

Minutes
North Carolina Sandhills Conservation Partnership
Steering Committee Meeting
1:00PM – 4:00PM Wednesday, March 18th, 2020
CONFERENCE CALL

- **Welcome and Introductions**
- **Steering Committee Attendance**

Present

Jeff Marcus	TNC
Brady Beck	NCWRC
Pete Benjamin	USFWS
David Heins	Fort Bragg/ED
Brian Yeich	NCFS
Crystal Cockman	Three Rivers Land Trust
Clyde Sorenson	Sandhills Ecological Institute
Jessie Jordan	NCDPR
Barry Hull	Fort Bragg/DPTM

Other attendees:

Jackie Britcher, Jessie Schillaci (Fort Bragg ESB), Rex Badgett (NCDOT), Dan Hannon (ORISE Fellow), John Hammond (USFWS), Susan Miller (USFS), , Gabriela Garrison, Kacy Cook, Tim Mcfayden, John Isenhour (NCWRC), Debbie Crane, Carmella Stirrat, Gretchen Coll, Julie DeMeester (TNC), Jesse Wimberley (Sandhills PBA), Rod Fleming, Alan Schultz, Aaron Brown, Barron Feit (Fort Bragg), Jesse Woodsmith (Southern Conservation Trust), Jay Carter (JCA/SEI), James Dodson (NCDPR), Wendy Dunaway (Fayetteville PWC), Scott Pohlman (NCNHP), Elizabeth McCombs (Enviva), Leigh Ann Hammerbacher, Jordan Iddings (Triangle Land Conservancy), Sean Sellers (University of Florida).

- **Longleaf Pine and Payments for Watershed Services – Sean Sellers, University of Florida**
 - Sean Sellers, a master’s student from the University of Florida School of Forestry, Fisheries, and Geomatic Sciences, presented original research on the feasibility of using Payments for Watershed Services (PWS) programs to incentivize conservation of the longleaf pine ecosystem.
 - Sean’s work used interviews with public and private sector experts as well an extensive literature review on using PWS as a market-based tool to incentivize management of longleaf pine by private forest landowners.
 - PWS programs are voluntary, market-based tools designed to link upstream land management practices and downstream water conditions. Program designs vary, but include:
 - Ratepayer surcharges
 - Municipal bonds

- Sales tax
 - Donated water conservation savings
 - Voluntary ratepayer contributions
 - Revolving impact funds
- Relevance of PWS programs to the NC Sandhills Conservation Partnership is primarily associated with increasing upland conservation efforts in watersheds of high conservation priority, such as Drowning Creek.
- A local example of a successful PWS program includes the Upper Neuse Clean Water Initiative in Raleigh which generates \$2M annually through ratepayer surcharges and has resulted in the protection of 10,000 acres in the watershed.
- Using PWS programs to promote open longleaf forests on private lands is expected to address future challenges and changes to water resources in the southeast caused by climate change, land use change, and population growth.
- At the species level, longleaf pine trees are more water efficient and drought tolerant than other southern pines such as loblolly, though overall there were no differences in water yield between similarly managed longleaf and loblolly stands
- At the stand scale, open longleaf forests – especially those managed with fire, use 15% less water than mixed pine-hardwood forests and 30% less water than intensive loblolly plantations, with differences attributed primarily to stand density
- At the watershed scale, all forest types resulted in high water quality, but managing for open canopy longleaf comes with the added benefits of increasing water yield and baseflows as well as decreasing the risk of severe wildfire impacts.
- Implementing PWS programs requires a substantial time and resource investment to determine the optimal program design; this includes advanced hydrological and forestry modeling efforts paired with economic studies to:
 - Develop forest management BMPs
 - Assign a dollar value of conservation actions and the relationship between management action and water quality/quantity benefits.
- Success of PWS programs depend on strong partnerships between government and non-government conservation agencies/organizations and local governments responsible for managing the infrastructure and finances of public water utilities.
- For more information on Sean Seller’s research, refer to a PDF copy of his presentation as well as a peer-reviewed article published in the journal *Forests* (attached).

➤ **Watershed Conservation Strategies – Leigh Ann Hammerbacher, Triangle Land Conservancy**

- Leigh Ann Hammerbacher, Director of Conservation and Stewardship for Triangle Land Conservancy presented on her experience assisting with the design and

implementation of the [City of Raleigh Watershed Protection Program](#) and the [Jordan Lake One Water](#) initiative.

