



Friends of Congaree Swamp News

www.friendsofcongarree.org

Fall 2019

Save the date

Big Sweetgum Hike

By John Cely

We will have an up close and personal look at some of Congaree's big sweetgums on **Saturday, Dec. 7**, with an off-trail walk in the area bounded by the Weston Lake Loop Trail.

The sweetgum, *Liquidambar styraciflua*, is by far the dominant tree in Congaree's bottomland hardwood forest. About one of every five trees is a sweetgum, and what gums they are!

When I first started visiting the Congaree many years ago I began keeping a log of every sweetgum I found 12 feet in circumference (about four feet in diameter) or greater. But it didn't take long before I discovered that there were so many big ones that I couldn't possible keep track of them

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The difference between natural disasters and events

By John Cely

We talk of natural disasters at Congaree National Park, but the term, of course, is a misnomer. A natural disaster is a term best applied to the human landscape, in the form of fires, floods, earthquakes, hurricanes, tornadoes and other such events that cause widespread suffering, sometimes loss of life, and severe economic hardship and displacement.

For wild lands and wilderness areas, a natural disaster is an extreme form of a natural event that has repeated itself over the millennia. And the only "damage" is to the habitat or ecosystem itself. A better term for these episodic events might be "extreme natural event" or "extraordinary natural event."

Extreme natural events are part and parcel of ecosystems worldwide. Although the damage from such events may appear catastrophic in some cases, we know that most ecosystems have evolved with such disturbances and in many cases require them for perpetuation.

Most coniferous forests in North America, for example, owe their origins, and maintenance, to fires that allowed the stand to get established in the first place. Those magnificent old-growth yellow poplars at the Joyce Kilmer Memorial Forest in western North Carolina are there thanks to a wild fire or landslide several hundred years ago that damaged the then-existing forest enough to allow sufficient sunlight to germinate and grow yellow poplar seedlings.



Damage to the high boardwalk after Hurricane Hugo in 1989

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President's Corner

Dr. John Grego

Call for volunteers

We have a couple different volunteer opportunities that have recently come up. After years of collecting, fabricating and storing recyclable plates, bowls, cups, utensils and napkins for our annual meeting and Dawn Chorus events, Virginia Winn is ready to pass the torch.

If someone has storage space for the recyclables and could bring them to the annual meeting (I can pick up the more limited set of supplies we use for Dawn Chorus), please contact me directly at friendsofcongareeswamp@gmail.com or (803) 331-3366.

And thanks once more to Virginia for initiating our recycling effort. It's always gratifying to walk away from our annual meeting with only a single, half-full bag of non-recyclable trash.

I shared news about the Smithsonian Water/Ways grant in our last newsletter, which will bring a traveling exhibit to the Harry Hampton Visitor Center November 2020 through January 2021.

Though park staff and volunteers will oversee the exhibit, we could use a couple more Friends members with a strong interest in the theme of the exhibit, whether related to the role the waters and wetlands have played in the cultural history of the area or water quality issues impacting the park.

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Friends of Congaree Swamp advocates for Congaree National Park and its unique environment.

Dr. John Grego, President

Sharon H. Kelly, Editor

In particular, you would have the opportunity to develop programs that will complement and support the exhibit. If you are interested, please contact me directly.

Land Development Manual

Richland County staff have been working on the county's Land Development Manual over the past year.

In theory, development of the manual seemed uncontroversial. The many disparate county land development regulations and standards are consolidated in a single document so that county standards are more readily followed.

In practice, some members of the development community saw it as an opportunity to discuss modifications to the land development code. Some drafts we saw included a significant weakening of regulations for buffer averaging, a method used by developers so that some portions of water quality buffers can be narrowed in exchange for widening others.

When applied too liberally, buffer averaging can have a deleterious impact on water quality and leave waterways poorly protected. The current language was developed in 2009-2012 during the site development roundtable meetings between conservation groups, the development community and county staff.

To our dismay, the county storm water staff did not push back against the developers as forcefully as they should, and the proposed changes we saw were actually a compromise proposed by county staff. In correspondence and at a couple presentations to the county's Conservation Commission, we impressed upon the staff our view that the manual was simply supposed to be a faithful transcription of existing ordinance language, and not an opportunity to weaken water quality standards.

Fortunately, we recently learned from staff that the offending language had been removed, and buffer averaging standards would be left unchanged. It was relief to learn of one less battle to be fought.

