We’re Crafting a 50-Year Roadmap to Restore Tucson’s Rivers!

How do you achieve an audacious 50-year vision? This summer, WMG staff is tackling that question by crafting our 50-year internal strategic plan for the River Run Network. The typical three-year strategic plan won’t cut it; so we’re defining goals, strategies and metrics for 5, 10, 25, and 50-year timelines. Intermediary goals and measurable metrics will ensure we reach our long-term goal of restoring Tucson’s heritage of flowing rivers.

This Watershed Moment unveils our vision in greater depth, and we invite you to envision this future with us to inspire a collective river revival.

50-Year Vision

In 2065, the Santa Cruz River, the Rillito, and their tributaries are a cooling ribbon of green that’s central to the city’s economy, culture, and livability. The mesquite forest lining the banks of our creeks and rivers is as large as it’s ever been with functional floodplains that make up an expansive green infrastructure network harvesting stormwater and floodwaters. The rivers are once again places for the community to play, wade and swim, and refresh under the shade of cottonwood and ashtrees.

Stretches of Sabino, Ciénega, and Tanque Verde Creeks and the Rillito and Santa Cruz River flow year-round supported by a healthy groundwater aquifer. The waterways are connected with stream sections that flow seasonally, linking populations of Gila topminnow, longfin dace, and other native fish and wildlife. Tucson’s rivers are revered by the community, led by the children who grew up with this vision and became public servants, biologists, artists, and elected officials who ensure we properly manage, conserve, and protect our water to revive flowing rivers.
From Widespread Loss to River Revival!

Rivers in the Tucson Basin started drying up in the late 1800s due to the negative impact of Western settlers’ land management practices related to agriculture, grazing, and logging. The decline amplified with the introduction of the turbine pump in the 1920s, allowing well users to pump deeper water at greater rates, drawing down our aquifers.

In 1910, UA engineer and geologist George E.P. Smith described what he thought the Tanque Verde and Pantano Creeks’ confluence area was like in the early 1800s.

“The entire valley was at that time an unbroken forest, principally of mesquite, with a good growth of grama and other grasses between the trees. The river course was indefinite – a continuous grass of tall cottonwood, ash, willow, and walnut trees with underbrush and sacaton and galleta grass, and it was further obstructed by beaver dams. The vegetative covering on the mountain slopes, on foothills and plains held the rainfall, causing a large proportion of it to be absorbed in the soil. Such portion as found its way to the river channel was retarded and controlled its flow, and perhaps not oftener than a century did a master flood erode and sweep the river channel.”

After 1875 – with the establishment of Fort Lowell – the riparian wetland and forest began to disappear due to horse and cattle grazing, fuelwood cutting, and ditch digging for irrigation. 1

The confluence of the Tanque Verde and Pantano Creeks – which becomes the Rillito River – is still hanging on to its former glory with some springs, natural river banks, and remaining cottonwood stands. However, this area is in critical condition. The groundwater levels continue to drop annually, threatening complete cottonwood die-off. If we take action now to halt groundwater decline, we can preserve what remains.

As a community, we’re capable of so much more than just preserving the river’s current status! With your participation in the River Run Network, we can restore the confluence to be an area with almost year-round flow that supports cottonwoods and an extensive mesquite forest. It’s not a matter of how much water we have, it’s what we do with our water that matters. The solutions are here – rainwater harvesting, water efficiencies, neighborhood green infrastructure, floodplain protection. Together we can create widespread adoption of these practices and the political will to make it happen!

You can be part of this widespread adoption by joining the River Run Network and by attending some of our upcoming classes or workshops to transform your own oasis home to an abundance of wildlife and endless recreation opportunities for families.

