

NCSCP Steering Committee Meeting Summary
September 13, 2017
Weymouth Woods - Sandhills Nature Preserve

Steering Committee Attendance:

Present

Brady Beck	NCWRC
John Hammond (Alternate for Pete Benjamin)	USFWS
Jimmy Dodson	NCDPR
Jay Carter	SEI
Jeff Marcus	TNC
Nancy Talton	SALT
Scott Pohlman	NCDENR/CPCA
David Heins	Fort Bragg/DPW

Absent

Pete Edmunds Chair	Fort Bragg/DPTM
Sarah Crate	NCFS

Other Attendees

Susan Miller (USFWS), Kerry Burst (SEI), Mike Martin (NCWRC), Rex Badgett (NCDOT), Rod Fleming (Ft. Bragg), Alan Shultz (Ft. Bragg), Gabriella Garrison (NCWRC), Stacy Huskins (Ft. Bragg), Jessie Schillaci (Ft. Bragg), Andy Van Lanen (SEI), Brian Ball (Ft. Bragg), Tom Augspurger (USFWS), Jame Amarosa (NCDENR), Tim McFayden (NCWRC), Michele Wilcox (Ft. Bragg), Ryan Bollinger (Longleaf Alliance), Gretchen Coll (TNC), Barry Hull (Ft. Bragg/ACUB), Jackie Britcher (Ft. Bragg), Larisa Fitzgerald (Ft. Bragg), Caroline Krom (USFWS), Jeff Walters (Virginia Tech), Rhonda Sturgill (TNC), Jesse Wimberley (SALT).

Notes

GOPHER FROG HEAD-START PROGRAM: MIKE MARTIN

Presentation focus is on the telemetry project associated with the Gopher Frog Head-start program and how fire ants are playing a significant role in mortality of frogs.

- The Gopher frog is a state threatened species in NC. Map comparisons show quite a contraction of range with only a few pockets of gopher frogs left in the state, which is concerning.
- The species specialize in upland isolated wetlands that have open grassy ponds adjoining longleaf pine ecosystems that are kept open through fire, such as the WRC owned 17 Frog pond (~6-ac.). The Gopher Frog is atypical because the majority of their time is spent away from water. Part of what causes the complications with this species is their extensive upland movement. The frogs aside from the pond use stump holes as refuge and spend a vast majority of time in them.
- The Head Start Project is a cooperative effort with the NC Zoo, egg masses are identified and collected around breeding time usually February-March. Usually 1-2 eggs are used for genetic testing and 20-25 eggs are used for the Head Start program. Stages are collect the eggs, they hatch a day or two later, as tadpoles age they are a little more resilient than the freshly hatched ones.
- The zoo transfers the tadpoles to a mesocosm filled with pond water and substrate for algae growth. When large enough they are caught in minnow traps then data is collected and this year transmitters were attached prior to release to allow closer monitoring through radio telemetry.

Fluorescent dye is also inserted into the frog's thigh so ultimately they could be recaptured for long term monitoring.