Meeting celebrates first hike to swamp

When Dr. Neal Polhemus suggested to the board that we should commemorate the 50th anniversary of the Sierra Club's first hike to Congaree Swamp, we realized the anniversary was so very close to our annual meeting date that the two events should be combined and take place at the park.

And so on Oct. 27 we found ourselves celebrating the Oct. 25-26, 1969, hike at Congaree National Park's outdoor education center a little more than 50 years to the day that the hike was held.

John Cely led a large crowd east of the boardwalk to visit the muck swamp and discuss the habitats that favor various tree species at the ecotone along the bluff edge. Upon John's return, we welcomed park employees then talked about the historic hike, which was many activists' first exposure to the park and set the stage for the advocacy campaign that followed.

Park activists then shared first-hike memories.

John Cely first visited in March 1967 while a sophomore at Clemson, upon invitation from Harry Hampton after an exchange of letters. His visit to the sweetgums south of



John Cely



Ann Timberlake

was one of the organizers of that first Sierra Club hike, with 75 members from South Carolina and North Carolina participating. She placed the preservation effort in the context of other important regional conservation efforts taking place at that time.

LaBruce Alexander concluded with Audubon South Carolina's first organized trip to the park in the early 1970s. Brusi's account of Harry Hampton's eccentric method for emptying out his shoes after a wet crossing of Cedar Creek on a flooded causeway was backed up by a video clip of that hike that we were able to play for multiple sets of members on projection equipment provided by the park.

We then held a raffle, with Jon Flamholtz winning a framed photograph donated by Ann Currie Williams.

Superintendent K. Lynn Berry discussed the challenges of replacing park employees who left before and after her

Wise Lake made an impression upon him that led to a lifetime of exploration in the park.

Ann Timberlake



LaBruce Alexander

arrival, the park's efforts to improve employee and visitor safety, and the evergreen topic of feral hog management with the good news that the park will continue a hog management contract with the U.S. Department of Agriculture's Animal and Plant Health Inspection Service.

Friends of Congaree Swamp reviewed a couple highlights of the past year, including John Cely's blog, Congaree Journal, and our acquisition of 214.42 acres adjacent to the park (see page 8). We then presented the Order of the Cypress to Ann Timberlake.

Ann became involved in the effort to protect Congaree National Park soon after joining the Carolinas group of the Sierra Club, headed by Ted Snyder. Because she lived in Columbia, Ted asked her to head up a Congaree committee with a few other activists, including Jim Parks, her former physics teacher at Dreher. After an earlier scouting trip to the park, Ann co-organized the 1969 hike to the park.

She was Ted's right-hand on Congaree strategy as he made national connections and raised funds for the campaign. She participated in early meetings with Jim Elder, and testified in Columbia and Washington, D.C., on behalf of the park.

She and Ted even met with the younger Frank Beidler and the family forester in Chicago to try to convince them to name

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And closer to home, most of Congaree's old-growth sweetgums owe their existence to hurricane-force winds that open the canopy enough to allow sweetgum regeneration.

Congaree National Park has experienced its share of extreme events in recent years. It started with the Great Ice Storm of February 2014. Ice storms occur at the park at regular intervals but this one was in a class by itself. For the first time ever I saw entire trees toppled by ice and the amount of downed limbs, some as large as small trees, was unbelievable. Five years later, the debris from this storm is still evident, especially when off-trail hiking.

And then there was the Great Midland Flood of October 2015 when parts of Richland County received 18 inches of rainfall and floodwaters at the park reached nearly 20 feet, a figure not seen in more than 50 years. Of course the Congaree is a floodplain and extreme flooding is nothing new. Damage from this flood to the bottomland hardwood forest seemed minimal although several large trees were later toppled, perhaps as a result of all that water rushing over shallow root systems.

The following October of 2016 saw another extreme event when strong winds from Hurricane Matthew swept through the park. Matthew caught some of us by surprise since we didn't expect much damage this far inland but the

50 mph plus sustained gusts proved strong enough to knock down a number of trees in the park, noticeably so along the park's trail system. The River Trail, Sims Trail, and Weston

Lake Loop Trail had 186 downed trees greater than five inches in diameter according to a USC student research project.

Along with the 2014 ice storm debris, the large limbs and trees downed by Matthew added a whole new meaning to cross-country navigation in the park's back country where it became nearly impossible to walk more than fifty feet in a straight line.

Nearly a year later, September 2017, another hurricane, Irma, came by park. But surprisingly, although the maximum winds and gusts recorded at the nearby McEntire Air National Guard Base were similar to those of Matthew a year before, damage to the park's canopy trees was surprisingly light and the rains caused little flooding.