In our 50-year vision, the lower Tanque Verde Creek will have year-round, meandering flow that feeds a ciénega (wetland) with tall stands of riparian grasses, alive with the sounds of native frog and toads. Regular flow invites native fish populations of the Gila topminnow and Gila chub to return as well as the illustrious American beaver. The reintroduced beavers will enhance the flow, through low mud-packed leaf dams that help slow the flow of water and provide for rich and diverse riparian habitat. Seasonal flows of the Pantano River will help connect populations of native fish from Ciénega Creek to Tanque Verde Creek. The extensive floodplain will be a natural sponge to absorb large flood events and increase recharge supporting an extensive mesquite bosque (forest). The mesquites, interspersed with cottonwoods and ash trees, will create a shady oasis home to an abundance of wildlife and endless recreation opportunities for families.

What fuels your passion?

Favorite river experience:

Background:

Specialty:

Lisa Shipek
Executive Director

Policy and Technical Director

Connecting people to their local environment – from their backyard to urban rivers – through community events, play, art, and coalition building.

Started as a UA master’s student studying community-based watershed management along U.S.-Mexico border communities in the Santa Cruz River watershed. 12 years of experience as WMG’s Executive Director, developing community-building programs for Tucsonans focused on water harvesting, soil stewardship, neighborhood green infrastructure, and river restoration.

Favorite river experience:

What fuels your passion?

Catlow Shipek
Policy and Technical Director

Field practitioner that’s just as comfortable building a check dam as planning water policy with elected officials. Geeks out on developing water resource budgets to determine groundwater recharge and conservation goals to restore surface flows.

Background: 15 years of field experience ranging from erosion control and arroyo restoration with ranchers, to water harvesting design and project implementation in urban watersheds, to community-scale water resource planning, policy, and conservation incentives.

Favorite river experience:

What fuels your passion?

Experiencing the Tucson community mood shift when the Rillito or Santa Cruz rivers flow, as well as running along restored urban rivers and creeks.

Catlow Shipek
Policy and Technical Director

What fuels your passion?

Favorite river experience:

Background:

Specialty:

Joaquin Murrieta-Saldivar
Cultural Ecologist

Thinks like a watershed and connects people like a flowing river.

Background:

worked with local communities to develop watershed management strategies for several rivers of the Sonoran Desert such as the Santa Cruz River, Rio Sonora, and the Colorado River.

Favorite river experience:

What fuels your passion?

Kieran Sikdar
Stormwater Solutions Director

Utilizing stormwater to restore historic river floodplains.

Background:

Civil and environmental engineering with a focus on ecological and natural systems infrastructure. I specialize in helping engineers feel okay about soil, plants, bacteria and all the fungi that help us!

Favorite river experience:

What fuels your passion?

Connecting humans with the outdoors and our true nature through stormwater harvesting and restoration.

Kieran Sikdar
Stormwater Solutions Director

What fuels your passion?

Favorite river experience:

Background:

Specialty:

Trevor Hare
River Restoration Biologist

Walking the rivers and reading the landscape, sitting under cottonwood trees and dreaming up innovative solutions to restore our creeks and wetlands.

Background: Over 25 years of experience walking the region’s desert rivers, designing riparian and upland restoration projects, collaborating with landowners and managers, and sharing the joy and mystery of water in the desert with the public.

Favorite river experience:

What fuels your passion?

To walk under the towering cottonwoods, swimming in the secret holes, seeing the Mexican garter snake hunt the Chiricahua leopard frog, hearing the gray hawk warn me away from her nest, finding the fresh bear print, and knowing there are jaguars out there.

Trevor Hare
River Restoration Biologist

What fuels your passion?

Favorite river experience:

Background:

Specialty:

Joaquin Murrieta-Saldivar
Cultural Ecologist

To walk under the towering cottonwoods, swimming in the secret holes, seeing the “happiness” of rivers flowing towards the ocean. My mother used to say: “Ya escuchaste al rio miojito…. Lo oyes que va feliz hacia el océano?”

What fuels your passion?

To bring the happiness of flowing rivers.

Joaquin Murrieta-Saldivar
Cultural Ecologist

What fuels your passion?

