Final Report
White-nose Syndrome Grants to States
F15AC00694
South Carolina Department of Natural Resources (SCDNR)
October 1, 2015- September 30, 2016

Project Title: South Carolina White-nose Syndrome State Support FY16

This state support grant deadline was extended to May 16, 2017 per an extension dated April 11, 2016. The extension letter states a final report is due for this grant by August 16, 2017 for the grant period of October 1, 2015 through September 30, 2016.

The purpose of this grant was to partially cover personnel costs (up to $10,000) to defray a shortfall in a WNS grant (SC-E-F15AP01087). No funds from this account were expended for any use other than salary, indirect and fringe for a temporary grant Biologist II (hired in March 2016). This report includes the activities funded by *SC-E-F15AP01087 WNS Grants to States (2015): Part II*. That grant partially funded the travel and participation by our temporary grant Biologist II (now also known as our WNS Biologist) to the National White-Nose Syndrome Workshop. This report also includes some overlap from work involving netting and acoustic analysis from contractors, which was funded by an older WNS state support grant (SC E-F14AP00731) and included in that final report.

Objective 1: We proposed to continue shipping bat samples from rabies-negative bats submitted to South Carolina Department of Health and Environmental Control (SCDHEC) and samples from cool weather bat die-offs to the Southeastern Cooperative Wildlife Disease Study (SCWDS) for WNS testing (provided that SCDHEC made specimens available). This included submitting specimens from hibernating species from public sources and sick or dead bats collected from winter surveys.

Accomplishments:

SCDNR shipped 14 rabies-negative bats from the SCDHEC rabies testing lab to SCWDS for *Pseudogymnascus destructans* testing (*P.d.*). These were sent in two shipments (winter and spring). SCDNR also submitted a desiccated Rafinesque's big-eared bat (*Corynorhinus rafinesquii*) found under a bridge by US Forest Service employees at Savannah River Site in Barnwell County. That submission and the rabies-negative bats from SCDHEC were all negative for *P.d.* Swabs from a live silver-haired bat (*Lasionycteris noctivagans*) found on a homeowner's deck on Keowee Lake, Oconee County, during cool weather in April 2016, were also negative for the *P.d.* fungus. A tri-colored bat (*Perimyotis subflavus*) from Table Rock State Park (Pickens County), was picked up from the ground by a hiker and turned in to park staff on February 17, 2016. The bat died later that day. SCDNR submitted that bat to SCWDS and it was found to be histologically positive for WNS. That is not surprising because the hiking trail goes within 0.1 mile of a hibernaculum and we have reported WNS positive tri-colored bats from that park in 2013 (the first confirmation of WNS in South Carolina).

In addition to the SCWDS testing of swabs and whole body samples, we also collected some swab and substrate samples at three sites for Anne Ballman at the National Wildlife Health Center (NWHC) while conducting some winter counts. Those results are included below.

Significant deviations:
There were no significant deviations.

Objective 2: Conduct winter bat counts at a minimum of 5 sites in winter/early spring 2015-16.

Accomplishments:

SCDNR completed 18 hibernacula counts from January 6, 2016 to March 28, 2016 (Table 1): ten mines in Oconee County (a WNS-positive County), two Greenville county rock shelters, one Union County mine, six rock shelters in Lancaster County, and the Table Rock cave in Pickens County. We also made arrangements to have access to a cave or cave-like structure in Calhoun County in next year's winter count season. Access this year was not possible because of on-site construction. Element of Occurrence Records were completed for each site where bats were present.

Table 1. Winter bat counts in South Carolina (winter 2015-16). Type: RS = rock shelter, C = cave, M= mine, T = Tunnel. County: OC = Oconee, PI = Pickens, GRV = Greenville, U = Union, LAN = Lancaster. Bats: CORA = *Corynorhinus rafinesquii*, EPFU = *Eptesicus fuscus*, PESU = *Perimyotis subflavus*, MYLU = *Myotis lucifugus*, MYSE = *Myotis septentrionalis*, MY? = *Myotis spp*.