- The increased monitoring is an effort to gain additional information of spatial ecology of the metamorph frogs as opposed to the adults, which is the only other stage that has been tracked in the gamelands (2010).
- The gopher frogs raised by the zoo are roughly the size of a walnut. The aim is for larger metamorphs primarily because of the 5-10% body mass rule when using transmitters.
- 17 Frog Pond is the only pond on the gamelands where eggs were found although a manmade pond has had them in the past.
- Release points were chosen (somewhat on cardinal directions) and the frogs were tracked daily (1x during the day and 1x at night), however data collection difficulty increased once with the higher number of frogs were released, which occurred over a month's time. Data collected includes habitat preference, movement, behavior, and mortality.
- **Results:** out of 29 frogs released,
 - 15 total were predated by something native (12 by racers, 1 avian, 1 perhaps by a larval dragonfly or beetle in the pond, 1 by a banded water snake in the pond.
 - 6-8 frogs were predated by invasive red imported fire ants.
- Many frogs did not disperse very far or very quickly.
- Fire ants are known to effect wildlife and vegetation (mounds around pond veg.) and are well known to be flood resistant. The ants are sensitive to chemical controls, however the chemicals are non-specific and will target native species, as well. Additionally, the chemical can get into the water, which is a big concern since 17 Frog pond is such an important habitat for the gopher frogs, tiger salamanders, and many other species.
- Anthills within the tree line were GPS (active and inactive burrows) and a few transects (near release sites).
 - Trends: Grassy open side where high water line is late winter/early spring had fewer anthills. It was also SW facing – sunnier side of the pond.
 - The opposite site had closer canopy to the pond's edge that had a higher number of anthills.
 - GPS coordinates on telemetry recovered from frogs affected by fire ants for the most part were close to release points by the pond. Frogs that did get farther from the pond seemed to go farthest on the last segment before mortality that might suggest ants on-loaded at the next to the last, stop causing them to move out.
- Tried to develop questions about the behaviors that might be answered by scientific papers, but there is little published specifically on herps and fire ants.
 - Houston Toad recovery efforts – similar system: isolated upland ponds that dry down seasonally pine dominated habitat that had prescribed fire. Did not give range or specific information on canopy cover. The paper mentioned the height of RIFA activity May-October – a time when frogs are migrating from pond to uplands for refuge.
 - 2nd herp-related paper out of SC – looked at different forestry stands and assigned them to different levels of habitat disturbance and examined the causation of wooden cover boards by fire ants. Results: the more altered the habitat the greater increased likelihood of fire ant invasion. Worst-case scenario was clear cut with coarse woody debris suggesting that with more woody surface you get more fire ant activity.
 - The SC paper looked at terrestrial salamanders and found that with more veg ground cover there is lower mortality from fire ants.

- There is annual variation in reproductive output per site. Frogs are dependent on ponds charging over late winter months and drying down in the summer months, but that varies every year so there are times when no egg masses are found.
- All 29 frogs died. It is normal that there is a high mortality rate due to predation (frogs tend to have high dispersal rates with only a few reaching adulthood to reproduce), but in this case the few adult frogs that might have lived on to reproduce may be taken out by nonnative predators.
- Many species have similar strategies to the gopher frogs including Southern chorus frog, ornate chorus frog, Eastern tiger salamander, and Mabees salamander that are also winter breeding amphibians that use the same types of frogs that gopher frogs do. Little grass frogs are similar but their breeding lasts longer. There has also been antidotes of similar fire ant effects on snakes, turtles, and other reptiles.
- Approaches to control fire ants: portable fire ant mound destruction machine. Dumping boiling water on anthills in a non-invasive approach that does not negatively affect the environment. Cost reduction – build a fire to boil the water
- Last note: the adult study (2010) showed the same general trend for gopher frog eastward dispersal but we do not know why the frogs tend to move in that directions. Fewer animals were released on the west side of the pond and had a massive failure with those animals. Greater success was achieved by frogs moving northeast and southeast. Whether it is coincident or not the frogs tend to move in the direction that had lower density of fire ant mounds.
- Thanks to Nathan Sheppard & Mike Sisson, Brady Beck, Jeff Humphries, Jeff Hall
- Coastal study supported by Fort Fisher Aquarium
- Most of the study is based off of University of Georgia lab

Questions:

- What percentage of telemetry frogs actually survived for 45 days? No frogs survived past 45 days and most of them were consumed the first few days. There were 6 or so animals slipped transmitters with no signs of ants – maybe snakes eat them and push off the transmitter harness. One survived to 45 days from the first batch and all that was found was the transmitter on the ground, but no ants.
- How often did they have to return to take care of a pond? The boiling water was mostly effective with 1 treatment, but often there was a second treatment maybe 6 months later. Checked 1 year out to see if additional treatment is needed. For the most part, it showed that the ant mounds were basically gone. The paper did not say if the ant colonies shifted, which is why Mike identified active mounds versus inactive because abandoned mounds can be recolonized.
- The hope is to have a basic approach to treat fire ants once so to have a marked decrease in fire ants and give metamorphs a greater chance to survive when they leave ponds.