Favorite river experience:

Background:

Specialty:

Trevor Hare
River Restoration Biologist

To bring the happiness of flowing rivers.

Background:

Specialty:

Lincoln Perino
Water Harvesting Project Manager and Designer

Implementing landscape projects to manage water from roofs, through the neighborhoods and into our streams.

Background:

Specialty:

Kieran Sikdar
Stormwater Solutions Director

Stormwater Solutions Director

What fuels your passion?

Growing up and hiking around the Southwest, I found that my favorite spots had one thing in common – water. I want future generations to have those same experiences.

Lincoln Perino
Water Harvesting Project Manager and Designer

What fuels your passion?

Favorite river experience:

Background:

Specialty:

Kieran Sikdar
Stormwater Solutions Director

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Trevor Hare
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What fuels your passion?

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Trevor Hare
River Restoration Biologist

What fuels your passion?

Favorite river experience:

Background:

Specialty:
Get to know hidden gems across the Tucson Basin at one of Watershed Management Group’s River Run Network Creek Walks. Not yet a River Run Network (RRN) member? You can join today by signing up for one of these featured events at Watershedmg.org/RRN.

1. **Explore La Cebadilla**
   A natural spring feeding a wetland and lake in the Upper Tanque Verde streamshed. **Aug 30, 6-8 p.m.**, led by River Restoration Biologist Trevor Hare and Policy and Technical Director Catlow Shipek.

2. **Discover Christmas Wash**
   A hidden, tree-lined urban arroyo in the Rillito Bend neighborhood that feeds the Rillito River. **Sept 28, 5:30 to 7:30 p.m.**, with Catlow and Lisa Shipek, WMG’s Executive Director.

3. **Go wild at Cienega Creek**
   A lush riparian area with year-round flows that provides 40% of Tucson’s groundwater recharge. **Oct 13, 9 a.m. -noon**, led by Trevor Hare and Lisa Shipek.

4. **Go big at Paseo de las Iglesias**
   A large-scale river restoration site along the Santa Cruz River. **Nov 10, 10 a.m. -noon**, with Cultural Ecologist Joaquin Murrieta.

5. **Get to know Cañada del Oro**
   A river fed by the north side of the Santa Catalina mountains with new restoration work along the floodplain. **Dec 1, 10am -12pm**, led by River Restoration Biologist Trevor Hare and Stormwater Solutions Director Kieran Sikdar.
Restoring Tucson’s heritage of flowing rivers is a substantial undertaking that calls for consistent financial investment. WMG’s goal is to raise $250,000 annually from people like you to fund River Run Network programs, which includes on-the-ground restoration projects, community education, citizen science monitoring programs, watershed planning and policy work. You can invest in WMG’s team to get the work done!

Help us reach our goal by sending in a donation with the attached remit or by donating online at Watershedmg.org/Donate. Want to make a consistent investment? Set up a recurring gift through our monthly donor program, Flow, at Watershedmg.org/Flow. WMG is also able to accept planned gifts, stocks, charitable donations from your IRAs, and more through a new partnership with the Community Foundation of Southern Arizona. Please contact WMG’s Executive Director, Lisa Shipek, at 520-396-3266 x2, to set up your gift.

50-Year Vision
The Rillito at Mountain Ave Bike/Pedestrian Bridge

Through the River Run Network, we will restore seasonal flows to the Rillito River, supported by a healthy groundwater aquifer that is recharged with green infrastructure throughout the surrounding neighborhoods. Parking lots and impervious areas will be replaced with rain garden parks full of native habitat. The Rillito will be a lush riparian area supporting important aquatic species with great wildlife viewing and recreation opportunities, tying into cultural amenities like the racetrack, restaurants, and the bike loop.
Valley Docents Amplify WMG’s Impact in Metro Phoenix

This spring we kicked off our inaugural Valley Docent program, providing an opportunity for passionate water-lovers to contribute their skills and help WMG fulfill our mission in the Phoenix metro area. We are thrilled to have eight amazing ambassadors of WMG who come from practically every corner of the Valley of the Sun and bring with them diverse backgrounds and a shared passion for revitalizing our urban watershed. Valley Docents are assisting with community engagement through outreach events, caring for our green infrastructure public demonstration sites, and organizing educational events. To learn more or apply for our 2019 Valley Docent program, visit Watershedmg.org/ValleyDocents.

