

**SANTA CRUZ
WATERSHED
COLLABORATIVE**

Water Resource Research Center

November 18, 2022

SCWC Watershed Restoration Plan

Amanda Webb, Pima County Office of Sustainability and Conservation
Lisa Shipek, Watershed Management Group



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Vision: People working together to ensure a healthy urban watershed with flowing rivers and streams



Confluence of Tanque Verde Creek and Pantano River at Craycroft bridge-illustration by Dennis Caldwell, courtesy of Watershed Management Group



Santa Cruz River Heritage Project rendering-rendering by Wheat Design Group for Tucson Water

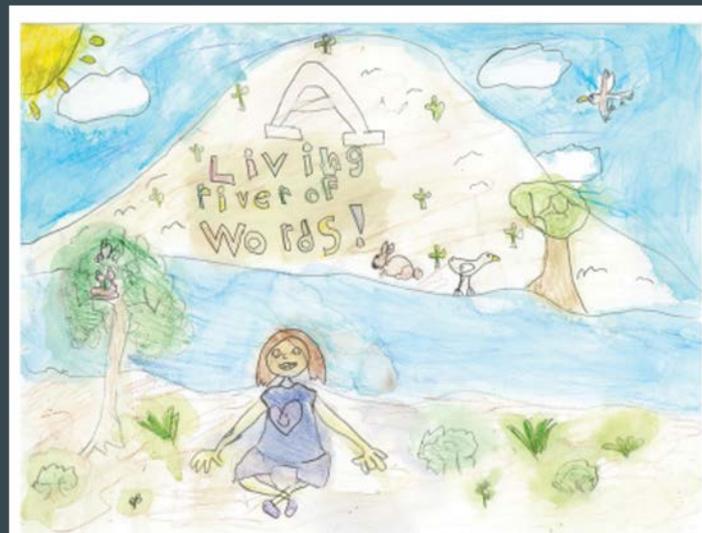


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Working together for our future -
Family with baby enjoying public access to Sabino Creek



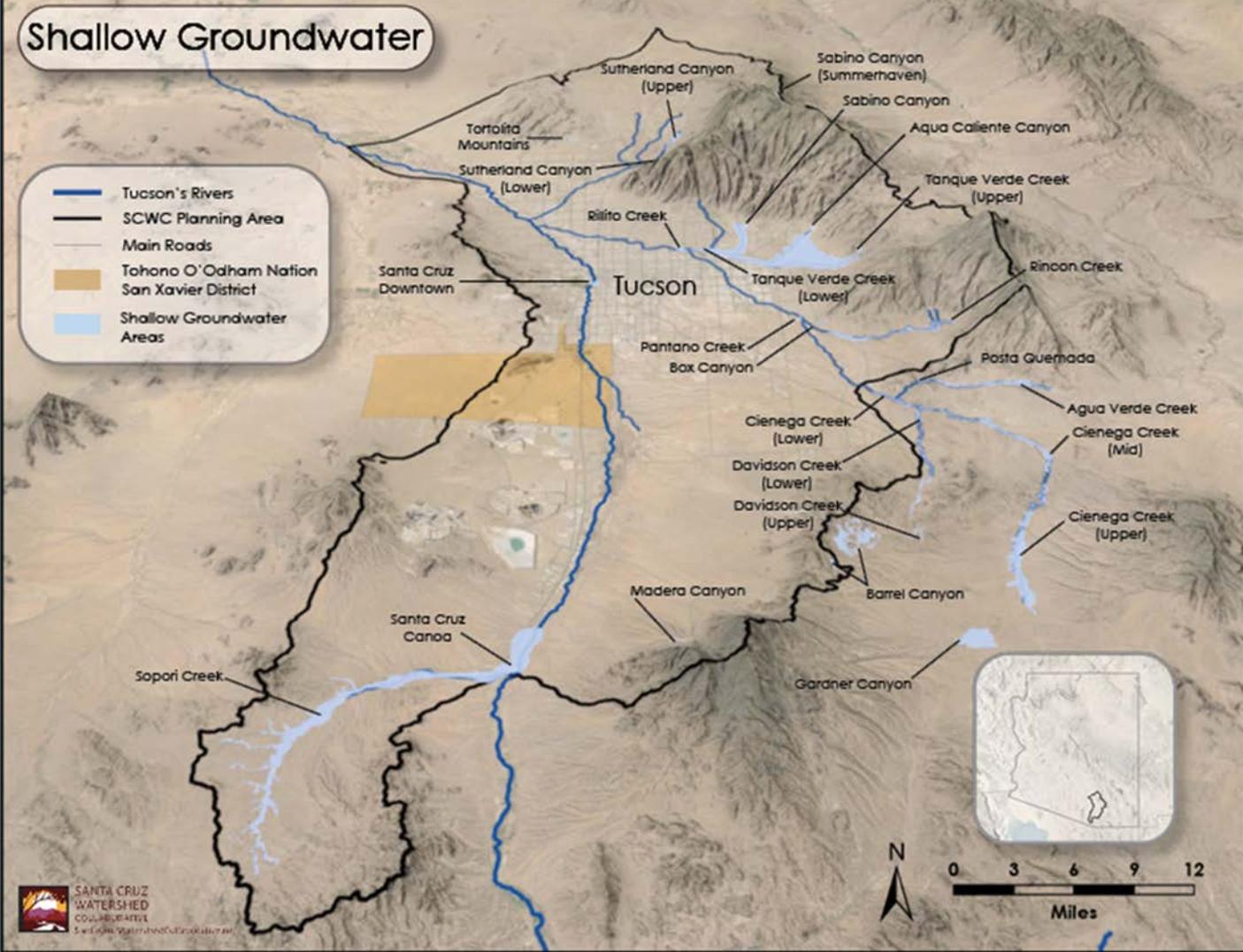
Me at the River
Helena Gallo-Quiroz, age 9
Barrio Kroeger Lane-Favor Celestial – Josefina Cardenas

