
Broad Incidental Take Permit/Authorization Grassland and Savanna Protocols

Silphium Borer Moth (*Papaipema silphii*)

This Broad Incidental Take Permit/Authorization (BITP/A) has been issued by the Wisconsin Department of Natural Resources to allow landowners to conduct certain grassland and savanna management activities while remaining in compliance with the state's endangered species law (s. 29.604, Wis. Stats.). This BITP/A allows for the incidental taking (mortality) of the state endangered silphium borer moth (*Papaipema silphii*) that may occur as a result of the grassland and savanna management activities listed below.

Background information/criteria on this BITP/A must also be reviewed and followed:

https://dnr.wi.gov/topic/ERReview/Documents/GSP_Overview.pdf

Protocols for all other species covered under this BITP/A can be found here:

<https://dnr.wi.gov/topic/ERReview/ItGrasslands.html>

Note: If carrying out a given protocol is not feasible, or multiple listed species in a given management area pose conflicts, contact the Bureau of Natural Heritage Conservation (NHC) at DNRRERreview@wisconsin.gov. Staff in NHC will work with species experts and managers to establish an acceptable protocol for a given site that will allow for incidental take without further legal consultation or public notice.

I. Species Background Information

State Status: Endangered

Background information on the silphium borer moth can be found on the Wisconsin Department of Natural Resources' web page for the species:

<https://dnr.wi.gov/topic/EndangeredResources/Animals.asp?mode=detail&SpecCode=IILEYC0350>

II. Management Protocols for Permitted/Authorized Incidental Take

If the management activity is for the purpose of recovering, maintaining, or improving the grassland, prairie, savanna ecosystem that includes habitat for Silphium borer moths, then incidental take is allowed if the conditions listed below are followed:

A. Burning

1. If no monitoring of silphium borer moth is occurring, and

a. If burning in early spring (*see definitions*),

then you may burn up to 3/4 of a site's entire host plant population in any given spring, **as long as**, at least 1/3 of the entire host plant population remains unburned for at least two consecutive springs, and there is no more than 200 ft separating burned and unburned host plant populations.

b. If burning at other times of the year,

then you may burn up to 1/3 of the site's entire host plant population in any given 12 month period, **as long as**, at least 1/2 of the entire host plant population remains unburned for at least 3 consecutive growing seasons, and there is no more than 200 ft separating burned and unburned host plant populations.

2. If monitoring of silphium borer moth is occurring¹,

then other burn regimes may be employed under consultation with the Bureau of Endangered Resources.

B. Mowing/Haying

1. If no monitoring of silphium borer moth is occurring, and

a. If mowing/haying once between May 1 and June 20, or between Sept. 1 and Oct. 1,

then you may cut up to 1/2 of the site's entire host plant population, **as long as**, at least 1/3 of the entire host plant population remains uncut for at least 3 consecutive growing seasons, and there is no more than 200 ft separating cut and uncut host plant populations.

b. If mowing/haying once between Oct. 1 and May 1, or between June 20 and Sept. 1,

then there are no restraints on the activity.

2. If monitoring of silphium borer moth is occurring¹,

then other cutting regimes may be employed under consultation with the Bureau of Natural Heritage Conservation.

C. Selective Tree/Brush Cutting

As long as heavy equipment is not used and the host plants are not buried under cut materials, then there are no restraints on this activity.

D. Grazing

No incidental take is allowed under this management.

E. Use of Herbicide

As long as *silphium* species are not being affected, then there are no restraints on the use of herbicide.

¹At least 2 years of baseline monitoring must occur before management begins, and the monitoring must follow protocol acceptable to the Bureau of Natural Heritage Conservation.

Survey Protocols

Personnel conducting the surveys must be adequately trained in the use of sampling techniques and silphium borer moth identification. The training must include field experience.

Surveying for Adults

Sampling period: Sept. 1 to Sept. 20

Weather conditions: Air temp: > 50 F
Wind speed: < 15mph
Sky: overcast to partly cloudy (clear is OK if moonlight is minimal)
Moon phase: new moon is best (need minimal moonlight)
Humidity: > 60%

Time of day: 9:00 pm until 2 am

Number of visits per site: 2 visits per season, with not less than 5 days between visits

Sample effort per site: One for every 10 acres of *Silphium* occupied habitat

Sampling method: Night-lighting using a UV-light and a white sheet. The sheet must be monitored for a 5-hour period each time (a non-lethal funnel trap may also be used). Specimens should be released after handling and field identification, except for one voucher per site.

Surveying for Larvae (Preferred method)

Because of the uncertainty of where adults originate from and the very low and variable capture rates associated with night-lighting, surveying for larvae of silphium borer moths is the best way to detect their presence. However, adults are the best way to confirm the species identification. To do this, larvae can be either hand-reared, or adults can be night-lighted for in September following the above procedures.

Sampling period: May 15 to June 15

Weather conditions: Irrelevant

Time of day: Irrelevant

Number of visits per site: One per year

Sample effort per site: Inspect all plants on the site up to 200 individuals. If more than 200 plants are present, randomly select plants within all large host plants patches on the site.

Sampling method: The presence of a hole and abundant frass at the base of a host plant stem indicates the presence of a stem borer larvae. Because, other borer moths may, on rare occasion, infest silphiums, training on the type of hole and frass left by the silphium borer moth verses other moth species will be required.

Definitions

Site: Any contiguous patch of prairie vegetation or clusters of patches of prairie vegetation not separated from one another by more than 200 ft. of open (non-prairie) cover or by more than 30 ft. of dense brush or tree cover. (Note: roads and trails do not constitute barriers to dispersal.) If the area straddles a property line, the different ownerships must be considered different sites, unless silphium borer moth survey/management agreements exist between the owners.

Early Spring: Any time before April 20.