



Bill Hatcher, Sonoran Institute



# COLORADO RIVER DELTA PROGRAM

RESTORE. RENEW. RECONNECT.

Spring 2015

Francisco Zamora with aerial support from LightHawk, Sonoran Institute

## A NEW VISION

Water, life, and hope are returning to the Delta. In conjunction with the historic binational agreement Minute 319, we are leading efforts to 1) restore natural habitat through on-the-ground restoration projects; 2) renew individual and community relationships with the river and promote long-term stewardship through community engagement; and 3) reconnect the Colorado River with the sea by developing innovative mechanisms to secure water for the Delta.



## A River Returns

Something remarkable happened in Mexico's Colorado River Delta in the spring of 2014, a phenomenon that the children who live there had never experienced and one even their grandparents hardly remember: water flowed in the Colorado River.

An unprecedented "pulse flow event" that began in March 2014 sent over 100,000 acre-feet of water surging through the gates of the Morelos Dam at the U.S.- Mexico border. For the first time in over a decade, the river followed its natural course through the Delta. In mid-May, it joined the tidal waters of the Upper Gulf of California.

The Colorado River had reached the sea again at last, at least temporarily.

With this water came life. As the river wound through their communities, astonished crowds gathered to wade and play in places that have been caked and barren for the past 16 years. Birdsong filled the air, as the nourishing waters attracted migrating birds and moistened the soil to welcome native tree seeds carried on the wind. Where nature was being reborn, hope for new recreation and tourism businesses began to feel like real possibilities. And so did our goal of reconnecting the river to the sea more frequently.

Now, more than ever, our vision to restore the Delta to a healthy and functional ecosystem is within reach.

*"We are mimicking what nature used to do before the construction of the dams... It's a combination of restoring the habitat for the benefit of the people and the wildlife."*

Francisco Zamora Arroyo  
Director, Colorado River Delta Legacy Program, Sonoran Institute





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## A RECONNECT

Nothing like it had ever been tried before. In the historic 2012 binational agreement known as Minute 319, the United States and Mexico decided that some of the Colorado River's water—every drop of which is allotted for some type of human use—would be given back to nature. Of the 260 rivers that cross or form international boundaries, the Colorado River was the first in the world to have water allocated for the benefit of the environment. The amount, a little over one percent of the river's annual flows, was relatively miniscule. But its effect was epic.

On March 23, 2014, the unprecedented experiment began. When the gates of the Morelos Dam opened, the Colorado River reclaimed its corridor in Mexico—at first with a gush and then more gradually—transforming the landscape inch by inch, foot by foot. People living near its banks were delighted to watch a dry riverbed become a river eight feet deep in spots. With the floodplain saturated, cottonwood and willow tree seeds landed for the first time in many years on wet soil, where, it is hoped, they will germinate by the hundreds and create new habitat for wildlife and migrating birds.

Eight weeks later, on May 15, the fresh water of the Colorado “kissed” the salt water of the Upper Gulf of California, in a long-awaited reunion.

Sonoran Institute staff are part of a team of scientists monitoring the impact and benefits of the pulse flow on the region's natural systems. The native seedlings at our restoration site that have sprouted in response to the pulse flow are a very encouraging sign of a new beginning for the Delta.

*“It's for my well-being as well as that of my children, and everyone's future. We all benefit from the work that is being done here.”*

Julissa Gonzalez-Lopez  
seasonal employee, Sonoran Institute



Francisco Zamora, Sonoran Institute

Francisco Zamora, Sonoran Institute





Guadalupe Fonseca, Sonoran Institute



Bill Hatcher, Sonoran Institute



Edith Santiago, Sonoran Institute

## RESTORE: Ongoing Restoration Projects

Sonoran Institute works to restore marsh, riparian and estuarine habitat along the 100 river-miles of the Colorado River Delta.

**Laguna Grande Restoration Area**—With over 450 acres of riparian habitat either restored or undergoing restoration in Laguna Grande, we are over halfway to our 2017 goal of restoring 750 acres of riparian habitat through a combination of hands-on restoration work and the natural germination of native plants made possible by the pulse flow. We are implementing new restoration techniques and incorporating research on the region's native plants into our restoration designs. As one of the few green open spaces in the region, the Laguna Grande community park is now a birding hotspot for resident and migratory birds.