RCW RECOVERY WG REPORT – JEFF WALTERS/WILL MCDEARMAN (SKYPE)

Briefing of the recent developments of the RCW populations in the Sandhills put in context of the history of the RCW Recovery Working Group (WG)

- Establishing a single Sandhills population was a major driver behind formation of partnership in 2000 (discussions started in the late 90s)
- Initial RCW Working Group report 2001 – based on analysis of 9/00-3/01 data
 - The report results were the basis of treating the east (FB designated core population) and west (SGL/Camp Mackall designated support population) RCW populations separately
 - 5-10 km gap between the two populations – studied where birds come from that replace breeders and found they did not come from the gap area but everywhere else (~70% reduction of movement across the gap)

- Recommendations post 2001 WG report
 - Focus on Sandhills east and west as viable populations (demographically independent). Thought a stable viable population could be achieved in 20 years.
 - Improve connectivity, which is a necessary component of achieving viability
 - Specific areas identified in both east and west to focus conservation efforts to try to better connect RCWs within those areas (RCWs are very sensitive to spatial distribution of territory, which has a big impact on viability).
 - Sandhills West population: 2 areas of concern 3B and 3D in SGL. There were birds around there but the WG determined the need to better connect the habitat.
 - Sandhills East population: 3A NE Fort Bragg and connect with Overhills area (some concern that the NE Fort Bragg population would be cut off from the rest) and 5 secondary focus areas
 - Areas were identified of possible connection path for the two populations. 1) 3C Camp Mackall through Blue tract – “the Gap” in brief time some birds already were located in this area.
 - Lowest priority Connection Pathway - A block connect through Southern Pines /Moore county seemed difficult to do private lands some has appropriate habitat and some doesn't maybe 70-80 years to do lowest priority area due to the need to grow longleaf pine for habitat.
- 2010 Update Report: Both Sandhills east and west reached population goals in terms of numbers faster than anticipated (both Sandhills east and west) and much progress had been made on the habitat connective areas (contributed to the success of the Partnership). Realized this was habitat protection, mostly RCW unoccupied habitat but connectors that supported longleaf pine specialist species.
- Sandhills East: A lot happened NE Fort Bragg (3A) with acquisitions of Long Valley Farm etc., but still things to do in a few of the other areas
- Sandhills West: SGL improved connectivity
- 3D and 3E not much activity by 2010
- 3C “gap” area: Progress was made for habitat protection, but RCWs still not connected across the gap

➤ **USFWS RCW Species Status Assessment (SSA)**

- Commenced in 2016 and ongoing
- An analysis for looking at the best available science, synthesizing it essentially looking at where the species is population by population as a whole at the present time.
- Study Species as a function of 3 R's: Resiliency (population viability), Redundancy (multiple populations), Representation (genetic and demographic variability).
- Resiliency: Population defined as a set of territories in which breeding vacancy is mostly filled by birds within that set.
- Partners provided RCW data
 - Spatial data – active cluster locations
 - Past treatment history – prescribed fire, timber stand / cluster improvements

➤ **SSA DOES NOT REPLACE Endangered Species Act (ESA) or USFWS 2003 RCW Recovery Plan Guidelines**

- Results of SSA demographic connectivity analyses (≤6 km gap)
 - Based on juvenile foray distance

- Done with 3 km buffers
- Openings 500 m wide opening barrier that separates populations/ limits it
- Sandhills East and Sandhills West are tenuously linked and now 1 population via 2 fragile demographic connections mostly on privately-owned lands. Due to 7 new territories in the last 7 years.
 - Gap 1 (historic target connection) HOKE COUNTY – BLUE TRACT critical!
 - Gap 2 (ancillary target connection) western MOORE County – participation and protection by mosaic of Safe Harbor Landowners critical
 - ❖ Land use changes within these gaps can quickly and potentially permanently sever these demographic connections (clear-cutting, forestland conversion to agriculture, residential, or commercial development, lack of habitat management, especially burning).

➤ Implications

- Re-evaluate and adjust connectivity priorities
- Maintain present level of population monitoring region wide including West Fort Bragg, Camp Mackall, Sandhills Gameland (SGL), and Private lands.
- Keep managing RCW clusters and foraging habitat the way Partners have been doing
- RCW is a conservation reliant species – doing best for RCW will continue to do best for suite of species endemic longleaf pine specialists.