Inspiration from children with
Pima County NRPR River of Words

Shallow Groundwater

Geographic scope

- Tucson's Rivers
- SCWC Planning Area
- Main Roads
- Tohono O'Odham Nation San Xavier District
- Shallow Groundwater Areas



Who is the Santa Cruz Watershed Collaborative?



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Our Partners

State and Federal

- Arizona Game and Fish Department, Tucson Aquatic Wildlife Program
- Bureau of Reclamation
- Coronado National Forest
- Saguaro National Park
- US Geological Survey

Municipal and County

- Marana, Parks & Recreation Department
- Pima Association of Governments
- Pima County, Office of Sustainability and Conservation
- Pima County, Regional Wastewater Reclamation Department
- Town of Marana, Water Department
- City of Tucson, Department of Transportation and Mobility
- Tucson Water

Native Nations

- San Xavier District-Tohono O'odham Nation

Private

- Metro Water District
- BKW FARMS
- Farmers Water Co (FICO)
- Freeport-McMoRan Sierrita Operations

University of Arizona

- CAPLA University of Arizona
- Cooperative Extension
- Center for Climate Adaptation Science and Solutions
- Water Resources Research Center

Non-Government

- Borderlands Restoration Network
- Community Water Coalition of Southern Arizona
- Friends of El Rio Preserve (FERP)
- Friends of Sonoita Creek
- Friends of Tucson's Birthplace
- Local First Arizona
- Sky Island Alliance
- Sonora Environmental Research Institute (SERI)
- Sonoran Institute
- Tucson Audubon
- Watershed Management Group
- YWCA Southern Arizona



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Coordinating Team



- Amanda Webb, Pima County Office of Sustainability and Conservation
- Ashley Hullinger, UA Water Resources Research Center
- *Claire Zucker, Pima County Cooperative Extension*
- Claire Zugmeyer, Sonoran Institute
- Eve Halper, Bureau of Reclamation
- *Jaimie Galayda, Tucson Water*
- Jennifer Varin, Coronado National Forest
- John Baskett, San Xavier District, Tohono O'odham Nation
- Jonathon Goldman, Private
- Kelly Liska, Local First Arizona
- *Kimberly Baeza, Pima County Regional Wastewater Reclamation*
- Liane Hernandez, YWCA of Southern Arizona
- *Lisa Shipek, Watershed Management Group*
- *Mead Mier, PAG*
- Melodee Loyer, Green Valley Pecan
- Paul Rosenboom, City of Tucson Department of Transportation and Mobility
- *Sarah Truebe, Sky Island Alliance*



