

## TECHNICAL MEMORANDUM

**To:** Amber Schorg, U.S. Fish and Wildlife Service–Illinois-Iowa Field Office

**Prepared by:** Jesse Leckband, MidAmerican Energy Company

**Date:** March 31, 2023

**RE:** **TE41434D-0 Compliance Monitoring Annual Report**

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### INTRODUCTION

MidAmerican Energy Company (MidAmerican), currently operates the 21 Wind I-X wind energy facilities (hereafter referred to individually by facility name and collectively as Projects or Wind I-X), totaling more than 4,040 megawatts of wind generation capacity in Iowa. Operation of these facilities, in addition to the Iowa State Fair turbine, is a Covered Activity under MidAmerican’s Wind I-X Habitat Conservation Plan (HCP; MidAmerican 2019). MidAmerican’s Incidental Take Permit (ITP) TE41434D-0 was issued by the U.S. Fish and Wildlife Service (USFWS) on November 20, 2019, at which point MidAmerican began to implement MidAmerican’s Wind I-X HCP in compliance with the ITP. The goal of take compliance monitoring is to assess the level of incidental take of the Covered Species in the HCP (Section 5.1): Indiana bat (*Myotis sodalis*), northern long-eared bat (*M. septentrionalis*), little brown bat (*M. lucifugus*), tricolored bat (*Perimyotis subflavus*), and bald eagle (*Haliaeetus leucocephalus*).

This memo provides a summary of take compliance during bat compliance monitoring and bald eagles found between January 1 and December 31, 2022. Operations and maintenance (O&M) searcher efficiency (SEEF) trials conducted during the third permit year (November 20, 2021 – November 19, 2022) are also summarized in this memo.

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### **BAT INTENSIVE MONITORING SUMMARY**

Western EcoSystems Technology, Inc. (WEST) conducted the third year of bat compliance monitoring from July 1 – October 15, 2022, in accordance with the HCP's compliance monitoring protocol (HCP Section 5.41, Appendix K) and the ITP conditions (Conditions E and F). Standardized carcass searches were conducted on the entire gravel turbine pad and all gravel access roads within a 100-meter (m; 328-foot) radius of each turbine. Turbines at the Eclipse and Rolling Hills Wind Energy Facilities (Eclipse and Rolling Hills, respectively) were repowered during the study period, causing accessibility issues in active construction zones that resulted in fewer surveys completed than were scheduled. Bias trials were conducted to measure SEEF and carcass persistence rates.

During the monitoring period, 27,665 searches were conducted and 1,215 bat carcasses were found (Table 1). Three Covered Bat Species were found: a little brown bat carcass was found at the Pomeroy Wind Energy Facility (Pomeroy) on August 8, 2022; a tricolored bat carcass was found at the Century Wind Energy Facility (Century) on August 29, 2022; and a tricolored bat carcass was found at Rolling Hills on September 16, 2022.

Initially identified as an unidentified bat species, the little brown bat carcass found at Pomeroy was identified and confirmed by WEST bat biologists as a little brown bat on August 8, 2022. The Covered Species identity was unambiguously confirmed using deoxyribonucleic acid (DNA) analysis on September 12, 2022. USFWS was notified of the confirmed identification on September 21, 2022. The little brown bat carcass is preserved at the Pomeroy O&M building freezer.

The tricolored bat carcass found at Century on August 29, 2022, was identified and confirmed by WEST bat biologists on the same day. Covered Species identity was unambiguously confirmed using DNA analysis on October 28, 2022. USFWS was notified of the confirmed identification on November 2, 2022. The tricolored bat carcass is preserved at the Ida Grove Wind Energy Facility (Ida Grove) O&M building freezer.

The tricolored bat carcass found at Rolling Hills was identified and collected as an unidentified bat species on September 16, 2022. WEST bat biologists updated the identity of the species as a tricolored bat on September 19, 2022. The Covered Species identity was unambiguously confirmed using DNA analysis on November 11, 2022. USFWS was notified of the confirmed identification on November 15, 2022. The tri-colored bat carcass is preserved at the Ida Grove O&M building freezer.