➤ WF Actions

- Continue to look for opportunities to strengthen population connections
 - New properties for RCW Safe Harbor Enrollment (there are more provisioning of artificial cavities on safe harbor properties and fewer clusters abandon sites than non-safe harbor properties).
 - Create new RCW recruitment clusters
 - Continue to translocate juvenile RCW to MOOR or HOKE from FB donor groups

Feedback:

- Jay – Western Moore, Blue Tract, and McCain – a lot of the land is non-forested or forested with very young pine that are not necessarily being managed for long term but short rotation. It is privately owned – not in any kind of agreement – it is crucial to fill in and manage land to maintain connection. That is particularly true of western Moore County area – 75% of the area is non-forested or in very young pine or hardwood swamps.
- Jay: Connection broken – 60s-early 70s started fading out. 1978-79 disappearing particularly private property. Important to point out reason new clusters are happening now is that there are a lot more birds on Fort Bragg and SGL, that is producing population pressure to push birds out into these adjacent habitats.
- Jeff Walters: Juveniles before 1 year if can't find a place jump off.
 - Source populations important: Calloway now 10 groups increased from 3 in the late 80s
 - Future? – properties other land uses – real estate get worse – Southern Pine/ Pinehurst/close to SGL burning and planting longleaf pine that is a large block of potential habitat but it is in private ownership.
 - Seven Lakes area – birds present in the 80s but now area is abandoned, but the habitat is still there.
 - Still big threats of development of West Moore County – DOT

- New development projects within a couple hundred feet of Moor 35 – expansion of highway 211 to 4 lanes and more dev projects
- Handouts

WORKING GROUP UPDATES

Resource Management Working Group – Brady Beck

- Still working on a field trip for this fall
- Open to topic suggestions, some people okay revisiting previous discussed topics and some people prefer to discuss new timber management topics. Compiling list of people who want to participate

Communications Working Group – Debbie Crane

- No report received.

Land Protection Working Group – Jeff Marcus

- No closing of projects to report, but today Hutchinson (near Block A) is being transferred to WRC
- CWMTF: the Womble transfer to WRC was funded – Usher and Godwin II did not get funded
 - SALT had one grant that was not funded
- Several upcoming projects in the big gap between Fort Bragg and Camp Mackall

Reserve Design Working Group –

- No update
- Matthew Moskwik had been leader of Reserve Design Working Group. He took a job at Defenders of Wildlife as a GIS specialist in Washington D.C. – Congratulations Matthew. Currently recruiting for a replacement.
- ORISE Fellowship position has been posted. Applicants must have graduated from an education program within the last 3 years with a minimum of a bachelor's degree but prefer a master's. The candidate must have the skill set to be able collaboratively work with partner agencies and play a leadership role in the research and survey component of implementing our surveys.

PARTNER UPDATES

WRC – Brady Beck, Gabriella Garrison

- Tim McFayden, Wildlife Forester, replaced Chris Jordan who accepted a position at the Raleigh office.
- In 2 weeks, interviews scheduled to back fill his vacated position (4 internal candidates). Hopefully, at the end of the month, WRC will be full-staffed, but they will need to back fill the position of whoever is chosen from the candidate pool.
- Upcoming tour for Moore County zoning staff. Last year through Green Growth Tool Box zoning ordinances were updated and this year they are working on their land use plan. They will tour Jesse's property to give them an idea of land management and what makes the Sandhills so special.
- Gabriella (Green Growth Tool Box) is going to reach out to Hoke County planners and try to engage them to work out specific outcomes for better zoning.
- Kacy Cook engaged with DOT about the 15/501 widening that was going to go through the gamelands. It sounds like the plan may be shifting from 4-lane divided highway to putting in

some passing lanes, which is a great outcome. The timing of the change has been pushed back as well.

TNC – Jeff Marcus, Gretchen Coll

- National Fish and Wildlife Foundation grant submission is Feb. 2018. Funding pays for seasonal fire crew, contractual projects, etc. Grants are written on behalf of the partnership. In the next month or two there will be a meeting to discuss the proposal. All partners are welcome to participate. Please contact Jeff.
- Along with TNC's traditional burn crew – TNC is renewing the collaborative burn crew with WRC.
- New this year – TNC is hiring an on-call fire crew. Paid an hourly rate on an as-needed basis. Targeting volunteer firemen.

