

## *Eptesicus fuscus* (Big Brown Bat)

### Priority 2 Species of Greatest Conservation Need (SGCN)

**Class:** *Mammalia* (Mammals)

**Order:** *Chiroptera* (Bats)

**Family:** *Vespertilionidae* (Common Bats)

#### General comments:

Since the introduction of WNS, indices used to track bat abundance have indicated a 30% decline. While this is not the catastrophic decline observed in other species, a decline of this magnitude raises serious concerns about the long term health of this species in Maine. This decline, combined with the absence of any trend data regarding this species suggests that population monitoring should be considered in Maine.

#### Species Conservation Range Maps for Big Brown Bat:

Town Map: [Eptesicus fuscus\\_Towns.pdf](#)

Subwatershed Map: [Eptesicus fuscus\\_HUC12.pdf](#)

#### SGCN Priority Ranking - Designation Criteria:

**Risk of Extirpation:** NA

**State Special Concern or NMFS Species of Concern:**

*Eptesicus fuscus* is listed as a species of Special Concern in Maine.

**Recent Significant Declines:**

Big Brown Bat is currently undergoing steep population declines, which has already led to, or if unchecked is likely to lead to, local extinction and/or range contraction.

Notes:

Since the discovery of white-nose syndrome, big brown bat populations in the northeastern US have declined by more than 30% (USFWS 2015). While this is not the same rate of decline that has been observed in some of the other bat species, the long term implications raise serious concern.

**Regional Endemic:** NA

**High Regional Conservation Priority:** NA

**High Climate Change Vulnerability:** NA

**Understudied rare taxa:** NA

**Historical:** NA

**Culturally Significant:** NA

#### Habitats Assigned to Big Brown Bat:

Formation Name	Agricultural
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Macrogroup Name	Agricultural
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**Habitat System Name:** Agricultural Macrogroup - Unknown Habitat System **Notes:** *Big Browns* are considered true habitat generalists and occur from northern Alberta to northern South America. In maine, we suspect that they are found in most woodlands, with an emphasis on openings or edges of these woodlands. They are also known to inhabit and use developed areas.

Formation Name	Boreal Upland Forest
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Macrogroup Name	Boreal Upland Forest
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**Habitat System Name:** Boreal Upland Forest Macrogroup - Unknown Habitat System **Notes:** *Big Browns* are considered true habitat generalists and occur from northern Alberta to northern South America. In maine, we suspect that they are found in most woodlands, with an emphasis on openings or edges of these woodlands. They are also known to inhabit and use developed areas.

***Eptesicus fuscus* (Big Brown Bat)****Priority 2 Species of Greatest Conservation Need (SGCN)****Class:** *Mammalia* (Mammals)**Order:** *Chiroptera* (Bats)**Family:** *Vespertilionidae* (Common Bats)**Formation Name**      **Boreal Wetland Forest****Macrogroup Name**      **Boreal Forested Peatland****Habitat System Name:** Boreal Forested Peatland Macrogroup - Unknown Habitat System    **Notes:** *Big Browns are considered true habitat generalists and occur from northern Alberta to northern South America. In Maine, we suspect that they are found in most woodlands, with an emphasis on openings or edges of these woodlands. They are also known to inhabit and use developed areas.***Formation Name**      **Coastal Scrub-Herb****Macrogroup Name**      **Coastal Grassland & Shrubland****Habitat System Name:** Coastal Grassland & Shrubland Macrogroup - Unknown Habitat System    **Notes:** *Big Browns are considered true habitat generalists and occur from northern Alberta to northern South America. In Maine, we suspect that they are found in most woodlands, with an emphasis on openings or edges of these woodlands. They are also known to inhabit and use developed areas.***Formation Name**      **Developed****Macrogroup Name**      **Extractive****Habitat System Name:** Subsurface Mines & Caves    **Notes:** *Regular but not obligate cave/mine dweller***Macrogroup Name**      **Maintained Grasses and Mixed Cover****Habitat System Name:** Maintained Grasses and Mixed Cover Macrogroup - Unknown Habitat System    **Notes:** *Big Browns are considered true habitat generalists and occur from northern Alberta to northern South America. In Maine, we suspect that they are found in most woodlands, with an emphasis on openings or edges of these woodlands. They are also known to inhabit and use developed areas.***Macrogroup Name**      **Urban-Suburban Built****Habitat System Name:** Urban-Suburban Built Macrogroup - Unknown Habitat System    **Notes:** *Big Browns are considered true habitat generalists and occur from northern Alberta to northern South America. In Maine, we suspect that they are found in most woodlands, with an emphasis on openings or edges of these woodlands. They are also known to inhabit and use developed areas.***Formation Name**      **Freshwater Marsh****Macrogroup Name**      **Wet Meadow-Shrub Marsh****Habitat System Name:** Wet Meadow-Shrub Marsh Macrogroup - Unknown Habitat System    **Notes:** *Big Browns are considered true habitat generalists and occur from northern Alberta to northern South America. In Maine, we suspect that they are found in most woodlands, with an emphasis on openings or edges of these woodlands. They are also known to inhabit and use developed areas.***Formation Name**      **Grassland & Shrubland****Macrogroup Name**      **Ruderal Shrubland & Grassland****Habitat System Name:** Ruderal Shrubland & Grassland Macrogroup - Unknown Habitat System    **Notes:** *Big Browns are considered true habitat generalists and occur from northern Alberta to northern South America. In Maine, we suspect that they are found in most woodlands, with an emphasis on openings or edges of these woodlands. They are also known to inhabit and use developed areas.***Formation Name**      **Northeastern Upland Forest****Macrogroup Name**      **Central Oak-Pine****Habitat System Name:** Central Oak-Pine Macrogroup - Unknown Habitat System    **Notes:** *Big Browns are considered true habitat generalists and occur from northern Alberta to northern South America. In Maine, we suspect that they are found in most woodlands, with an emphasis on openings or edges of these woodlands. They are also known to inhabit and use developed areas.*

