

The Nature
Conservancy



KENTUCKY
FIELD NOTES

FALL/WINTER 2021

Patience and Urgency



Green River Lock and Dam #5 ceased operating in 1951, the same year The Nature Conservancy was founded. I've thought of this shared temporal history often as I've visited the site several times the last few months to observe and help celebrate ongoing removal efforts (page 3). While the timing is coincidental, there's a certain symmetry that makes me smile and appreciate that playing the long game—a true strength of the Conservancy—can yield transformative results. It is also worth reflecting

that while this removal was a long time coming (efforts to remove defunct locks and dams on the Green River stretch back at least 20 years, and we've actively been at it with partners since 2015) and the removal work itself is slow (hammering massive concrete walls to rubble requires the very definition of patience), the conservation benefits will accrue relatively immediately. As soon as the Green River flows freely once again, water quality and aquatic habitats will improve, and we can all enjoy a healthier, safer, and more accessible river.

While patience and the long game certainly have their merits, we must also recognize that the global challenges of climate change and biodiversity loss demand ever larger and more immediate responses. One of the ways the Conservancy is stepping up to the challenge is increasing its focus and investments in landscapes that contain biodiversity treasures and irreplaceable stores of forest carbon. The Appalachian Mountains, including eastern Kentucky, represent one of those landscapes, and we are excited to see the larger organization help our longstanding, multi-state conservation efforts in the region expand and accelerate (pages 4-5). Cumberland Forest demonstrated the scale of conservation projects we can conceive, develop, and execute, and now the challenge is doing many more similar sized projects.

None of this work—whether patient and slow or urgent and accelerating—is possible without the support of our loyal and generous donors. The projects described in this issue of Field Notes represent key elements of *Our Kentucky* campaign (page 7), and our ongoing work restoring Mississippi River floodplains (page 6) and protecting and restoring a resilient and connected corridor through the Appalachians represent critical priorities for our work moving forward. Your continued support remains vital to all that we do, and I am grateful for your belief in our mission and investment in our work.

Gratefully,

David Phemister
Kentucky State Director

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The Largest DAM REMOVAL

IN KENTUCKY HISTORY

On an otherwise quiet stretch of the Green River near Roundhill, Kentucky, the sound of construction fills the late morning air. Heavy equipment hammers away at the lock walls of Green River Lock and Dam #5, slowly turning them to rubble. An excavator picks up piles of this rubble and moves it closer to the dam, working to build a ramp and pad that will soon allow attention to turn to the dam itself.

The U.S. Fish and Wildlife Service dam removal team takes a break for lunch, and quiet returns to the river, with only the sound of the river rushing over the dam in the distance.

“Removing this dam will definitely save lives in the future,” says Hal Jones, a member of the removal team with 30 years of experience. “That’s first and foremost. And when you get these dams out and the water clears up, and you start seeing these fish migrate up through that path for the first time in a hundred years, there’s nothing like it.”

This is the largest dam removal in Kentucky history, and it will open up 73 miles of the Green River to free-flowing conditions. Together with the 2017 removal of Lock and Dam #6, nearly 200 miles of the river will flow freely after the removal.

“This dam removal is going to do a lot for stream-loving aquatic species,” says Lee Andrews, field office supervisor for the U.S. Fish and Wildlife Service Kentucky Field Office. “This river has a lot of endemism—there are a lot of fish and mussel species that only occur here in the Green River watershed. We have a number of listed and at-risk species that occur here,

and all of those species should benefit from the removal.”

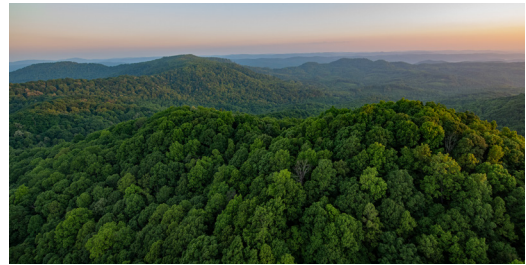
The Nature Conservancy is working with the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and other partners to take the dam out, a project that has taken years to bring to fruition.

“Removal of Lock and Dam #5 is just a phenomenal example of partners coming together over many years to get something really significant accomplished,” says Danna Baxley, director of conservation for the Kentucky chapter. “We have been the partner convener for this project, bringing everyone together and troubleshooting problems.”

