



June 20, 2023

Julianne Randazzo
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St. Louis, MO 63166-6149

**Reference: Spring 2023 ITP Post-Construction Monitoring Seasonal Summary
High Prairie Renewable Energy Center
Schuyler and Adair Counties, Missouri**

Dear Ms. Randazzo,

Following is a seasonal summary containing the preliminary data and results of the spring 2023 post-construction monitoring at the High Prairie Renewable Energy Center (Project or High Prairie), owned and operated by Ameren Missouri (Ameren). The Project consists of 175 turbines with an approximate 400-megawatt (MW) operating capacity in Schuyler and Adair Counties, Missouri. This letter fulfills the requirements of the seasonal summary for the 2023 spring monitoring period (April 1 – May 14, 2023) as outlined in the Habitat Conservation Plan (HCP). As required by the HCP, this summary is due to the U.S. Fish and Wildlife Service (USFWS) and Missouri Department of Conservation (MDC) by June 15, 2023.

On May 14, 2021, an Incidental Take Permit (ITP) was issued for the federally-endangered Indiana bat (*Myotis sodalis*), federally-endangered northern long-eared bat (*Myotis septentrionalis*), and the little brown bat (*Myotis lucifugus*). The Indiana bat is also state-endangered and the northern long-eared bat is state-endangered, and both species are Species of Conservation Concern (SOCC) in Missouri. The ITP covers operations of the wind project, however, for the spring monitoring period (April 1 through May 14, 2023), Ameren voluntarily implemented avoidance measures and the wind turbines ceased operation on a daily basis from 45 minutes before sunset until 45 minutes after sunrise for the majority (143-161) of the 175 turbines. There were 14-32 turbines that operated on select nights under limited nighttime operations, which is summarized below in Table 1. The turbines that operated under limited nighttime operations were operated using the EchoSense smart curtailment technology, which Ameren is voluntarily phasing in to further reduce bat mortality.

Table 1. Summary of nighttime operations at the High Prairie Renewable Energy Center in Schuyler and Adair Counties, Missouri during spring 2023 (April 1 – May 14).

	Number of Turbines Operating at Night	Number of Turbines Not Operating at Night
April 1 – April 11	20	155
April 12 – April 23	14	161
April 24 – May 2	32	143
May 3 – May 14	29	146

In consultation with the USFWS and MDC, it was agreed that post-construction monitoring for bats need not occur during total curtailment periods (i.e., nighttime shutdown). Accordingly post-construction monitoring was only conducted at the operational turbines during the spring monitoring period.

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Methods and Results

Full plots out to 197 ft (60 m) were established at 27 of the 32 searched turbines, while roads and pads were searched out to 328 ft (100 m) at the remaining five turbines. These plots were systematically searched approximately 3 to 5 times each week during the period of operations, for a total of 516 turbine searches and an average search interval of 2 days. A total of five non-protected bat carcasses were found, which are summarized in Table 2 below and details are included in Attachment A.

Table 2. Summary of all bat carcasses found incidentally and during standardized carcass searches during spring 2023 post-construction monitoring at the High Prairie Renewable Energy Center, Schuyler and Adair Counties, Missouri.

Species	Number found during standardized searches	Number found incidentally	Total found (percent of total)
Eastern Red Bat	0	1	1 (20%)
Silver haired Bat	3	0	3 (60%)
Big Brown Bat	0	1	1 (20%)
Total	3	2	5 (100%)

No Covered Species (Indiana bat, little brown bat, or northern long-eared bat) were found.

The Generalized Estimator (GenEst; Dalthrop et al. 2018) was used for calculating bias correction factors (carcass persistence, searcher efficiency).

Carcass removal trials estimate the persistence time of bat carcasses on-site before scavengers remove them. Carcass persistence trials were conducted using 30 mouse carcasses placed on April 19, 2023. Carcasses were checked daily for the first 7 days, and then periodically through day 33. GenEst models indicated that carcass persistence was best modeled using a Weibull distribution, and that the location parameter and the scale parameter were constant. Carcass persistence averaged 12.2 days (90% CI: 8.9 to 16.6) and did not vary by plot type.

Searcher efficiency trials estimate the probability that a searcher detects a carcass, given that the carcass is available to be detected. Searcher efficiency trials were conducted in April and May and included 43 mouse carcasses that remained available during the search. GenEst models indicated that searcher efficiency varied by plot type, with an estimated searcher efficiency of 56.8% on full plots (90% CI: 43.2% to 69.4%) and 91.7% on roads and pads (90% CI: 66.4% to 98.4%).



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Conclusion

A total of five bat fatalities were found during the spring post-construction monitoring period. No Covered Species were found. These results are preliminary, and final results will be included in the annual report at the end of the year.

Regards,

STANTEC CONSULTING SERVICES INC.

A handwritten signature in blue ink that reads 'Molly Stephenson'.

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Attachments:

Attachment 1. Preliminary data from bats found incidentally and during standardized post-construction monitoring searches in spring 2023

Attachment 1. Preliminary data from bats found incidentally and during standardized post-construction monitoring searches at the High Prairie Renewable Energy Center in Schuyler and Adair Counties, Missouri between April 1 and May 14, 2023.

Survey123 ID	Turbine	Plot Type	Date Found	Species	Found By	Distance	Azimuth	Forearm	Age	Sex	Condition And Notes
20230403_A-08_1	A-08	Full	4/3/2023	Eastern Red Bat	HR	54	315	40	A	M	Intact; incidental
20230406_D-03_1	D-03	Full	4/6/2023	Big Brown Bat	TS	65	45	47	A	F	Intact; incidental
20230420_D-06_1	D-06	Full	4/20/2023	Silver Haired Bat	RR	42	350	42	U	M	Scavenged
20230420_D-06_2	D-06	Full	4/20/2023	Silver Haired Bat	RR	56	345	42	U	U	Scavenged
20230420_C-01_1	C-01	Full	4/20/2023	Silver Haired Bat	JD	6	240	38	U	U	Dismembered