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**Formation Name**      **Northeastern Upland Forest**

**Macrogroup Name**      **Exotic Upland Forest**

**Habitat System Name:** Exotic Upland Forest Macrogroup - Unknown Habitat System    **Notes:** *Big Browns are considered true habitat generalists and occur from northern Alberta to northern South America. In maine, we suspect that they are found in most woodlands, with an emphasis on openings or edges of these woodlands. They are also konwn to inhabit and use developed areas.*

**Macrogroup Name**      **Northern Hardwood & Conifer**

**Habitat System Name:** Northern Hardwood & Conifer Macrogroup - Unknown Habitat System    **Notes:** *Big Browns are considered true habitat generalists and occur from northern Alberta to northern South America. In maine, we suspect that they are found in most woodlands, with an emphasis on openings or edges of these woodlands. They are also konwn to inhabit and use developed areas.*

**Macrogroup Name**      **Plantation and Ruderal Forest**

**Habitat System Name:** Plantation and Ruderal Forest Macrogroup - Unknown Habitat System    **Notes:** *Big Browns are considered true habitat generalists and occur from northern Alberta to northern South America. In maine, we suspect that they are found in most woodlands, with an emphasis on openings or edges of these woodlands. They are also konwn to inhabit and use developed areas.*

**Formation Name**      **Northeastern Wetland Forest**

**Macrogroup Name**      **Central Hardwood Swamp**

**Habitat System Name:** Central Hardwood Swamp Macrogroup - Unknown Habitat System    **Notes:** *Big Browns are considered true habitat generalists and occur from northern Alberta to northern South America. In maine, we suspect that they are found in most woodlands, with an emphasis on openings or edges of these woodlands. They are also konwn to inhabit and use developed areas.*

**Macrogroup Name**      **Northeastern Floodplain Forest**

**Habitat System Name:** Northeastern Floodplain Forest Macrogroup - Unknown Habitat System    **Notes:** *Big Browns are considered true habitat generalists and occur from northern Alberta to northern South America. In maine, we suspect that they are found in most woodlands, with an emphasis on openings or edges of these woodlands. They are also konwn to inhabit and use developed areas.*

**Macrogroup Name**      **Northern Swamp**

**Habitat System Name:** Northern Swamp Macrogroup - Unknown Habitat System    **Notes:** *Big Browns are considered true habitat generalists and occur from northern Alberta to northern South America. In maine, we suspect that they are found in most woodlands, with an emphasis on openings or edges of these woodlands. They are also konwn to inhabit and use developed areas.*

### Stressors Assigned to Big Brown Bat:

	Moderate Severity	High Severity
Highly Actionable	Medium-High	High
Moderately Actionable	Medium	Medium-High
Actionable with Difficulty	Low	Low

**IUCN Level 1 Threat**      **Energy Production and Mining**

**IUCN Level 2 Threat:**      **Renewable Energy**

**Severity:** Moderate Severity      **Actionability:** Highly actionable

**Notes:** There is a high probability that the cummlative effects of wind turbine mortalities would have a population level effect on this bat species in Maine.

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**IUCN Level 1 Threat**      **Human Intrusions and Disturbance**

**IUCN Level 2 Threat:**      Recreational Activities

**Severity:** Moderate Severity      **Actionability:** Moderately actionable

**Notes:** Caving activities w/o following disinfection procedures may spread WNS; also found on talus slopes but encounters with hikers would be rare.

**IUCN Level 1 Threat**      **Other Options**

**IUCN Level 2 Threat:**      Lack of knowledge

**Severity:** Moderate Severity      **Actionability:** Moderately actionable

**Notes:** Little information regarding range and population trends have been gathered on this species in Maine. Efforts should be made to develop better baseline information on big brown bats and other bat spp in maine.

**IUCN Level 1 Threat**      **Invasive and Other Problematic Species, Genes and Diseases**

**IUCN Level 2 Threat:**      Problematic Species-Diseases of Unknown Origin

**Severity:** Severe      **Actionability:** Actionable with difficulty

**Notes:** WNS will remain active in the soil for a long time; however, progress is being made in coming up with ways to disinfect hibernacula. Furthermore, the role of WNS in big brown bat populations is not well understood.

### Species Level Conservation Actions Assigned to Big Brown Bat:

None. *Only species specific conservation actions that address high (red) or medium-high (orange) priority stressors are summarized here.*

### Guild Level Conservation Actions:

This Species is currently not attributed to a guild.

### Broad Taxonomic Group Conservation Actions:

Relevant conservation actions for this species are assigned within broader taxonomic groups in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-1.

### Habitat Based Conservation Actions:

Additional conservation actions that may benefit habitat(s) associated with this species can be found in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-15. Click on the Habitat Grouping of interest to launch a habitat based report summarizing relevant conservation actions and associated SGCN.

*The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, stressors, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.*