

**Protocol
for
Incidental Take Authorization**

Bell's vireo (*Vireo Bellii*)

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 DNREReview@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

A. Status

State Status: Threatened

USFWS Region 3 Species of Management Concern? Yes

Breeding Distribution and Abundance in Wisconsin: Irregularly distributed as a breeding species within its range in Wisconsin. It is uncommon in southwest and south-central Wisconsin, rare or locally uncommon in western Wisconsin, and rare in the southeast and central parts of the state. It is absent in the north (north of and including the counties of Burnett, Washburn, Rusk, Clark, Marathon, Shawano, and Oconto; Door excluded).

Global Range: Breeds from parts of California, southern Nevada, southwestern Utah, northwestern and east-central Arizona, southern New Mexico, northeastern Colorado, Nebraska, South Dakota, western North Dakota, southeastern Minnesota, southern Wisconsin, northeastern Illinois, northwestern and central Indiana, and southwestern Michigan south to northern Baja California, southern Sonora, Durango, and Tamaulipas, Zacatecas, southern and eastern Texas, north-central Louisiana, Arkansas, southwestern Tennessee and Kentucky, southern Indiana, and western Ohio. Winters from southern Baja California, casually along the southern tier of states from Arizona to Florida, and southern Sonora south, to Honduras.

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B. Habitat

General Habitat Description: Prefers brushy thickets, clumps of shrubs and saplings, shrubby edges of woods, or linear shrub/sapling cover for nesting (deciduous shrubs and saplings only), typically with adjacent grassy or herbaceous cover of moderate to tall height. Can be associated with wet or riparian areas (e.g., along streams, near swales, or in brushy draws and shallow ravines), but also occurs regularly in uplands. Suitable habitat is found in a variety of settings, including brushy pastures, old fields or other idle (uncut) grassland cover with shrub and sapling invasion, adjacent to woods with shrubby edges, or in grassy areas edged by linear woody cover (e.g., fields divided by shrub rows and shrubby fence lines or woody growth along streams, ditches, trails, railroad beds). Amount and distribution of woody cover is variable. In Oklahoma, shrubs comprised from 9.5 to 17 % of the vegetation in Bell's vireo territories, while trees (all less than 25 feet tall; most between 6 and 25 feet tall) comprised 19 to 33%. In Missouri, Bell's vireos preferred habitat with >280 stems per acre less than 1 inch d.b.h.; optimal habitat had < 850 stems/acre. At 5 sites in Wisconsin for which we have vegetation data, woody cover ranged from 25 to 82% (0 to 18% cover, 0 to 3 feet tall; 8 to 63% cover, 3 to 9 feet tall; 16 to 18% cover, 9 to 18 feet tall; 0 to 8% cover, >18 feet tall). However, woody cover may be restricted to one or a few shrub clumps in a large grassland area and thus can be less than 25%, and in some cases even less than 5 to 10%. Typical woody species include willow, dogwood, hawthorn, hazelnut, wild plum, alder, lilac, black cherry, black locust, and box elder, among others.

Critical Habitat Features: Typically requires brush clumps or thickets at least 12 -15 feet in diameter. Shrubs or saplings must have a spreading form with low branches and ideally are surrounded by grasses, other herbaceous vegetation, brambles (or lianas) tall enough to arch over the low branches. Woody plants preferably have a horizontal rather than vertical branch structure to facilitate nest building. Vegetation cover should be dense below a height of about 9 feet. Some of the shrubs or saplings in the breeding territory need to be at least 9 feet tall for singing perches.

C. Life History

Territory Size/Home Range: In the Midwest, territory size ranges from 0.25 to 3 acres with a mean of 1.24 acres. No information on home range.

Does Species Nest Colonially? Can occur in "loose" colonies; nests in Wisconsin typically are at least 300 feet apart.

Site Fidelity: In California, over ½ of nestlings return the following year to breed in the natal area. Birds in California and Arizona are known to nest close to previous years'

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nests.

Nest Location and Height: Nests placed at the edge of a thicket or shrub, an average distance of 20 inches in from the tip of a branch. Most nests located 1.5 to 5 feet above ground (range = 0.7 to 26 feet). Shrubs and saplings used as nest sites average 11 to 12 feet tall (range = 3 to 16 feet).

Number of Generations/Broods per Year: One, sometimes 2.

Resident or Migrant? Long-distance migrant; winters from northwest Mexico south to Honduras.

