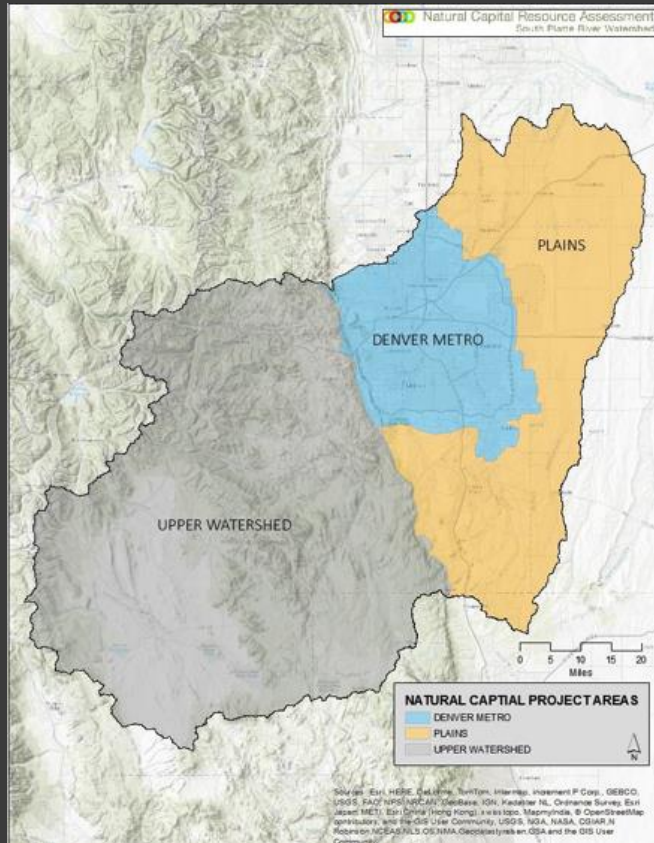
- ⦿ Goals and Requirements
- ⦿ Combine several data sources into a central database
 - Variety of water quality parameters (nutrients, CECs, *E. coli*)
 - Data across lots of monitoring locations
- ⦿ Suite of Interactive tools
 - Interactive map and graphs
 - interactive storylines
- ⦿ Tool equally useful to water quality experts and non-experts alike
- ⦿ Ability to explore a variety of questions from a single tool