Site	Type	Date	County	Bats	Previous Count
'ForkedOne'(fed)	T	2/5/2016	OC	9 PESU (one w/visible fungus)	1995: 32 PESU
'Sarah'(fed)	T	2/5/2016	OC	1 PESU, 1 CORA	na
'Moldycricket'(fed)	T	2/5/2016	OC	15 PESU, 1 CORA	1995: 18 PESU
'Peach'(fed)	T	2/5/2016	OC	0	na, New
'Cactus' (fed)	T	2/5/2016	OC	3 PESU	1995:0; 1992: 1 PESU
'Pillow' (fed)	T	2/5/2016	OC	5 PESU	1995: 8 PESU
'DirtyDive' (fed)	T	2/5/2016	OC	0	na
'P-eye' (fed)	T	2/5/2016	OC	3 PESU	1995: 6 PESU
Clemson Univ1 (state)	T	3/18/2016	OC	0	1996: 1 PESU
Clemson Univ2 (state)	T	3/18/2016	OC	4 PESU*	New, no previous survey
Table Rock (state)	C	2/17/2016	PI	295 PESU, 2 MYSE, 3 MYLU, 2 MY?	1995: 372 PESU, 24 MYSE, 61 MYLU, 22 MY?
Ashmore HP (state)	RS	3/23/2016	GRV	0	na, new
WCHP Coldbranch (state)	RS	1/6/2016	GRV	1 EPFU	na, new
UN3B (private)	M	3/14/2016	U	16 PESU (No WNS detected)	2010: 9 PESU
FARHP-1 (state)	RS	3/28/2016	LAN	0	na
FARHP-2 (state)	RS	3/28/2016	LAN	0	na
FARHP-3 (state)	RS	3/28/2016	LAN	0	na
FARHP-4 (state)	RS	3/28/2016	LAN	1 PESU (No WNS detected)	na
Stumphouse (state)	T	2/29/2016	OC	67 PESU, 4 EPFU, 1 MY? (WNS+)	2015: 148 PESU, 3 MY?, 6 dead PESU (WNS +)

*Swab of PESU and substrate positive for *P.d.* per NWHC report

In the significant Table Rock cave the *Myotis* group was down over 93% and tri-colored bats were down over 20%. Fungus was obvious on a Northern long-eared bat and numerous tri-colored bats. It is important to note that when we did the winter count in 1995, that site was heavily visited by cavers and was used for training by the Clemson University Fire Department. While evidence of illegal entry continues, the level of wear was much less than that observed in 1995, so we expect bat numbers had been increasing (prior to the arrival of WNS) after the park stopped allowing fire department training there.

Concurrently, a collaborator, Dr. Susan Loeb, collected swab samples and conducted the winter count at the main Stumphouse Tunnel, an old railroad tunnel in Oconee County owned by Clemson University and managed by the Walhalla Recreation Department (results reported in Table 1). That tunnel is used as a special research area by Dr. Loeb. Dr. Loeb's swab samples were sent to Winifred Frick at UCSC. We report only the winter count information above; Dr. Loeb's project is funded by another grant and will be reported elsewhere.

None of the bats in the three sites, from which we collected swab and environmental samples for the NWHC, had visible fungus indicative of WNS. The private abandoned gold mine in Union County held 16 tri-colored bats, 12 of which were swabbed for White-nose Syndrome (WNS), and 13 environmental samples were taken. The Clemson Experimental Forest survey in an abandoned gold mine in Oconee County held four tri-colored bats, all were swabbed for WNS, and 21 environmental samples were taken. Forty Acre Rock Heritage Preserve in Lancaster County had multiple promising sites that were investigated, one of which held a single tri-colored bat that was swabbed for WNS and 24 environmental samples were taken. All 75 samples were sent to Anne Ballman of the USGS National Wildlife Health Center for WNS testing. Only the Clemson Experimental Forest mine, and a tricolored bat within it, tested positive for *Pseudogymnoascus destructans*. This was noteworthy because though Oconee County is already considered WNS positive, the site was less than 2 miles away from the WNS negative Anderson County.

SCDNR started work on fitting the tri-colored bat occupied, WNS-positive mine (Clemson University-2), on the Clemson University Experimental Forest with a bat-friendly gate. The gate has been built, and installation will be completed this fall. While surveying the nearby mine, Clemson University-1, we found and removed a geocache.

Significant deviations:

There were no significant deviations.

Objective 3: Conduct some summer and fall netting or trapping on state-owned or conservation partner-held properties; emphasis will be on sites not previously sampled and on sites slated for acquisition. At least 3 of those sites are in expected Northern long-eared bat (NLEB) range.

