

SUBJECT: Request adoption of Board Order ER-37-10(E) and authorization for public hearings on Board Order ER-35-10, revisions to NR Ch. 27, addition of Wisconsin cave bats to the threatened species list

Fiscal Estimate was Updated on 9-17-10

FOR: SEPTEMBER 2010 BOARD MEETING

TO BE PRESENTED BY: Erin Crain - Section Chief, Dave Redell - Bat Ecologist

SUMMARY:

Request to list four WI cave bat species, including the little brown bat (*Myotis lucifugus*), northern long-eared bat (*Myotis septentrionalis*), eastern pipistrelle (*Perimyotis subflavus*), and big brown bat (*Eptesicus fuscus*), as Threatened via emergency rule due to overall declines in the populations at the national level and the immediate threat of white-nose syndrome (WNS) in WI. Additionally, request to authorize public hearings for the permanent listing of these species as Threatened. The removal of cave bats from the ecosystem will have significant economic, environmental and public health impacts. Listing will prohibit the transport, possession and disturbance, and decrease mortality.

WNS has spread across 14 states and 2 Canadian provinces in the last 3 years, spreading up to 800 miles each year. Mortality rates of affected colonies are greater than 90%. The disease was located last spring within 225 miles of the WI's southern border and 300 miles from the northern border. WI has one of the highest concentrations of cave bat hibernacula in the Midwest and large numbers of cave bats from neighboring states hibernate in WI. Consequently, WI's cave bat population, and those of surrounding states, is threatened by this devastating disease.

DNR will issue broad incidental take guidelines immediately (attached). Additionally, DNR will begin to work collaboratively with stakeholders to develop minimization measures, produce a conference report containing recommendations for reducing adverse impacts that will be presented to the NRB, and update the permit as needed if and when WNS is discovered in Wisconsin.

Affected constituencies include commercial caves and mines, recreational cavers, wildlife rehabilitators, animal control operators, private cave and mine owners, farmers, the conservation community, utilities, and homeowners.

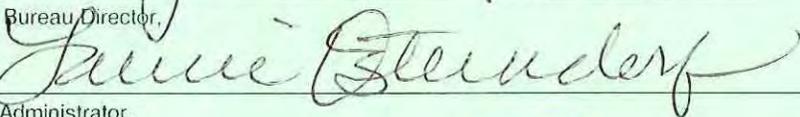
RECOMMENDATION: Adoption of Board Order ER-37-10(E), emergency listing of WI cave bats as threatened species. Authorization for public hearings of Board Order ER-35-10 for permanent listing.

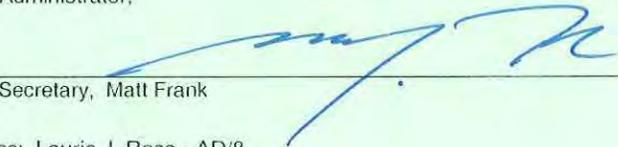
LIST OF ATTACHED MATERIALS:

- | | | | | | |
|----|-------------------------------------|---|-----|-------------------------------------|----------|
| No | <input type="checkbox"/> | Fiscal Estimate Required | Yes | <input checked="" type="checkbox"/> | Attached |
| No | <input checked="" type="checkbox"/> | Environmental Assessment or Impact Statement Required | Yes | <input type="checkbox"/> | Attached |
| No | <input type="checkbox"/> | Background Memo | Yes | <input checked="" type="checkbox"/> | Attached |

APPROVED: 

Bureau Director,


Administrator,


Secretary, Matt Frank

09.13.10

Date

9/13/10

Date

9-14-10

Date .

- cc: Laurie J. Ross - AD/8
- Craig Thompson - ER/6
- Erin Crain - ER/6
- Tim Andryk - LS/8

DATE: September 13, 2010

TO: Natural Resources Board

FROM: Matthew J. Frank 
Secretary, Department of Natural Resources

SUBJECT: Request adoption of Board Order ER-37-10(E) and authorization for public hearings on Board Order ER-35-10, revisions to NR Ch. 27, addition of Wisconsin cave bats to the threatened species list

Background

Bats affected with white-nose syndrome (WNS) were first observed in 2006 at a single cave near Albany, New York. WNS has since spread across 14 states and 2 Canadian provinces, spreading up to 800 miles each year. WNS has been linked to the death of over one-million bats since 2007 and threatens to cause the extinction of several bat species in the near future. Mortality rates of affected colonies reach 100%. Last spring, the disease was located within 225 miles of Wisconsin's southern boarder and 300 miles from the northern boarder. Because the known dispersal distance of the little brown bat is 280 miles, an affected cave is now located within the dispersal range of Wisconsin little brown bats. Based on the current location and known rate of spread of the disease, we anticipate the presence of white-nose syndrome in Wisconsin as early as January 2011.

