

MDEQ Screening for Threatened & Endangered Species





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MDEQ Screening for T&E Species

Background ...

- The DNR Environmental Review Program had been discontinued.
- An *interim* DEQ T&E review process had been in place since then.
- Improved screening for T&E species developed for the permit administrative review process.
 - Creation of the T&E Coordinator role
 - Developed T&E Checklist for staff
 - Ensure that staff are familiar with the *federally listed* species (and habitats) occurring within their counties
 - staff T&E trainings throughout the state
 - development and release of the “Bat Tool” and staff training

MDEQ “T&E Checklist”

Administrative review for T&E species
and rare communities

A logical “checkbox” review process for MDEQ staff, in the form of a dichotomous key.

- If “true”, go to ...
- If “false”, go to...

MDEQ T&E Checklist

state-listed species and rare/imperiled communities

- MiWaters T&E “hit” within the vicinity of the proposed project?
- Is appropriate habitat actually present?
(**aerials**, photos, T&E habitat survey results, etc.)
- Review of proposed activities and possible effects.
- **Staff unsure of habitat or possible effects? *Contact Keto.***
 - MNFI GIS spatial data analysis; coordinate with MDNR; possible field review
- Outcome: Is there a potentially a state-listed T&E impact or not?
 - *If so, then Public Notice any “Minor Project” or “General Permit” project.*

MDEQ T&E Checklist


federal-listed species

- Staff are expected to know the **federal-listed species** *and* **federal critical habitat** for *their counties*.
- MiWaters “hit” for **federal-listed** species or **critical habitat**?
- Is habitat actually present for a T&E species? (**aerials**, photos, T&E survey results, etc.)
- **Unsure? *Contact Keto*.**
 - MNFI GIS spatial data analysis; discussion and possible field inspection with USFWS
- Determine whether the species may exist within the project limits or nearby.
 - *If so, then **Red File** the project.*

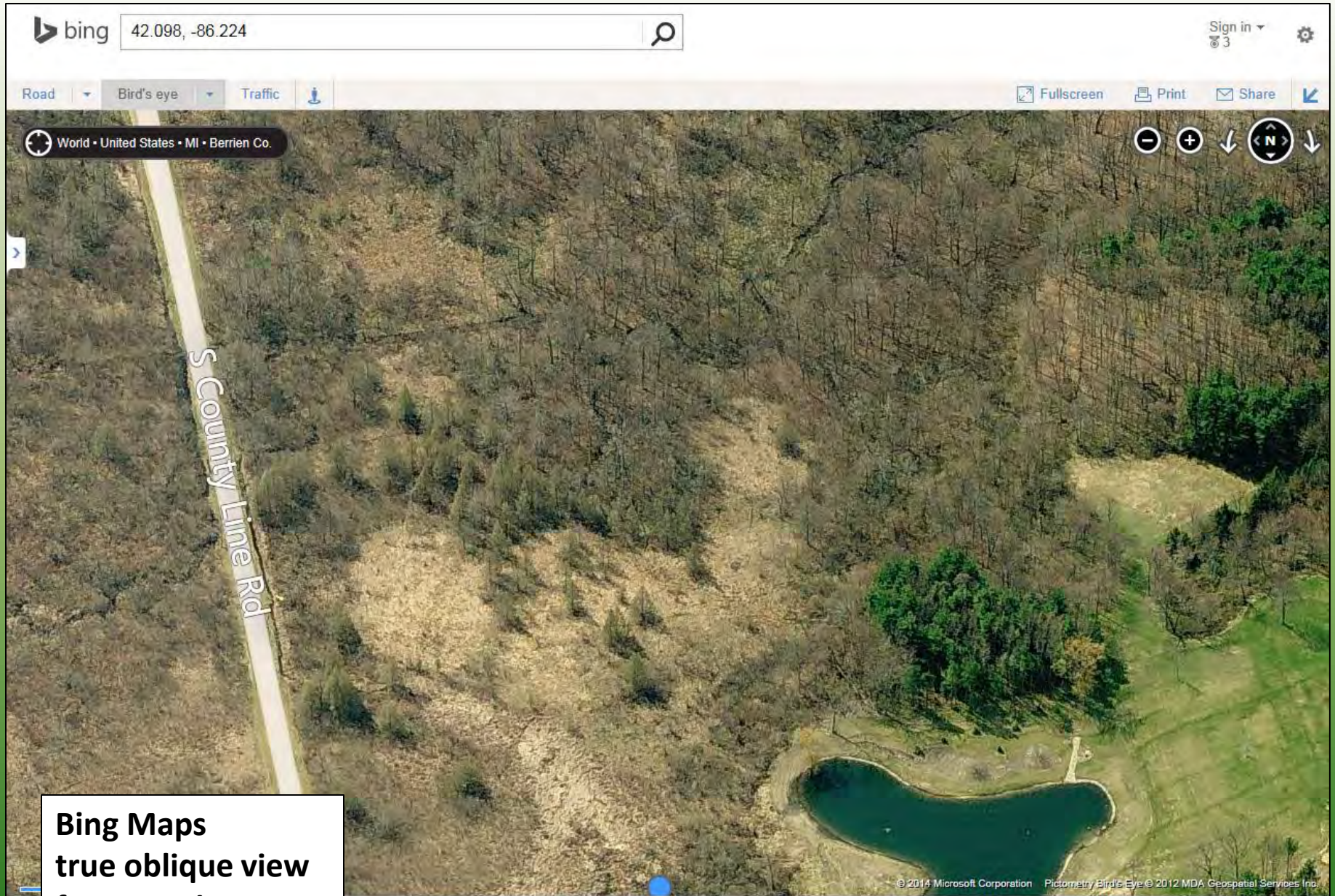
**EXAMPLE:
hypothetical
project in
Van Buren
County...**

