
Broad Incidental Take Permit/Authorization Grassland and Savanna Protocols

Slender Shovel-headed Leafhopper (*Attenuipyga vanduzeei*)

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 slender shovel-headed leafhopper (*Attenuipyga vanduzeei*) 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 slender shovel-headed leafhopper 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=IIHOM26010>

II. Management Protocols for Permitted/Authorized Incidental Take

If the management activity is for the purpose of recovering, maintaining, or improving the grassland, prairie, or savanna ecosystem that includes habitat for the slender shovel-headed leafhopper, then incidental take is allowed if the conditions listed below are followed:

A. Burning

1. If no monitoring of the slender shovel-headed leafhopper is occurring, and
 - a. If burning in early spring (*see definitions*),

then you may burn up to 1/3 of the site's total area of dry to mesic prairie in any given spring, **as long as**, at least 1/2 of the dry to mesic prairie habitat remains unburned for at least two consecutive springs.
 - b. If burning at other times of the year,

then you may burn up to 1/4 of the site's total area of dry to mesic prairie in any given 12 month period, **as long as**, at least 2/3 of the dry to mesic prairie habitat remains unburned for at least two consecutive growing seasons.
2. If monitoring of the slender shovel-headed leafhopper is occurring¹,

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

B. Mowing/Haying

1. If no monitoring of the slender shovel-headed leafhopper is occurring, and
 - a. If mowing/haying once between May 11th and Sept. 30th, and
 - 1) If allowing at least 2 years before re-cutting more than 1/2 of the previously cut portion of the site's dry prairie habitat,

then you may cut up to 3/4 of the site's total dry to mesic prairie habitat at a minimum cut height of 6" above the ground.
 - 2) If allowing at least 3 years before re-cutting more than 1/2 of the previously cut portion of the site's dry to mesic prairie habitat,

then you may cut up to 7/8 of the site's total dry to mesic prairie habitat at a minimum cut height of 6" above the ground.
 - b. If mowing/haying between Oct. 1st and May 10th,

then there are no restraints on the activity.
2. If monitoring of the slender shovel-headed leafhopper 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, there are no restraints on this activity.

D. Grazing

Allowed only under consultation with the Bureau of Natural Heritage Conservation.

E. Use of Herbicide

As long as native prairie grasses are not being affected, there are no restraints on the use of herbicide.

¹ At 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 leafhopper genus *Attenuipyga* identification. The training must include field experience.

Sampling period: July 1 to Aug. 25

Weather conditions: Air temp: 75 to 90 F
Wind speed: depends on sampling method used (see below)
Sky: clear to partly cloudy
Foliage must be dry

Time of day: 10 am to sunset

Number of visits per site: Make a minimum of 3 visits in a season, with not less than 4 days between visits.

Sampling effort per site visit: Sample a minimum of 10 patches of *Mulenbergia cuspidata*, *Sporobolus heterolepis*, *Bouteloua curtipendula*, or some combination of these species, for every 20 acres of dry to dry-mesic prairie habitat. If the same site is to be resampled for multiple years, make note as to where the species is found, and be sure to resample those same spots in the future. The slender shovel-headed leafhopper tends to be localized in its distribution and remains true to those locations over time.

Sampling method:

Sweep netting: Wind speed must be below 10 mph. Use 15 to 18 inch diameter sweep nets with 3 to 5 foot long handles. Leafhoppers are sensitive to vibrations and movement, and quickly drop down into the duff when disturbed. Therefore, the target plants must be approached quickly, but quietly. Make just one fast sweep tight across the plant's surface as you quickly step (lunge) towards the plants with the net well out in front of you. If you are in a large patch of target grasses, additional sweeps may be made with each long forward step through the patch. Approach target plants with the sun in front of you (i.e., your shadow behind you). Technique is important.

or

Vacuum sampling (modified leaf blower): Wind speed may vary from 0 to 20 mph. Vacuum the surface and down into the duff of the target grasses. Under ideal weather conditions, the vacuum method is only slightly more effective than the sweep net at finding leafhoppers. However, under windy conditions (even just an occasional gust above 10 mph) and during temperatures either above or below 75 to 90 F, the vacuum is much more effective than the sweep net. Leafhoppers tend to retreat down into the duff when conditions are too cool, too desiccating (hot and sunny), or too windy.

Definitions

Site: Any contiguous patch of prairie vegetation or clusters of patches of prairie vegetation not separated from one another by more than 300 ft. of open (non-brush/tree) cover or by more than 20 ft. of dense brush/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 net-veined leafhopper survey/management agreements exist between the owners.

Early Spring: Any time prior to the 7th day after the first opening of pasque flowers (*Anemone patens*) on the site. If no pasque flowers are on site, the closest population with a slope aspect similar to the site in question may be used.