A Shared Funding Approach

Grants and Foundations

- BOR WaterSmart Grant, Phase 1, 2019-2020
- Network for Landscape Conservation, Catalyst Grant 2020-2022
- BOR WaterSmart Grant, Phase 1, 2022-2024

Total to Date: \$225,000

Partner Support

- American Rivers
- Borderlands Restoration Network
- Community Water Coalition of Southern Arizona
- Family Trust (Jonathon Goldman)
- Local First Arizona
- Pima County
- Sky Island Alliance
- Sonoran Institute
- Town of Marana
- Tucson Audubon
- Tucson Water
- Watershed Management Group

Total Direct to Date: \$19,600

In-kind: forum costs (staff & food)



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Plan Adopted!

March 2022

Review or download here:
santacruzwatershedcollaborative.net



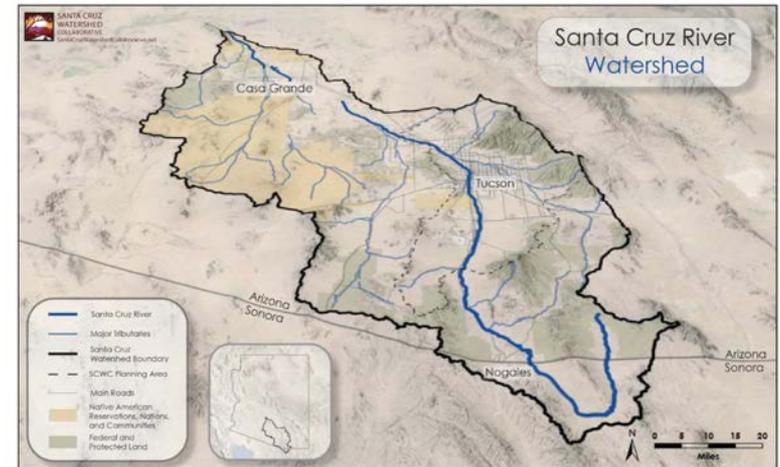
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Watershed Restoration Plan

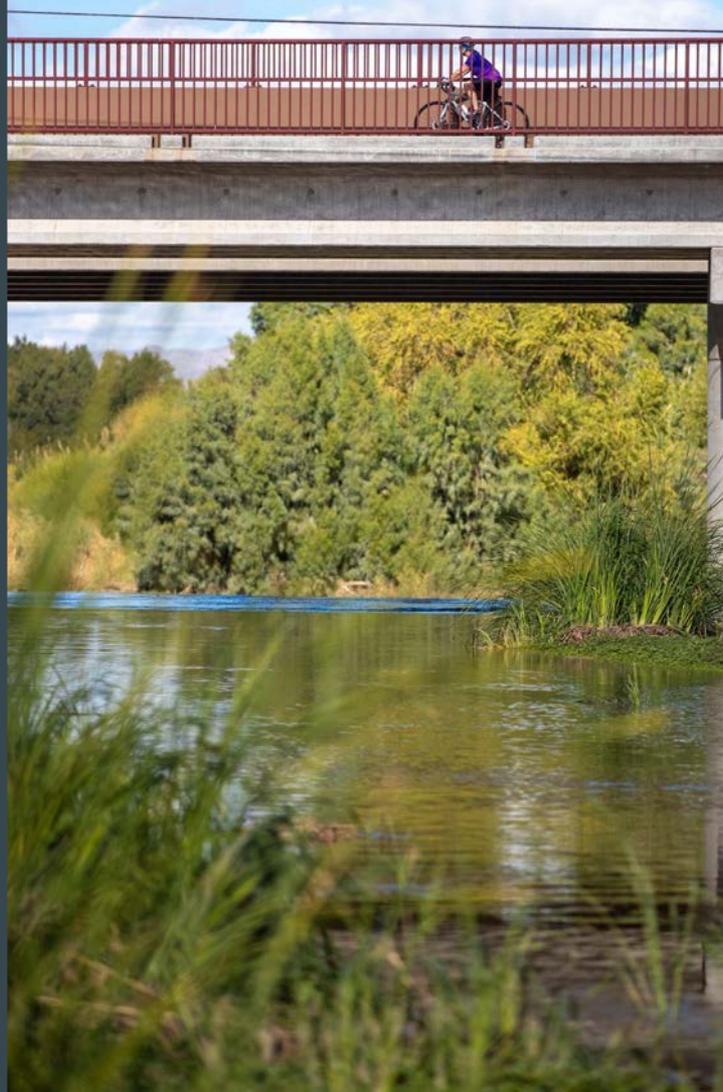
For the Santa Cruz Watershed Collaborative Planning Area of the Santa Cruz River Watershed



