

10TH ANNUAL

# Santa Cruz

# RIVER

## RESEARCH DAYS

**OCTOBER 30 – OCTOBER 31, 2018**

Pima Community College

Desert Vista Campus, Community Room

5901 S. Calle Santa Cruz, Tucson, Arizona 85709

## IDENTIFYING PRIORITY RESEARCH TOPICS FOR THE NEXT 5 YEARS

In honor of the 10th anniversary of Santa Cruz River Research Days, we are celebrating the many years of research and conservation by looking forward together.

Over the summer we identified topics that require more study, based in part on survey results that show that we need a better understanding of the river's role in community development and economics. Survey results also highlighted that researchers pursue projects that help fulfill community needs.

To help assess current needs, we've invited community leaders from Nogales to Marana to discuss the research projects they feel would be necessary to advance their work along the Santa Cruz River. This special session on day two will also include "speed date" networking to introduce these leaders to researchers and Santa Cruz River experts.

Sonoran Institute will share research priorities for the coming years in a collective research agenda, which will be published later in the year. We hope this document will inspire research projects and support research funding that will further collective conservation and management efforts along the river. We will compile all the ideas identified during Research Days. Day two will be devoted to gaining attendee input on research priorities.

### PURPOSE

Modeled on the successful Tumacácori Information and Exchanged Day held at the Tumacácori National Historical Park in 2005, Santa Cruz River Research Days was launched in 2009 as a venue for learning. We aim to:

- trigger new research questions;
- promote networking;
- catalyze new collaborative projects; and
- foster awareness of each other's research and conservation efforts.

Santa Cruz River Research Days was founded to allow sharing of experiences and results across diverse institutions and disciplines.

### 2018 STEERING COMMITTEE

Sherry Sass, Friends of the Santa Cruz River

Roger Anyon, Pima County

Julia Fonseca, Pima County

Claire Zugmeyer, Sonoran Institute

Amanda Smith, Sonoran Institute

Pat O'Brien, Southwest Center

Forrest Sherman, Southwest Arid Grassland Ecology

Roger Dorr, Tumacácori National Historical Park

Michael Bogan, University of Arizona



SONORAN  
INSTITUTE



# TUESDAY / OCTOBER 30, 2018

<b>8:30–9:00 AM</b>	<b>SIGN-IN AND REFRESHMENTS</b>
<b>9:00–9:20 AM</b>	<b>Welcome</b>
<b>9:20–9:40 AM</b>	<b>Amanda Smith</b> —Sonoran Institute <i>The Many Benefits of Effluent in the Santa Cruz River: A Collaborative Water Management Tool</i>
<b>9:40–10:00 AM</b>	<b>Evan Canfield</b> —Pima County Regional Flood Control District <i>Valuing the Ecosystem Services of the Effluent-Dependent Santa Cruz River in Pima County</i>
<b>10:00–10:20 AM</b>	<b>Alexandra Stoicof</b> —Wheat Design Group <i>El Rio Preserve: Ecological Rehabilitation &amp; Community Connection</i>
<b>10:20–10:50 AM</b>	<b>BREAK</b>
<b>10:50–11:10 AM</b>	<b>Hamdhani</b> —University of Arizona <i>Dynamics of Water Quality in an Effluent-Dominated Reach of the Santa Cruz River, AZ</i>
<b>11:10–11:30 AM</b>	<b>Drew Epehimer</b> —University of Arizona <i>Aquatic Macroinvertebrates of the Lower Santa Cruz River</i>
<b>11:30–11:50 PM</b>	<b>Kelsey Hollien</b> —University of Arizona <i>Implications of Using Treated Wastewater as Habitat for Desert Fishes</i>
<b>11:50–12:10 PM</b>	<b>Michael Bogan</b> —University of Arizona <i>Dragonflies and Damselflies of the Lower Santa Cruz River: Brilliant Biodiversity and Opportunities for Community Engagement</i>
<b>12:10–1:20 PM</b>	<b>BREAK FOR LUNCH</b> (bring your own)
<b>1:20–1:40 PM</b>	<b>David Quanrud</b> —University of Arizona <i>Occurrence, Fate, and Relevance of Emerging Contaminants in the Upper Santa Cruz River at Tumacácori National Historical Park</i>
<b>1:40–2:00 PM</b>	<b>David Walker</b> —University of Arizona <i>Mixture Toxicology of Persistent Organic Pollutants in the Santa Cruz River: Past Research and An Unknown Future</i>
<b>2:00–2:20 PM</b>	<b>Austin B. Smith</b> —Arizona Game and Fish Department <i>Mapping and Quantifying Xeroriparian Across the Arid Deserts</i>
<b>2:20–2:40 PM</b>	<b>Charles C. Hofer</b> —Arizona Game and Fish Department <i>Starting From (Almost) Scratch: Protecting Riparian Habitat in Pinal County</i>
<b>2:40–3:10 PM</b>	<b>BREAK</b>
<b>3:10–3:30 PM</b>	<b>Elia Tapia</b> —University of Arizona <i>Assessing the Long-term Impact of Climate Uncertainties and Binational Land and Water Management Decisions on the Transboundary Santa Cruz Aquifer</i>
<b>3:30–3:50 PM</b>	<b>Mark Bultman</b> —U.S. Geological Survey <i>A Three-Dimensional Hydrogeologic Model of the Upper Santa Cruz Basin, Arizona</i>
<b>3:50–4:10 PM</b>	<b>Olga Hart</b> —Arizona Department of Water Resources <i>Expansion of ADWR Modeling and Field Efforts to Develop a Groundwater Flow Model of the Potrero Canyon Area</i>
<b>4:10–4:20 PM</b>	<b>Evan Canfield</b> —Pima County Regional Flood Control District <i>A Multibenefit Channel Modification Project Downstream of Cortaro</i>

