



Case No. 17-1152-EL-BGN

July 6, 2020

Ohio Power Siting Board
Docketing Division
180 East Broad Street, 11th Floor
Columbus, Ohio 43215-3793
Attn: Grant Zeto

RE: Hillcrest Solar I, LLC

Notice of Compliance with Certificate Condition #19 - Unless coordination with ODNR and USFWS allows a different course of action, Hillcrest shall adhere to seasonal cutting dates of October 1 through March 31 for the removal of trees three inches or greater in diameter to avoid impacts to Indiana bats and northern long-eared bats.

Dear Mr. Zeto;

Hillcrest Solar I, LLC (“Hillcrest Solar”) is certified to construct a solar-powered electric generation facility in Brown County, Ohio in accordance with the orders issued by the Ohio Power Siting Board (“OPSB”) in the above-referenced cases.

A couple of small patches of trees that were planned to be cleared for construction activities were identified after the seasonal cutting window of October 1 to March 31. Hillcrest Solar consulted with ODNR and USFWS for removal of trees three inches in diameter or greater in two areas and developed a bat survey protocol that was submitted to the agencies on June 14, 2020. Approval of this protocol was received from both USFWS (June 16, 2020) and ODNR (June 18, 2020) and bat surveys were conducted by qualified environmental professionals (Copperhead Environmental Consulting, Inc.) from June 23 to 26, 2020 to assess the areas for presence of several bat species including Indiana and northern long-eared bats. Upon analysis of survey data, Copperhead deemed that the execution of the surveys sufficiently met the requirements of the protocol and that *“there is no evidence that listed bats use the project area during the summer months”*. The survey report (attached) was sent to ODNR and USFWS on June 30, 2020, and concurrence was received on July 2 and 6, 2020, respectively.

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Attached please find a copy of the Listed Bat Surveys for the Hillcrest Solar Project by Copperhead Environmental Consulting, Inc. and the written approvals of the document from ODNR and USFWS regarding compliance with Certificate Condition #19 of the Opinion, Order and Certificate issued on February 15, 2018 in Case No. 17-1152-EL-BGN and Amendment 18-1267-EL-BGA.

We are available, at your convenience, to answer any questions you may have.

Sincerely,

A handwritten signature in black ink, appearing to read "Julia Mancinelli", with a stylized, flowing script.

Julia Mancinelli, Director – Environment

Attachment: Report – Listed Bat Surveys for the Hillcrest Solar project, Mt. Orab, Ohio (Copperhead Environmental Consulting)

Acoustic bat survey report for the Hillcrest Solar project
(Communication between ODNR and Copperhead Environmental Consulting), July 2, 2020

Hillcrest Solar Project, Bat Survey Response
(Communication between USFWS and Copperhead Environmental Consulting), July 6, 2020



Listed Bat Surveys for the Hillcrest Solar project Mt. Orab, Ohio

Angela Boyer
Endangered Species Coordinator for Ohio
U.S. Fish and Wildlife Service
4625 Morse Road, Suite 104
Columbus, Ohio 43230

Prepared by:
Steve Samoray
Sr. Biologist/Project Manager
30 June 2020

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INTRODUCTION

Copperhead Environmental Consulting, Inc. (Copperhead) was contracted by Cardno to conduct a presence/probable absence (P/A) acoustic survey for listed bat species for the Hillcrest Project in Mt. Orab, Ohio. Tree removal is proposed for 2 areas (Area 1 and Area 4) within the project boundary (Appendix A). Area 1 (39.076831°, -83.906407°) is located 60 meters east of a power substation and Area 4 (39.093421°, -83.916709°) is located approximately 2 kilometers southeast of Fivemile, OH. Listed species include the federally endangered Indiana bat (*Myotis sodalis*), the federally threatened and state-endangered northern long-eared bat (*M. septentrionalis*), the state endangered little brown bat (*Myotis lucifugus*), and the state endangered tricolored bat (*Perimyotis subflavus*).

A Study Plan was submitted to the US Fish and Wildlife Service (USFWS) Columbus Field Office and the Ohio Department of Natural Resources (ODNR) on 16 June 2020 and concurrence was received on the 16 and 18 June respectively. Surveys were conducted under USFWS Permit # TE94849b-1 and ODNR Permit # 23-046.

METHODS

Survey Methodology

There were no deviations from the Study Plan. Acoustic surveys to determine P/A were implemented in accordance with the USFWS “2020 Range-wide Indiana Bat Summer Survey Guidelines” (Guidance) and ODNR Guidance for Bat Surveys and Tree Clearing June 2020. Level of effort was based on the Guidance for the required number of detector nights (dn) on non-linear projects in the Midwest Recovery Unit (8 dn/123 acres of impacted forested habitat) and the estimated amount of impacted forested habitat at each Area [0.08 acres (Area 1) and 0.06 acres (Area 4)]. Copperhead deployed an AnaBat Swift (Titley Electronics Pty Ltd, Ballina, NSW Australia) acoustic detector with 5-250 kHz omnidirectional microphones vertically oriented at 0° and no weather proofing at two detector sites for four nights at each site (23-26 June 2020) for a total of 8 dn in each Area (Table 1). Detectors were set to record in zero-crossing mode and were placed in habitats where bats were likely to be foraging/traveling and in areas that increase the likelihood of recording high-quality calls (e.g., forest canopy openings, road or stream corridors with open canopies, ponds, wetlands). Detector microphones were placed on 12’ poles and approximately 10’ from vegetation to increase the sample area and reduce distortion from the ground or vegetation. Detectors were placed at least 200 meters apart. Sampling began thirty minutes before sunset and continued until 30 minutes after sunrise and the following detector settings were used:

- Hardware Rev 1.0
- Software 1.6 (master/dabb19a-mod)
- Trigger Freq 3kHz to 250kHz
- Recording div 8 ZC files
- Max file length 10s
- Min event 2ms
- Analog HP filter On

Finger rubs in front of microphones prior to deployment and after pickup ensured proper functionality. Acoustic data were downloaded in the field to confirm that each detector recorded the entire survey period. Copperhead Biologist Kelsie Eshler selected detector locations and microphone orientation in the field. A project area map detailing detector location is in Appendix B and site photos are in Appendix C.

The presence of listed bat species was determined using the manufacture recommended settings in Kaleidoscope Pro (Kpro) version 5.1.9g (Wildlife Acoustics, Inc. Maynard, MA). Kpro analysis settings are in Appendix D. Based on species distribution maps and Copperhead experience, the species listed in Table 2 were selected in the Kpro 5.1.0 classifier. If presence of listed bat species was considered unlikely (i.e., Maximum Likelihood Estimation [MLE]) had a p-value >0.05), no further analysis was performed. If presence of listed bat species was considered likely (i.e., MLE had a p-value ≤0.05), all files from that site/night were visually examined by qualified Copperhead biologist Steve Samoray (See Appendix E: Resumes).

Table 1: Acoustic detector site location details from the Hillcrest Bat Survey, Mt. Orab, OH, June 2020.

Site #	Lat/Long	Survey Dates	Habitat Type	Site Description
Area 1 Site 1	39.07686, -83.906497	23-26 June	Field Edge	North east of well pad near County Hwy 8C and Drier Collins Rd
Area 1 Site 2	39.078264, -83.905907	23-26 June	Field Edge	North of County Hwy 8C east of Driver Collins Rd
Area 4 Site 1	39.093372, -83.916883	23-26 June	Field Edge	West of Site 2, west of 70 and Hillcrest Rd
Area 4 Site 2	39.093183, -83.914432	23-26 June	Field Edge	West of 135 and 70 intersection on tree line

Table 2: Species considered potentially present by Kaleidoscope Pro Classifier at the Hillcrest Bat Survey, Mt. Orab, OH, June 2020.