But the winter of 2018-2019 will always be remembered as the "winter that never quit flooding" at the park. It started early with partial flooding from Hurricane Florence in September, followed up by more flooding from Hurricane



Flooding on the high boardwalk just west of Sims Trail, Oct. 2015

Michael in October. We had about three weeks of drier conditions but by mid-November the park was flooded again and stayed that way for the remainder of the month and through December and January!

The verdict is still out on the long-term effects of such prolonged flooding. I found few trees that I thought had been toppled due to soggy, saturated soils but I did notice some rather severe erosion along sections of the Congaree riverbank.

Hurricane-force winds are no doubt the single biggest natural event to affect Congaree's bottomland hardwood forest. And Hurricane Hugo was the granddaddy of all hurricanes, at least of the twentieth century. This monster storm crossed through the Midlands in the early morning hours of September 22, 1989, with wind speeds unprecedented in modern record-keeping annals. The anemometer at Shaw Air Force Base in Sumter, for example, registered 109 mph

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before it went down for good.

I remember the first time I was able to visit the park about three weeks after the storm—what I saw seemed like a major natural disaster, even if it was an “extreme natural event.” The high boardwalk, completed only four years previous, was a shambles and downed and snapped off trees were everywhere, to the point that some areas of the park appeared to have been clear cut.

Although the effects from Hugo are still evident today, for the most part storm recovery happened quickly and within seven to ten years most of the canopy had closed over to pre-storm conditions and many of the downed trees and big limbs had rotted and returned to earth. Exceptions were the many oaks, which took fifteen to twenty years to disintegrate, and the big pines which are still intact on the ground thirty years after Hugo and will probably be evident for another twenty years. And those areas heavily damaged by Hugo, where most of the overstory was blown down,

will take decades to recover.

Looking back on Hugo, I have to remind myself that the storm’s eye, and strongest winds, actually passed some 15 miles east of the park; I can only imagine the damage it would have created if the eye had passed over the park.

Some have argued that recent natural disasters might

dogma dictated that all forest fires were bad, and the resultant fire suppression policies led to unnatural and unhealthy accumulations of dead wood and other fuel on the ground that in turn led to more intense and damaging fires later.

The recent spate of hurricanes might be cyclic or they could be a result of

warmer ocean waters caused by global warming. These warmer waters will in turn feed stronger and perhaps more frequent hurricanes.

Whether it be floods, strong winds, ice



Damage on Oak Ridge Trail near Wise Lake, Hurricane Matthew, 2016

not be so natural after all.

Going back to our western fires, the case has been made that a number of these catastrophic fires may have had the hand of man involved. For the first half of the twentieth century, forest management

storms, or other natural events, the Congaree floodplain has proven resilient and adapted to them all. But if the intensity and frequency of these events becomes the “new normal” then that resiliency may be stretched to its limits.

Meeting

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a price for the forest. Ann also participated in the founding of Friends of Congaree Swamp and played a prominent role in our first annual meetings.

Afterwards, we acknowledged departing board member Blaney Coskrey and elected

board members Barry Beasley, John Cely, John Grego, Valerie Marcil and Bill Stangler to three-year terms.

We sorely missed Andy Fiffick’s barbecued chicken, but supplemented Oyster Bar’s roasted oysters with our usual chili, roasted vegetables and side dishes.

A special thanks to our

volunteers (and apologies to any we have overlooked): Mary Bull, Carol Gist, Rhonda Grego, Jerry and Deynise Griggs, Nancy Barton and Bob Guild, Jill and Neal Polhemus, Dennis Poole, Clover Robichaud, Claire and Dave Schuetrum, Bailey Slice and Clay Parker, George and Lynn Teague, and Angela Valvasori.

Friends offers comments on surface water discharge permit at Westinghouse

Apropos of all the other environmental issues that have placed the Westinghouse Fuel Fabrication Facility in the spotlight, we recently commented on the surface water discharge permit for the plant.

This permit, issued under the National Pollutant Discharge Elimination System (NPDES) program, regulates discharge to the Congaree River for process, sanitary and contaminated wastewater at the plant.

Contaminated wastewater is the only wastewater that may have come in contact with uranium, though mostly from shower areas and sinks for nuclear workers.

Review of the permit rationale and EPA's ECHO database confirms that most violations of discharge limits are intermittent and infrequent.