Denver WQAT





Natural Capital Resource Assessment South Platte River Watershed



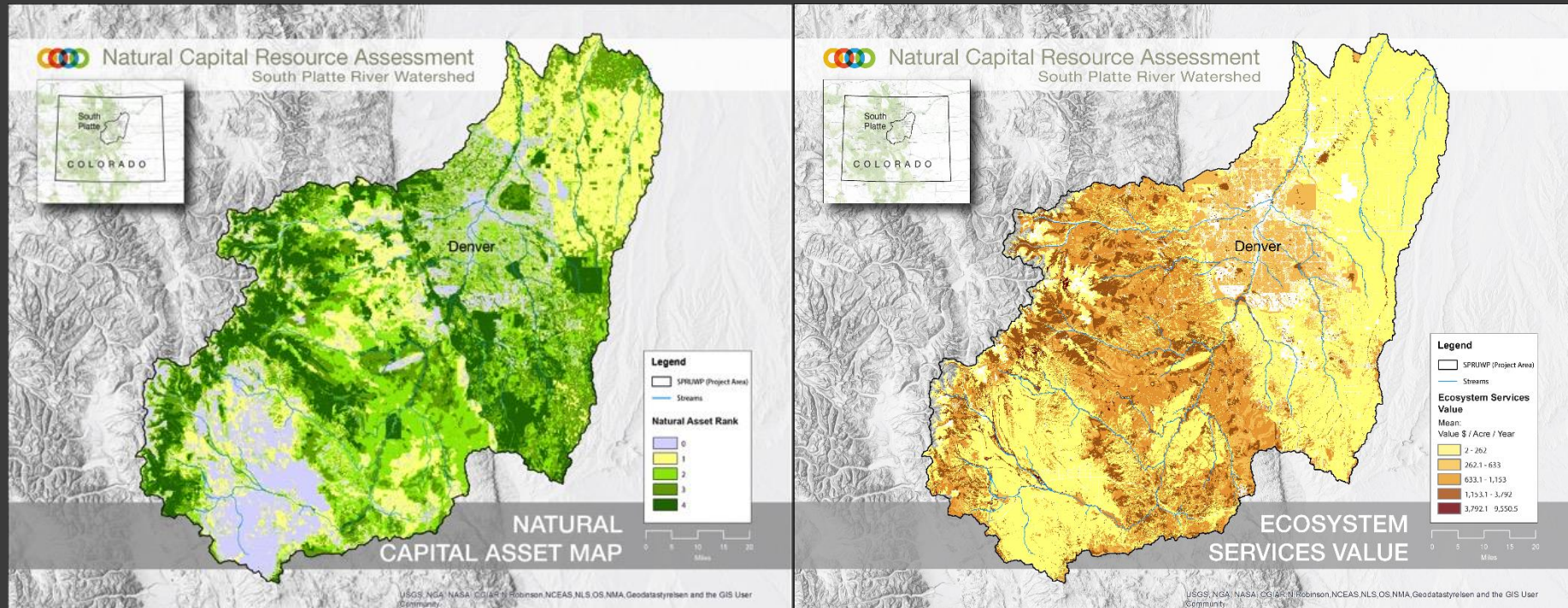
<https://pg-cloud.com/NaturalCapital/>

<https://www.epa.gov/urbanwaterspartners/south-platte-natural-capital-project>



Natural Capital Resource Assessment

South Platte River Watershed

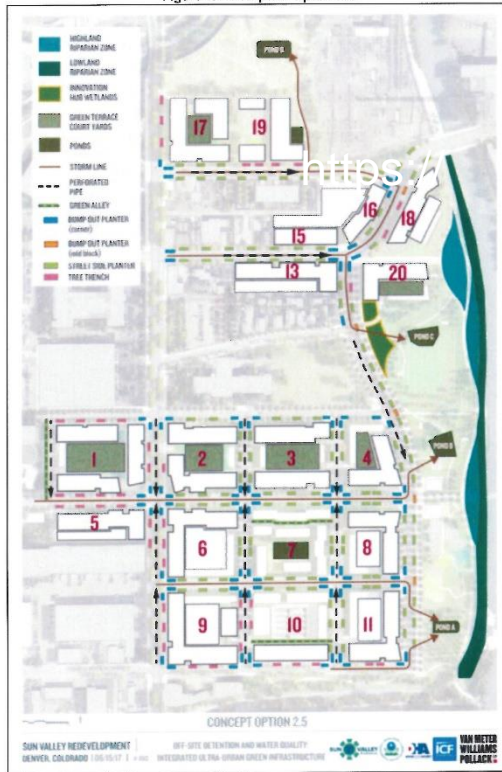


<https://pg-cloud.com/NaturalCapital>

Sun Valley GI Options Study

Technical Memorandum
Sun Valley EcoDistrict - Green Infrastructure and Stormwater Management Option 2.5

Figure 1. Conceptual Option 2.5



<https://www.epa.gov/urbanwaterspartners/sun-valley-stormwater-options>

Description	Capital Cost	Annual Operating Cost	Total NPV Costs (20-YR)
OPTION 2.5 - Integrated Ultra-Urban Green Infrastructure, Off-Site Detention and Water Quality	\$11,492,700	\$425,300	\$18,485,700
OPTION 1 - Conventional Conveyance and Site Retention/Detention	\$11,217,600	\$617,600	\$21,374,300
OPTION 2 - Green Infrastructure with Centralized Site Retention/Detention	\$12,525,400	\$752,700	\$24,902,500
OPTION 3 - Green Infrastructure with De-Centralized Site Retention/Detention	\$15,870,100	\$1,621,300	\$42,530,700

Lower Bear Creek



- Watershed plan
- Water quality monitoring and EJ youth blue team training
- Septic system and stormwater outreach
- Draft alternate to a TMDL for e-Coli
- Created with 2 UWSG and NPS funding and EPA and NPS RTCA staff support to Groundwork Denver
- <https://groundworkcolorado.org/programs/water/>

H2Oonly Water Quality Messaging



BARR MILTON
Watershed Association

- Subset of partnership developed unified and comprehensive messages about water quality and stormwater including dog waste, algae, and phosphorus fertilizer.
- Funded by EPA UWSG to Barr Milton Watershed Association.