Problem statement

Stakeholders expressed a need for greater coordination and collaboration across the watershed.

Desire is to manage through a holistic approach to ensure a sustainable water supply and healthy ecosystems.



SCWC Mission

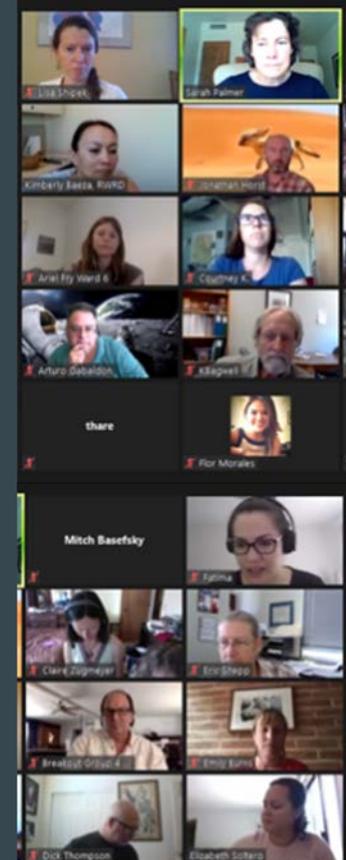
To collaboratively restore the hydrological and ecological function of the watershed. By fostering cooperation, SCWC enables watershed leaders to make well-informed management and policy decisions.



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Watershed Restoration Plan Process

- **2017** - Interviewed 22 stakeholders & confirmed common interest and need for a Watershed Collaborative and Plan
- **2018** - Drafted and adopted SCWC's vision, mission, and shared goals
- **2018 - 2021**
 - Semi-annual forums: 50+ participants each, >40 representative unique stakeholders
 - Summer 2020 virtual planning sessions
 - 4 sessions: 114 unique participants & 61 unique stakeholder groups
 - Follow-up stakeholder meetings to align with partner interests, goals, plans
 - Over 90 watershed restoration strategies documented and incorporated into Plan
- **2022** - Plan reviewed and adopted by Coordinating Team



SCWC Shared Goals, foundational to the Watershed Restoration Plan

Shared Goal 1

A One Water system where surface water, groundwater, rainwater, stormwater, and recycled water are managed together to create a secure and equitable water future.



Shared Goal 2

Holistic watershed management that restores perennial and intermittent flow, native riparian habitat and associated ecosystem services of rivers and streams.



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Photo: Tanque Verde Creek, Watershed Management Group

Shared Goal 3

Alignment and strengthening of environmental education and recreation among our collaborative partners to improve community connections to the watershed.



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Watershed Restoration Plan Contents

- Vision, Mission, Shared Goals
- Regional assets (natural and cultural)
- Regional challenges (growth, climate, water demand)
- Riparian conditions (hydrologic, ecologic, priority preservation and restoration areas)
- Points of Progress
 - Restoring springs and mountain uplands
 - Replenishing shallow groundwater areas
 - Integrating urban forests and greenways
 - Connecting Santa Cruz River flows
- Priority Strategies
- Action Items



Model efforts and goals at El Rio Preserve in Marana- Illustration of Increased Wildlife Connectivity and Floodplain Function with an RFCD wildlife ramp. From the Pima County Living River Report, shared with permission from PC RFCD and Sonoran Institute

Watershed Plan Priority Strategies (Chapter 3 of the plan)