- As Falls Lake serves as the water supply for the City of Raleigh, land protection and stewardship in the watershed is a high priority for providing quality drinking water for the public.
- Starting in 2005, the City of Raleigh instituted a surcharge on public water consumption (\$0.15 per 1000 gallons) in order to generate revenue to fund land protection and conservation projects in the Falls Lake watershed.
- On average, City of Raleigh water utility customers are charged \$0.66 per month, and the program generates over \$24 million in conservation funds annually.
- Since its inception, fund generated by the program have resulted in the protection of 10,000 acres and 111 miles of stream across 114 properties.
- The Jordan Lake One Water initiative is an effort to institute a program similar to the City of Raleigh Watershed Protection Program to the Jordan Lake watershed.
- For more information on these programs and the involvement of Triangle Land Conservancy please refer to the PDF of Leigh Ann's presentation (attached) or contact her at: lhammerbacher@triangleland.org

➤ **Forest Restoration and Water Resources: using the mountains as an example – Julie DeMeester, The Nature Conservancy**

- Julie DeMeester, the Director of the Water Program for TNC in North Carolina, presented on an ongoing project in the Southern Blue Ridge (SBR) Mountains involving the effects of forest management – including prescribed fire, on watershed protection.
- In the SBR, climate change is leading to more extreme precipitation events and future projections indicate that evapotranspiration will outpace precipitation which would be expected to decrease the amount of water in streams.
- Moreover, the composition of the SBR forests have changed over time from fire-tolerant oaks and hickories to maples and poplars (mesophication) which also leads to changes in water resources because a species like poplars can use 4x the amount of water as and oak.
- The waters of the SBR are not only hugely significant source of drinking water, but also an important source of aquatic biodiversity, with 20 federally-listed threatened or endangered species depending on aquatic systems of the SBR.
- Following the 2016 wildfires in the SBR, the Coweeta Hydrologic Laboratory launched two studies – one looking at the effects of fire severity on water quality and another to look at controlled burning effects on vegetation, water quantity and water quality. These experiments aim to inform land managers on both wildfire and controlled fire effects on water.
- Julie and others are currently working on a project that seeks to identify areas where prescribed fire can be used to improve water yield through the use of GIS analysis on overlays of SBR burn units, fire-adapted vegetation, and conservation land.

- Julie concluded by relating her work in the mountains to the Sandhills.
- Although climate change scenarios project a wetter future for the NC Sandhills, these annual projections may be driven by extreme precipitation events; coupled with sandy soils, this could mean more frequent drought periods between extreme weather events.
- As with much of NC, land use change/urbanization is expected to affect the Sandhills, and combined with climate change, this leads to an uncertain future for priority watersheds such as Drowning Creek.
- Regarding Drowning Creek, Julie reminded the partnership of the black water streams monitoring project, conducted by Matthew Moskwik, that showed a long-term trend of declining baseflows in Drowning Creek which is concerning as this constitutes a concern for the future of the drinking water supply for the town of Southern Pines.
- Julie concluded with what should be done moving forward including:
 - Making a decision about who we are trying to influence and an understanding of their needs.
 - Creating maps of places to restore, important aquatic species, etc
 - Conducting advanced water models that quantify forest restoration effects on stream flows specific to the Sandhills.

➤ **Discussion of longleaf restoration and management as pertaining to black water stream conservation and watershed protection – open discussion**

- Following her presentation, Julie DeMeester facilitated a discussion on water conservation and forest management in the Sandhills.
- Julie posed the four questions to the meeting participants: questions and summary of responses below:
- Question 1: What are some of the ideas that resonate with you from today's presentations?

Response summary:

Ideas that resonated with meeting participants including: the importance of using fire and forest management practices to improve water resources; having a market-based mechanisms that link upstream management to downstream water quality/quantity in which funding can be generated for increasing land protection or implementing forestry BMPs on private land.

- Question 2: How would you intersect watershed protection and forest restoration with your work?

Response summary:

The longleaf alliance responded by sharing that they recently submitted a NFWF LLSF proposal to connect longleaf restoration and utilities with goals to prioritize forest watersheds in longleaf landscapes for drinking water protection, quantify the benefits of longleaf management for water quality, and implement wetland restoration and amphibian recovery projects.

Other responses included using watershed protection programs to advance longleaf restoration (thinning and burning); incentivize conversion from loblolly pine plantation to longleaf or open pine forests; conducting outreach to landowners and developers about the benefits of open pine forests and the links to water quality.

- Question 3: What information would you need to better understand or incorporate watershed protection into your work?