WEDNESDAY / OCTOBER 31, 2018

<b>8:30–9:00 AM</b>	<b>SIGN-IN AND REFRESHMENTS</b>
<b>IDENTIFYING PRIORITY RESEARCH TOPICS FOR THE NEXT 5 YEARS</b> Moderated by: <b>Dr. Philip Stoker</b> , University of Arizona, College of Architecture, Planning and Landscape Architecture	
<b>9:00–9:15 AM</b>	<b>Amanda Smith</b> , Sonoran Institute <i>Introduction and Assessment Results</i>
<b>9:15–9:45 AM</b>	<b>PANEL 1—NOGALES TO TUBAC</b> <b>Bob Love</b> , Tumacácori National Historical Park, <i>Superintendent</i> <b>Guillermo Valencia</b> , Greater Nogales and Santa Cruz County Port Authority, <i>Chairman</i> <b>Ben Lomeli</b> , Friends of the Santa Cruz River, Board member, <i>Hydrologist</i> <b>Q&amp;A—15 minutes</b>
<b>9:50–10:20 AM</b>	<b>PANEL 2—TUBAC TO TOHONO O’ODHAM NATION, SAN XAVIER DISTRICT</b> <b>Sally Pablo</b> , Tohono O’odham Nation, San Xavier District, <i>Natural Resources Supervisor</i> <b>Connie Williams</b> , Anza Trail Coalition, <i>Secretary</i> <b>Vincent Cazo</b> , Amado Business Association, <i>Chair</i> <b>Q&amp;A—15 minutes</b>
<b>10:25–11:00 AM</b>	<b>PANEL 3—TUCSON TO MARANA</b> <b>Mead Mier</b> , Pima Association of Governments, <i>Sustainability Coordinator</i> <b>Alice Templeton</b> , Barker Contracting, Inc., <i>Business Development Director</i> <b>Jim Conroy</b> , Town of Marana Parks and Recreation, <i>Director</i> <b>John Kmiec</b> , Marana Water, <i>Director</i> <b>Q&amp;A—15 minutes</b>
<b>11:00–11:45 AM</b>	<b>Speed Date a Panelist—Semi-Structured Networking</b>
<b>11:45 AM–12:00 PM</b>	<b>Closing Statements and Final Voting on Priorities</b>
<b>12:00–1:00 PM</b>	<b>BREAK FOR LUNCH</b> (bring your own)
<b>1:00–1:15 PM</b>	<b>FIELD TRIP</b> —Travel Independently to nearby restoration site (see map on back cover)
<b>1:15–3:00 PM</b>	<b>Guided Tour of Midvale Park Restoration Project</b> (see back cover for description)