<https://barr-milton.org/resources/messages/>

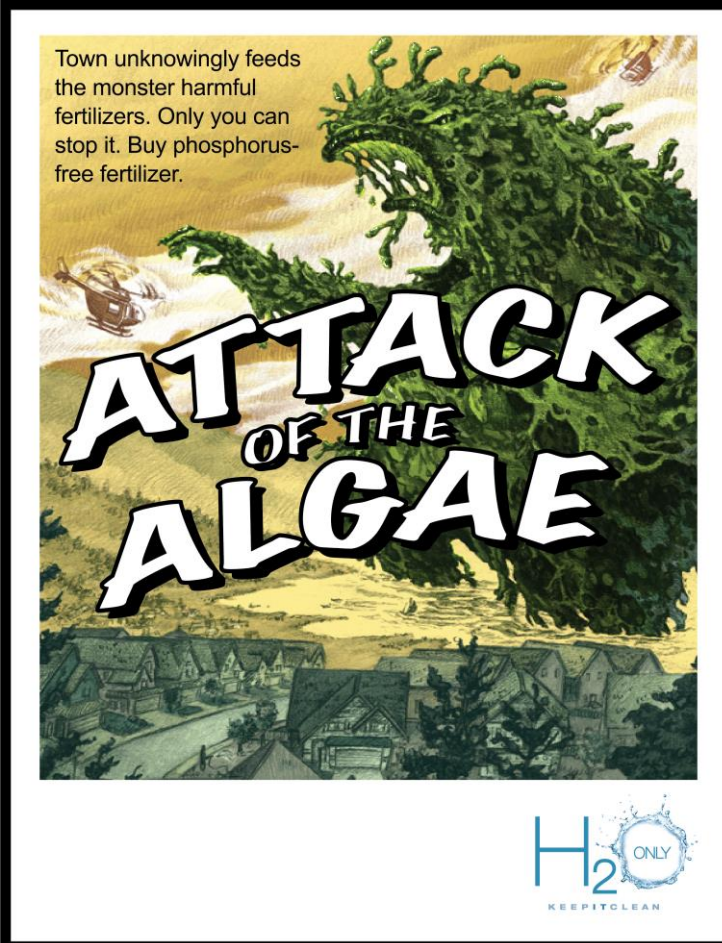
Think About Your Drink



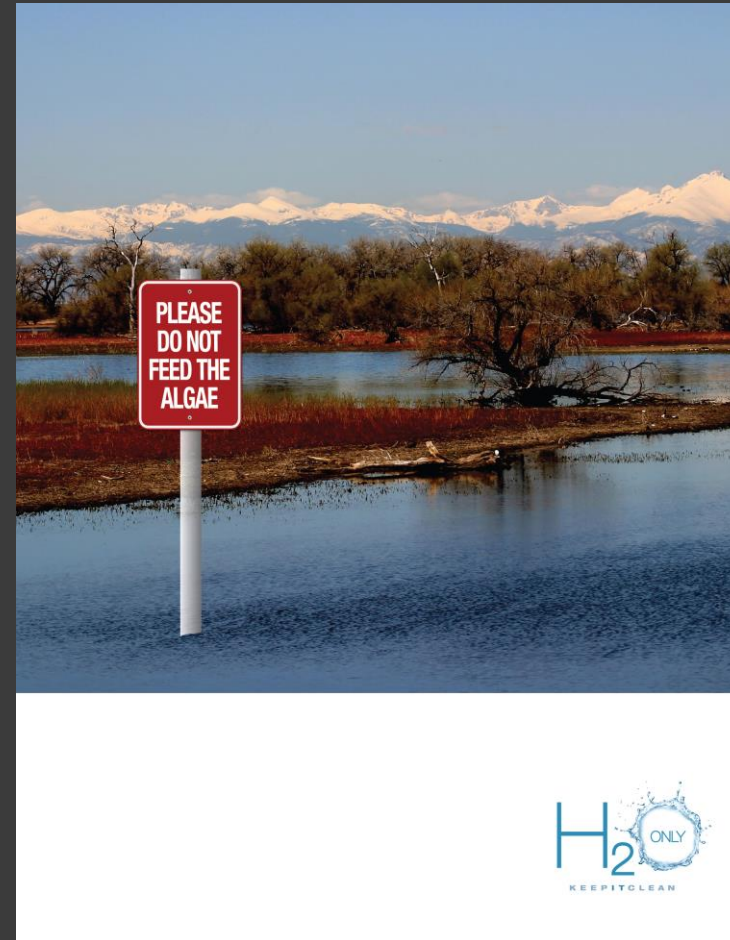
BARR MILTON
Watershed Association



Attack of the Algae



Don't Feed Algae



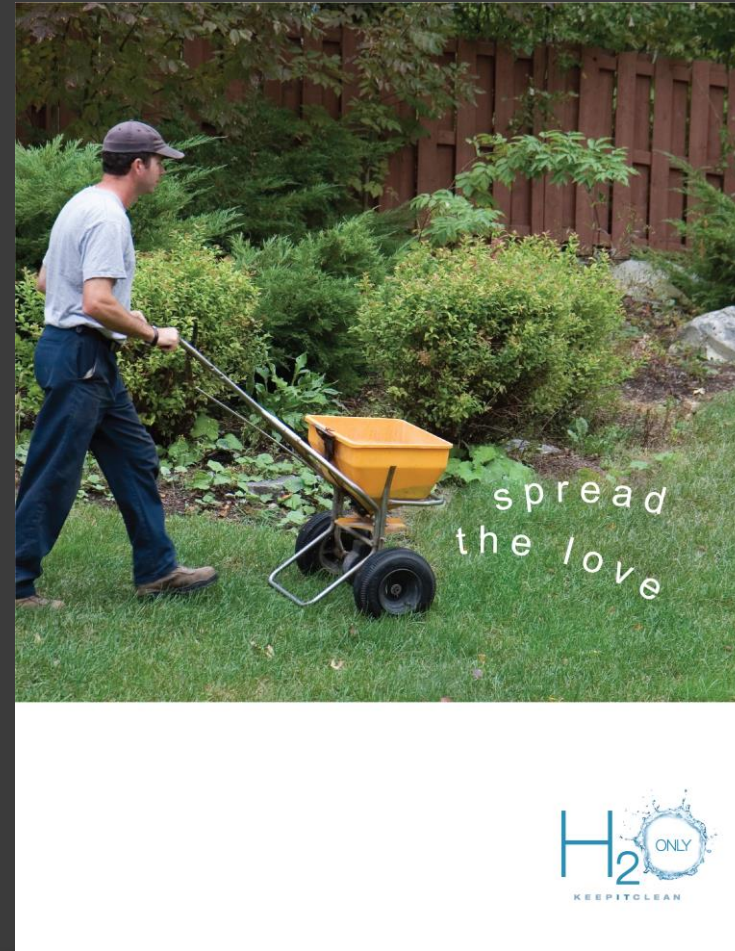
BARR MILTON
Watershed Association

Pick up After Dog

Spread the Love



BARR MILTON
Watershed Association



KIC-NET Stormwater

- [Keep It Clean-Neighborhood Environmental Trios](#)
- [An innovative, hyperlocal urban stormwater education program](#)
- [STEM, Stormwater, MS4 permits, and Environmental Citizenship](#)
- [CAEE 2014 Award for Environmental Education](#)
- [Funded with 3 EPA Urban Waters Small Grants across 2 EPA Regions](#)
- <http://earthforce.org/KICNET/>
- <https://www.denvergov.org/content/denvergov/en/wastewater-management/keep-it-clean/case-study-keep-it-clean-denver-and-earth-force.html>
- <http://www.urbanwaterslearningnetwork.org/wp-content/uploads/2016/02/Earth-Force-KIC-NET-Activity-Guide-DEN-ed-July-2015.pdf>
- <http://www.urbanwaterslearningnetwork.org/resources/watershed-plan-born/>
- <https://www.denvergov.org/content/dam/denvergov/Portals/711/documents/KeepItClean/KICNETeducatorbrochure.pdf>
- https://www.epa.gov/sites/production/files/2018-08/documents/pollution_tolerance_index_-_south_platte_river_kic-net_-_july_2017.pdf



Collaborations and Spin Offs



- ◎ CSU Water Building at the Redeveloped National Western Center <https://nwc.colostate.edu/csu-water-building/>
- ◎ Denver Urban Field Station <https://www.nrs.fs.fed.us/STEW-MAP/denver/>
- ◎ Metro Denver Nature Alliance <https://www.metrodna.org/>



THANK YOU!

Reduce Runoff-
Slow it Down,
Spread it Out,
Soak it in