**Minor Project pond
creation/extension in
wetland (less than
1/3 acre of wetland
impact)**



An aerial photograph of a wetland area. A dark, irregularly shaped pond is located in the upper left. A yellow line is drawn on the image, starting from the pond's edge and extending to the right, enclosing a large area of land. This area contains a mix of dark, dense vegetation (likely tamaracks) and lighter, sandy or silty ground. The surrounding landscape is a mix of these two types of terrain. A straight, light-colored path or road runs vertically along the right edge of the image.

High-Res Aerial:
tamaracks,
apparent sedge mat,
and groundwater seepage
signatures?



**Bing Maps
true oblique view
from north**

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Michigan's Natural Communities

Prairie Fen

State Rank: S3

Overview

Prairie fen is a wetland community dominated by sedges, grasses, and other graminoids that occurs on moderately alkaline organic soil and marl south of the climatic tension zone in southern Lower Michigan. Prairie fens occur where cold, calcareous, groundwater-fed springs reach the surface. The flow rate and volume of groundwater through a fen strongly influence vegetation patterning; thus, the community typically contains multiple, distinct zones of vegetation, some of which contain prairie grasses and forbs.

Landscape Context

Prairie fens occur predominantly within poorly drained outwash channels and outwash plains in the interlobate regions of southern Lower Michigan. This area is comprised of coarse-textured end moraines and ice-contact features (eskers and kames) that are bordered by glacial outwash. Prairie fen often occurs where an outwash feature (channel or plain) abuts a coarse-textured end moraine or ice-contact feature.

Historically, the uplands surrounding prairie fens typically supported fire-dependent oak barrens and oak openings. Today, most of the surrounding uplands support closed-canopy oak forest (dry and dry-mesic southern forest), agriculture, or rural residential development.

Prairie fens typically occur as part of large wetland complexes that support a variety of wetland communities including emergent marsh, southern wet meadow, wet prairie, wet-mesic prairie, southern shrub-carr, and rich tamarack swamp. The community is frequently found along both small lakes and the upper reaches of streams and rivers.

Soils


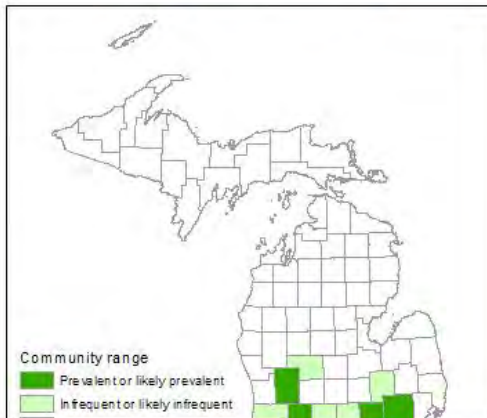


Photo by Michael A. Kost
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County Distribution Map



Community range

- Prevalent or likely prevalent
- Infrequent or likely infrequent

100%



MDEQ T&E Checklist

Therefore...

There may be impacts to a **state-listed rare/imperiled community** and/or **state-listed T&E species**.



