

25 August 2025

Richard Davis, Supervisor  
Dean Baker, Planning Commission Chair  
Springfield Charter Township  
12000 Davisburg Road  
Davisburg, MI 48350

Re: Natural features within Shiawassee Basin Preserve

Dear Mr. Davis and Mr. Baker:

I am writing to bring to your attention the important natural resources supported by the Shiawassee Basin Preserve (SBP) within the Shiawassee River watershed. With the Township considering the proposed nearby gravel mining operation and continually making decisions about stewardship activities on its properties, I wanted to ensure you are aware of the many unique natural features supported by these lands.

The Michigan Natural Features Inventory (MNFI), a program of Michigan State University Extension, provides information to a variety of partners and stakeholders to assist the conservation of Michigan's biodiversity. We manage the State's Natural Heritage Database (NHD), the most comprehensive database of information about our high-quality natural communities and rare plant and animal species. Our staff has expertise with Michigan's native ecosystems and plant and animal species and conducts research, monitoring, inventories, and educational activities to support the needs of our conservation partners. The MNFI has collaborated with the Township and other agencies and organizations to complete research and monitoring within the SBP for well over a decade, with work to monitor Poweshiek skipperling, eastern massasauga, and their habitats continuing today.



## MSU EXTENSION

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counties cooperating.

Based on information housed in the NHD, below are the natural features known to occur in the SBP:

- **Prairie fen:** A groundwater-fed wetland type dominated by sedges and grasses and known to support high biodiversity, including endangered and threatened plant and animal species. Long Lake Fen is considered a high-quality example of this natural community with excellent to good estimated viability.
- **Poweshiek skipperling** (*Oarisma poweshiek*, Federal and State Endangered): Prairie fens of the SBP host the largest of only two remaining populations of this critically endangered butterfly in the United States and are crucial to the species' survival. The second population is also within the Shiawassee River Basin and within five miles of SBP.
- **Eastern massasauga** (*Sistrurus catenatus*, Federal and State Threatened): Numerous detections of this rattlesnake have been recorded in and around prairie fens of SBP from 1993 through 2024. This population is critical to recovery of this species across its range.
- **Henslow's sparrow** (*Centronyx henslowii*, State Endangered): This declining grassland bird species was recorded in prairie fen within SBP in 2024.
- **Huron River leaf hopper** (*Flexamia huroni*, State Endangered): This insect species was documented within prairie fen of SBP and is only known to occur in association with its host plant, mat muhly.

- **Goldenseal** (*Hydrastis canadensis*, State Threatened): A rare plant species documented near the edge of prairie fen within SBP in 2008.
- **Mat muhly** (*Muhlenbergia richardsonis*, State Threatened): A rare grass species that is the host plant for Huron River leaf hopper and a suspected host plant for Poweshiek skipperling.
- **White lady's slipper** (*Cypripedium candidum*, State Threatened): A rare plant species found in prairie fen of SBP first documented in 2005 and reconfirmed in 2024.
- **Blanding's turtle** (*Emydoidea blandingii*, State Special Concern): Several observations of this turtle species were recorded within SBP from 2019 through 2025. This species has declined throughout its range and is being considered for federal listing.
- **Yellow bumble bee** (*Bombus fervidus*, State Special Concern): This bumble bee species was documented in prairie fen of SBP during 2021 through 2025.
- **Blazing star borer** (*Papaipema beeriana*, State Special Concern): This rare moth species was recorded in prairie fen of SBP in 2022. Blazing star plants (*Liatris* spp.) serve as its larval host plant.
- **Pickerel frog** (*Lithobates palustris*, State Special Concern): Several observations of this frog species were documented within wetlands of SBP from 2000 through 2024.
- **Rainbow** (*Cambarunio iris*, State Special Concern): This rare freshwater mussel species was observed in the Shiawassee River between Long Lake and Davis Lake in 2019.
- **Tamarack tree cricket** (*Oecanthus laricis*, State Special Concern): This tree cricket inhabits dense to open tamarack stands and was documented in prairie fen of SBP in 1999.

Wise land use planning and ongoing stewardship activities will be necessary to ameliorate the threats facing these unique natural features and ensure their continued existence. Prairie fens and the rare species supported by them are vulnerable to hydrologic changes within the surrounding watershed, which can be caused by a variety of activities, such as modifying surface drainage, extracting groundwater via wells, and altering land use within aquifer recharge areas. Hydrologic investigations of other Michigan prairie fens indicated major recharge areas could occur up to 15 miles away. Other threats to these ecosystems and species include nutrient loading from the surrounding landscape, shrub and tree encroachment due to fire suppression/altered hydrology, and the expansion of invasive plant species. I applaud Springfield Township for its long-term commitment to the protection and conservation of the ecosystems and species occurring on its lands. By dedicating substantial time and money to these natural resources, you have helped ensure the conservation of biodiversity for current and future generations. Ongoing conservation action by the Township and its partners will be necessary to maintain these natural communities and species against existing and emerging threats to their survival.

I appreciate your consideration of this information as you make decisions that could affect these important species and ecosystems. Please feel free to contact me at monfilsm@msu.edu or 517-284-6205 if you have questions or would like additional information about the natural features documented on Township properties.

Sincerely,



Michael J. Monfils, Ph.D.  
Director  
Michigan Natural Features Inventory