

# NATURE

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Louisiana is one of 31 states in the Mississippi River Basin. © NASA

## Restoring America's river

The Mississippi River may be closer to home than you think.

Did you know you live in the Mississippi River Basin? The basin, or watershed, is the vast area of land where rainfall feeds an interconnected system of over 7,000 rivers and streams across 31 states, all flowing into the Mississippi River.

Stretching from the Missouri River in Montana to the Allegheny in Pennsylvania and south to the Atchafalaya in Louisiana, this vast system provides drinking water, nourishes crops and offers critical wildlife habitat. Yet the Mississippi River Basin has been dramatically reshaped over time, and those changes have caused serious consequences. Decades of draining wetlands, tilling grasslands, straightening rivers and disconnecting floodplains have increased nutrient pollution, worsened flooding and led to widespread habitat loss.

“What happens on the land doesn't stay on the land. Every farm field, prairie, forest, city and floodplain in the basin is part of a living system that shapes the

health of the Mississippi River,” says Nick Ohde, coordinating director of TNC's Mississippi River Basin program.

By caring for local lands and waters, we improve the entire system. What does this look like? Planting trees and restoring prairies and grasslands to keep roots in the ground. Employing regenerative agriculture practices that mimic natural ecosystems to hold onto nutrients, soil and water. And protecting wetlands that absorb floodwaters and provide wildlife habitat.

**Every farm field, prairie, forest, city and floodplain shapes the health of the Mississippi River.**

*Nick Ohde, Coordinating Director, TNC's Mississippi River Basin program*

This is why TNC partners across sectors and state lines to improve water quality, restore habitat and strengthen climate resilience. The work adds up across landscapes to create a healthier river and a more sustainable future.

### Mississippi River Basin Facts

**~7,000**

**Rivers and streams are located in the basin**

**20 million**

**People depend on the Mississippi River for drinking water**

**325**

**Bird species migrate through the Mississippi Flyway**

#### Learn more

about the Mississippi River Basin here:





TNC Louisiana Director of Science Bryan Piazza monitors conditions at Loch Leven in Mississippi. © Joe Baustian

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The Mississippi River Delta spreads out below New Orleans. © Bridget Besaw

# Q&A: Bryan Piazza

## TNC's director of science for Louisiana and the Mississippi River Basin Program

**TNC is studying how to improve the way water flows between the Mississippi River and the Atchafalaya River. Can you tell us more about that?** Last year, TNC and the U.S. Army Corps of Engineers held a workshop to study what's working (and what's not working) about that flow of water. For decades, the Old River Control Structure (ORCS) has diverted 30% of the combined flows from the Mississippi and Red Rivers into the Atchafalaya River Basin, while allowing the remaining 70% to run down the Mississippi River. This flow split is managed daily by ORCS and accountable by law. Workshop participants studied flow patterns to develop hydrographs that compare the current 70/30 split with management alternatives that would benefit water quality, surrounding lands, and fish and wildlife habitat while meeting the flood control and navigation functions of the ORCS.

**TNC also has designed a sentinel system to monitor the Mississippi River to provide real-time data on water quality, sediments, navigational safety and flood risk. How's that project going?** For many years, information about the Mississippi River was collected by a patchwork of different agencies, hampered by inconsistent funding. Some stretches of the river hosted ample monitoring stations that collected data, such as nutrient runoff, sedimentation, and variations in river current and water levels. Other areas, like the lower Mississippi River, remained poorly monitored. TNC is working to address this patchwork issue.

**What does that look like?** We're collaborating with dozens of partners and technical advisors to create a monitoring network throughout the basin. We need to upgrade the current systems to the latest technology, so that we can collect data in a standard way. Then communities will have the information they need to issue emergency flood alerts, manage their drinking water systems better, and make decisions about land use and conservation. We're working with partners to raise the public funding we need to implement this system across the basin.

### Mississippi River Delta

Strengthening connections with nature can pay dividends by building stronger and more resilient cities, towns and neighborhoods around the country, including here in Louisiana.

As a result of a changing climate, rising seas and increasingly severe weather events, communities throughout the Mississippi River Basin face more frequent flooding and other water-related damage. In response, The Nature Conservancy teamed up with RTI International and the State of Louisiana to create the Nature-based Solutions Explorer, an interactive, on-demand modeling tool that allows users to assess the important role that nature can play in reducing flood risk, building resilience to changing weather and protecting freshwater resources.

After years in development, this tool is launching to the public this spring. Learn more at [nature.org/lwi](https://nature.org/lwi).

### Grand Isle Bird Festival

The 28th annual Grand Isle Migratory Bird Festival will be held April 17–19, featuring birding tours, educational displays, guest speakers, nature-themed artisans and other events. Follow us on social media for details.