Ft. Bragg – Alan Shultz, Barry Hull, David Hein

- Just had a good dove hunting season – shot about 1200 birds
- In the middle of the quail study still.
- Built some volunteer intern support programs tied into Wounded Warriors now called Operation Woodpecker now– quite a few soldiers transitioning out and working wildlife management degrees
- Submitted annual REPI submission -~\$2.2 million and the Army decided to rethink previous decision and now is funding the \$800,000 REPI Challenge grant (for properties north of FB boundary).
- Recognize Larisa Fitzgerald the new ORISE participant and Stacey Huskins the new 1 Each botanist intern for Fort Bragg. Even though he is an intern, he is also the lead botanist.
- Previous presentation on changing the approach of how the training area is managed. Training Land Working Group is a collaborative effort between training and environmental division. Everyone focuses on 3 contiguous training areas annually to maximize resources. The quarterly meeting was yesterday and it went fairly well.
- A little over 57,000 acres burned/this year with the help of Forestry and ESB, which is very good considering the amount of storm damage on firebreaks. Starting to plan for next year.
- Janet Gray retired – Stacy Huskins new botanist
- A surrogate project is starting in October at all DOD installations. It will be looking at American Kestrel's sensitivity to climate change and will be doing some modeling. Another legacy project with the Institute of Bird Populations will be studying training effects on the migratory bird population.

SEI – Jay Carter, Kerry Brust

- Still collecting census data. Seems to be taking longer – more birds and fewer people to do it.
- Will be working with USFWS to (Caroline and Susan) to identify additional safe harbor properties, as well as overseeing and directing some recruitment clusters – western Moore connector and then doing some small scale translocation work in late October – November.

Jeff Walters

- Another project approved yesterday, with Bill Morrison, PI (Duke Uni.), Nick Hadad, Jeff Walters and a few others next spring to study synchrony and demography at different spatial scales of Venus fly traps, St. Francis Satyrs, and RCWs. Bill Morrison is going to organize a stakeholders

meeting before the project starts to ask how the study can be tweaked to help answer questions that people have here and to get the most useful information out of it.

Longleaf Alliance – Ryan Bollinger

- America's Longleaf Initiative is asking all of the Local Implementation Teams (LIT) to come up with a more detailed plan on how we are going to achieve the 8 million acre restoration goal by 2025.
- Annual plus 5 year goals out to 2022. Results are tracked through NFWF in accomplishment recording (i.e. prescribed fire, planting, easement, etc.). Trying to get a sense of the scale of operations and agencies annual goals, but also figure out how to accelerate longleaf restoration. The request is an excel spreadsheet where resource needs can be expressed. The information will be shared with the federal coordinating community, *who will facilitate getting the needed resources so that goals can be met.*
- One of the things identified: If there is a mixed hardwood/pine stand, where the percentage of pine is 48% with small timber stand improvements can make it a dominant longleaf stand and can change how the data are counted. Those are fixes that can be done to get to the number quicker. Uwharrie forest for example. Need NC Forest Service from the top down to prioritize longleaf.
- **Deadline mid-October.** Need a representative from each partner that can speak to 1) number of acres of planting and burning 2) What are the needs and what are the opportunities to get to the goals
- Matthew was going to be coordinating the effort. With him gone Jeff will coordinate the meeting with the NFWF meeting
- Production of longleaf seedlings had been ramped up but due to the nursery was hit by two floods this past spring there is a short-term shortage.