Why are you a WMG Valley Docent?

Aaron Levy  Hope Manross  Jeanne Santillán  Michael Gettens  Michele Smith  Patty Cockrill  Wayne Pudney  Willie Sommers

What role does WMG play in the Valley watershed?

“The mission of WMG is important to water and our future. Green infrastructure has a place in Phoenix and surrounding cities.”

“Helping to revitalize the watershed and letting people know how much fun it can be to capture rainwater on your property.”

“I understand the dire need for raising water awareness in the desert. WMG has a great platform for education and focused action.”

“I was interested in rainwater harvesting, and after my first co-op workshop I was convinced it was as important to promote sustainable water as it is to promote growing sustainable food.”

“WMG offers education, tools, and raises awareness of our particular desert watershed for today’s water needs, and our sustainable path to future generations and environmental water needs.”

“To help educate communities with new skills and an understanding that there is more than one option to water conservation and sustainability.”

“What is the most fulfilling aspect of being a WMG Docent?”

“Sharing knowledge and information with others and encouraging them to conserve water and use it wisely.”

“I enjoy talking to people and sharing ideas on how to build community through projects based on water conservation.”

“The abundant education and all the amazing people I have met. I look forward to building new relationships through the docent program, co-op workshops and classes.”

“I was interested in rainwater harvesting, and after my first co-op workshop I was convinced it was as important to promote sustainable water as it is to promote growing sustainable food.”

Jeanne Santillán  Michael Gettens  Michele Smith  Patty Cockrill

Patty Cockrill
Composting Toilets Aren’t Just for Tiny Homes!

Composting toilets are getting good face time these days – thanks to the tiny house movement and Airbnb. No sewer hookup? No problem! Five gallon bucket systems fit in the tiniest of spaces, and can be installed with the slimmest of budgets. Or you can go pro and get a commercial composting toilet that fits in conventional bathroom spaces.

Even if you’re not building a tiny house or starting an Airbnb rental, we want to sell you on composting toilets. Why? There’s some serious water savings at the tip of your finger. Almost 30% of indoor residential water is used to flush away pee and poo!

Think about it: Why poop in our drinking water, only to pipe it many miles to an expensive treatment facility that then removes the poop from our water to ensure it’s clean enough to put back into our rivers and groundwater?

Come to the Living Lab and choose your own toilet adventure. We’re demonstrating three different composting toilets and three different urine diversions at our Living Lab and Learning Center. Without a flush toilet option, all visitors get to contribute their personal resources back to the Living Lab’s food production! Urine is diverted directly into the soil as liquid fertilizer and poop is composted into humanure to support nine fruit trees on campus.

To learn more, visit Watershedmg.org/learn/resource-library to see composting toilet designs, videos, and even our very own children’s book – “Poo to Peaches.” Attend one of our composting toilet classes (Watershedmg.org/FieldStudies, next class is 10/11/18), or order a composting toilet barrel kit for your own home (Watershedmg.org/CTKit).
August
Living Lab & Learning Center Tour ...................................................... Sat, Aug. 4, 8 a.m.-9:30 a.m.
Rainwater Harvesting Class (Tucson Water Rebate) ......................... Thu, Aug. 9, 4:30 p.m.-7:30 p.m.
Living Lab & Learning Center Tour .................................................. Wed, Aug. 15, 6 p.m.-7:30 p.m.
*Field Studies Class: Rain Garden Care .............................................. Thu, Aug. 16, 5 p.m.-7:30 p.m.
Rainwater Harvesting Class (Tucson Water Rebate) ......................... Sat, Aug. 18, 9 a.m.-noon

Field Studies Class
Pruning Native Shade Trees: Join us for a jam-packed session on proper tree care and pruning practices with our very own ISA Certified Arborist on Nov. 10. $25-$30.