Response summary:

Participant responses included the need to identify funding mechanisms to incentivize private land management and the need for more data and study to quantify the amount of prescribed fire and forest management required to achieve water quantity and quality goals.

- Question 4: What are the incentives or levers to accomplish more watershed protection and forest restoration work?

Response summary:

Participants said they would be able to accomplish more water protection if there was public buy-in to such project/programs, a clear linkage between upstream management and downstream benefits, more dedicated funding for forest management and protection with an emphasis on water protection.

- The questions and responses were documented within the Google Sticky Notes app; to view the results of the discussion click [here](#).

➤ Working Group Reports and Discussion

- **Resource Management** (Brady Beck)
 - After the meeting NCWRC shared results of a management effort to control invasive fire ants around sensitive wetland habitats using a hot water treatment. This treatment appears to be effective on controlled treated mounds.
- **RCW Recovery** (Kerry Brust)

Sandhills Ecological Institute (SEI) and Dr. J.H. Carter III & Assoc (JCA) coordinated RCW cavity management within Southern Pines-Pinehurst (SOPI) private lands active and recruitment clusters.

- 9 inserts provisioned in 7 Pinehurst Golf Course clusters (7 replacement inserts)
- 2 inserts provisioned at MCCAIN and CALLOWAY Forests
- Cavity restrictor installation and/ or removal within ~ 12 SOPI / BLUE clusters
- 2021 RCW Population Monitoring:

Anticipate similar demographic data collection to past regional efforts with SEI, Endangered Species Branch (ESB), NC Wildlife Resources Commission (WRC), and JCA commitment on Fort Bragg, Sandhills Game Land A-Block and varied state and privately-owned RCW subpopulations.

Research on Avian Keratin Disorder (AKD) in RCWs

- 2019 screening by USGS of samples from AKD-affected RCWs found no Poecivirus (novel picornavirus first described in Alaskan black-capped chickadees)
- Zylberberg et al. (2020) discovered Poecivirus in 5 additional Alaskan bird species and in a Blackpoll warbler from Maine, the first documentation of Poecivirus in eastern North America.
- USGS Alaska Science Center will retest Sandhills samples for Poecivirus through highput sequencing to corroborate initial screening negative results.

2021 Sandhills breeding season AKD study: SEI will collect targeted resight and repeat morphometric data through recaptures for 'longbilled' RCW on Western Fort Bragg and Camp Mackall to investigate seasonality and consequences of AKD on individuals.

- **Communications** (Debbie Crane)
 - The communications working group is currently working on a post-COVID communications plan
 - Debbie also shared 3 media pieces directly related to the NCSCP:
 - NPR story on the proposed downlisting of the red-cockaded woodpecker, featuring our own Mike Lynch talking about the power and importance of partnerships for addressing environmental and military training challenges. Listen: <https://www.npr.org/transcripts/969703397>
 - The Washington Post wrote a story on pine straw raking featuring quotes from TNC's Jeff Marcus that can be found [here](#)
 - TNC was recently shadowed by a reporter from the Washing Post who is working on a story about the difference in fire management and wildfire between the western and southeastern United States. The story is still being written but will be shared when published.
- **Land Protection** (Jeff Marcus)

Since the last meeting December 2, 2020 there has been the following Land Protection activity:

- The Town of Southern Pines purchased the ~157-acre Whitehall property in Southern Pines. The property includes an existing 67-acre

conservation easement held by Three Rivers Land Trust. As part of the recent transaction, the Town placed a conservation easement on an additional 9 acres with Three Rivers. The deal also included deed restrictions on subdividing the property or commercial or residential development.

- The Nature Conservancy sold the 107 Buckrub property to the NC Wildlife Resources Commission on 12/15/20. This property is now part of Sandhills Game Land and the land sale proceeds will be used to purchase additional land in the Sandhills.
- TNC and 3R continue to work on multiple projects that are in various stages

- **Reserve Design** (Dan Hannon)
 - No update

➤ **Partner Updates**

NC Parks – James Dodson

- Jessie Jordan was introduced as the new Piedmont Biologist for State Parks
- State Parks is working on prescribed fire Carvers Creek and Weymouth Woods.
- State Parks is also working on groundcover restoration work at Weymouth Woods.
- They're starting to look restoration area/loblolly plantation removal on Carvers Creek - Long Valley.
- Weymouth Woods is still awaiting a new ranger now that Dousharm has retired.