There are several aspects of the permit that we were pleased to see. The updated **Dissolved Oxygen** standard of 5.0 mg/l is a welcome change. Our records indicate that Westinghouse should have little trouble meeting this standard, with only one reading below that level in the past few years.

Too often when commenting on permits, we see low levels of DO permitted, with the expectation that the impact of low DO levels will quickly dissipate when released to local streams and rivers.

It was also good to see a

narrative standard—no visible sheen—imposed for **Oil & Grease**. This should allow for visual confirmation at the outfall that process wastewater has been properly treated.

Reviews confirm that most violations of discharge limits are intermittent and infrequent.

We do have some concerns with recent records for **Total Residual Chlorine**, a by-product of the wastewater treatment system.

The permit rationale stated that the highest reading occurred in February 2014, while our records showed a higher reading in March 2019. Two other readings so far this year have also exceeded the limit (January 2019 and April 2019), suggesting a systemic problem that needs to be more seriously addressed.

We also supported monitoring of 303(d)-listed metals **Copper and Mercury**. These contaminants helped place the Congaree River on the S.C. Department of Health and Environmental Control's 303(d) list of impaired waters and recent testing confirmed the presence of the latter during sampling.

Given positive testing results,

we would prefer to see limits set for Mercury, rather than rely on monitoring and reporting. Too often, "monitor and report" is a euphemism for inaction.

Based on reports of extensive groundwater pollution onsite, and other issues with the uranium dioxide pellet production process, we support continued monitoring of **Fluoride** and the establishment of **Uranium** monitoring.

As often happens with permit rationales, reporting on rare, threatened and endangered species was incomplete and out of date.

The information on endangered Shortnose Sturgeon (*Acipenser brevirostrum*) listed no updates since a 1992 sighting, ignoring S.C. Department of Natural Resources studies from 2004 and 2007 that confirmed the presence of Shortnose Sturgeon in all portions of the Congaree River up to the Saluda River/Broad River confluence.

Several mussel surveys conducted in recent years by the Nature Conservancy and Congaree National Park were also overlooked. Though most of these are well downstream of the project area, the surveys have documented the presence of species of concern (e.g., Savannah Lilliput and Yellow Lampmussel) and we argued that possible impacts on mussels should be considered as well.

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all. It is no accident that for many years Congaree had the national champion sweetgum, 17 feet in circumference and 150 feet tall. (The tree is still living but the top forty feet of the canopy got blown out by a wind storm several years ago).

Sweetgum has a large range that covers much of the Eastern U.S. Surprisingly, there are disjunct populations in the cloud forests of Mexico and Central America. There are few places within that large range that support the number of large sweetgums as found at Congaree and I'm convinced that Congaree National Park has the finest sweetgum forest in the world.

This will be a leisurely walk in the woods but participants should have strong ankles since the terrain is uneven in places, and comfortable hiking shoes. Contact John Cely at cowasee@gmail.com or (803) 782-7450 to sign up.

Group size may be limited and preference will be given to members of Friends of Congaree Swamp.

We will meet at 9:30 a.m. on the back patio of the Visitor Center. The hike should last until about 1 p.m. Bring water; snacks optional.

Christmas Bird Count

This year's Congaree Swamp Christmas Bird Count will be held **Sunday, Dec.**



Photo by Ron Ahle

Pileated woodpecker

15, beginning at 7 a.m.

Christmas Bird Counts, conducted nationally each year since 1900, are the oldest citizen-science project in the country. A CBC is an all-day effort to find and identify as many wild birds as possible within a 15-mile diameter circle. This effort, which now includes more than 2,500 circles and more than 70,000 participants annually, is sponsored by the National Audubon Society. We have a CBC for Congaree Swamp (founded by Robin Carter) that includes almost all the national park and adjacent areas, from Gadsden and Wateree in Richland County to Fort Motte and St. Matthews in Calhoun County.

The Congaree Swamp CBC often has among the highest

counts in the country of Pileated Woodpecker, Northern Flicker, Yellow-bellied Sapsucker, Barred Owl, Winter Wren and others. Even though the park was extensively flooded last year, we still managed the third-highest total of Barred Owl in the country.

It is also an excellent opportunity to document use of the park by Rusty Blackbird, a wetlands-loving blackbird whose numbers have declined precipitously the past few decades.

Join us to help out. If you are a novice, an expert birder will lead you around the

boardwalk and Bluff Trail in the morning, which together host some of the park's best sites for interesting wintering species and permanent residents, including Winter Wren, Blue-headed Vireo, White-breasted Nuthatch, Brown Creeper, Red-headed Woodpecker, Rusty Blackbird and Fox Sparrow.