Common Name	Scientific Name	Kpro Identifier
Big brown bat	<i>Eptesicus fuscus</i>	EPTFUS
Eastern red bat	<i>Lasiurus borealis</i>	LASBOR
Hoary bat	<i>Lasiurus cinereus</i>	LASCIN
Silver-haired bat	<i>Lasionycteris noctivagans</i>	LASNOC
Eastern small-footed bat	<i>Myotis leibei</i>	MYOLEI
Northern long-eared bat	<i>Myotis septentrionalis</i>	MYOSEP
Indiana bat	<i>Myotis sodalis</i>	MYOSOD
Evening Bat	<i>Nycticeius humeralis</i>	NYCHUM
Tri-colored bat	<i>Perimyotis subflavus</i>	PERSUB

RESULTS

Weather conditions remained suitable for all sampling periods (i.e., temperatures below 50°F, no strong winds, and/or precipitation, or fog during the first 5 hours of the survey [Table 3]). Weather data was obtained from the nearest NOAA weather station located at KI69, approximately 16.5 miles west of the survey sites. A total of 1,502 files were recorded during the four survey nights. Kpro software classified 767 as noise files, 735 files as bats, and identified 635 bat files to species. Kpro identified the following species as likely present on the project area: big brown bat (*Eptesicus fuscus*), red bat (*Lasiurus borealis*), hoary bat (*Lasiurus cinereus*), northern long-eared bat (*Myotis septentrionalis*), Indiana bat (*Myotis sodalis*), and evening bat (*Nycticeius humeralis*). Kpro output tables including MLE scores by site and species are included in Appendix F. Because Kpro determined likely presence of Indiana bats and northern long-eared bats during the survey period, manual vetting was performed and concluded that no listed bat species were detected during the survey period. Results of the manual vetting process are in Appendix G. Representative photographs of sonograms from each species consider present by Kpro are in Appendix H.

Table 3: Weather conditions during the first five hours of each survey night at the Hillcrest Bat Survey, Mt. Orab, OH, June 2020.

Date	Time	Temperature	Weather Condition
23-Jun	21:00	77.9	Partly Cloudy
23-Jun	22:00	78.3	Mostly Cloudy
23-Jun	23:00	76.1	Mostly Cloudy
23-Jun	0:00	75.2	Mostly Cloudy
23-Jun	1:00	72.1	Clear
24-Jun	21:00	75.4	Overcast
24-Jun	22:00	77.5	Partly Cloudy
24-Jun	23:00	77.2	Clear
24-Jun	0:00	73.8	Clear
24-Jun	1:00	70.7	Partly Cloudy
25-Jun	21:00	80.6	Overcast
25-Jun	22:00	80.1	Overcast
25-Jun	23:00	80.8	Partly Cloudy
25-Jun	0:00	79.7	Clear
25-Jun	1:00	76.3	Clear
26-Jun	21:00	74.1	Overcast
26-Jun	22:00	79	Mostly Cloudy
26-Jun	23:00	80.8	Clear
26-Jun	0:00	81.5	Clear
26-Jun	1:00	78.8	Clear

CONCLUSIONS

Although presence of Indiana or northern long-eared bats was considered likely by the automated acoustic identification software (Kpro) manual vetting concluded that these calls were misidentified and were likely all made by red bats in clutter. Clutter can consist of vegetation near the bat when it is echolocating or even the acoustic detector, pole, and microphone. Bats will alter their call structure under these conditions, generally increasing the slope of each call pulse to obtain more information from the call. Because higher slope calls are indicative of *Myotis* species, these calls are often confused for listed species.

The acoustic survey effort (8 dn at each Area) meets the suggested level of effort and was conducted under the appropriate weather conditions to determine P/A of listed bat species during the maternity season (USFWS 2020¹). Based on negative results of the acoustic survey, there is no evidence that listed bats use the project area during summer months. The overall low-quality bat habitat within the project area and the failure to detect listed bats suggests they are not present during the maternity season or are present in such low densities that current survey techniques failed to detect them.

¹ USFWS (United States Fish and Wildlife Service). 2020. Range-wide Indiana bat survey guidelines. March 2020. 65 pp.

APPENDIX A

PROJECT MAP



COPPERHEAD
ENVIRONMENTAL CONSULTING

Prepared for:

USFWS

Hillcrest Solar Bat Survey Areas

Legend



Survey Areas



Scale: 1 in = 2,000 ft

Prepared by :

Copperhead Environmental Consulting, Inc.
3908 Gallatin Pike
Nashville, TN 37216

Drawn by: STS Date: 6/14/2020

Checked by: Revision:

Project Location

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community. Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Coordinate System: NAD 1983 StatePlane Ohio South FIPS 8202
Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Sources: USDA, Esri, USGS

Copyright (c) 2014 Esri

APPENDIX B

ACOUSTIC DETECTOR LOCATIONS



Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402
Projection: Lambert Conformal Conic
Datum: North American 1983
Sources: USDA, ESRI, USGS

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



COPPERHEAD
ENVIRONMENTAL CONSULTING

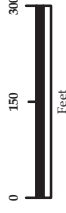
Prepared for:

USFWS

Hillcrest Solar Bat Survey
Area 1 Acoustic Detector
Locations

Legend

- Area 1 Detector Locations



Scale: 1 in = 300 ft

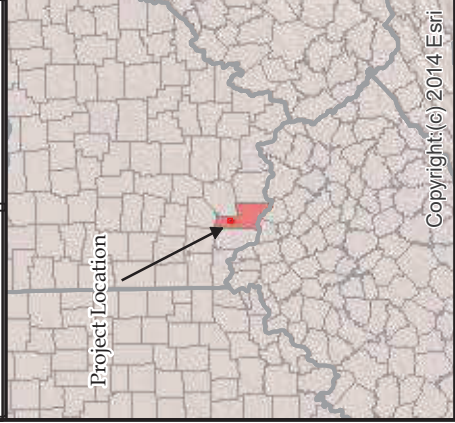
Prepared by :

Copperhead Environmental Consulting, Inc.
3908 Gallatin Pike
Nashville, TN 37216

Drawn by: STS Date: 6/30/2020

Checked by: Revision:

Project Location



Copyright (c) 2014 Esri



Site 1



Site 2



Coordinate System: NAD 1983 StatePlane Ohio South FIPS 8402
Projection: Lambert Conformal Conic
Datum: North American 1983
Sources: USDA, ESRI, USGS

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



COPPERHEAD
ENVIRONMENTAL CONSULTING

Prepared for:

USFWS

Hillcrest Solar Bat Survey
Area 4 Acoustic Detector
Locations

Legend

- Area 4 Detector Locations



Scale: 1 in = 250 ft

Prepared by :

Copperhead Environmental Consulting, Inc.
3908 Gallatin Pike
Nashville, TN 37216

Drawn by: STS Date: 6/30/2020

Checked by: Revision:

Project Location



Copyright (c) 2014 Esri

APPENDIX C

PHOTO LOG



Summer 2020 Listed Bat Acoustic Surveys for the Hillcrest Solar project in Mt. Orab, Ohio.

