

Getting Ahead of

Perry County interests take a proactive approach to watershed management after federal listing of endangered species.



Story and photos by Nora Farkis

There may be plenty of fish in the sea, but the grotto sculpin is not among them. The tiny aquatic creature is found only one place on earth — the cave system of Perry County, Missouri.

In 2012, the obscure fish catapulted to the forefront of the Perryville community's consciousness. A lawsuit by an out-of-state environmental advocacy group urged the U.S. Fish & Wildlife Service to list the species as endangered. The lawsuit began a ripple effect among Perry County's administrative, industrial and agricultural stakeholders, leading to the development of a proactive watershed management strategy — the Perry County Community Conservation Plan.

More than 50 community leaders and groups, including local manufacturing businesses, University of Missouri Extension and Perry County Farm Bureau, contributed to the 126-page conservation plan. When the grotto sculpin was listed as endangered in late 2013, the Perryville community pointed to their watershed management plan as proof they were committed to water quality and environmental health.

Frank Wideman, a natural resources engineer with the University of Missouri and a leader of the movement for a conservation plan, says the community embraced the opportunity to regulate themselves rather than face government regulation.

"Having citizens make decisions for their own community is more palatable than having big brother come down and say, 'Thou shalt,'" Wideman says.

"We looked at making a community effort, promoting the idea that we tell the agencies what we

Big Brother

would like to do to keep our waters clean and our ecosystems thriving. We found common ground and created a solution, rather than just following rules set for us.”

Perry County is home to some rather uncommon ground. The local karst topography is characterized by erodible limestone riddled with collapsed sinkholes, bubbling springs and miles of caves. Surface water and rainfall filter through the porous layers of limestone rock, feeding the subterranean tributaries coursing through the county’s caverns. Environmental contaminants — soil, human and animal waste, chemicals, gasoline residues — can trickle down through the bedrock, threatening belowground ecosystems and cave species like the grotto sculpin.

Most people in Perry County have never seen a living grotto sculpin in its natural habitat, but they have something in common with the endangered fish: They rely on clean, healthy water.

“We’ve got this issue surrounding this fish, which in some cases is smaller than the end of your finger. It’s in the cave system where it can’t be found easily. So, it’s hard to get people excited about the grotto sculpin itself,” Wideman says.

“By changing the focus of our plan and talking about water quality — something we all value — we were able to get the community motivated to make some changes.”

The introduction of the conservation plan enhanced the environmental programs already in place. Regular collections were held for tires, household hazardous wastes and electronic waste to prevent citizens from discarding those items in sinkholes and



polluting groundwater. Those efforts continue to contribute to the ongoing conservation and stewardship efforts in Perry County.

“The community conservation plan helped us rethink a lot of things that we were doing as a community and helped us organize the things we were already doing,” says Perryville City Administrator Brent Buerck. “The plan drove us to report our efforts. Every quarter, we compile a report to send to stakeholders and we outline the changes made and the activities performed that improve the water quality.”

Farmer Dave Steinbecker has implemented a number of practices to reduce runoff. He and other farmers in Perry County are working with the community’s conservation plan to improve water quality.



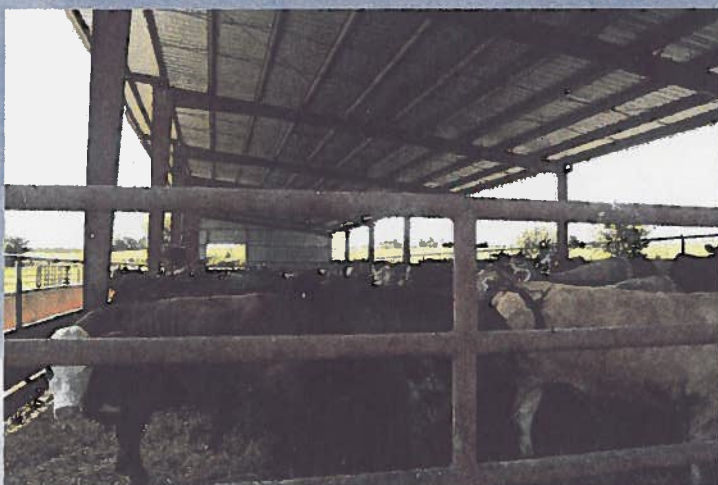


Although the plan's direct impact on the grotto sculpin population is unknown (the fish are elusive and hard to count reliably), its effects on water quality are clear.

"Spelunkers are talking about how they're seeing better water quality in the caves," Wideman says. "We're hopeful that their observations translate into better water quality and improvement in the environment in Perry County all the way through."

However, the plan would not work without people who are putting it in practice like Dave Steinbecker. For Steinbecker, owner of Steinbecker Livestock Farms of Perryville, good land management and environmentally conscious farming are part of being a responsible neighbor.

Even before the grotto sculpin was declared endangered, Steinbecker used innovative nutrient management practices to control the runoff. In 1995, the farm had bare soil prone to erosion, no fencing to prevent or limit cattle access to the creek and no buffers near waterways to avoid runoff.



Cattle on the Dave Steinbecker farm are housed in open-sided structures to help reduce waste runoff. Perry County's cave system and number of sinkholes is unique. Efforts are ongoing to clean up debris thrown in sinkholes and shore up drainage to keep them from collapsing.



"The thought of everything from my farm going downstream and into everybody's water supply — I knew that wasn't fair," Steinbecker says. "That's where we started."

Today, Steinbecker's operation is a model for environmental sustainability. Fallow fields get planted in cover crops to retain soil. Sinkholes are filled and pipes are installed in the fractured limestone formations to control runoff. Feed plots and buffers near waterways provide food and habitat for wildlife and capture nutrient runoff before it enters the watershed. Fences prevent cattle from entering the creek.

Monoslope cattle barns keep his livestock dry and comfortable during all seasons. The barns minimize the environmental impact of the cattle by keeping the animals off bare dirt and erodible slopes. Fields are mapped and analyzed for manure loads, allowing Steinbecker to determine the best practices for limiting runoff.

The federal Farm Service Agency and Natural Resource Conservation Service provide incentive programs for habitat and wildlife conservation, as well as for soil and nutrient management projects.

"There's money available to do projects, so if you get on board, you can make some pretty big improvements on your farm," Steinbecker says.

Although it is difficult to monitor the impact of his conservation practices on the grotto sculpin, more wildlife has been seen on the farm.

Quail have taken up residence in some fencerows, and other projects have enhanced habitat for deer and turkey. The streams on Steinbecker's farm are clear and clean — enough to spot softshell turtles paddling below the surface.

"The whole creek through the farm is just beautiful," Steinbecker says. "It depends on what you call beautiful, though. If you're going to manage it for wildlife, it's going to have to look a little bit ugly to some people."

The sight would be lost on the blind grotto sculpin. But for Steinbecker and farmers in Perry County, land conservation and clean water show others they are true stewards of the environment.

"We're happy to do the projects that we've done," Steinbecker says. "It took some adjusting, but we're proud of the results." 