White-nose syndrome is characterized as a condition of hibernating bats. Those infected tend to show a white fungal growth on their face, arms, legs, wings, and/or tail caused by the newly isolated and named fungus, *Geomyces destructans*. Infected bats exhibit atypical behavior, such as daytime activity during winter hibernation, which rapidly depletes stored energy reserves. Wing damage and emaciation are also common.

Research conducted at the United States Geological Survey (USGS) Wildlife Health Center has shown *G. destructans* to transfer from bat to bat, and from infected site to bat. There is also evidence of human transfer of *G. destructans* from site to site and/or bat via contaminated clothing and gear. At this time, there is no known cure or treatment for WNS.

To date, nine species of cave bats are affected by WNS, including the federally endangered Indiana bat. All Wisconsin cave bats, which includes the little brown bat (*Myotis lucifugus*), northern long-eared bat (*Myotis septentrionalis*), eastern pipistrelle (*Perimyotis subflavus*), and big brown bat (*Eptesicus fuscus*), are among the species fatally affected by the white-nose syndrome. Consequently, Wisconsin's cave bat population as a whole is threatened by this devastating disease. The greatest decline in population has been observed in the little brown bat, which many scientists speculate could become locally extinct in the near future.

Wisconsin has one of the highest concentrations of cave bat hibernacula in the Midwest and large numbers of cave bats from neighboring states hibernate in Wisconsin. Consequently, Wisconsin's cave bat population, and those of surrounding states, is threatened by this devastating disease. Three hibernacula alone house over 300,000 bats, including all four cave bat species. The largest known hibernaculum in the

state, Neda Mine, may also be the largest in the Midwest with an estimated population of 150,000. The little brown bat is the most common species in Wisconsin and given that this species has seen the greatest mortality rate due to WNS, Wisconsin is anticipating significant impacts to its cave bat populations when WNS begins to affect Wisconsin bats.

Bats are a vital part of many ecosystems and white-nose syndrome has significant environmental, economic, and public health impacts. All bats affected by WNS are insectivorous and a single little brown bat can eat up to 1,000 insects per hour, often consuming large numbers of agricultural pests, which cost farmers and foresters billions of dollars per year. As predators of many insects, bats also may play an important role in reducing risk of human disease transmitted by flying insects. Bats play an important role in the unique and fragile cave ecosystems, and their disappearance would have significant impacts. The nutrients bats bring into caves, and upon which other cave species depend, often have no other means of entry. In many cases, only bats regularly move in and out of the cave environment, while other cave species must rely solely on what is found or brought inside. Thus, the disappearance of bats from caves could cause the disappearance of other species as well. Non-cave ecosystems would also be significantly impacted by the disappearance of bats.

Listing these species before WNS has been detected in Wisconsin will ensure that appropriate conservation measures, such as the protection of refuge hibernacula, are developed and in place in the event that WNS affects Wisconsin.

The Department has been establishing volunteer agreements with hibernacula owners, holding stakeholder meetings, working with volunteer monitors, and implementing an education and outreach program.

Rule Summary

Ch. NR 27, Wis. Admin. Code lists Wisconsin's endangered and threatened animals and plants. Due to the immediate threat of white-nose syndrome in Wisconsin, the Department proposes to add the following cave bat species to Wisconsin's threatened species list, NR 27.03 (3), Wis. Admin. Code, via emergency rule: little brown bat (*Myotis lucifugus*), northern long-eared bat (*Myotis septentrionalis*), eastern pipistrelle (*Perimyotis subflavus*), and big brown bat (*Eptesicus fuscus*).

In anticipation of listing, DNR will issue broad incidental take guidelines (attached) to be effective as soon as the emergency listing is effective (upon publication of rule and public notice of permit/authorization). The new requirements will primarily affect caving and pest control activities. The process for assessing transportation project impacts to listed species and the associated minimization measures will follow existing protocols. No additional actions, above those currently requested by the Department, will be required of the wind industry at this time.

The Department will begin to work immediately with stakeholders to develop minimization measures and produce a conference report containing recommendations for reducing adverse impacts that will be presented to the NRB and update the broad incidental take permit/authorization as needed if and when WNS is discovered in Wisconsin.

Recommended Public Participation

Joint public hearings will be held for the emergency and permanent rule change to list Wisconsin cave bats. Four public hearings will be held around the state.