1. Promote Diversity, Equity, and Inclusion of Watershed Residents
2. Support Strategic Invasive Species Efforts
3. Advance Watershed Recreation and Education Master Planning
4. Expand Green Stormwater Infrastructure and Water Harvesting Practices
5. Advocate for Instream Recharge to Revive Streamflows



Photo Credit: San Xavier Cooperative Farm

Promote Diversity, Equity, and Inclusion of Watershed Residents

SCWC will

- Recognize and include Indigenous ecological knowledge, stewardship roles, and traditional and current land and water uses
- Support and promote contributions of the Tohono O'odham and Pascua Yaqui
- Engage and support representatives from diverse and under-resourced communities to participate and present
- Establish diversity, equity, and inclusion goals and metrics
- Provide training opportunities for DEI capacity building among Coordinating Team members



Support Strategic Invasive Species Efforts

SCWC will

1. Support coordination of SCWC Partners in riparian invasive species removal
2. Facilitate information sharing and best practices
3. Invite partners to learn from each other to coordinate efforts



Advance Watershed Recreation and Education Master Planning

SCWC will

1. Develop working group leadership to support partners
2. Coordinate outreach and engagement of environmental educators on SCWC Plan strategies
3. Facilitate information sharing among stakeholders to promote coordination
4. Ensure inclusivity of historical and cultural aspects of the Santa Cruz River watershed
5. Promote inclusivity of the framing of educational programming



Photo credit: Pima County

Expand Green Stormwater Infrastructure and Water Harvesting Practices

SCWC will

1. Facilitate information sharing and best practices
2. Invite partners to learn and coordinate GSI across the basin
3. Find strategic opportunities to use GSI to recharge and benefit shallow groundwater riparian habitats and floodplain restoration



Photo credit: WMG

Photo credit: HarvestingRainwater.com

Advocate for instream recharge to revive streamflows

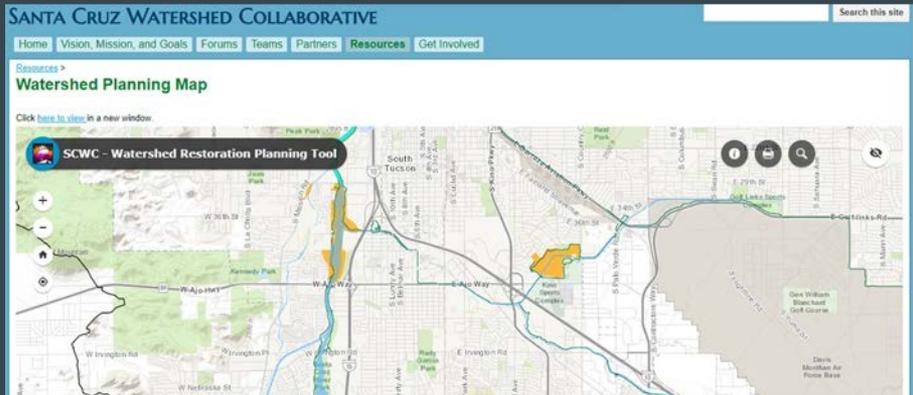
SCWC will

1. Support SCWC Partners through sharing information and facilitating dialogue
2. Develop and share resources and recommend actions
3. Outreach to targeted stakeholders on opportunities, challenges, and benefits of in-stream recharge
4. Discuss opportunities and issues with using effluent in rivers with community stakeholders



SCR by A Mtn, Photo credit: Michael Bogan, University of Arizona

Additional SCWC Accomplishments



Watershed Planning Map - see SCWC website

- ❑ Vision, Mission, and Goals
- ❑ Governance Framework
- ❑ Shared Partner Funding
- ❑ Semi-annual Forums
- ❑ Monthly Working Groups
- ❑ Watershed Planning Map
- ❑ Visual Online Storymaps
- ❑ Watershed Restoration Plan

See: santacruzwatershedcollaborative.net



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Recent Field Tours

Nov. 7, 8am-12pm

Multi-Benefits of River Recharge

- Irvington Rd Heritage Site, Santa Cruz River next to the TARP treatment plant
- San Xavier District, where the Santa Cruz River emerges

Nov. 15, 8am-12pm

Springs and Shallow Groundwater Areas

- Lower Sabino Creek
 - Middle Tanque Verde Creek
-

What's next for SCWC?