Accomplishments:

Mist Netting Surveys

Our target of netting at least five un-surveyed sites on SCDNR owned lands and a candidate property, was exceeded by one additional site. The best and most probable locations for bat captures were netted at six properties in the projected area of the potential range of the Northern long-eared bat (*Myotis septentrionalis*). Two sites (Chestnut Ridge Heritage Preserve and Tall Pines) are in the historic, previously known, range for that species. Tall Pines is currently owned by the Conservation Fund, the five other tracts are owned and managed by SCDNR.

This netting effort relied heavily on volunteer assistance. Volunteers didn't handle bats but they were essential in helping put up and move net poles, checking nets, data entry, and decontamination of equipment (in addition to being excellent company). We had 10 volunteers assist with this project, contributing 308 hours. The project was an important opportunity for two Clemson University interns to gain some bat netting experience. Combined, they contributed 200 hours toward this survey.

We also contracted Eco-Tech to conduct 14 net nights (with SCDNR conducting the other 33) at Liberty Hill Wildlife Management Area. This was funded by an older WNS state support grant and will also be reported in that final report (SC E-F14AP00731). In addition, we contracted Ecological Solutions to conduct mist net and acoustic surveys for two nights at a previously un-surveyed site, the Wee Tee State Forest in Williamsburg County. Wee Tee State Forest was acquired using Forest Legacy and NAWCA funds, and one significant attribute of the property was the presence of massive trees in the swamplands. No bat surveys had been conducted there previously. Unfortunately, wet weather and poor road conditions delayed surveys until September 20-September 21, 2016. Netting was conducted in two main areas: one off the main access road and swamp, and the other at Oxbow Lake forest road. This effort yielded no bat captures, however recordings from two nights detected three bat species (see acoustic analysis section).

The combined netting effort resulted in 306 nets deployed over 45 nights and a total of 106 bats captured representing eight species. Table 2 summarizes the netting effort from this project. No Northern long-eared bats (abbreviated MYSE) were captured, but we did have tri-colored bats captured at three properties and Chestnut Ridge Heritage Preserve was a good site for Eastern small-footed bats (*Myotis leibii*).

Table 2. Mist netting survey sites and results for summer and fall 2016. HP= Heritage Preserve, SF = State Forest, WMA = Wildlife Management Area. Net nights are calculated using the method in the 2016 Range-wide Indiana Bat Summer Survey Guidelines (April 2016).

					Bats[a]								
Location	**Dates**	**County**	**Net Sites**	**Net Nights**	PESU	LABO	LASE	EPFU	LANO	NYHU	MYLE	MYLU	MYSE
Cliff Pitts WMA	5/11-5/16	Laurens	8	44	0	15	0	0	0	2	0	1*	0
Tall Pines	5/23-6/1	Greenville	10	46	1	0	0	0	2	0	0	0	0
Chestnut Ridge HP	6/20-6/29	Greenville	17	45	1	11	0	4	0	0	7	0	0
Pacolet River HP	7/5-7/14	Spartanburg	16	43	0	0	0	0	0	0	0	0	0
Poinsett Bridge HP	7/18-7/26	Greenville	12	42	0	2	0	6	0	0	0	0	0
Liberty Hill WMA**	7/22-8/4	Kershaw/ Lancaster	16	47	6	34	1	6	0	7	0	0	0
Wee Tee SF***	9/20-9/21	Williamsburg	12	39	0	0	0	0	0	0	0	0	0
Totals	**45**	**6**	**91**	**306**	**8**	**62**	**1**	**16**	**2**	**9**	**7**	**1**	**0**

[a] PESU=*Perimyotis subflavus*, LABO=*Lasiurus borealis*, LASE=*Lasiurus seminolus*, EPFU= *Eptesicus fuscus*, LANO=*Lasionycteris noctivagans*, NYHU=*Nycticeius humeralis*, MYLE=*Myotis leibii*, MYLU=*Myotis lucifugus*, MYSE=*Myotis septentrionalis*.

*New county record

**We contracted Eco-Tech to conduct 14 net nights at this site, and SCDNR conducted the other 33. This was funded by an older WNS state support grant and will be reported in that final report (SC E-F14AP00731) also.

***We contracted Ecological Solutions to conduct all surveys at this site. This was funded by an older WNS state support grant and will be reported in that final report (SC E-F14AP00731) also.