Site Name:
Area 1 Site 1

Project Number:
948

Photograph Log Page Number:
1





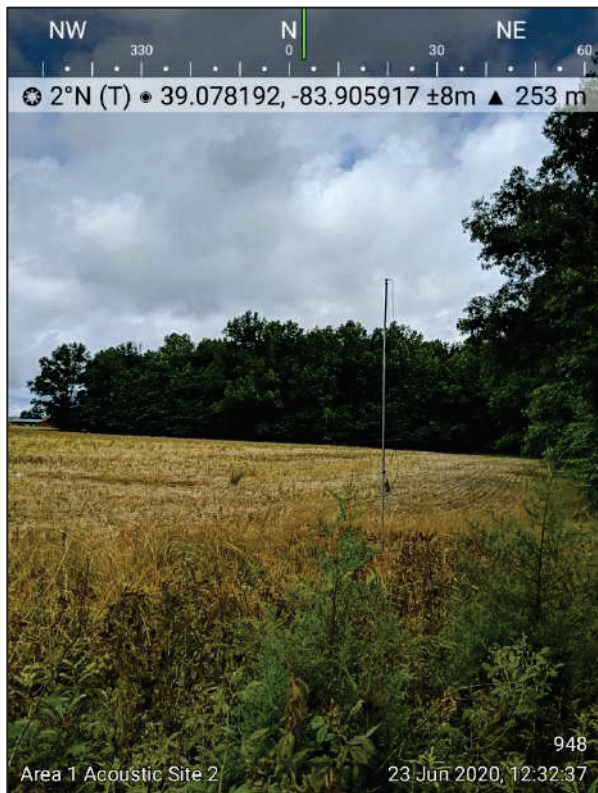
COPPERHEAD
ENVIRONMENTAL CONSULTING

Summer 2020 Listed Bat Acoustic Surveys for the Hillcrest Solar project in Mt. Orab, Ohio.

Site Name:
Area 1 Site 2

Project Number:
948

Photograph Log Page Number:
2



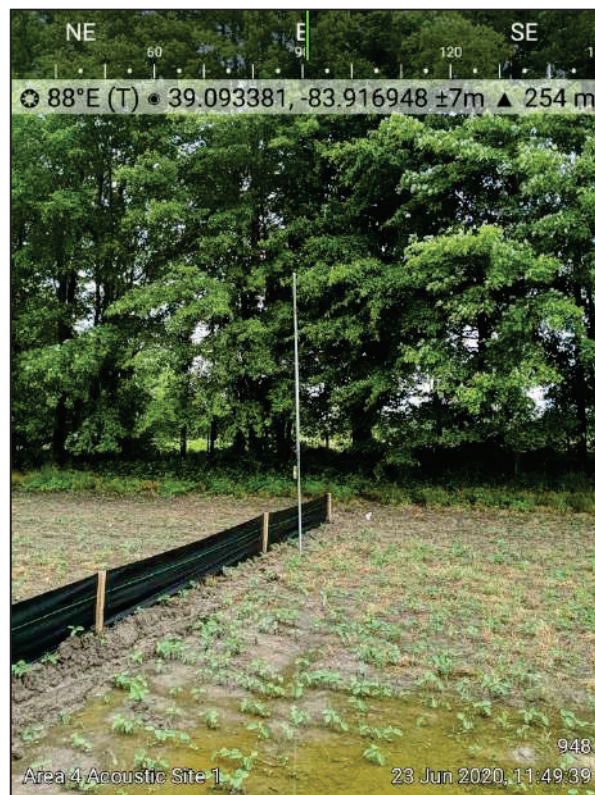


Summer 2020 Listed Bat Acoustic Surveys for the Hillcrest Solar project in Mt. Orab, Ohio.

Site Name:
Area 4 Site 1

Project Number:
948

Photograph Log Page Number:
3



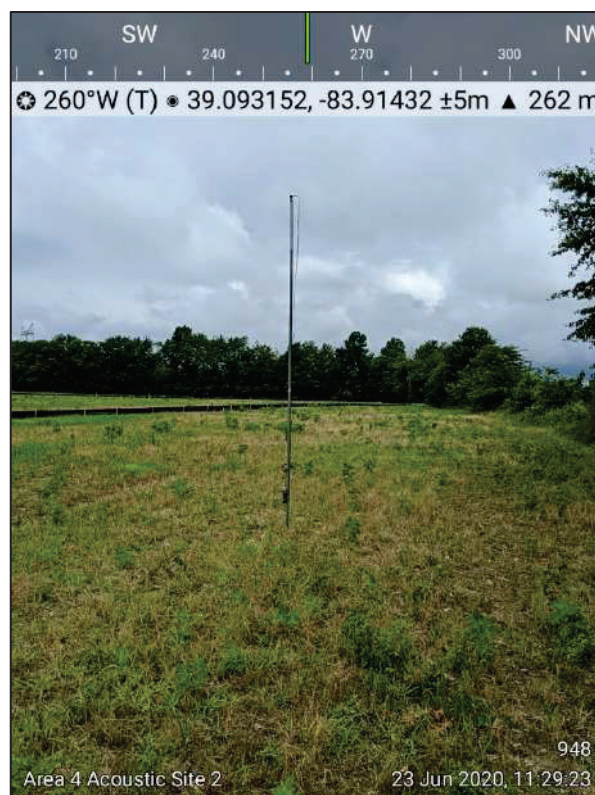


Summer 2020 Listed Bat Acoustic Surveys for the Hillcrest Solar project in Mt. Orab, Ohio.

Site Name:
Area 4 Site 2

Project Number:
948

Photograph Log Page Number:
4



APPENDIX D

KPRO ANALYSIS SETTINGS

version=5.1.9i

classifier=classifiers-Bats_of_North_America_5.1.0

[analysis]

freqmin0=8

freqmax0=120

durmin0=2

durmax0=500

maxgap0=500

mincalls=5

filterzc=1

removedc=0

enable=0

divratio=8

APPENDIX E

RESUMES

Capabilities

Ecological Studies

- Migratory bird surveys (MAPS)
- Raptor nest surveys
- Breeding bird point counts
- Migratory bird nest searches
- Vertical cave surveys
- Bridge bat surveys
- Bat trapping/netting surveys
- Bat habitat surveys
- Bat acoustical surveys
- Wildlife radio telemetry
- Herpetological surveys

Natural Resource Evaluations

- Endangered and Threatened Species (State & Federal)
- Baseline Ecological Conditions Surveys and Documentation
- Critical or Significant Wildlife Habitat
- Cave and Karst Investigations

Technology Experience

- AnaBat bat detectors
- Pettersson bat detectors
- Wildlife acoustics bat detectors
- AnalookW software
- Sonobat software
- Wildlife acoustics bat detectors
- Binary acoustics transmitters

Additional Training and Certifications

- Commercial pilot certification
- Red Cross Adult CPR/First Aid/Bloodborne Pathogens/2020
- Anabat techniques workshop
- Sonobat techniques workshop
- Thermal IR/T3 training course
- Smith System driver training
- Fire extinguisher training
- Excavation safety training
- Chainsaw training and safety course
- ATV safety and training course
- Rabies Vaccination: to guard against rabies when handling bats and other carriers of the disease.

Qualifications and Background

Mr. Samoray joined Copperhead Environmental Consulting, Inc in July of 2011 where he has served as a field biologist and project manager. He received both a B.A. and M.S. in biology from Middle Tennessee State University. His undergraduate work focused on amphibian and reptile research. His Master's thesis involved bat acoustic monitoring and habitat use. Mr. Samoray has been conducting biological field research throughout the United States since 1998, focusing mainly on herps, birds, and bats. His extensive work with cave and forest bat species has given him the opportunity to handle and identify thousands of individuals including all the endangered or threatened bat species in the eastern U.S. He is proficient in the use of mist-nets, harp traps, radio telemetry, acoustic monitoring/analysis, thermal video recording, and near infrared video recording. He has participated in acoustic studies since 1997 and has manually vetted tens of thousands of call files collected throughout the southeast and Midwest. This experience gave him a unique understanding of what calls can or should be identified and how calls change given particular habitat characteristics. He spent 4 seasons at a MAPS station, assisting with banding and mist-netting efforts for migratory birds. These seasons were also spent conducting point-count surveys for migratory bird species as well as night bird and raptor surveys. Mr. Samoray has held a private pilot certification since 2013 and a commercial certification since 2019. He has participated in aerial surveys for bats and conducted aerial American Bald Eagle and other raptor nest surveys. He is a member of the Tennessee Bat Working Group, currently serves as the President for the Southeastern Bat Diversity Network and is the Webmaster for both organizations.