A 2-year (2022-2024) Bureau of Reclamation project planning grant (\$100,000) received thanks to adopted Plan.

Objective: to develop project concepts for restoring flows and habitat to the Santa Cruz River along the Sahuarita reach.

Sonoran Institute will administer the grant and lead the planning effort for SCWC.



Photo and River Renderings Courtesy of Sahuarita Farms

Q&A & comments

What actions will help advance your restorative efforts?

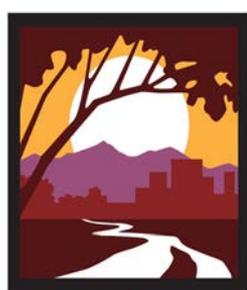
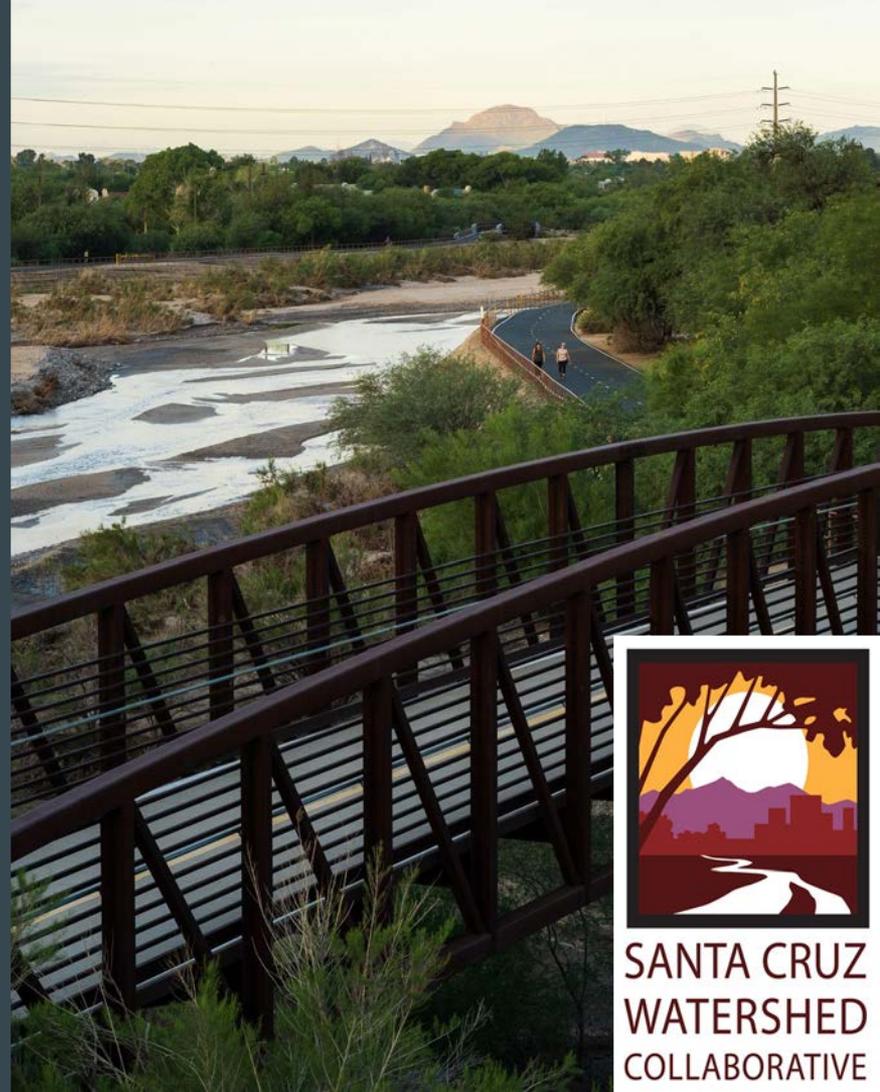
How can we enhance watershed-scale collaboration?



Thank you for your support!

Join the listserv at
santacruzwatershedcollaborative.net

Contact: SCWCollaborative@gmail.com



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