Acoustic Analysis

Using an Anabat Express, acoustic recordings were opportunistically taken at each site. Data from these recordings were run through Bat Call Identification Software (BCID). Currently SCDNR staff need additional practice in order to be fluent in bat call vetting and identification. A modification to another WNS State Support grant (SC E-F14AP00731) allowed us to expend some of those funds toward call analysis (in support of WNS work for this reported season). Species identified by the program as *Myotis* were sent to acoustic expert contractors for species verification. Eco-Tech Consultants reported little brown bat and/or southeastern bat calls in Lancaster County, which would be the first record in that county for either *Myotis* species. Ecological Solutions detected Northern long-eared bats and little brown bats, along with tri-colored bats at Chestnut Ridge Heritage Preserve. However, the quality of these calls were poor and because no small-footed bats were reported despite being captured at several nearby net sites, it seems possible some small-footed bat calls were mistaken as other *Myotis* species. Acoustic identification is inherently difficult because Eastern bats in the genus *Myotis* produce calls extremely similar to one another, especially when comparing Northern long-eared bats and Eastern small-footed bats.

Table 3 provides location information and recording information for 14 nights of surveys we contracted out for analysis. The table also includes acoustic recordings done by contractors at net sites at Liberty Hill Wildlife Management Area (WMA) and Wee Tee State Forest. The call sequence from Chestnut Ridge Heritage Preserve highlighted in green indicates a potential MYSE sequence. Dr. Susan Loeb and Clemson University graduate student, Ben Neece, reviewed the calls identified by Ecological Solutions as MYSE recordings. Calls marked with a ** represent calls they confirmed as consistent with MYSE (in green) and calls marked with * indicate a lack of confirmation (highlighted yellow). The fact that some call sequences reported by Ecological Solutions as MYSE could not be confirmed by third party experts emphasizes the need for substantial call vetting for all acoustic work.

Table 3. Acoustic Summary Results: Species identified by BCID, and *Myotis* echolocation pulse sequences manually vetted by partners.

Date	Location Name	Lat	Long	BCID Species Identification[a]	Vetted By[b]	Results[b]
5/11/16	Cliff Pitts WMA	34.45304	-82.18445	EPFU, LANO, LABO, LACI, MYLU, NYHU, PESU		
5/12/16	Cliff Pitts WMA	34.45303	-82.18470	EPFU, LANO, LABO, LACI, MYLU, NYHU		
5/13/16	Cliff Pitts WMA	34.45312	-82.18474	EPFU, LANO, LABO, LACI, MYLU, NYHU, PESU, UNKN		
5/16/16	Cliff Pitts WMA	34.44816	-82.18458	LABO, MYLU, NYHU, PESU	ES	MYAU - ES*
5/17/16	Cliff Pitts WMA	34.44832	-82.18458	LANO, LABO, MYLU, NYHU	ES	
5/18/16	Cliff Pitts WMA	34.44833	-82.18443	LABO, MYLU, NYHU, UNKN	ES	
5/25/16	Tall Pines	35.06423	-82.55972	LANO, LABO, LACI, MYLU, NYHU, PESU	ES	
6/3/16	Chesnut Ridge HP	35.15155	-82.28088	LABO, MYSE, NYHU, UNKN	ES, SL, BN	
6/7/16	Chesnut Ridge HP	35.15155	-82.28088	MYLU, NYHU, PESU, UNKN	ES, SL, BN	MYSE - ES*
6/8/16	Chesnut Ridge HP	35.15155	-82.28088	LANO, LABO, MYLU, NYHU, PESU		
6/12/16	Chesnut Ridge HP	35.15155	-82.28088	LANO, MYLU, NYHU, PESU, UNKN		
6/16/16	Chesnut Ridge HP	35.15155	-82.28088	LABO, MYLU, PESU		
6/20/16	Chesnut Ridge HP	35.15056	-82.27928	EPFU, MYLU, MYSE, NYHU, UNKN	ES, SL, BN	MYSE - ES; MYSE/MYLE - SL, BN**
7/11/16	Pacolet River HP	34.93657	-81.77809	EPFU, LANO, MYLE, NYHU, PESU, UNKN	ES	
7/12/16	Pacolet River HP	34.93657	-81.77806	EPFU, LANO, LABO, MYLU, NYHU, PESU, UNKN	ES	
7/19/16	Poinsett Bridge HP	35.12951	-82.38426	EPFU, LANO, LABO, MYLU, MYSE, NYHU, PESU, CORA, UNKN	ES, SL, BN	MYSE/MYAU - ES*
7/20/16	Poinsett Bridge HP	35.13007	-82.38586	EPFU, MYLU, NYHU, PESU		
7/21/16	Chesnut Ridge HP	35.14039	-82.28377	EPFU, LANO, LABO, MYLE, MYLU, PESU, CORA, UNKN	ES	
7/22/16	Chesnut Ridge HP	35.14039	-82.28377	EPFU, LABO, MYLE, MYLU, PESU, CORA, UNKN	ES	
7/23/16	Chesnut Ridge HP	35.14039	-82.28377	EPFU, LANO, LABO, MYLU, NYHU, PESU, CORA, UNKN	ES	
7/24/16	Chesnut Ridge HP	35.14039	-82.28377	EPFU, LABO, LACI, MYLU, NYHU, PESU, CORA, UNKN	ES, SL, BN	MYSE - ES, BN*
7/27/16	Liberty Hill WMA	34.47949	-80.86501	LABO, MYAU, MYLU, MYHU, PESU, CORA, UNKN	ET	MYLU, UNKN, MYAU - ET
7/28/16	Liberty Hill WMA	34.53917	-80.87050	EPFU, LABO, MYAU, NYHU, PESU, UNKN	ET	MYLU, UNKN, MYAU - ET
7/31/16	Liberty Hill WMA	34.51507	-80.86411	LABO, MYAU, MYLU, NYHU, PESU, UNKN	ET	MYLU, MYAU - ET
9/20/16	Wee Tee SF	33.39807	-79.78790			CORA, PESU, MYAU - ES
9/21/16	Wee Tee SF	33.39791	-79.78814			MYAU - ES

