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## TECHNICAL MEMORANDUM

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**Date:** November 2, 2016, revised July 27, 2017

**To:** Scott Pruitt, Marissa Reed, U.S. Fish and Wildlife Service, Bloomington Field Office

**From:** Quintana Hayden and Cara Meinke, Western EcoSystems Technology, Inc. and Erin O'Shea and Christina Calabrese, EDP Renewables, North America

**Subject:** Mitigation Banking-Style Option for the Headwaters Wind Farm Habitat Conservation Plan

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### BACKGROUND

The memo that follows describes a proposed approach to the structure and function of a mitigation “bank” style option for EDP Renewable’s (EDPR) Headwaters Habitat Conservation Plan (HCP). EDPR is not proposing that a formal mitigation bank be established, rather that the concept be used to facilitate using a mitigation property to fulfill mitigation for more than one HCP. The purpose of establishing this option would be to allow EDPR to store surplus credit from the mitigation projects secured for the Headwaters HCP and enable that surplus credit to be withdrawn to offset the impact of take under other EDPR HCPs currently in development in U.S. Fish and Wildlife Service (USFWS) Region 3. Surplus credit refers to the number of Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) (Covered Species) credits produced by the mitigation projects beyond the number of bats needed to offset the impact of take under the Headwaters HCP. The mitigation projects include winter habitat protection through gating of Wind Cave in Kentucky, and protection of swarming and summer habitat through conservation of a yet-to-be-identified property.

### MITIGATION BANK OPTION

Under the mitigation bank-style option, EDPR proposes to establish an amount of mitigation credit conferred by the Headwaters HCP mitigation projects for each of the Covered Species in a stand-alone document to be agreed upon by EDPR and the USFWS. The document could be attached to the Headwaters HCP and any other relevant HCPs (e.g., the in-development HCP for EDPR’s Meadow Lakes project) as an appendix for public review.

The mitigation credit document would be accompanied by a ledger for tracking the amount of credit used by each EDPR HCP in the Headwaters HCP project file (and other HCPs, as appropriate). This ledger would be a living document that would be updated every fifth year of each HCP’s Incidental Take Permit. The updated ledger would accompany that year’s monitoring report to the USFWS.



Although the mitigation projects described in the mitigation credit document will be secured by EDPR in their entirety, the credit necessary to offset the impact of taking for the Headwaters HCP and other EDPR HCP(s) would be withdrawn just prior to the five-year period for which it is needed. At the end of each five-year period, the amount of mitigation credit withdrawn for that period will be compared to the actual impact of take estimated from the monitoring data collected during the same five-year period and any surplus mitigation credit would be deposited back into the bank. Conversely, if the amount of mitigation credit withdrawn for the period was less than the actual impact of take, the deficit of mitigation credit would be added to the amount of credit withdrawn for the next five-year period<sup>1</sup>. In either case, the mitigation would remain ahead of the taking because EDPR will secure the initial mitigation upfront or no later than two years after receiving the Incidental Take Permit and the ledger is simply a process by which to track how much of the mitigation credit has been assigned to offset the impact of take over time. If additional mitigation projects are secured in the future, their associated mitigation credit may be added to the ledger.

An example of this process, using hypothetical numbers, is shown below. In the example, the initial predicted impact of take for HCP A is 2 Indiana bats and 1 northern long-eared bat per year. The initial predicted impact of take for HCP B, which is approved two years after HCP A, is 4 Indiana bats and 2 northern long-eared bats per year. Both HCPs are found to have a surplus of mitigation credit after the first five-year period, which EDPR considers a likely scenario for their HCPs due to the conservative take prediction approach used in these HCPs. The example only shows the first 15 years of HCP A, to demonstrate the process; the next entry in this ledger would be the withdrawal of the Period 3 credit for HCP B (unless a third HCP was added prior to that event, or HCP B again has a surplus to deposit from Period 2 before making the Period 3 withdrawal).

### Hypothetical Example Demonstrating the Ledger Process

Year	Action	Amount		Total Mitigation Credit in “Bank”	
		INBA	NLEB	INBA	NLEB
2017	Bank Established	+ 850	+ 250	850	250
2017	Withdrawal – HCP A, Period 1	- 10	- 5	840	245
2019	Withdrawal – HCP B, Period 1	- 20	- 10	820	235
2022	Deposit – HCP A, Period 1 (surplus)	+ 2	+ 1	822	236
2022	Withdrawal – HCP A, Period 2	- 8	- 4	814	232
2024	Deposit – HCP B, Period 2 (surplus)	+ 9	+4	823	236
2024	Withdrawal – HCP B, Period 2	- 11	- 6	812	230
2027	Withdrawal – HCP A, Period 3	- 8	- 4	804	226

INBA = Indiana bat, NLEB = Northern long-eared bat

<sup>1</sup> It is very likely that this event would be accompanied by an adaptive management action, due to the higher-than-expected actual take. The estimated take, and consequently the amount of mitigation credit necessary, for the next five-year period after the adaptive management action would be calculated as described in the HCP’s adaptive management plan.