Breeding Season Dates for Wisconsin:

Arrival in spring: Spring migration runs from early May to early June, with a peak from 10 to 20 May.

Dates for nests with eggs: 28 May through 14 July.

Last known date for hatchlings: 25 July.

Peak nesting period (period with 70%-80% of active nests): Unknown, but approximately 30 May to 5 July.

Does Species Re-Nest after Failed First Nest Attempts? Yes. In Wisconsin, typically re-nests 22 to 44 yards (but sometimes more than 220 yards) from the original nest site; in Kansas replacement nests have been as close as 36 feet from the original nest.

Length of Breeding Cycle (cumulative time required for nest-building, egg-laying, incubation, and hatchling stages, to the time of fledging) 34-37 days. Adults feed young for 20-30 days after fledging.

II. Management Protocol For 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 Bell's vireo, then incidental take is allowed if these conditions are followed:

A. **Burning, Mowing, Selective Brush/Tree-cutting, Grazing, and Herbicide Use:**

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1. If any of the above management activities are to occur at a site (see definition below):
 - a) Between 21 July and 24 May,OR
 - b) In the northern part of the state outside of the species' range (see section on breeding distribution and abundance in Wisconsin, above),

then there are no restrictions on the activity, as take is avoided under these circumstances.

2. If any of the above management activities are to occur at a site **between 25 May and 20 July**,

then incidental take is allowed as described under the following conditions:

 - a) **Burning and Mowing:**

Allowed on a portion of the site that includes up to 1/3 of the available nest sites.

 - b) **Grazing:**
 - (1) If pasturing dairy cows, beef cattle, horses, or sheep,

then there are no restrictions on the activity.

 - (2) If pasturing browse-loving species such as goats and Scottish Highland cattle,

then you may graze in a portion of the site that includes up to 1/3 of the available nest sites.

 - c) **Selective Brush/Tree-cutting and Herbicide Use:**
 - (1) If the individual nest sites (see Definition) consist of woody vegetation from more than one height class, you may cut or herbicide up to 1/3 of the available nest sites.

 - (2) If the individual nest sites consist entirely of shrubs and saplings from only one height class, you may cut or herbicide up to:

-100% of the nest sites consisting of shrubs and saplings over 18

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feet tall;

-50% of the nest sites consisting of shrubs and saplings between 9 and 18 feet tall;

-25% of the nest sites consisting of shrubs and saplings between 3 and 9 feet tall; and

-75% of the nest sites consisting of shrubs and saplings less than 3 feet tall.

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Survey Protocol

For Presence / Absence Surveys:

Personnel must be able to identify Bell's vireos in the field by song and by sight.

Survey period: 25 May - 20 July.

Weather conditions: No rain, wind \leq 10 mph.

Time of day: Conduct surveys between 30 minutes before sunrise and 10 a.m..

Number and timing of surveys: At least two surveys (preferably 3) must be conducted, preferably at least 4 days apart (3 days apart if management is to occur before 28 May), including at least one survey \leq 1 week prior to proposed.

Size of area surveyed: Entire area to be subjected to management that contains suitable nesting habitat for Bell's vireo.

Method: Traverse entire area slowly on foot, investigating potential sightings or vocalizations of Bell's vireos where detected. Large sites may best be covered by walking a series of parallel lines located 110 yards apart (closer if topography, shrubs, or other obstacles obscure vision or hearing). Stop periodically (roughly every 5 minutes) to listen and watch for vireos for 5 minutes before resuming walking. Record location and number of vireo individuals on a map of the area. Pairs may be indicated by the presence of two birds together in the same nest site where one bird is not singing, or where birds do not behave aggressively toward one-another; however, males do behave aggressively towards females until nests are built.

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Definitions

Definition of “Site” for Bell’s vireo: Any patch of habitat suitable for Bell’s vireos (see section B above) that contains at least one nest site (see definition below) and which is designated as a management unit, as well as any directly contiguous suitable habitat within a given property ownership, or across ownerships where survey and management agreements for the species are in place.

Other Definitions:

Nest site: A nest site is habitat suitable for one vireo pair, consisting of the appropriate woody vegetation buffered by approximately 55 yards of the adjacent grassy or grass/shrub vegetation. Examples include: a shrub clump with a 55-yard-radius buffer (approximate) of the adjacent grassy or herbaceous habitat around it, or a 110-yard-length of shrub row with a 55-yard buffer (both approximate) from the center point, or a shrub thicket at the edge of a woodlot with a 55-yard semi-circular buffer (approximate) away from the woodlot.