[a] EPFU = *Eptisicus fuscus*, CORA = *Corynorhinus rafinesquii*, LABO = Lasiurus borealis, LACI = L. cinereus, LANO = *Lasionycteris noctivagans*, MYAU = *Myotis austroriparius*, MYLU = *M. lucifugus*, MYSE = *M. septentrionalis*, NYHU = *Nycticeius humerali*, PESU = *Perimyotis subflavus*, UNKN = unknown

[b] ES = Ecological Solutions, SL = Dr. Susan Loeb, BN = Ben Neece, ET = Eco-Tech Consultants

* Potential but unconfirmed MYSE identification

** Call is consistent with MYSE/MYLE identification

Significant deviations:

There were no significant deviations.

Objective 4: Provide outreach on WNS and NLEBs to Nuisance Wildlife Control Operators (NWCOs) and notify them about any training opportunities. Provide outreach to local scouting groups, mining groups, and the caving group known as the Interstate Grotto. Provide WNS information to the public via links on the SCDNR website, in news releases, and on signs at critical sites.

Accomplishments:

Letters updating NWCOs listed as working on bats were distributed on March 11, 2016 and September 15, 2016. The total number of NWCO letters sent in March was 150, and in September was 132 for a total of 282. Those letters included current WNS brochures from the whitenosesyndrome.org website and updates on WNS, the Northern long-eared bat listing, and other relevant research projects and decontamination information (Appendix I). Postage for the first mailing was covered by a previous grant (and so we report it in both reports for clarity).

Two New Releases were posted. On December 21, 2015 we distributed, "Remember bats are mammals that should be protected," and on April 7, 2016, we launched "SC bats begin to emerge from hibernation, and need your help!" The latter also included some Facebook postings. In partnership with a local business called Sunrift Adventures, a Halloween Bat Count and talk was scheduled during Bat Week (Appendix II) as an opportunity to involve the public in bat observation and learn more about bats and WNS.

The temporary grant biologist, Jennifer Kindel, made a presentation to the Interstate Grotto about SC bats and prevention of WNS spread and attended their meeting. She also attended the Columbia Gem and Mineral Club meeting on April 18, 2016 and offered to provide them a WNS-related presentation. They said she could give a presentation after attending more meetings.

On 7/18/2016, Fox Carolina News interviewed Biologist Kindel about SCDNR's northern long-eared bat project in the afternoon, and at 10 pm the segment aired locally (http://www.foxcarolina.com/clip/12612862/bats-essential-to-sc-ecosystem). [Note: the link is now closed.] On 7/26, this link was posted on the SCDNR Facebook page for outreach purposes.