**Las Arenitas Treatment Wetland**—In 2009, the Sonoran Institute and partners created an artificial wetland next to Mexicali's Las Arenitas Wastewater Treatment Plant that naturally filters the treated wastewater, or effluent, from the treatment plant and significantly improves its water quality. The effluent water quality is important, as it is becoming the primary source of flows for the Hardy River, a tributary of the Colorado and a key recreational area for local communities and international visitors. Sonoran Institute hopes to create additional treatment wetland areas as the plant doubles its treatment capacity over the next five years, which may lead to an increased amount of treated effluent flows for the Hardy River. Augmenting flows and improving the conditions of the Hardy River, a critical bird habitat and popular hunting, sport fishing, boating, and swimming area, will also boost economic prospects for local communities.

**Estuary**—We are developing a strategy to increase freshwater flows and enhance the physical connectivity with the estuary. Our Long term vision is to restore 32,000 acres in the upper estuary.

## RECONNECT: Water for the Delta

The Sonoran Institute is playing a critical role in implementing large-scale restoration associated with Minute 319 and, along with our partners, we are developing innovative solutions to secure required, regular water flows for the Colorado River and its tributaries. In 2008, the Institute, Pronatura Noroeste, and the Environmental Defense Fund established the Colorado River Delta Water Trust as a mechanism to secure permanent water rights in Mexico for Delta restoration. Thus far, the Trust has secured approximately 30 percent of the 52,700 acre-feet required by Minute 319. To achieve our goal, we must raise the necessary funding to purchase water through the Trust. Your support is critical.

## RENEW: Community Engagement

The long-term recovery of the Delta ultimately depends on the commitment of the people who live in the region. The Sonoran Institute works closely with local community groups, government agencies, and conservation organizations to create awareness about the importance and benefits of a healthy Delta. Volunteers in our Adopt-the-River program have helped restore over 65 acres of habitat, create the Laguna Grande community park, maintain restoration sites, and have made financial donations toward restoration efforts. A new bird-watching group formed by our employees and community members is offering popular Spanish- and English-language birding tours in the community park. Within the Delta community and beyond, four new Raise the River videos have substantially increased visibility of the Delta project. These include RENEWAL, a 10-minute film narrated by Robert Redford that was released in July 2014 and was also posted with Spanish subtitles (available on our YouTube channel).

To date, the assortment of videos has been viewed/downloaded almost 30,000 times since March 2014. Public service announcements about the pulse flow, featuring Robert Redford and Will Ferrell, garnered tens of thousands of additional views.



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## JOIN THE DELTA TEAM

We need your help to accomplish our 2015 goal to restore 250 acres and plant 111,000 trees!

**Donate:** Your financial support is critical to advancing our restoration initiatives and bringing the Delta back to life, one tree at a time. Your donation can put an acre-foot of water back into the river, plant 50 trees, sponsor environmental workshops with local community members, and provide a healthy river for future generations.

**Volunteer Opportunities:** Interested in volunteering in the Delta or becoming an Adopt-the-River group? Volunteer activities include tree planting, creating trails, installing infrastructure, or helping our ecological monitoring team. To learn the latest about upcoming volunteering opportunities, follow us on Facebook and Twitter, or contact **Edith Santiago** at [esantiago@sonoraninstitute.org](mailto:esantiago@sonoraninstitute.org).

**Internship Opportunities:** University students contribute to our restoration efforts by helping with restoration project design, hydrological research, data collection and analysis, and program communications. Long- and short-term internship opportunities are available. For more information, contact **Fátima Luna** at [fluna@sonoraninstitute.org](mailto:fluna@sonoraninstitute.org).

**Conserve-to-Enhance:** This new online water savings web tool enables Colorado River water users to donate water conserved in their home to the Colorado River Delta Water Trust! To learn more, visit [www.conserve2enhance.org](http://www.conserve2enhance.org).

**Take a tour of the Delta:** The best way to learn about the Delta is to go there! The Sonoran Institute offers guided tours to the Delta in the fall and spring seasons. For more information, contact **Fátima Luna** at [fluna@sonoraninstitute.org](mailto:fluna@sonoraninstitute.org).

## WHY YOUR SUPPORT IS IMPORTANT

The next decade offers the opportunity to greatly expand on current achievements and to realize the ambitious vision of a renewed Delta with healthy ecosystems and vibrant communities.

Please join us in our efforts to restore this ecological treasure.

### DONATE NOW

Your support enables us to continue our work on the Colorado River Delta Project. To make a donation, go to [www.sonoraninstitute.org/donate](http://www.sonoraninstitute.org/donate) and direct your gift to the Colorado River Delta, or email [SupportSI@SonoranInstitute.org](mailto:SupportSI@SonoranInstitute.org).

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Save the Colorado River Delta



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Shaping the Future of the West

The Delta Program thanks all of our supporters, including foundations, government and private institutions, as well as individual donors from Mexico and the US, for making this work possible. For a complete list of donors, see our annual report at <http://www.sonoraninstitute.org/about-us/annual-report-2013.html>.