Education

Master of science, 2002, Middle Tennessee State University, Murfreesboro, Tennessee

Bachelor of science, 1999, Middle Tennessee State University, Murfreesboro, Tennessee

Minor: Forestry

Publications

- Samoray, ST**, SN Patterson, J Weber, and J O'Keefe. 2020-*In Press*. Gray Bat (*Myotis grisescens*) Use of Trees as Day Roosts in North Carolina and Tennessee. *Southeastern Naturalist*.
- Samoray, ST**, SN Cotham, and MW Gumbert. 2019. Spring Migration Behavior of a *Perimyotis subflavus* (Tri-colored Bat) from Tennessee. *Southeastern Naturalist*:18(3): N16.
- Samoray, ST**, MW Gumbert, PL Roby, GA Janos, and RR Borthwick. 2019. Effectiveness of Acoustic Lures for Increasing Bat Captures in Mist-Nets. *Journal of Fish and Wildlife Management* 10(1): 206-212.
- Samoray, ST** and K Barrett. 2017 A unique Winter Roosting Location for a Northern Long-eared bat (*Myotis septentrionalis*). *Bat Research News* 58(4): 34.
- Braun De Torrez, EC, **ST Samoray**, KA Silas, MA Wallrichs, MW Gumbert, HK Ober, and RA McCleery. 2017. Acoustic lure allows for capture of a high-flying, endangered bat. *Wildl. Soc. Bull.*, 41: 322-328. doi:10.1002/wsb.778
- Barrett, K, C Guyer, **ST Samoray**, and Y Kanno. 2016. Stream and Riparian Habitat Use by Anurans along a Forested Gradient in Western Georgia, USA. *Copeia* 104(2): 570-576.
- Barrett, K, BS Helms, **ST Samoray**, and C Guyer. 2010. Growth patterns of a stream vertebrate differ between urban and forested catchments. *Freshwater Biology*. Available on-line (<http://www3.interscience.wiley.com/journal/123261547/abstract>).
- Elliott, WR, **ST Samoray**, SE Gardner, and JE Kaufmann. 2006. The MDC Method: Counting bats with infrared video. Pp. 147-153 In G.T. Rea (ed.), *Proceedings of the 2005 National Cave & Karst Management Symposium*, Albany, NY, Oct. 30-Nov. 4, 2005.
- Elliott, WR, **ST Samoray**, SE Gardner, and T Aley. 2005. Tumbling Creek Cave: An On going conservation and restoration partnership. *American Caves, American Cave and Karst Conservation Association*. 19(1): 8-13.
- Samoray, ST**. 2002. Bat utilization of barrens restoration sites, final report. Technical report: Arnold Engineering and Development Center, Environmental Services (Conservation), Tullahoma Tennessee: 42pp.
- Samoray, ST** and HR Garland. 2002. Geographic distribution note: *Gyrinophilus palleucus*. *Herpetological Review* 33(4): 316.
- Regester, KJ and **ST Samoray**. 2002. Natural history note: *Plethodon glutinosus*: *Herpetological Review* 33(1): 45.
- Samoray, ST** and KJ Regester. 2001. Geographic distribution note: *Rana sylvatica*. *Herpetological Review* 32(2): 190.

Selected Project Experience

Additional experience available upon request

Biologist – Aerial Eagle Survey, Macoupin County Illinois, 2020. Mr. Samoray acted as an observer during an aerial eagle survey for a proposed wind farm.

Biologist/Pilot – Aerial Eagle Survey, Crawford, Richland, Huron counties Illinois, 2020. Mr. Samoray acted as pilot and observer during an aerial eagle survey for a proposed wind farm.

Project Manager – Environmental Boundaries Reports for a transportation project in Bradley County, Tennessee, 2020. Mr. Samoray managed multiple teams during field studies and reporting and was responsible for client interaction (Tennessee Department of Transportation).

Project Manager – Endangered bat survey, Montgomery, Alabama, 2019. Mr. Samoray supervised mist-netting crew and reporting.

Project Manager – Endangered bat survey, Birmingham, Alabama, 2019. Mr. Samoray supervised mist-netting crews and reporting.

Biologist/Pilot – Aerial Eagle Survey, Montgomery County Indiana and Champaign County Illinois, 2019. Mr. Samoray acted as pilot and observer during an aerial eagle survey for a proposed wind farm.

Project Manager/Biologist/Pilot – Indiana bat research project in Wilson County, Tennessee, 2019. Mr. Samoray acted as pilot in command and conducted mist-netting as part of a Indiana bat spring/summer roosting study.

Project Manager – Endangered bat surveys, multiple counties in Tennessee, 2019. Mr. Samoray supervised mist-netting crews and reporting for six Tennessee Department of Transportation projects.

Project Manager/Pilot – Spring Migration of Indiana Bats, Tennessee, 2018. Mr. Samoray acted as pilot and project manager on a USFWS spring migration project to determine migration routes and find new summer roosting habitat for the endangered Indiana bat.

Project Manager/Pilot – Spring Migration of Tri-colored Bats, Tennessee, 2018. Mr. Samoray acted as pilot and project manager on a spring migration project to determine migration routes for tri-colored bats on or near Arnold Air Force Base Tennessee.

Project Manager/Pilot – Summer Foraging of Gray Bats, Tennessee, 2018. Mr. Samoray acted as pilot and project manager on two summer foraging projects in Tennessee; one located near the town of Cookeville and funded by The Tennessee Chapter of the Nature Conservancy and the other at and funded by Arnold Air Force Base.

Biologist/Project Manager – Endangered Bat Surveys, Tennessee, 2018. Mr. Samoray participated in and/or managed 14 endangered bat survey projects related to Tennessee Department of Transportation projects.

Biologist/Project Manager – Bat Survey at Mine Portal, Alabama, 2018. Mr. Samoray participated in and managed a fall portal survey for bats in central Alabama to determine use and species composition.

Biologist/Pilot – Endangered Bat Survey, Ohio, 2017. Mr. Samoray acted as pilot and biologist on a project to determine presences or probable absence of endangered bat species for a wind development project in northern Ohio.

Biologist/Project Manager – Winter Foraging Telemetry, Tennessee, 2017. Mr. Samoray acted as pilot and project manager on a project to determine winter foraging range of several species of bats in Tennessee.

Biologist/Pilot – Spring Migration of Indiana Bats, Tennessee, 2017. Mr. Samoray acted as pilot and biologist on a spring migration project to determine migration routes and find new summer roosting habitat for the endangered Indiana bat.

Biologist/Project Manager – Indiana bat habitat assessment, Davidson County, Tennessee, 2017. Mr. Samoray conducted assessment and reported on the presence or probable absence of suitable Indiana bat summer habitat and several residential development projects for the Metropolitan Development and Housing Agency.

Biologist/Project Manager – Avian surveys, Stewart County Tennessee and Trigg County Kentucky, 2017. Mr. Samoray led a team and conducted visual and auditory surveys for all bird species as part of an overall bio inventory effort.

Biologist – Endangered bat cave survey, Kentucky, 2017. Mr. Samoray conducted bat counts at several caves in Kentucky as part of a statewide survey project.

Biologist – Stream determination, Tennessee, 2017. Mr. Samoray assisted with a hydrological determination on a west Tennessee water course as part of a multistate transmission line project.