We posted the Clemson University Experimental Forest abandoned gold mines, and the Middle Tunnel at Stumphouse Mountain Heritage Preserve with signs indicating the site as WNS-positive and asking people to help prevent the spread of white-nose syndrome. We also provided signs to the managers of the main Stumphouse Tunnel (Walhalla Recreation Department) and to the Table Rock State Park superintendent (SC Parks, Recreation and Tourism). Those signs were purchased with an earlier WNS-State Support Grant.

Significant deviations:

There were no significant deviations.

Objective 5: Review and update the Bat Conservation Plan and White-Nose Syndrome (WNS) Response Plan for South Carolina with the participation of our partners.

Accomplishments:

Both the WNS Response Plan and the South Carolina Bat Conservation Plan were edited, updated, and posted on the SCDNR website by September 30, 2016. Both documents require additional updates as information, contacts, and decontamination procedures change.

Significant deviations:

There were no significant deviations.

Total Cost: $10,000

Recommendations:

We recommend continued monitoring and winter counts in South Carolina piedmont hibernacula. We also recommend continued mist netting efforts to learn more about the distribution and status of South Carolina's bat populations.

Submitted by: Jennifer Kindel, SCDNR

Appendix I. Wildlife Control Operator informational outreach letters.

South Carolina Department of
Natural Resources

DNR

Alvin A. Taylor
Director

Emily C. Cope
Deputy Director for
Wildlife and Freshwater Fisheries

South Carolina Department of Natural Resources
311 Natural Resources Drive
Clemson, SC 29631
March 11, 2016

Dear Wildlife Control Professional,

You / your company are/is listed on the South Carolina Department of Natural Resources (SCDNR) website as a wildlife control specialist that handles nuisance bat jobs. This letter and most current WNS fact sheet is being sent as a courtesy to help keep you informed on bat related issues in South Carolina.

- ***New***: Acceptable Management Practices for Bat Control Activities in Structures- A Guide for Nuisance Wildlife Control Operators is now available online at: https://www.whitenosesyndrome.org/sites/default/files/resource/wns_nwco_amp_1_april_2015_0.pdf
- ***If you have trouble downloading this national guidance document please contact me and I will mail you a copy.***
- We must now assume the entire state is WNS positive and appropriate precautions must be followed. Please consult the WNS Decontamination guidelines enclosed for treating materials used on bat exclusions. Please do **not** move bat exclusion materials between states. Never move bats to new locations; you may accidentally speed the spread of WNS. Please periodically check the national WNS website for updates. https://www.whitenosesyndrome.org/
- WNS does not affect non-hibernating Mexican free-tailed and evening bats. It does affect big brown, little brown, small-footed, Northern long-eared and tri-colored bats. Big brown bats sometimes have colonies in with free-tailed bat colonies. The fungus that causes WNS has been found on some other bat species with no disease exhibited.
- Due to a significant decline in the formerly abundant Northern long-eared bat (*Myotis septentrionalis*) aka NLEB, the US Fish and Wildlife Service (USFWS) has placed the NLEB on the federal register as *threatened*. The USFWS grants exemptions (i.e. no permit required) under the 4(d) rule for bat exclusions and for rabies testing. To read more go to: http://www.fws.gov/Midwest/endangered/mammals/nleb/index.html
- If you are handling bats in SC mountains, and think they are *Myotis* bats please contact me as a courtesy.
- On-line or web-based minimum standards bat exclusion training will be available soon (maybe). The bat standards training was prepared by the National Wildlife Control Operators Association (NWCOA) but you do *not* have to be a member of NWCOA to take the training/certification. The training does include information about WNS. This training is not required by the state of South Carolina but it is a good way to remain current and to demonstrate professionalism to future customers. SCDNR will mail a notice when that minimum bat standards training becomes available online.
- A Clemson University graduate student, Glenda Lofink, is interested in surveying Wildlife Control Professionals both before and after any of you take the on-line, web-based training or the in person bat standards training. She can be contacted at gslofink@aim.com (Please cooperate with or help her if you can).
- SCDNR has updated some of our bat-related web pages. For example, the public can now report their successful (occupied) bat boxes or you can view the 1st version of the SC Bat Conservation Plan (it is a huge document so don't attempt to download on your phone): http://www.dnr.sc.gov/wildlife/bats/index.html
- A March 2016 WNS brochure is enclosed.

