



Resource Conservation Starts in the Watershed

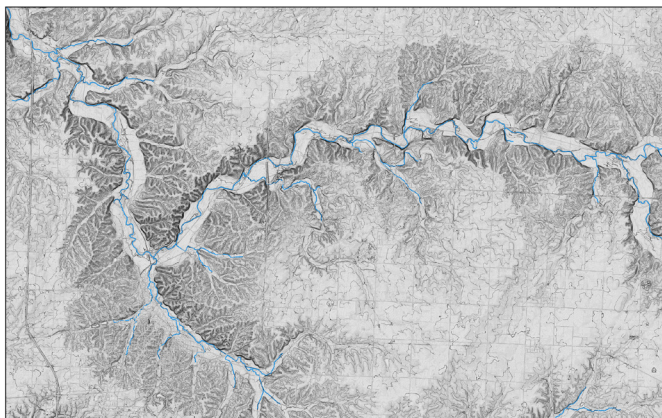
Wildlife habitat, clean drinking water, flood mitigation, and great outdoor recreation all have one thing in common: healthy watersheds.

CFM conservation partners Land Learning Foundation (LLF), The Nature Conservancy (TNC), Midwest Waters Initiative, Riverlaw.org, and Stream Teams United have formed the Shoal Creek Consortium to advance a multiyear initiative that will help to restore and conserve stream and wetland resources in Southwest Missouri's Shoal Creek Watershed. The Consortium is also connecting with local Missouri Stream Teams, city and county officials, teachers, and the Harry S Truman Coordinating Council, among others. Incorporating local voices and knowledge will help to ensure project success and promote long-term sustainability.

The cornerstone of our work is 35 acres at the confluence of Hickory and Shoal Creeks north of Neosho, Missouri. It was acquired by LLF in 2020 with support from Missouri Department of Natural Resources (MDNR) and US Fish and Wildlife Service (USFWS), as Natural Resource Damage Restoration Trustees for Missouri. LLF will restore and preserve over a mile of streambank and riparian corridor along Hickory and Shoal Creeks, as well as 5 acres of wetland. This provides us with the space and real-life examples to teach youth, adults, and landowners about water quality and conservation practices.

Shoal Creek Consortium partners are working with stream morphology engineers from the Saint Louis University (SLU) WATER Institute to develop an aquatic habitat restoration plan for the Site.

(Cover) Cara Arrigo (middle) training volunteers in the Volunteer Water Quality Monitoring program at the Confluence Site.
(Photo: Eric Dannenmaier)



Additional core partners are Neosho High School (NHS) science teachers and the Air Force Junior ROTC program which acts as a steam team. By partnering with teachers from NHS and faculty from Missouri State University, Crowder College, the University of Missouri's Prairie Fork Conservation Area, and SLU's WATER Institute, the Consortium will make the Confluence Site a living laboratory to demonstrate habitat conservation and sustainable farming practices for the next generation. The Consortium's goal is to use the Site as a demonstration for all ages to learn about the value of water quality, native plants, and being outdoors.

The Missouri Department of Conservation (MDC) is supporting Volunteer Water Quality Monitoring (VWQM) training for local volunteers who will monitor progress and project impact over the next three years. The state-wide VWQM initiative lets citizens take an active role in protecting water resources and helps them understand biological, chemical, and physical influences on water and habitat quality.

Staff from the Neosho National Fish Hatchery are also working on aquatic resource restoration in the watershed, and the Confluence Site will be one location where they will reintroduce and augment mussels in the Shoal Creek system including, potentially, the endangered Neosho Mucket (*Lampsilis rafinesqueana*). Hatchery staff will also assist in educational events and native plant establishment.

LLF Deputy Director and Biologist Katie Wiesehan, and Conservation Counsel and Riverlaw.org Director Dr. Eric Dannenmaier, are coordinating the Consortium effort.

The project has been in the works since 2020, and restoration activities started with an October 2021 Stream Team volunteer cleanup led by retired Joplin police officer Tom Guernsey. Several volunteers have already engaged with the Confluence Site in tree planting, water quality monitoring, and trash clean-ups with more to come.

Katie managed spring plantings of over 200 native trees, and participated in a June visit by SLU's WATER Institute engineers who gathered baseline data for restoration design alternatives. Rachel Rimmerman, the Institute's Director of Business and Outreach, noted that "Saint Louis University is excited to be part of this initiative."

Eric pointed to "the impressive level of local enthusiasm and support," which will be "essential to shaping and sustaining watershed conservation efforts in the long-term." MDC's Cara Arrigo, who trained VWQM volunteers at the Confluence Site in June, will return on October 1st to continue training with local science teachers and high school students. The Neosho Hatchery will also support public engagement, and hosted a preliminary workshop in March to introduce the Shoal Creek Consortium and to outline its own plans for mussel reintroduction.

CFM's President, Biologist Zach Morris, will also have an active role – helping to design streambank and wetland plans and to reintroduce native plants at the Confluence Site and other project locations. Zach pointed out that "The breadth of experience and talent represented by Consortium partners make this a unique opportunity for Southwest Missouri."

Drew Holt, TNC's Western Ozark Waters Coordinator, who has worked in the region for many years, agreed; adding, "This is a great opportunity to build on prior conservation efforts of many dedicated private landowners and public partners in this unique watershed."

Core funding is provided by MDNR and USFWS, with additional support from the US Environmental Protection Agency's 319 Nonpoint Source Program, the National Fish and Wildlife Federation, and the Conservation Federation of Missouri (CFM).

For more information or to get involved, visit the project website at <https://shoalcreekwatershed.org/>.

Katie Wiesehan

(Top) Map of the Shoal Creek Watershed in southwest Missouri. The Confluence Site is shown in red. (Photo courtesy of I-Map Data Systems, LLC <http://www.i-maps.com>)