To measure detection bias, 525 SEEF carcasses were placed, of which 508 were available to be found. To measure carcass persistence bias, 402 carcass persistence trials were conducted during the 2021 compliance-monitoring year.

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**Table 1. Total Number of Bat Carcasses Discovered during Bat Compliance Monitoring at the MidAmerican Energy Company’s Iowa Wind I-X Wind Energy Facilities from July 1 to October 15, 2022.**

Facility	Eastern Red Bat	Hoary Bat	Big Brown Bat	Silver-haired Bat	Evening Bat	Tri-colored Bat <sup>1</sup>	Little Brown Bat <sup>*</sup>	Seminole Bat	Unidentified Non-Myotis Bat <sup>**</sup>	Indiana Bat <sup>*</sup>	Northern Long-eared Bat <sup>*</sup>	Total
Adair	26	13	10	0	1	0	0	0	0	0	0	50
Adams	17	4	13	2	0	0	0	0	0	0	0	36
Carroll	20	11	5	2	0	0	0	0	0	0	0	38
Century	60	33	7	13	0	1	0	0	0	0	0	114
Charles City	9	4	9	10	1	0	0	0	0	0	0	33
Eclipse	20	16	1	1	3	0	0	0	0	0	0	41
Highland	62	27	17	7	0	0	0	0	0	0	0	113
Ida Grove I	57	27	39	4	0	0	0	0	0	0	0	127
Intrepid	26	17	16	4	0	0	0	0	0	0	0	63
Laurel	50	22	8	19	0	0	0	0	0	0	0	99
Lundgren	31	9	8	2	0	0	0	0	0	0	0	50
Macksburg	11	3	1	2	4	0	0	0	0	0	0	21
Morning Light	13	9	1	2	0	0	0	0	0	0	0	25
O'Brien	28	18	9	3	0	0	0	0	0	0	0	58
Pomeroy	26	15	5	0	0	0	1	0	0	0	0	47
Rolling Hills	60	26	23	5	6	1	0	0	0	0	0	121
Victory	18	8	2	0	0	0	0	1	0	0	0	29
Vienna	28	11	4	19	0	0	0	0	0	0	0	62
Walnut	24	11	13	1	0	0	0	0	0	0	0	49
Wellsburg	20	7	0	11	0	0	0	0	1	0	0	39
<b>Total</b>	<b>606</b>	<b>291</b>	<b>191</b>	<b>107</b>	<b>15</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1,215</b>

<sup>\*</sup> Covered species included in the Habitat Conservation Plan.

<sup>\*\*</sup> DNA (deoxyribonucleic acid) identification inconclusive.

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### **OPERATIONS AND MAINTENANCE SCANS SUMMARY**

MidAmerican trained O&M technicians in carcass search and identification methods in accordance with the HCP's compliance monitoring protocol (HCP Section 5.4.2, Appendix K) and the ITP conditions (Conditions E and F). Trained O&M technicians conducted road and pad surveys of all roads within 100-m for bat carcasses and scanned roads, pads, and a surrounding 100-m radius plot for eagle carcasses at each wind turbine every month when technicians visited for regular maintenance.

O&M scans were conducted between January 1 and December 31, 2022, during which four eagle carcasses were found: one at the O'Brien Wind Energy Facility (O'Brien), one at the Macksburg Wind Energy Facility (Macksburg), one at the Wellsburg Wind Energy Facility (Wellsburg), and one at Eclipse (Table 2). An additional eagle carcass was found incidentally at the Highland Wind Energy Facility (Highland). No Covered Bat Species were found during O&M road and pad searches.

