a living river

CHARTING SANTA CRUZ RIVER CONDITIONS
NORTHWEST TUCSON TO MARANA

Claire Zugmeyer
The Santa Cruz River: from Mexico to Marana, is a living flowing river and the foundation of community health and prosperity.
12,000 years of rich history

Artistic collage from State of the Santa Cruz River
Santa Cruz River Watershed
Living River reports track improvements on Santa Cruz River near Nogales

- Reports:
  - 2008 to 2010 water years
  - 2008-2014 water years online summary
  - 2018 water year
  - 2019 water year
Expand to Tucson in partnership with Pima County

2013 Baseline

2014

2015

2016

2017

2018

2019 Water Year

All reports available at www.sonoraninstitute.org
Santa Cruz near Tucson
Water quality and clarity improved
**Little to no ammonia**

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014–2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average ammonia concentrations by water year</td>
<td>13 mg/L</td>
<td>1 mg/L</td>
<td>2 mg/L</td>
<td>1 mg/L</td>
</tr>
</tbody>
</table>

- **13 mg/L** for 2013
- **1 mg/L** for 2014–2017
- **2 mg/L** for 2018
- **1 mg/L** for 2019
Increased aquatic invertebrate diversity

<table>
<thead>
<tr>
<th>2013</th>
<th>2013-2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>23</td>
</tr>
</tbody>
</table>

Cumulative number of species average
Increased Fish Diversity

2013

Total number of fish species

1

2014–2019

6

Common carp
Bluegill sunfish
Green sunfish
Western mosquitofish
Black bullhead
Gila topminnow
Increased recharge reduces miles of June flow
Recent peak floods = longer dry reach

<table>
<thead>
<tr>
<th>Direction of Flow</th>
<th>June Miles Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three Rivers Reach</td>
<td>23.0</td>
</tr>
<tr>
<td>Cortaro Narrows Reach</td>
<td>19.4</td>
</tr>
<tr>
<td>Marana Flats Reach</td>
<td>16.1</td>
</tr>
<tr>
<td>Trico Road</td>
<td>22.1</td>
</tr>
<tr>
<td></td>
<td>21.4</td>
</tr>
<tr>
<td></td>
<td>22.4</td>
</tr>
<tr>
<td></td>
<td>21.2</td>
</tr>
</tbody>
</table>

![Graph showing miles of flow in June for different years](image)

![Graph showing number of days since last peak flow, measured in June](image)
#Notinmyriver campaign launched

- Over 7 videos made
- 10,000 video views
Dragonfly Day on the Santa Cruz 2020 - Virtual

- Nearly 100 attendees
- Virtual Dragonfly Talks
- Livestream From Two Sites
1,000 Nature-to-Go Kits
Community Support for River Infrastructure Projects

- GIS-based survey for Pima County's Santa Cruz River Management Plan
- 1,450 unique project evaluations
  - 84% in support of projects
  - Responses for 39 Pima Co. area codes
- Success attributed, in part, to:
  - social media + partner reposts
  - traditional media (AZPM report)
  - stakeholder meetings
Santa Cruz RIVER RESEARCH DAYS

March 25 and 26, 2021

sonoraninstitute.org/events/scrrd-2021/
Next Steps

- Expand report to include Heritage Project downtown
- Collect/analyze trash data
- Look for opportunities to maximize flow

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