- This project **must be public noticed** and go to next step to determine if it should also be processed as a Red File.
- **Onward to the next step (federal T&E review).**

MDEQ T&E Checklist

☐ Staff review of known **federal-listed** species in the county has been completed...

County	Species	Conservation Status	Habitat / Notes
Van Buren	Eastern prairie fringed orchid (<i>Plantathera leucophaea</i>)	Threatened	Mesic to wet prairies and meadows
	Indiana bat (<i>Myotis sodalis</i>)	Endangered	Summer habitat includes small to medium river and stream corridors with well developed riparian woods; woodlots within 1 to 3 miles of small to medium rivers and streams; and upland forests. Caves and mines as hibernacula.
	Northern long-eared bat <i>Myotis septentrionalis</i>	Proposed as Endangered	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
	Rufa Red knot (<i>Calidris canutus rufa</i>)	Proposed threatened	Only actions that occur along coastal areas during the Red Knot migratory window of MAY 1 - SEPTEMBER 30
	Eastern massasauga (<i>Sistrurus catenatus</i>)	Candidate	
Washtenaw	Mitchell's satyr butterfly (<i>Neonympha mitchellii mitchellii</i>)	Endangered	Fens; wetlands characterized by calcareous soils which are fed by carbonate-rich water from seeps and springs
	Pitcher's thistle (<i>Cirsium pitcheri</i>)	Threatened	Stabilized dunes and blowout areas
	Indiana bat (<i>Myotis sodalis</i>)	Endangered	Summer habitat includes small to medium river and stream corridors with well developed riparian woods; woodlots within 1 to 3 miles of small to

- Mitchell's Satyr
- EMR
- Indiana Bat
- N. Long-Eared bat
- Rufa Red Knot
- Pitcher's Thistle



<http://mnfi.anr.msu.edu/abstracts/zoology/Neor>

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Neonympha mitchellii mitchellii French Mitchell's satyr

Photo of female Mitchell's satyr by Jim McCormick

State Distribution

Best Survey Period

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
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Status: Federally endangered, state endangered

Global and state rank: G1G2T1T2/S1

Family: Nymphalidae

Range: Mitchell's satyr is known historically from approximately 30 sites in four states including southern Michigan, northern Indiana, northern Ohio, and northern New Jersey. An additional historical population has been reported from central Maryland, but this record has never been verified and remains questionable (U.S. Fish and Wildlife Service [USFWS] 1998). Most of the historical sites are known from Michigan, possibly indicating the former core of this species' range (Szymanski 1999). Today, Mitchell's satyr occurs primarily in southern Michigan and at only one site in northern Indiana. The species is considered extirpated in Ohio and New Jersey due to habitat loss and overcollecting (Evers 1994, USFWS 1998).

A closely related subspecies, the Saint Francis satyr (*Neonympha m. francisci*) currently occurs as a single population in the sandhills of North Carolina.

and in Mississippi in 2003 (Hart 2004). Preliminary genetic analysis suggests that these populations are not *Neonympha mitchellii mitchellii*, but their biogeographic history and the taxonomic relationships between these populations and those occurring in Indiana, Michigan, and North Carolina have not yet been established (Hamm pers. comm. 2012).

State distribution: Mitchell's satyr has been recorded from at least 22 sites in 11 counties, extending as far north as Kent County (Wilsmann and Schweitzer 1991, USFWS 1998). Mitchell's satyr has not been documented at six of these sites in over a decade, and these sites are believed to be extirpated. Two counties (Kent and Lenawee) are no longer thought to support extant satyr populations (USFWS 1998). Comprehensive surveys of potential fen habitat resulted in the discovery of three additional occupied sites in 1999, 2002 and 2005 (Hyde et al. 2009). Surveys from 2007 to 2011 of known sites and potential habitat have confirmed extant populations at only 16 sites in 9 counties, primarily in southwest Michigan. Of the 16 extant populations, only 6 sites are considered likely viable. These six sites, which consistently support

Downloaded (2.53 MB of 2.54 MB) : http://mnfi.anr.msu.edu/abstracts/zoology/Neonympha_mitchellii_mitchellii.pdf

MDEQ T&E Checklist

- STEP 3 (conclusion)
 - Project may impact **federally listed T&E species**
(e.g., Mitchell's Satyr)



- The proposed project **does not qualify for General Permit or Minor Project** categories.
- **Public Notice** the project.
- **Project is *also* a Red File.**