Biologist/Project Manager – Florida Bonneted Bat Acoustic Monitoring Project, Florida, 2016. Mr. Samoray lead teams and reported on a project to determine presences or probable absence of the endangered Florida bonneted bat for a residential development near Fort Myers.

Biologist/Pilot – Spring Migration of Indiana Bats, Tennessee, 2016. Mr. Samoray acted as pilot and biologist on a spring migration project to determine migration routes and find new summer roosting habitat for the endangered Indiana bat.

Biologist/Project Manager – Indiana bat habitat assessment, Oak Ridge, Tennessee, 2016. Mr. Samoray conducted assessment and reported on the presence or probable absence of suitable Indiana bat summer habitat.

Biologist/Pilot – Spring Migration of Indiana Bats, Tennessee, 2016. Mr. Samoray acted as pilot and biologist on a spring migration project to determine migration routes and find new summer roosting habitat for the endangered Indiana bat.

Biologist – Aerial Eagle Survey, Obion County Tennessee, 2015. Mr. Samoray acted as co-pilot and observer during an aerial eagle survey for a proposed wind farm.

Project Manager – Listed bat presence/probable absence survey, Illinois, 2015. Mr. Samoray managed acoustic, mist-net, and radio-telemetry survey efforts on a 200km pipeline project. He was responsible for coordinating field efforts, managing sub-contractors, and analyzing acoustic data.

Survey Experience

- Bat presence/absence surveys
- Bat habitat assessments
- Radio telemetry
- White-nose Syndrome assessments
- Acoustic monitoring
- Wetland Delineations
- Stream Quality Assessments
- Environmental Site Assessments
- Air Quality Assessments

Professional Experience

Copperhead Environmental Consulting, Inc.,
Biological Technician/Biologist, May 2017 – Present

Intertek – PSI: Professional Service Industries,
Project Scientist, January 2016 – May 2017

Education

B.A. Environmental Earth Science and Sustainability, 2015, Miami University, Oxford OH

Certifications/Trainings

- Federally permitted under TE 94849B-0
- OSHA 30 hour, 2018
- OSHA 10 hour, 2018
- First Aid CPR / AED, 2018
- Ohio Wetlands Association Wetlands Science Summit and vernal pool workshop, 2017

Affiliations

- Ohio Wetlands Association
- Ohio Bat Working Group



Qualifications and Background

Miss Eshler is a wildlife biologist with multiple years in the consulting business completing wildlife surveys, habitat assessments, and environmental site assessments. She has two years of survey experience dealing with eastern bat species. Her field experience has given her the opportunity to handle and identify thirteen different species of bats, including the federally endangered Indiana bat and Gray bat as well as the federally threatened Northern Long-Eared bat. Additionally, Miss Eshler has tracked to and identified roost trees and rock features for six different species of bats in eight different states. She is proficient in the use of mist nets, radio telemetry, acoustic monitoring/analysis, and bat counts using various techniques such as guano measurements, and direct counts.

Selected Project Experience

Indiana bat (*Myotis sodalis*), Northern Myotis (*Myotis septentrionalis*), and Eastern Massasauga rattlesnake (*Sistrurus catenatus*) habitat assessment in Pratt County, IL. 2018. Performed desktop analysis and a field habitat assessment of Pratt County to identify and later determine potential bat or Massasauga habitat suitability.

Kentucky Endangered Species Bridge Program. 2019. Performed 25+ bridge and water quality habitat assessments, for the potential of listed species including but not limited to the Kentucky Arrow Darter, Snuffbox mussel, Virginia Big-Eared Bats, and Big Sandy Crayfish underneath bridges throughout Kentucky. Supervised by Marty Marchaterre and Theresa Wetzel.

Fall Portal/Cave Surveys near Charleston, WV. 2018. Working with permitted biologists; deployed harp traps, applied exclusion netting, removed bats from nets, obtained morphometric measurements from bats, and deployed AnaBat Swift acoustic detectors for a project in Boone and Kanawha Counties in West Virginia. Species identified and handled: Tri-colored bat (*Perimyotis subflavus*). Supervised by Taylor Culbertson and Rob Stinson.

Kentucky Bat Working Group Bat Blitz. 2018. Working with permitted biologist; Choose mist net site locations, deployed nets, removed bats, and obtained morphometric measurements from bats. Species handled and identified: Gray bat (*Myotis grisescens*), Little Brown bat (*Myotis lucifugus*), Big Brown bat (*Eptesicus fuscus*), and Red bat (*Lasiurus borealis*). Supervised by Rob Stinson.

Timber Stand Improvement near Fort Knox, KY. 2018. Working with foresters, improved the quality and species of multiple tree stands on base at Fort Knox. Supervised by Matt Hinds.

Indiana bat and Northern Myotis presence/absence and Acoustic survey on Fort McClellan, AL. 2018. Working with permitted biologists; Chose mist net sites, deployed nets, removed bats from nets, obtained morphometric measurements from bats, and deployed AnaBat Swift acoustic detectors for a project on Fort McClellan in AL. Species identified and handled: Gray bat, Big Brown bat, Red bat, Evening bat (*Nycticeius humeralis*), Tri-colored bat (*Perimyotis subflavus*), Seminole bat (*Lasiurus seminolus*), Mexican Free-tailed bat (*Tadarida brasiliensis*). Supervised by Mark Gumbert and Piper Roby.

Radio telemetry study of an Indiana bat bridge bachelor colony near Fort Knox, KY. 2018. Tracked Indiana bats (*Myotis sodalis*) from a bridge colony to other diurnal roosts, conducted bridge bat survey counts, and conducted emergence counts. Supervised by Piper Roby.

Kentucky Endangered Species Bridge Program. 2018. Performed 200+ preliminary desktop habitat assessments, including the use of GIS, for the potential of listed species including but not limited to the Kentucky Arrow Darter, Snuffbox mussel, Virginia Big-Eared Bats, and Big Sandy Crayfish underneath bridges throughout Kentucky. Supervised by Marty Marchaterre.

Non-native Invasive Species (NNIS) Removal near Hoosier National Forest, IN. 2018. Working with foresters, improved the quality and species of approximately 40 acres of land using backpack sprayers. Supervised by Matt Hinds.

Indiana bat and Guano Collection on Fort Knox, KY. 2018. Biweekly monitored the usage of BrandenBark™ structures by an Indiana bat maternity colony located on Ft. Knox and took guano pellet samples from seven of the BrandenBark™ structures per visit for further laboratory dietary analysis.

Radio telemetry study of an Indiana bat maternity colony on Fort Knox, KY. 2018. Captured Indiana bats, tracked bats to diurnal roosts, and conducted emergence counts. Species handled and identified: Indiana bats, Little Brown bats. Supervised by Piper Roby.

Indiana bat monitoring of a maternity colony on Fort Knox, KY. 2018. Deployed nets around BrandenBark™ structures, removed bats, and obtained morphometric measurements from bats. Banded and applied radio transmitters to Indiana bats. Species handled and identified: Indiana bat. Supervised by Piper Roby.

Indiana bat monitoring of a maternity colony on Fort Knox, KY. 2018. Deployed nets around BrandenBark™ structures, removed bats, and obtained morphometric measurements from bats. Banded

and applied radio transmitters to Indiana bats. Species handled and identified: Indiana bat, Little Brown bat, Evening bat. Supervised by Piper Roby.

Gray Bat roost and foraging telemetry study on Arnold Air Force Base, TN. 2018. Working with permitted biologist; Choose mist net site locations, deployed nets, removed bats, and obtained morphometric measurements from bats on Arnold Air Force Base in TN. Actively applied radio transmitters to Gray bats, and tracked them to their diurnal roosts and conducted emergence counts. Species handled and identified: Gray bat, Red bat, Evening bat, Little Brown bat, and Hoary bat (*Lasiurus cinereus*). Supervised by Steve Samoray.