One eagle carcass was found by O&M staff conducting an eagle scan at O'Brien Turbine 96 on February 25, 2022. The USFWS was verbally notified of the find on February 25, 2022. The carcass is preserved at the O'Brien O&M building freezer, where it will remain until further arrangements can be made to transport the carcass to the National Eagle Repository or other location at the directive of the USFWS.

One eagle carcass was found by O&M staff conducting eagle scans at Macksburg Turbine 6 on February 28, 2022. The USFWS was verbally notified of the find on February 28, 2022. The carcass is preserved at the Macksburg O&M building freezer, where it will remain until further arrangements can be made to transport the carcass to the National Eagle Repository or other location at the directive of the USFWS.

One eagle carcass was found by O&M staff conducting eagle scans at Wellsburg Turbine 57 on March 21, 2022. The USFWS was verbally notified of the find on March 22, 2022. The carcass is preserved at the Wellsburg O&M building freezer, where it will remain until further arrangements can be made to transport the carcass to the National Eagle Repository or other location at the directive of the USFWS.

One eagle carcass was found incidentally at Highland Turbine 166 on May 3, 2022 by a WEST field supervisor while conducting O&M SEEF trials. The USFWS was verbally notified of the find on May 3, 2022. The carcass is preserved at the Highland O&M building freezer, where it will remain until further arrangements can be made to transport the carcass to the National Eagle Repository or other location at the directive of the USFWS.

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One eagle carcass was found by O&M staff conducting eagle scans at Eclipse Turbine 51 on September 12, 2022. The USFWS was verbally notified of the find on September 12, 2022. The carcass is preserved at the Eclipse O&M building freezer, where it will remain until further arrangements can be made to transport the carcass to the National Eagle Repository or other location at the directive of the USFWS.

**Table 2. Bald Eagle Carcasses Discovered during Operation and Maintenance (O&M) Scans and as Incidental Finds at MidAmerican Energy Company's Iowa Wind I-X Wind Energy Facilities from January 1 to December 31, 2022.**

Facility	O&M Scans	Incidental Finds	Total
Adair	0	0	0
Adams	0	0	0
Carroll	0	0	0
Century	0	0	0
Charles City	0	0	0
Eclipse	1	0	1
Highland	0	1*	1
Ida Grove I	0	0	0
Intrepid	0	0	0
Laurel	0	0	0
Lundgren	0	0	0
Macksburg	1	0	1
Morning Light	0	0	0
O'Brien	1	0	1
Pomeroy	0	0	0
Rolling Hills	0	0	0
Victory	0	0	0
Vienna	0	0	0
Walnut	0	0	0
Wellsburg	1	0	1
<b>Total</b>	<b>4</b>	<b>1</b>	<b>5</b>

\* Found during O&M searcher efficiency trial placements by Western EcoSystems Technology, Inc. staff.

## OPERATIONS AND MAINTENANCE SEARCHER EFFICIENCY

MidAmerican is currently collecting data to measure SEEF of O&M technicians at each Project. SEEF trials were conducted in the same areas as O&M scans. SEEF estimates will be used to adjust eagle carcass counts into take estimates. SEEF trials were stratified by O&M building, under the assumption that crews associated with each O&M building conducted scans at all facilities that are serviced by that crew. WEST placed 418 SEEF carcasses (i.e., turkey decoys) for O&M technicians during the 2021–2022 permit year. Data is currently still be analyzed and final values will be provided at the Annual meeting, April 12, 2023.

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### **CONCLUSION**

A third full year of compliance monitoring for the Projects has been completed, and the data presented here will be used to facilitate discussion during the annual meeting with the USFWS, per requirements of the HCP (Section 5.5). Zero Indiana bats, zero northern long-eared bats, one little brown bat, and two tri-colored bats were found during 27,665 searches in 2022. Four bald eagle carcasses were found during scheduled O&M scans and one was found incidentally in 2022. Reporting of each find occurred as directed by Condition O of ITP TE41434D-0. The information presented in this memo will be combined with past monitoring data collected during years one through two of the ITP (2020–2021) and future monitoring data collected during years four through five of the ITP (2023–2024) to develop 5-year take estimates (Table 4) to inform discussion of HCP implementation, effectiveness, and adaptive management decisions during the Decision Meeting per the HCP requirements (Section 5.5).