Experienced birders can participate in one of our many parties spread throughout the circle. Those parties assigned to the main trail system will meet at the visitor center parking lot at 7 a.m. for this free event.

If interested, please contact John Grego at (803) 331-3366, or email friendsofcongareeswamp@gmail.com.

Friends just one of several partners in Running Creek Tract acquisition deal

If you saw Sammy Fretwell's article in "The State" about our recent land acquisition, you likely had some questions about it since Friends is not in the habit of purchasing land.

Acquisition of the 214.42-acre tract, referred to as the Running Creek Tract, was the result of a months-long partnership between Friends of Congaree Swamp, Open Space Institute, National Park Foundation, the National Park Service and private donors Fred and Alice Stanback, in coordination with the Weyerhaeuser Corporation, S.C. Department of Transportation, U.S. Army Corps of Engineers and the Kingville Hunt Club.

The seeds for the acquisition were planted during Mark Kinzer's term as interim superintendent, during which he was determined to jumpstart acquisition of some of the park's in-holdings using funds held by the National Park Foundation on behalf of Congaree National Park

as judicial fines for wetlands violations. Environmental non-profits with expertise in land protection were encouraged to apply for grants to explore possible land acquisitions within the park's boundary, later extended to lands adjacent to the park.

There has been concern for some time that the park's northern border is not well-buffered, with few to no conservation easements there. A portion of Weyerhaeuser's Kingville property seemed to be an ideal property to protect. Not only would it provide a conservation buffer, but could consolidate the park's management of the waters on its border, variously called Running Creek or Running Lake, stretching from U.S. 601 west to the Norfolk Southern's railroad.

Patrick Moore from Open Space Institute agreed to lead negotiations with Weyerhaeuser, while Mark Kinzer mapped numerous options for a sub-parcel that would meet the park's goals and fall within range

of a negotiated price. Other project partners do not typically hold land and so Friends agreed to do so.

The parcel that was eventually selected avoids important interior roads used by both Weyerhaeuser and Kingville Hunt Club, while including substantial portions of the Griffin Creek and Singleton Creek floodplains, and the entirety of Big Lake and Little Lake.

Additionally, none of the acreage has been harvested recently, not even the portion of the tract that is planted in loblolly pine.

The bottomlands contain even-aged water tupelo and bald cypress, with isolated old-growth bald cypress and water tupelo.

Funding for the project came from several sources. The National Park Foundation has held funds from an important wetlands violation case since 2005 and the Open Space Institute approached Fred and Alice Stanback for a donation.