Indiana bat and Northern Myotis presence/absence survey near Pikeville, TN. 2018. Working with permitted biologists; Choose mist net sites, deployed nets, removed bats from nets and obtained morphometric measurements from bats for a project near Pikeville, TN. Species identified and handled: Gray bat, Big Brown bat, Red bat, Evening bat. Supervised by Steve Samoray.

Migration study of a Tri-Colored Bat starting near Dechard, TN. 2018. Captured Tri-Colored bats, tracked bats to diurnal roosts, and conducted emergence counts. Species handled and identified: Tri-Colored bats, Gray Bats. Supervised by Piper Roby.

Migration study of an Indiana bat starting near Mountain View, AR. 2018. Captured Indiana bats from cave, tracked bats to diurnal roosts, and conducted emergence counts. Species handled and identified: Indiana bats. Supervised by Piper Roby.

Winter behavior of Northern Myotis at Alligator River National Wildlife Refuge, NC. Fall 2017 through Winter 2018.

Working with permitted biologist; Choose mist net site locations, deployed nets, removed bats, and obtained morphometric measurements from bats. Actively applied radio transmitters to Northern Myotis bats and tracked them to their diurnal roosts and conducted emergence counts. Also conducted wing punch biopsy sampling, WNS swabbing, hair sampling, and guano collection on all Myotis species. Species handled and identified: Northern Myotis (*Myotis septentrionalis*), Rafinesque's Big-Eared bat (*Corynorhinus rafinesquii*), Seminole bat, Evening bat, Big Brown bat, Red bat, Tri-colored bat. Supervised by Theresa Wetzel.

Migration study of Northern Myotis throughout central-northern Iowa. 2017. Working with permitted biologist; Choose mist net site locations, deployed nets, removed bats, and obtained morphometric measurements from bats. Deployed acoustic lures at net sites to attract Northern Myotis. Applied radio transmitters to Northern Myotis bats and Little Brown bats and tracked them to their diurnal roosts and conducted emergence counts. Additionally, conducted WNS swabbing, dog scent swabbing, hair sampling, and guano collection on all Myotis species. Species handled and identified: Northern Myotis, Little Brown bat, Big Brown bat, Red bat, Hoary bat, Silver-haired bat (*Lasionycteris noctivagans*), and Evening bats. Supervised by Piper Roby.

Kentucky Bat Working Group Bat Blitz. 2017. Working with permitted biologist; Choose mist net site locations, deployed nets, removed bats, and obtained morphometric measurements from bats. Species handled and identified: Indiana bats, Evening bats, Big Brown bats, and Red bats. Supervised by Theresa Wetzel.

Indiana bat and Northern Myotis presence/absence survey on Fort Knox, KY. 2017. Working with permitted biologists; Deployed nets, removed bats from nets and obtained morphometric measurements from bats for a project on Fort Knox, KY. Also tracked a radio tagged Indiana bat to a new bridge colony. Species handled: Red bat, and Tri-colored bat. Supervised by Piper Roby.

Non-native Invasive Species (NNIS) Removal near Terrapin Barrens, KY. 2017. Working with foresters, improved the quality and species of a power line right of way using backpack sprayers. Supervised by Matt Hinds.

Indiana bat presence/absence and acoustic survey near Hot Springs, AR. 2017. Working with permitted biologists; Deployed nets, removed bats from nets, obtained morphometric measurements from bats, and deployed SD2 AnaBat units for a project in Hot Springs, AR. Species handled: Big Brown bat, Red bat, Evening bat, Little Brown bat. Supervised by Theresa Wetzel.

Indiana bat and Northern Myotis presence/absence survey in northwest Ohio. 2017. Working with permitted biologists; Deployed nets, removed bats from nets and obtained morphometric measurements from bats for a project in NW Ohio. Also gained experience tracking Indiana bats the ground. Species handled: Big Brown bat, Red bat, and Hoary bat. Supervised by Zack Baer.

Selected Technical Reports

Eshler, K., P. Roby, W. Seiter. 2018. Threatened and Endangered Bat Monitoring Cundiff Lake and the South End, Fort Knox, KY. Prepared for Lee Andrews and Mike Armstrong USFWS, Frankfort, KY.

APPENDIX F

KALEIDOSCOPE PRO OUTPUT

Number of calls/species/night.

	EPTFUS	LASBOR	LASCIN	LASNOC	MYOLEI	MYOLUC	MYOSEP	MYOSOD	NYCHUM	PERSUB	NOID	NOISE	Totals
Area 1 Site 1	9	3	2	1					1		1	34	50
	11	1	2	1					1		3	46	65
	18	4	1						1		5	35	64
		6			1				1		4	52	64
Area 1 Site 2	38	5	3	1				4	3		5	59	118
	79	10	5		2		1	12	13	1	18	152	293
	100	5	12	1	1	2		13	4		28	96	262
	7	1	16	1				1			7	52	85
Area 4 Site 1	4		2	1			1				3	10	21
	16	1	7	1				1			5	28	59
	29	1	6	3			1				4	11	55
	11	2	17	1							2	37	70
Area 4 Site 2	34	1	2	3			1		1		5	21	68
	22		14			1					4	30	71
	17	1	7	1							3	46	75
	1	1	13	5						1	3	58	82
	396	29	119	22	3	4	4	31	25	2	100	767	1502

MLE Scores by species/night. Scores for species considered likely by KPro (MLE ≤ 0.05) are indicated in bold.

	EPTFUS	LASBOR	LASCIN	LASNOC	MYOLEI	MYOLUC	MYOSEP	MYOSOD	NYCHUM	PERSUB
Area 1 Site 1	6/23/2020	0.0000009	1	0.0489365	0.9742929	1	1	1	0.1909892	1
	6/24/2020	0	0.1965974	0.2838741	1	1	1	1	0.5930766	1
	6/25/2020	0	1	0.0489537	1	1	1	1	0.1909159	1
	6/26/2020	1	1	0.0000001	1	0.1275731	1	1	0.2139278	1
Area 1 Site 2	6/23/2020	0	0.0000614	0.6779388	1	1	1	0.050095	0.4394372	1
	6/24/2020	0	0.0000005	0.7953987	1	0.0567448	0.5327287	0.007401	0.0002187	0.8889344
	6/25/2020	0	0.0001865	0.0180407	1	0.4413206	1	0.0007933	0.2611372	1
	6/26/2020	0.0032916	0.062954	0	1	1	1	0.4715833	1	1
Area 4 Site 1	6/23/2020	0.003221	1	0.0762963	0.9940442	1	0.0233266	1	1	1
	6/24/2020	0	0.0629516	0.00016	1	1	1	0.4715834	1	1
	6/25/2020	0	0.0632937	0.0127013	1	1	0.0233266	1	1	1
	6/26/2020	0.0000069	0.0040083	0	1	1	1	1	1	1
Area 4 Site 2	6/23/2020	0	0.196584	0.9141515	1	1	0.0233266	1	0.5931055	1
	6/24/2020	0	1	0	1	0.1085289	1	1	1	1
	6/25/2020	0	0.0633078	0.0002198	1	1	1	1	1	1
	6/26/2020	1	0.0634582	0	0.6277584	1	1	1	1	0.0924728