In addition to making the river safer for people and healthier for aquatic species, the dam removal will also benefit the local economy by increasing opportunities for outdoor recreation (fishing, kayaking, and canoeing) and improving river access. The free-flowing river provides much better habitat and a healthier fishery for sought-after gamefish such as smallmouth bass, rock bass, and muskellunge. Canoeists and kayakers will be able to float through the area formerly cut off by the dam.

“Looking back at the Lock and Dam #6 removal, I was really impressed that those canoe liveries added all these new routes,” Baxley says. “People love to float through Mammoth Cave National Park. They can now go to Brownsville. And we’ll see the same effect here: People paddling through, getting food, purchasing gas, staying overnight. We hope this will result in a real economic boost for local communities.”





A New FOCUS ON THE APPALACHIANS

Kentuckians love their mountains. The Appalachians in the eastern part of the state are a place to admire the beauty of nature, a place to learn about our state’s history, and a place to call home. The Nature Conservancy is calling new attention to these mountains by recognizing their global importance in the face of a changing climate and biodiversity loss.

The Conservancy recently identified four landscapes for deep investment based on their value for biodiversity and natural climate solutions: the rainforests of Borneo, the northern Serengeti in Kenya, the Brazilian Amazon, and the Appalachians from Alabama to Maine, including right here in Kentucky.

“Our CEO Jennifer Morris said, we have a biodiversity crisis and a global climate crisis,” says Campbell Moore, senior carbon advisor on TNC’s Global Carbon Markets Team. “These landscapes provide us with some of the best opportunities to make a real and positive difference on both fronts.”

The Conservancy’s global science team reviewed more than 50 important landscapes for biodiversity and carbon storage. The Appalachians emerged as one of the four global priorities based on the urgency, need, and scale of conservation opportunities. Its unique geology, soils, elevation and topography and relatively intact forest cover make this 2,000-mile mountain chain a globally

CLOCKWISE FROM TOP LEFT An Eastern tiger swallowtail on a flower in the Cumberland Forest Project © Steven David Johnson; A mountain biker enjoys the Cumberland Forest Project. © Travis Dove; Elk were reintroduced to eastern Kentucky on reclaimed mine lands. © Steven David Johnson; The Cumberland Forest Project near the border of Tennessee and Kentucky © Cameron Davidson; Little Stony Falls in Dungannon, Virginia on the Cumberland Forest Project © Travis Dove



significant migration corridor, especially in a changing climate.

“Borneo, Kenya, the Amazon—the Appalachians are now in the same sentence as those truly iconic places,” says Bill Kittrell, deputy state director for the Virginia chapter. “It heightens the importance of this place.”

A Critical Landscape

The Appalachians are critical to nature as our climate changes. Many species will use this corridor for migration as the climate warms, including mammals, birds, and amphibians. This region plays an outsized role for carbon storage, too. For freshwater diversity, more rare and imperiled fish, mussels, and crayfish are found in Central and Southern Appalachian rivers than anywhere else in North America.

“We’ve always known the Central Appalachians are a hotspot in terms of biodiversity,” says Danna Baxley, director of conservation for the Kentucky chapter. “Between carbon sequestration potential and the biodiversity hotspot,

this is a premier area to stack those two benefits. There are few areas that provide such opportunities.”

The Appalachians’ designation as a critically important landscape is already bringing more resources to our work, including land protection, improved forest management, and development of best in class natural climate solutions projects.

“It means the area is really going to get a focus from the organization as far as policy, expertise like government relations and finance, access to decision-makers and, we hope, access to resources like funding,” says Kittrell. “The idea is that TNC chose these places to answer two fundamental questions: ‘What if we go all-in on these places? Can we really move the needle?’ We certainly think so and are excited to demonstrate success.”

A Good Investment

For Baxley, work in the Appalachians means that Conservancy employees will work together across state lines to bring their expertise to larger regions. Kentucky, Tennessee, and Virginia are collaborating on the Cumberland Forest Project, for example. Cumberland Forest is a 253,000-acre project where land protection, improved forest management, forest carbon markets, and recreational access all come together to create a multi-faceted approach to conservation. The project was funded by impact investment, a new funding model that the Central Appalachians team hopes to replicate in other large projects across the region.

“We’re really just scratching the surface,” says Moore. “We could do 10 other Cumberland Forest projects if we had the resources. That’s the

opportunity in front of us. Now we need to seize it.”