## POSTER PRESENTATIONS

**Sonoran Institute and Pima County**

*A Living River: Charting Wetland Conditions of the Santa Cruz River*

## THANK YOU TO OUR 2018 SPONSORS



**PimaCommunityCollege**

**HARRIS ENVIRONMENTAL GROUP, INC.**

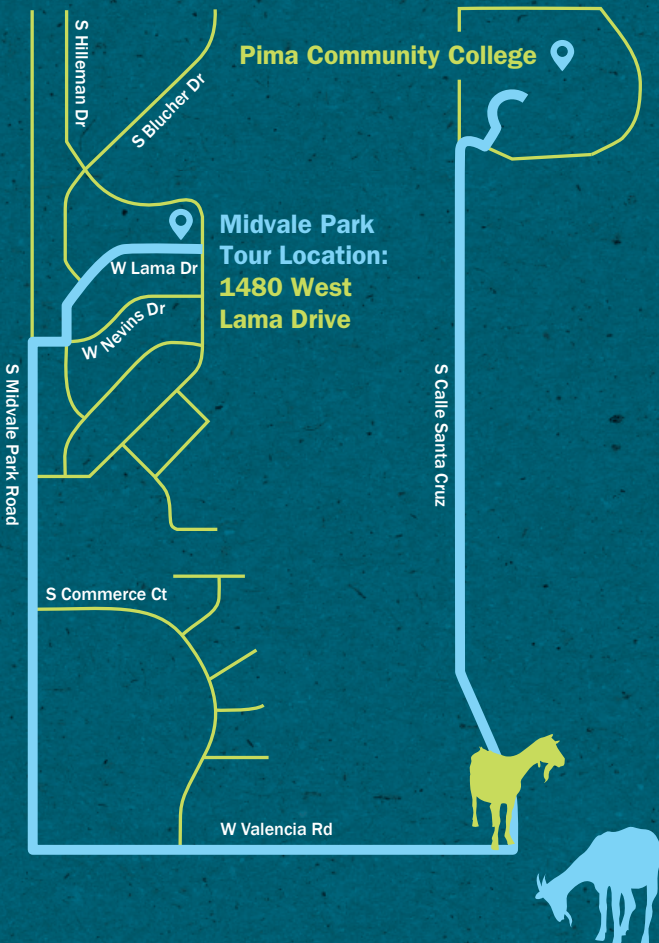
**FRIENDS OF THE SANTA CRUZ RIVER**



# TOUR OF MIDVALE PARK FLOODPLAIN RESTORATION PROJECT

Join a guided tour of the Midvale Park Floodplain Restoration Project on October 31 from 1:15–3:00 pm. This site receives a large amount of urban-enhanced runoff during storm events. This water was causing erosion problems in a barren landscape adjacent to the Chuck Huckleberry Loop along the Santa Cruz. The completed project includes four large water harvesting basins with rock grade control structures and native plants to slow, spread and sink stormwater to benefit the Santa Cruz River, wildlife habitat, and the Midvale Park neighbors. This is also a site where goats and sheep are being used to control non-native invasive plant species. Learn how this experimental technique could be deployed to other restoration sites in the Santa Cruz River Watershed. *Tour will be led by Watershed Management Group's Trevor Hare and Holistic Engineering and Land Management's Kieran Sikdar.*

Use the map below to travel independently to the tour location and carpool if you can. Water, sun hat, sunscreen, and good walking shoes recommended!



Proud Sponsor of the Sonoran Institute's

## Santa Cruz River Research Days

Celebrating 10 years of connecting our community with the river and its resources

**DESERT DIAMOND**  
CASINOS & ENTERTAINMENT

866.DDC.WINS | | [DDCAZ.COM](http://DDCAZ.COM)

Must be 21 to enter bars and gaming areas. Please play responsibly.  
An Enterprise of the Tohono O'odham Nation  
WORKING TOGETHER TO BUILD A STRONGER COMMUNITY

## THE SANTA CRUZ RIVER HERITAGE PROJECT

Working to ensure a thriving Santa Cruz River.

[tucsonaz.gov/water/SCRHP](http://tucsonaz.gov/water/SCRHP)

**TUCSON WATER**  
A proud part of the City of Tucson

# Revitalizing our shared environment

**PIMA COUNTY**  
PUBLIC WORKS

[www.pima.gov](http://www.pima.gov)