

# Post-Reclamation Long-Term Monitoring and Care at the Shullsburg Mine in the Upper Mississippi Valley Lead-Zinc District<sup>1</sup>

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**Abstract:** The lead-zinc deposits of the Upper Mississippi Valley had a 300-year history of continuous mining and inspired one of the earliest mineral rushes in the United States. The Shullsburg mine was one of only two mines in the region still in production after state permitting was introduced in the late 1970s. Reclamation to wildlife habitat began on a portion of the tailings pile in 1985 and continued on the remainder of the site into the early 2000s. Most of the 30-hectare site is management as shortgrass prairie and has become home to seven breeding pairs of state-threatened Henslow's Sparrow (*Ammodramus henslowii*), which inhabits open grasslands. The Wisconsin Department of Natural Resources, the regulatory authority, issued the Certificate of Completion in 2014, which initiated the required 20-year long-term monitoring and care period. During this period, annual site visits using a simple rapid assessment method are conducted at ten permanent observation points to identify hazards, limitations or threats, and management recommendations. The rapid assessment method was created by Applied Ecological Services, Inc. The latest site visit in fall 2018, found that more than 70% of the reclaimed tailings pile is revegetated. A few areas with minor erosion and red spots were identified for further remediation. Seven different invasive species with the potential to cause future management problems were identified. Woody vegetation, mostly eastern cottonwood (*Populus deltoides*) is starting to encroach on the top of tailings mound. Almost 5 years into the long-term monitoring, Shullsburg mine reclamation provides a secure, aesthetically compatible, ecologically functional, and stable wildlife habitat area.<sup>3</sup>

**Additional Keywords:** wildlife, habitat, Wisconsin.

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1. Poster paper presented at the 2019 National Meeting of the American Society of Mining and Reclamation, Big Sky, MT. Welcome Back to Montana: The Land of Reclamation Pioneers, June 3–7, 2019. Published by ASMR, 1305 Weathervane Dr., Champaign, IL 61821.
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  3. Work reported here was conducted near 42°32'32.3"N, 90°14'45.4"W.