In addition to the impact investment model, making a gift to this region is also a good investment due to land costs. “We’re pretty confident that there is no space in the U.S. where a dollar gets you as much conservation,” Moore says.

A Better Future for Nature and People

The Nature Conservancy works carefully in the Central Appalachians, remembering that our actions affect not only nature but also the people who live in these mountains.

“People in the Central Appalachians are facing some really difficult financial times,” says Kittrell. “We think we can be a helpful part of this transition as the region moves from an economy based on coal to something more diverse, sustainable, and we hope vibrant. Conservation and nature-based economies are not the only answer, but we do believe they are part of the solution.”

Conservation equity is becoming an increasingly important part of the Conservancy’s work in underserved areas like the Central Appalachians.

“Community development, especially through public access and recreation, will absolutely be part of our ongoing work in the Appalachians,” says Baxley. “There are lots of other potential benefits. Managing for resilience is a big part of our work. Reducing fire risk with prescribed fire is a benefit to people. People are critical and are an important part in the conversations about how we advance durable conservation in these landscapes.”

New Funding for WETLAND RESTORATION

The Kentucky and Tennessee chapters recently helped secure another round of funding to restore western Kentucky and Tennessee's critical floodplain wetlands. This work means our partners will be able to enroll another 2,500 acres into a key restoration program. Working with the Natural Resources Conservation Service (NRCS), the chapter applied for this additional funding under the Wetland Reserve Enhancement Partnership (WREP). WREP is an extremely competitive program, but a track record of success and continued big vision allowed us to secure third and first rounds of funding for the Kentucky and Tennessee chapters respectively.

"The question is, where does the science tell us we need to be working?" says Shelly Morris, director of floodplain strategies for the Kentucky chapter. "The western parts of Kentucky and Tennessee are critical for wetland restoration and floodplain conservation. And for Tennessee, this is a brand-new way of working with our partners."

Morris has expanded her work in recent years from working in Kentucky to assisting the Tennessee and Illinois chapters with their wetland restoration efforts. This new round of WREP funding will restore 1,500 wetland acres in Tennessee and 1,000 acres in Kentucky. "This program is extremely popular, more and more so every year," Morris says. "There were \$60 million in funding requests for \$30 million of available funding nationally, and we got \$9 million of it."

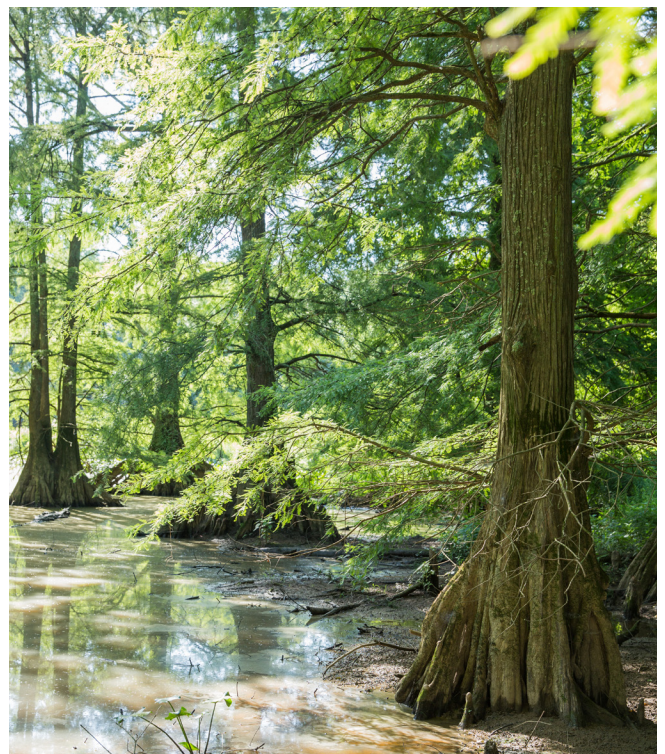
The Kentucky chapter and NRCS already have applications from landowners for the 1,000 acres allotted to Kentucky, and it will be a competitive process to choose which tracts are more critical for conservation than others. NRCS evaluates applications using criteria the Conservancy helped develop to determine the relative conservation benefits of each tract. Landowners are accepted into the program as funding is available. Then, restoration can begin.