APPENDIX G

MANUAL VETTING RESULTS

Area	Site	Date	File Name	Kpro ID	Manual Vetting Justification
1	Site 2	6/23/2020	2020-06-24 01-00-24.zc	MYOSOD	poor quality call, but inconsistent pulse spacing and fundamental frequency make it more likely a LASBOR in clutter
1	Site 2	6/23/2020	2020-06-24 04-35-57.zc	MYOSOD	poor quality call, but inconsistent pulse spacing and fundamental frequency make it more likely a LASBOR in clutter
1	Site 2	6/23/2020	2020-06-24 03-14-03.zc	MYOSOD	poor quality call, but inconsistent pulse spacing and fundamental frequency make it more likely a LASBOR in clutter
1	Site 2	6/23/2020	2020-06-24 02-20-53.zc	MYOSOD	poor quality call, but inconsistent pulse spacing and fundamental frequency make it more likely a LASBOR in clutter
1	Site 2	6/24/2020	2020-06-25 01-17-31.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
1	Site 2	6/24/2020	2020-06-24 23-58-52.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
1	Site 2	6/24/2020	2020-06-25 02-34-48.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
1	Site 2	6/24/2020	2020-06-25 02-45-06.zc	MYOSOD	poor quality call, but inconsistent pulse spacing and fundamental frequency make it more likely a LASBOR in clutter
1	Site 2	6/24/2020	2020-06-25 02-43-25.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
1	Site 2	6/24/2020	2020-06-25 00-09-05.zc	MYOSOD	poor quality call, but inconsistent pulse spacing and fundamental frequency make it more likely a LASBOR in clutter
1	Site 2	6/24/2020	2020-06-24 23-13-37.zc	MYOSOD	poor quality call, but inconsistent pulse spacing and fundamental frequency make it more likely a LASBOR in clutter
1	Site 2	6/24/2020	2020-06-24 23-56-20.zc	MYOSOD	poor quality call, but inconsistent pulse spacing and fundamental frequency make it more likely a LASBOR in clutter
1	Site 2	6/24/2020	2020-06-25 01-19-23.zc	MYOSOD	poor quality call, but inconsistent pulse spacing and fundamental frequency make it more likely a LASBOR in clutter
1	Site 2	6/24/2020	2020-06-25 00-57-19.zc	MYOSOD	poor quality call, but inconsistent pulse spacing and fundamental frequency make it more likely a LASBOR in clutter
1	Site 2	6/24/2020	2020-06-25 01-06-09.zc	MYOSOD	poor quality call, but inconsistent pulse spacing and fundamental frequency make it more likely a LASBOR in clutter
1	Site 2	6/24/2020	2020-06-25 00-04-16.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
1	Site 2	6/25/2020	2020-06-26 00-48-57.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
1	Site 2	6/25/2020	2020-06-26 03-54-51.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
1	Site 2	6/25/2020	2020-06-26 00-48-03.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
1	Site 2	6/25/2020	2020-06-26 00-47-01.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
1	Site 2	6/25/2020	2020-06-26 03-20-31.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter

Area	Site	Date	File Name	Kpro ID	Manual Vetting Justification
1	Site 2	6/25/2020	2020-06-26 00-47-44.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
1	Site 2	6/25/2020	2020-06-26 00-45-36.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
1	Site 2	6/25/2020	2020-06-26 01-12-09.zc	MYOSOD	poor quality call, but inconsistent pulse spacing and fundamental frequency make it more likely a LASBOR in clutter
1	Site 2	6/25/2020	2020-06-26 02-09-37.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
1	Site 2	6/25/2020	2020-06-26 00-47-14.zc	MYOSOD	poor quality call, but inconsistent pulse spacing and fundamental frequency make it more likely a LASBOR in clutter
1	Site 2	6/25/2020	2020-06-26 04-22-13.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
1	Site 2	6/25/2020	2020-06-26 01-08-01.zc	MYOSOD	poor quality call, but inconsistent pulse spacing and fundamental frequency make it more likely a LASBOR in clutter
1	Site 2	6/25/2020	2020-06-26 02-12-52.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
1	Site 2	6/26/2020	2020-06-27 00-17-34.zc	MYOSOD	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
4	Site 1	6/23/2020	2020-06-24 02-55-50.zc	MYOSEP	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
4	Site 1	6/25/2020	2020-06-26 02-24-43.zc	MYOSEP	inconsistent pulse spacing and fundamental frequency, more likely a LASBOR in clutter
4	Site 2	6/23/2020	2020-06-23 21-52-39.zc	MYOSEP	poor quality call, but inconsistent pulse spacing and fundamental frequency make it more likely a LASBOR in clutter

APPENDIX H

REPRESENTATIVE PHOTOGRAPHS OF SPECIES SONOGRAMS

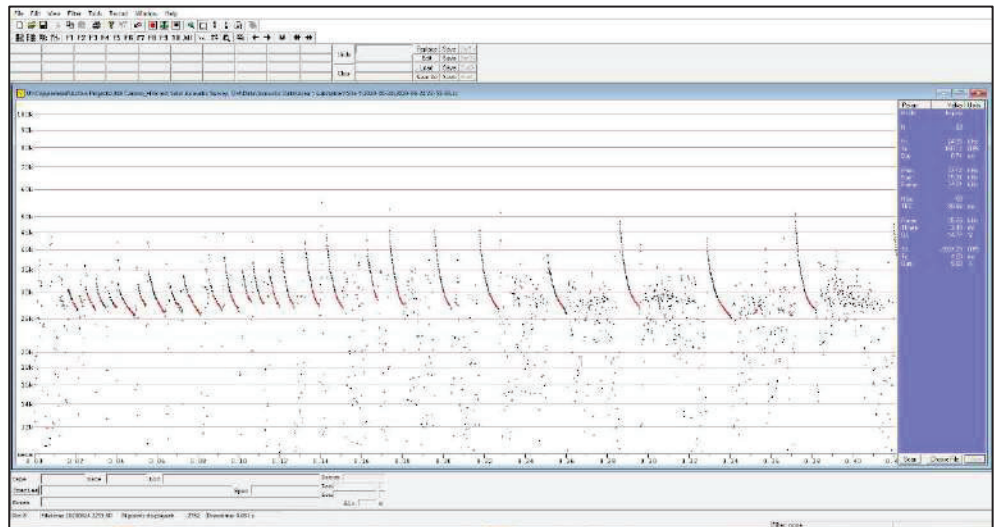


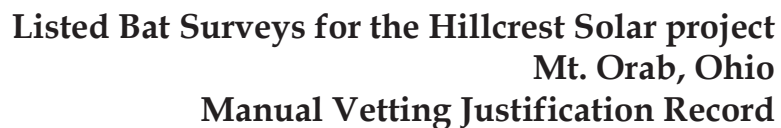
Listed Bat Surveys for the Hillcrest Solar project Mt. Orab, Ohio Manual Vetting Justification Record

Bat Species:
Big brown bat (*Eptesicus fuscus*, EPTFUS)

Project Number:
948

Representative EPTFUS call file.