### **LITERATURE CITED**

MidAmerican Energy Company (MidAmerican). 2019. Final Habitat Conservation Plan: MidAmerican Energy Company Iowa Wind Energy Project Portfolio. MidAmerican, Des Moines, Iowa. April 2019. 182 pp. + appendices and addenda. Available online: [https://downloads.regulations.gov/FWS-R3-ES-2018-0037-0107/attachment\\_1.pdf](https://downloads.regulations.gov/FWS-R3-ES-2018-0037-0107/attachment_1.pdf)

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**Table 4. MidAmerican Energy Company Wind I-X Habitat Conservation Plan Five-year "Snapshot" of Commitment Compliance (ITP effective dates: 11/20/2019 – 11/19/2049)**

Commitment	HCP Section(s)	Incidental Take Permit (ITP) Year and Date When Commitment Accomplished				
		1 2020	2 2021	3 2022	4 2023	5 2024
Implement seasonal and Project-specific turbine operational adjustments	5.3.2	Feathering, all projects: 3/15–11/15/2020; Raised cut-in, four projects: 7/15–9/30/2020	Feathering, all projects: 3/15–11/15/2021 - 78.96%; Raised cut-in, four projects: 7/15–9/30/2021 – 80.5%	Feathering, all projects: 3/15–11/15/2022 - 83.76%; Raised cut-in, four projects: 7/15–9/30/2021 – 72.55%		
Implement carcass removal program	5.3.2	1/1–12/31/2020				
Initial payments to conservation funds (eagle, bat, and mitigation lands)	5.3.3.3, 6.3	Payment 2019				
Technical Review Team meeting (MidAmerican, USFWS, IDNR, Mitigation Entity).	5.3.3.3	Refer to mitigation annual report				
Annual report to USFWS (by March 31)	5.3.3.3, 5.6, 6.3	03/31/2021	03/31/2022	3/31/2023		
Conduct compliance monitoring	5.4, Appendix K	Intensive monitoring: 7/1–10/15/2020; O&M scans: 1/1–12/31/2020	Intensive monitoring: 7/1–10/15/2021; O&M scans: 1/1–12/31/2021	Intensive monitoring: 7/1–10/15/2022; O&M scans: 1/1–12/31/2022		
Update EoA and SC with previous year's monitoring results	5.4, Appendix K					
Decision meeting to evaluate adaptive management (April 2025)	5.5					
Annual USFWS meeting (April)	5.5, 8.0	4/15/2021	4/22/2022	TBD		
Report Covered Species fatalities to USFWS within 24 hours of positive identification	5.5.1.1, 5.5.2.1	Ongoing	Ongoing	Ongoing		
Annual mitigation report to the Technical Review Team (by March 31)	5.6	03/31/2021	03/31/2022	03/31/2023		
Letter to USFWS certifying funding has been allocated for HCP administration and compliance monitoring (by March 31)	6.1	03/31/2021	03/31/2022	03/31/2023		
Financial information (30 CFR § 800.23(b)(4)) to USFWS (within 90 days of FY close)	6.2	03/31/2021	03/31/2022	03/31/2023		
Mitigation fund report (April 30)	6.3	4/30/2021	4/30/2022	4/30/2023		
Notify USFWS of an administrative change (within seven days of change)	8.4.1	Ongoing				
Store all carcasses collected in a freezer at the Project O&M & submit hair/tissue samples to USFWS	Appendix K	Ongoing	Ongoing	Ongoing		

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**Note:** An adaptive management response may trigger additional commitments during the ITP term.  
A changed circumstance response may trigger additional commitments during the ITP term.