"The landowner still owns the land—they can enjoy it for hunting, lease it, or even sell it," says Kathy Terry, easement coordinator and biologist for NRCS. "We restore it to wetlands. We plant a variety of oaks, hickories, wildlife trees with fruit such as persimmons, and cypress trees. We restore the hydrology; we plug ditches, build embankments to create shallow water habitat for waterfowl, and break drainage tiles to keep water on the lands much longer. This restoration provides all kinds of wetland values, including floodwater storage, nutrient and sediment reduction, and wildlife habitat."

These benefits are not only good for nature, but for people as well. Wetlands trap nutrients and sediments

so they don't flow into rivers, improving water quality from Kentucky and Tennessee all the way down to the Gulf of Mexico. Wetlands also act like sponges, enabling the land to hold more water and protecting downstream communities from flooding.

Wetland restoration also offers an excellent return on investment. "One really fantastic thing about WREP is that it's a great investment for donors. It's a 20:1 leverage of their dollars," says Morris. "We can get so much public funding with relatively little private match. TNC is great at multiplying the return on private investment thanks to our longstanding relationships with our federal partners like NRCS."



A Successful Campaign!

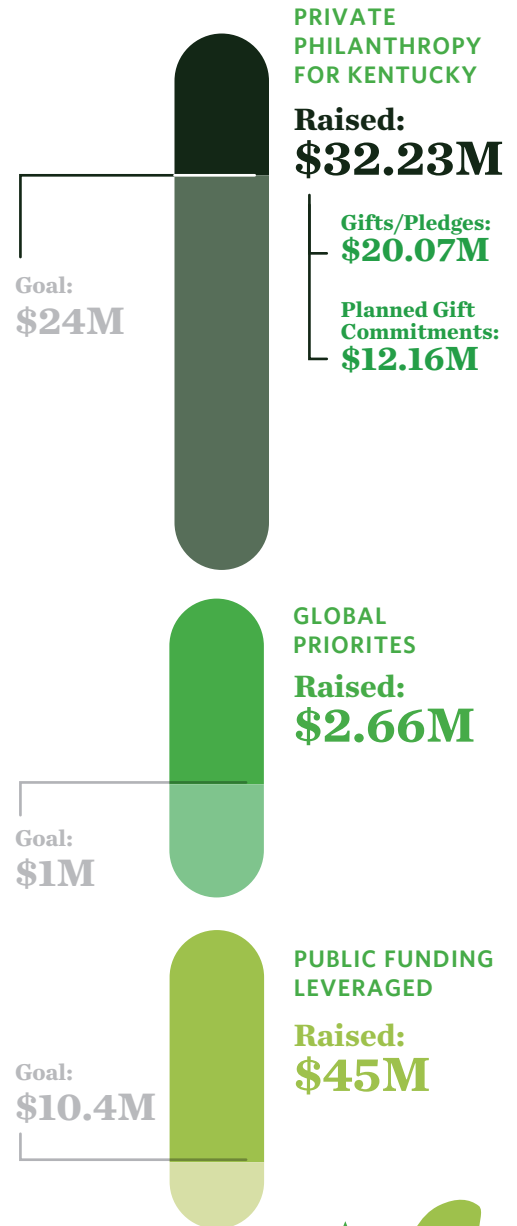
The Kentucky chapter wrapped up *Our Kentucky* campaign on June 30, celebrating the overwhelming success of all of its fundraising goals. From private philanthropy, to global priorities, to public funding, the chapter exceeded all its targets.

“We started this campaign five years ago because we had ambitious conservation goals, and we knew we needed more resources in order to achieve them,” says David Phemister, state director for the Kentucky chapter. “I am so thankful for gifts large and small. It really is humbling that so many people joined us in this effort, and I will always be grateful for that.”

Our Kentucky campaign ushered in an era of bigger, more meaningful conservation work, from the largest wetland and river restoration projects in state history to the first-of-its-kind Green Heart project in Louisville. Forest conservation in the Appalachian Mountains, promising engagements in the agriculture supply chain, and new capacity for policy work rounded out the campaign’s successes.

“Coming in, this automatically tells me that the Kentucky chapter has a tremendous vision,” says Bear Clifton, the chapter’s new director of development. “Kentucky has some of the most generous people I’ve ever met. This success tells me that The Nature Conservancy has made an incredible connection with the people of this state.”

As the Kentucky chapter celebrates the success of *Our Kentucky* campaign, we offer our sincere gratitude to all of the members and donors who made this campaign possible. Thanks to you, the future for nature and people in Kentucky is brighter.



Kentucky Field Notes

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