Continued on next page

Land

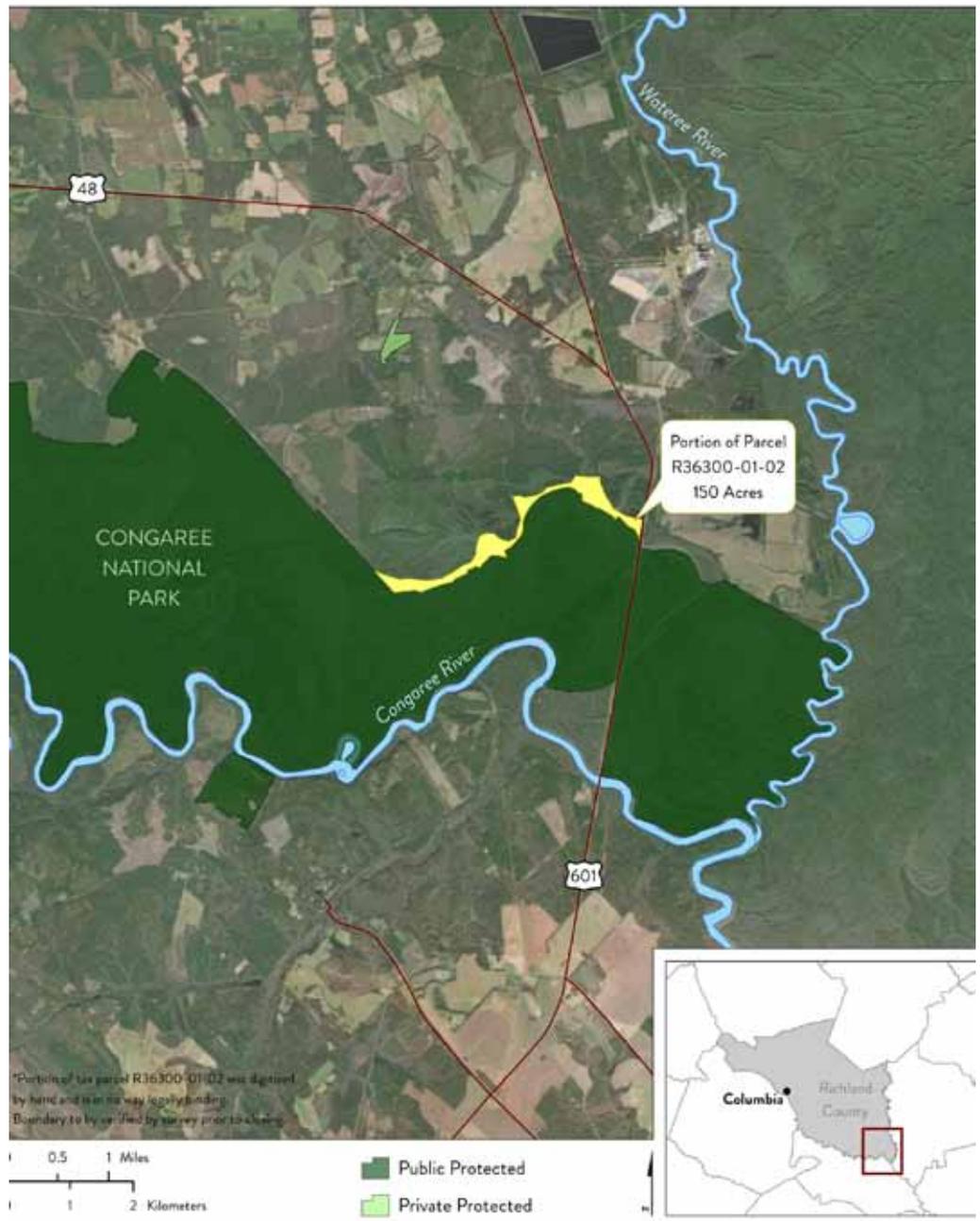
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Particularly gratifying to us, the \$250,200 in mitigation funds that were required as part of a U.S. Army Corps of Engineers permit for the U.S. 601 bridges project were released by SCDOT with the U.S. Army Corps of Engineers' approval.

The Corps had issued the permit and the clause to release the funds for a project outside the park's authorized boundary required Superintendent K. Lynn Berry to propose an alternate project for both agencies' approval.

Friends of Congaree Swamp also provided \$25,000 in earnest money, which was returned upon completion of the sale less money paid to attorney Ed Eubanks of Austin & Rogers, who handled the complex negotiations between Friends and the other project partners.

Friends of Congaree Swamp will manage the tract consistent with the park's management goals. We do plan to post the northern boundary, mostly to warn away any wayward



paddlers or fishers who might inadvertently stray onto land leased by the Kingville Hunt Club. Visitors who paddle Running Lake/Running Creek can be reassured that either bank is now protected, which should mean they can explore that portion of the park with an easier mind.

It is a long-term goal to donate the land to the park.

Though the minor boundary expansion for the Two Rivers Tract (see our Fall 2018 newsletter) went smoothly, it is our understanding that recent minor boundary expansions have been held up, and so the timeframe for future boundary expansions is uncertain. Our partners in the National Park Foundation have counseled patience and discretion.



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Join Friends of Congaree Swamp today!

Yes, I want to support conservation of Congaree Swamp for future generations. Enclosed is my tax-deductible contribution of \$ _____. (Please make checks payable to Friends of Congaree Swamp.)

_____ Individual \$15 Name(s) _____
_____ Family \$35 * Mailing address _____
_____ Advocate \$50 City _____ State _____ Zip _____
_____ Partner \$100 ** Phone _____ Email _____
_____ Benefactor \$500
_____ Patron \$1000
_____ Nonprofit \$50
_____ Corporate \$1000

Please keep your information current to receive special notices about field trips, events, scheduling changes and acknowledgements in addition to a quarterly newsletter.

*For a contribution of \$35 or more, you may choose one:

Baseball cap maroon _____ tan _____

Tan visor _____

Bandana with map of Congaree National Park gold _____ blue _____ red _____

**For a contribution of \$100 or more you will receive a copy of "The Natural History of Congaree Swamp."

In addition, I would like to donate \$ _____ as a gift.

Thank you for supporting Friends of Congaree Swamp!

Friends of Congaree Swamp, P.O. Box 7746, Columbia, SC 29202-7746
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