TNC – Carmella Stirrat

- TNC has thinned 150 acres at the Griffin Preserve property
- 50 acres of longleaf and native warm season grasses were planted at the Jordan Preserve property
- TNC and the NFWF crew assisted 470 acres of prescribed fire at Carvers Creek State Park.

USFWS – Caroline Krom & Pete Benjamin

- The Sandhills Safe Harbor program has 141 agreements, totaling ~66,806 acres.
- USFWS taking steps with the Town of Southern Pines, as well as Nicks Creeks Longleaf Reserve to reenroll these properties in the program under their new management.
- Currently, the FWS is in the process of transferring the HCP permit to new personnel and can begin enrolling landowners again once this process is complete.
- Pete announced that Lindsey Troutman was recently selected as the new RCW recovery lead for USFWS.
- Pete also discussed progressed on the automated system for screening project for impacts to RCWs.

Fort Bragg DPTM – Barry Hull

- No update

Fort Bragg ESB – Jackie Britcher

- No update

Fort Bragg WB – Alan Schultz

- Alan shared a resource for managing feral cats and their impacts on wildlife; it can be found [here](#).

NCWRC – Kacy Cook & Tim Mcfayden

- Kacy announced the NCORR resiliency planning funds, tied to Hurricanes Matthew and Florence – the group meets on last Thursday of each month (public meeting). Contact Marlena.Byrne@ncdps.gov for more information.
- The Recovering America's Wildlife Act (RAWA) is again seeing activity with new bipartisan cosponsors; WRC will update the partnership on RAWA periodically.
- Tim Mcfayden updated the partnership on recent land management work on game lands in the Sandhills including:
 - Accomplished 1,025 acres of prescribed fire so far in 2021.
 - Thinning of ~1,000 acres and planting wiregrass on 130 acres.

The Longleaf Alliance – Ryan Bollinger

- The Longleaf Library, a resource for housing research and reports relevant to the longleaf ecosystem, has been launched by LLA and can be found [here](#)
 - Ryan reminded the partnership about the Southeast LEO Project for which field work is soon to be wrapping up which will be followed by a QA/QC period prior to being accessible as a web map. For more information see the [FNAI LEO website](#).
 - The Longleaf Alliance launched their newly updated website: <https://longleafalliance.org/>
- USFS – Susan Miller
 - At the time of the meeting USFS had accomplished 600 acres of prescribed fire on the Uwharrie National Forest.
 - USFS is continuing to plant longleaf pine on the forest.
 - USFS and other are continuing to work on the Joint Chiefs proposal.

NCNHP – Scott Pohlman

- NHP updated the partnership on the state of land protection NC; 12% of the state is currently in permanent protection, and the current percentage of protected land is at less than half of the 30 by 2030 initiative goal of protecting 30% of NC by the year 2030.

Sandhills PBA – Jesse Wimberley

- A thinning and groundcover restoration project is currently being worked on at Hoke Community Forest; TNC donated the native warm season grass seed used in the groundcover work.
- The PBA accomplished their first prescribed fire with the Village of Foxfire
- Jesse reiterated his interest in water protection and forest management in the Drowning Creek watershed.

Southern Conservation Trust– Jesse Woodsmith

- Restoration work including thinning and possibly chipping is currently underway at Nick's Creek Longleaf Reserve.
- Other work includes boundary surveys and posting work and road improvements.

NCSU/SEI – Clyde Sorenson

- Clyde announced the start of the new PhD researcher, Lauren Par, who's dissertation will be focused on RCWs.

RLUAC – Pete Campbell

- RLUAC has a new tracking system for submitting development and rezoning projects from local municipalities that will screen for impact to military and conservation issues.
- RLUAC also has a new strategic plan and updated [by-laws](#).

NCFS – Brian Yeich

- At the time of the meeting NCFS had accomplished ~500 acres of prescribed burning in 2021.
- NCFS also dealt with 450 wildfires in the 2 weeks leading up to the meeting.
- Brian also announced/reminded the partnership about the landowner cost-share program that assists private landowners with planting, burning, site prep and TSI work.

City of Fayetteville Public Works – Wendy Dunaway

- Wendy announced that they've recently accomplished ~52 acres of prescribed fire at Bonnie Doone, and a mechanical hardwood removal project is upcoming as well.

- The next meeting of the NCSCP will take place on **Wednesday June 16, 2021 from 1:00 pm – 4:00 pm**. The meeting will be held via MS Teams ([Click here to join the meeting](#)). Sticking with the format of incorporating themed meetings (e.g., the water conservation theme of this meeting), we are tentatively planning on a them of land use planning in the region.