Project Number:
948

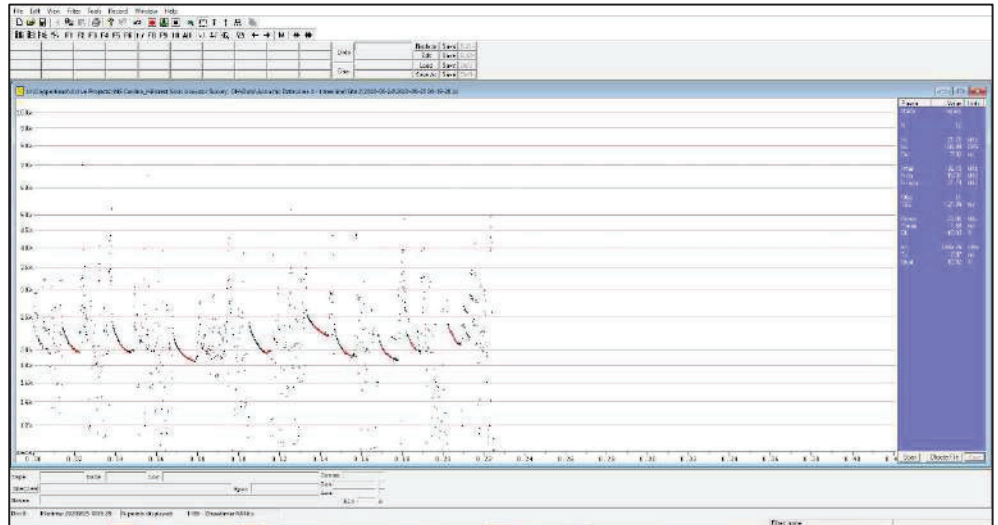


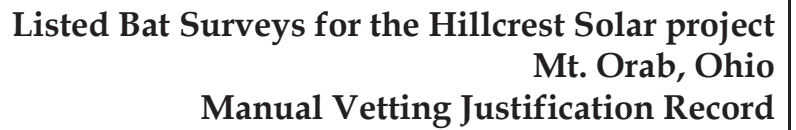
Listed Bat Surveys for the Hillcrest Solar project
Mt. Orab, Ohio
Manual Vetting Justification Record

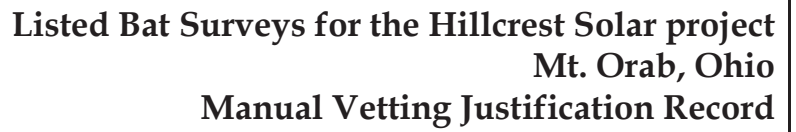
Bat Species:
Hoary bat (*Lasiurus cinerius*, LASCIN)

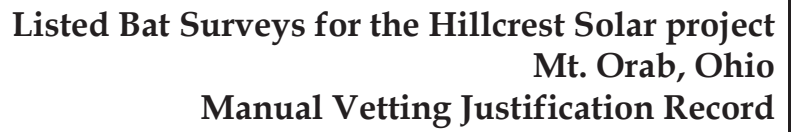
Project Number:
948

Representative LASCIN call file.



Project Number:
948[illegible]

Project Number:
948

Project Number:
948[illegible]

From: Sarah.Stankavich@dnr.state.oh.us
Sent: July 2, 2020 7:37 AM
To: Steve Samoray; Boyer, Angela (angela_boyer@fws.gov)
Cc: Bruce Moreira; Madison Walsh
Subject: RE: Acoustic bat survey report for the Hillcrest Solar project

MISE EN GARDE : Ce courriel provient de l'externe. Avant d'accéder à une pièce jointe ou à un lien de ce courriel, assurez-vous de reconnaître l'expéditeur et que le contenu est de confiance.

WARNING: This is an external e-mail. Before opening an attachment or clicking on a link, please make sure you recognize the sender and that the content is safe.

Steve -

We have received the summer bat survey report for the Hillcrest Solar project, conducted according to current U.S. Fish and Wildlife Service (USFWS) and Ohio Department of Natural Resources, Division of Wildlife (DOW) guidance. No Indiana (*Myotis sodalis*), northern long-eared (*M. septentrionalis*), little brown (*M. lucifugus*), or tricolored (*Perimyotis subflavus*) bats were detected, suggesting risk to these state-endangered species is low in the project area and tree cutting during summer maternity season is not likely to result in direct mortality of these species. Please contact DOW immediately should any bats be discovered during the work. Should tree cutting need to occur after March 31, 2024, ODNR recommends further consultation to reevaluate risk to these bat species.

This guidance does not constitute a full ODNR environmental review. If required, please contact the ODNR, Office of Real Estate Management to submit a request for agency environmental review coordination.

Sarah



Sarah Stankavich
Wildlife Technician (bats/pollinators)
ODNR Division of Wildlife
2045 Morse Road
Columbus, OH 43229
Phone: 614-265-6764
Email: sarah.stankavich@dnr.state.oh.us

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Please consider the environment before printing this email.

From: Steve Samoray <ssamoray@copperheadconsulting.com>
Sent: Tuesday, June 30, 2020 4:24 PM
To: Boyer, Angela (angela_boyer@fws.gov) <angela_boyer@fws.gov>; Stankavich, Sarah <Sarah.Stankavich@dnr.state.oh.us>
Cc: Bruce Moreira <bruce.moreira@cardno.com>; Madison Walsh <mw Walsh@innergex.com>
Subject: Acoustic bat survey report for the Hillcrest Solar project

Angela and Sarah,
Please see the attached report from our Hillcrest solar acoustic survey. We are seeking concurrence with our conclusion that listed bat species are not likely present during the maternity season at this site.
Please let me know if you have any questions or require additional information.

Thank you.

-Steve-

Steve Samoray
Sr. Biologist/Project Manager

Copperhead Environmental Consulting, Inc.

3908 Gallatin Pike
Nashville, TN 37216
615.542.1000 - Mobile
859.925.9012- Office
www.copperheadconsulting.com



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From: Ohio, FW3 <ohio@fws.gov>
Sent: July 6, 2020 5:22 AM
To: ssamoray@copperheadconsulting.com; Bruce Moreira; Madison Walsh
Cc: nathan.reardon@dnr.state.oh.us; Parsons, Kate; sarah.stankavich@dnr.state.oh.us
Subject: Hillcrest Solar Project, Bat Survey Response

MISE EN GARDE : Ce courriel provient de l'externe. Avant d'accéder à une pièce jointe ou à un lien de ce courriel, assurez-vous de reconnaître l'expéditeur et que le contenu est de confiance.

WARNING: This is an external e-mail. Before opening an attachment or clicking on a link, please make sure you recognize the sender and that the content is safe.



TAILS# 03E15000-2019-TA-0223

Dear Mr. Samoray,

We have received your summer bat survey report for the subject project. The survey was conducted following current U.S. Fish and Wildlife Service (Service) guidelines. No Indiana bats (*Myotis sodalis*) were detected, demonstrating probable absence of Indiana bats in the project area. Currently, the Service has no known hibernacula or maternity roost records for northern long-eared bat (*Myotis septentrionalis*) in the vicinity of the project. Therefore, the 4(d) rule for the northern long-eared bat could be applied (see: <http://www.fws.gov/midwest/endangered/mammals/nleb/index.html>). Tree clearing on the project site at any time of the year is unlikely to result in adverse impacts to Indiana bats and will not result in any unauthorized incidental take of northern long-eared bats. Negative Indiana bat summer surveys are valid for five years. Therefore, **no tree clearing should occur on the site after March 31, 2025** without further coordination with this office.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area until consultation under section 7 of the Endangered Species Act, between the Service and the federal action agency, is completed. We recommend that the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be initiated to assess any potential impacts.

This letter provides technical assistance only and does not serve as a completed section 7 consultation document. If project plans change, if portions of the proposed project were not evaluated, or if additional information on listed or proposed species or their critical habitat becomes available, it is our recommendation that you reinitiate coordination with this office. We recommend that the project be coordinated with the Ohio

Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.state.oh.us.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Patrice M. Ashfield". The signature is fluid and cursive, with a large initial "P" and "A".

Patrice M. Ashfield
Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW
Kate Parsons, ODNR-DOW

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

7/7/2020 1:21:43 PM

in

Case No(s). 17-1152-EL-BGN

Summary: Notice Notice of Compliance with Certificate Condition No. 19 - Listed Bat Survey Report and ODNR, USFWS Concurrence electronically filed by Ms. Madison Walsh on behalf of Hillcrest Solar I, LLC