SALT – Nancy Talton, Jesse Wimberley

- 12 tracts of land in play currently. Awarded grants for individuals that wanted to put some kind of protection on their tracts ~ 1,000 acres. 6 along Deep River; 1 in Eastwood that will go to the Plant Conservation Program; farm in Scotland Co. ~60 acres in LLP; ~100 acres Southern Moore in longleaf; with an additional 350-400 acres of longleaf to be protected – so ~500-600 acres in LLP in the next 6 months or so.
- Partners supported NFWF grant successfully concluded in July. Next round \$250,000 so the work will continue
- Next round want to focus on connecting the Sandhills partnership with the Uwharrie partnership. Want to have a Landowner Outreach meeting – there are many people interested in longleaf but very few people in Safe Harbor in that gap. 145 private landowners signed up for the farm bill engagement, which was a significant number – now if they will follow through. The model is working. Speed dating series of meetings around the Sandhills – Bring in landowners, have an orientation as to why longleaf is important effective, what each group brings to the table to the landowner. Will have dates soon to schedule one in the following counties: Hoke, Cumberland, and Moore.
- Enviva – (makes pellets) working in Hamlet fall 2018. Enviva's Sustainability director worked previously for National Wildlife Federation– he says that Enviva wants to help restore longleaf – feels strongly that they can work with landowners to take out hardwoods in areas to increase longleaf numbers without disturbance to the forest floor. Will start a pilot project with TNC Florida and Longleaf Alliance soon. They want to work with SALT through their target outreach.

Sounds like a good deal but there is also some negative comments going around. They are coming into Hamlet – so Jesse thinks they should be approached to see if they could work with the partnership following our management goals.

- Enviva supplies Europe with a pine/hardwood mix of pellets where there is a mandate that a percentage of energy sources has to be renewable and that is where some of the push back is because of the energy it takes to ship the product to Europe.
- The opportunity is to provide a market and have a financial benefit for something that costs us money to have to remove the mid-story and they actually remove the wood rather than dropping it to the ground. Follow-up management in terms of burning is easier.
- Short turnaround of removing encroaching hardwoods in a longleaf stand if we can get them to work in a manner that agrees with our management goals. Down east there is concern about Envivo taking out too much mature bottomland hardwood. There is a concern about the carbon

LLP Alliance – Ryan Bollinger

- Understory academy Sept. 26-28 at Lake Waccamaw and Green Swamp
- LLP Alliance – continues to expand and host different longleaf academies partnering with USFWS program
- (American Longleaf Initiative) This summer the LIT Summit was held at Berry College where all 17 Local Implementation Team (LIT) representatives were together plus leadership from Longleaf Partnership Council. Successful meeting and Ryan has written an 8-page summary.
- Partnership is considered one of the 17 LIT groups and Susan, Jeff, and Gretchen attended that meeting.
- Oct 23 is the biannual meeting of the Longleaf Partnership Council. Clay Ware asked to have the meeting here and the selling point was that they wanted to see Fort Bragg. They will meet Monday afternoon and Tuesday and Wednesday will be an all-day field tour. All invited but space is very limited.
- Southeast Regional Partnership for Planning and Sustainability (SERPPAS) will join Wednesday's tour and meet Thursday and half of Friday as some of the members overlap with the Longleaf Council. Invitation only for this group.

Natural Heritage Program – Scott Polman, Jame Amarosa

- The program collects and provide information for people to make conservation decisions.
- Another program task is to inventory and register as protection tools. Doing a lot of work with Clean Water Management Trust Fund (CWMTF) trying to review as many applications as we can to see if they can add points to the application scores. 70 applications this year, 68 finally reviewed, some were withdrawn before they got to the application board. About \$40M there was only about \$13M to give out and some were already allocated before the process was started. If someone is considering a CWMTF project next year, try to schedule an apt. on NHP calendar now for biologist's visit.
- Jame just started in a DOT position for Conservation Information Specialist. Currently cleaning up 40 years' worth of RCW data. Trying to make sure they have the most recent data. Have all Sandhills data from Susan. If have any data for federally listed plant or animals send to Jame.

USFWS – Tom Augspurger

Tom is now Deputy Supervisor. Previous work was recovery of aquatic endangered species: shellfish and fish.

Other News and Points of Discussion

- Fire in the Pines festival in Wilmington at Halyburton Park October 14th. Mansfield is looking for volunteers to help with festival activities.
- Party for the Pine festival, hosted by State Parks is April 22 – SALT gets funding for it from NFWF grant.
- Susan proposed another joint meeting with Uwharries, Longleaf Coalition, and the Partnerships early next year to talk about longleaf issues and revisit some of the things that have been changing.

➤ Next Meeting – December 6, 2017 at Weymouth

Meeting Adjourned at 4:05 PM.