October
Tour del Laboratorio Viviente y Centro de Aprendizaje ........................ Sat, Oct. 6, 9 a.m.-10:30 a.m.
*Field Studies: Composting Toilets .................................................. Thu, Oct. 11, 5 p.m.-7:30 p.m.
Rainwater Harvesting Class (Tucson Water Rebate) ................................. Sat, Oct. 13, 9 a.m.-noon
Living Lab & Learning Center Tour .................................................. Wed, Oct. 17, 10 a.m.-noon
Rainwater Harvesting Class (Tucson Water Rebate) ......................... Thu, Oct. 18, 4:30 p.m.-7:30 p.m.

November
Greywater Rebate Class (Tucson Water Rebate) ................................. Thu, Nov. 1, 5 p.m.-7 p.m.
Living Lab & Learning Center Tour .................................................. Sat, Nov. 3, 9 a.m.-10:30 a.m.
Rainwater Harvesting Class (Tucson Water Rebate) ................................. Thu, Nov. 8, 4:30 p.m.-7:30 p.m.
*Field Studies Class: Pruning Native Shade Trees ................................. Sat, Nov. 10, 9 a.m.-noon
Living Lab & Learning Center Tour .................................................. Wed, Nov. 14, 10 a.m.-11:30 a.m.
Rainwater Harvesting Class (Tucson Water Rebate) ................................. Sat, Nov. 17, 9 a.m.-noon
*Rainwater on Tap: A #GivingTuesday Happy Hour ............................ Tue, Nov. 27, 5:30 p.m.-8 p.m.
Clase de Cosecha de Agua de Lluvia (Reembolso de Tucson Water) ............................ Thu, Nov. 29, 4:30 p.m.-7:30 p.m.

December
Living Lab & Learning Center Tour (Bilingüe/Bilingual) ................. Sat, Dec. 1, 10 a.m.-11:30 a.m.
Living Lab & Learning Center Tour .................................................. Wed, Dec. 12, 10 a.m.-11:30 a.m.
Rainwater Harvesting Class (Tucson Water Rebate) ................................. Thu, Dec. 13, 4:30 p.m.-7:30 p.m.
Rainwater Harvesting Class (Tucson Water Rebate) ................................. Sat, Dec. 15, 9 a.m.-noon

OFFERINGS ARE FREE unless denoted by an asterisk (*). See the website for costs. Register for these events at Watershedmg.org/event/tucson or call 520-396-3266 X22
Visión a 50 Años

En el 2065, el Río Santa Cruz, el Rillito, y sus tributarios son un corredor sombreado y verde lo cual es central para la economía, cultura y vitalidad de la ciudad. Los mezquitales a lo largo de los depósitos de nuestros arroyos y ríos son tan extensos como nunca lo han sido, con sus llanuras aluviales funcionando como una extensa red de infraestructura verde, cosechando agua de tormenta y aguas fluviales. Los ríos son una vez más lugares de encuentro para la comunidad, para nadar, darse un chapuzón y refrescarse bajo la sombra de los álamos y sauces. Tramos de los arroyos Sabino, Ciénega, y Tanque Verde así como el Rillito y Río Santa Cruz fluyen todo el año apoyados por un acuífero saludable de agua subterránea. Los canales están conectados con secciones de arroyos que fluyen por temporadas, conectando a las poblaciones del charalito Gila y carpa aletalarga, además de otros peces nativos y vida-silvestre. Los ríos de Tucson son valorados por su comunidad, dirigido por los niños que crecieron con esta visión y se convirtieron en servidores públicos, biólogos, artistas y funcionarios electos que aseguran que hagamos una apropiada gestión, conservación y protección del agua para revivir el flujo de nuestros ríos.