Sincerely, Mary Bunch (BunchM@dnr.sc.gov) Enclosure

South Carolina Department of

Natural Resources

South Carolina Department of Natural Resources
311 Natural Resources Drive
Clemson, SC 29631

Alvin A. Taylor
Director
Emily C. Cope
Deputy Director for
Wildlife and Freshwater Fisheries

September 15, 2016

Dear Wildlife Control Professional,

My name is Jennifer Kindel, a Wildlife Biologist for the South Carolina Department of Natural Resources (SCDNR). I am writing you/your company because you're/it is listed on the SCDNR website as a wildlife control specialist that handles nuisance bat jobs. This letter, as well as the most current National White-nose Syndrome (WNS) Decontamination Protocol and WNS fact sheet, are being sent as a courtesy to help keep you informed on bat related issues in South Carolina.

- *New:* National WNS Decontamination Protocol, as of April 2016. Major updates include treatment of submersible equipment in water maintained at 55°C (131°F) for a minimum of 20 min, and the list of products demonstrating efficacy against *Pd* (*Pseudogymnoascus destructans*, the fungus that causes WNS) has changed. For example, Isopropyl Alcohol Wipes (70%) and Hydrogen Peroxide Wipes (3%) demonstrate immediate effectiveness following contact and associated drying time, while new ingredients found in previously approved products render them ineffective against *Pd*. Please see enclosed National WNS Decontamination Protocol, also available at: https://www.whitenosesyndrome.org/sites/default/files/resource/national_wns_decon_protocol_04.12.2016.pdf
- We still have to assume the entire state is WNS positive and appropriate precautions must be followed. Please consult WNS decontamination guidelines above for treating materials used on bat exclusions. Please do not move bat exclusion materials between states. Never move bats to new locations; you may accidentally speed the spread of WNS. Please periodically check the national WNS website for updates: https://www.whitenosesyndrome.org/.
- In March 2016, WNS was found in Washington state about 1,300 miles from the previous westernmost detection, and recent studies show eastern North America as the source. Though it is unclear how *Pd* reached Washington, this sad news is an example of how dramatically WNS can spread.
- In April 2016, the US Fish and Wildlife Service determined that designating critical habitat for northern long-eared bats (*Myotis septentrionalis*) was not prudent. This species is still listed as federally threatened, and the exemption (i.e. no permit required) under the 4(d) rule for bat exclusions and for rabies testing has not changed. See https://www.fws.gov/Midwest/endangered/mammals/nleb/index.html. Other species severely affected by WNS, the little brown bat and the tri-colored bat, are currently under review for consideration to list under the ESA.
- Acceptable Management Practices for Bat Control Activities in Structures - A Guide for National Wildlife Control Operators is still available ***(if you have trouble downloading this document, please contact me and I will mail you a copy)*** https://www.whitenosesyndrome.org/sites/default/files/resource/wns_nwco_amp_1_april_2015_0.pdf.
- WNS does not affect non-hibernating Mexican free-tailed and evening bats. Please see enclosed WNS fact sheet for current information. If you are handling bats in SC mountains and think they are *Myotis* bats, please contact me.
- Some useful SCDNR bat related links - the public can report successful bat boxes or view the SC Bat Conservation Plan at: http://www.dnr.sc.gov/wildlife/bats/batbox.html and http://www.dnr.sc.gov/wildlife/bats/index.html.

Sincerely,

Jennifer Kindel (KindelJ@dnr.sc.gov) Cc: Mary Bunch (BunchM@dnr.sc.gov)

Enclosures: April 12, 2016 National WNS Decontamination Protocol; May 2016 WNS Fact Sheet

Appendix II. Flier for new bat box monitoring effort.

Sunrift Adventures &

South Carolina Department of Natural Resources

invite you to their 1st annual

Halloween Bat Count!

Sunrift bat houses foster many beneficial insect-eating bats that emerge in an impressive display at sunset. Please join us in observing and counting these mysterious creatures, and learn why a world without bats would be scary indeed!

Sunday, Oct 30th

5:30 pm

Sunrift Adventures

1 Center St

Travelers Rest, SC