Rule Development

These rule changes were developed with the assistance of the Bureau of Endangered Resources and Legal Services and in consultation with stakeholders involved with development of the WNS response plan.

Small Business and Initial Regulatory Flexibility Analysis

Affected constituencies include commercial caves and mines, private cave and mine owners, recreational cavers, wildlife rehabilitators, animal control operators, farmers, the conservation community, wind utilities, and homeowners. Concerns will likely include how listing the bats will affect current activities. Many of these potential concerns will be addressed through a broad incidental take permit/authorization and voluntary agreements so that the listing does not have a significant economic impact on a substantial number of small businesses.

A broad incidental take permit/authorization would be created, as provided for under s. 29.604, Wis. Stats. This incidental take permit/authorization is only needed when a bat is present or suspected to be present (e.g., Natural Heritage Inventory report of bats in the area, evidence of bat presence). The broad incidental take permit/authorization would allow for the incidental taking of state listed cave bats that may occur as a result of specific public health concerns, bat removals, building demolitions, forestry activities, bridge demolitions, miscellaneous building repairs and wind energy development projects (see the "Broad Incidental Take Permit/Authorization for Cave Bats" attachment for more information). Some take of bats may still occur as a result of these activities, however take will be minimized by following specific minimization measures and the department has concluded that the projects covered under this permit are not likely to jeopardize the continued existence and recovery of the state population of these bats or the whole plant-animal community of which they are a part; and has benefit to the public health, safety or welfare that justifies the action.

Environmental Analysis

This is considered a Type IV Action, as defined in NR Ch. 150.03 (4), and no environmental analysis is required.

Broad Incidental Take Permit/Authorization for Cave Bats

Conservation Measures

This Broad Incidental Take Permit, as provided for under s. 29.604, Wis. Stats., allows for the incidental taking of state listed (threatened or endangered) cave bats in Wisconsin that may occur as a result of specific public health concerns, bat removals, building demolitions, forestry activities, bridge demolitions, miscellaneous building repairs and wind utility development projects. Take will be minimized by following specific minimization measures and the Department has concluded that the projects covered under this permit are not likely to jeopardize the continued existence and recovery of the state population of these bats or the whole plant-animal community of which they are a part; and has benefit to the public health, safety or welfare that justifies the action.

These measures must be followed when a bat is present or suspected to be present (e.g., Natural Heritage Inventory report of bats in the area, evidence of bat presence).

A. Health Exceptions

Centers for Disease Control and Prevention (CDC) protocols should be followed for all situations where rabies or histoplasmosis is a possibility (see Appendix 1). (report required if a bat is killed)

B. Bat Removal

1. Residence or Place of Work

If individual bats (5 or fewer) enter a residence or place of work, reasonable attempts must first be made to remove the bats alive and unharmed (see Appendix 2). If individual bats cannot realistically be removed unharmed, up to 5 bats may be killed for the purpose of removing them from a residence or place of work. No more than 5 bats may be killed within any 24 hour period and a maximum of 10 bats may be killed from June 1 – August 31. (report required)

2. Storage Areas, Attics, Barns, etc.

Bats found in storage areas, attics, barns, etc., may be excluded from the area September 1 – May 31 (see Appendix 2). Exclusion may not occur from June 1 – August 31.

C. Building Demolition

1. Building demolition occurring from June 1 – August 31:

- If there is no evidence of bat presence (see Appendix 3), there are no restrictions.
- If there is evidence of bat presence (see Appendix 3), bats must be excluded from the building 5-7 days prior to demolition. Exclusion is not required if the building is unsafe to enter. (report required for unsafe buildings)

2. Building demolition occurring from September 1 – May 31 does not have any restrictions.

D. Forestry

1. Forestry activities occurring within 1 km of waterbody or wetland:

- No snags or dying trees may be cut from June 1 – August 31.
- When marking the area, flag all trees with evidence of bat presence (see Appendix 3); flagged trees may not be cut from June 1 – August 31.

2. Forestry activities occurring greater than 1 km from a waterbody or wetland do not have any restrictions.

E. Bridge Projects

The process for assessing transportation project impacts to listed species and the associated minimization measures will follow existing protocols.

1. Bridge repairs or demolition occurring from September 1 – May 31 do not have any restrictions.
2. Emergency bridge repairs or demolition occurring from June 1 – August 31 are covered under this permit but must be reported within 5 working days. (report required)
3. Non-emergency bridge repairs or demolition may not occur from June 1 - August 31 unless bats are excluded prior to April 1 to prevent bats from using the bridge.

F. Miscellaneous Building Projects (e.g., roofing, painting, siding)

1. Projects occurring from September 1 – May 31 do not have any restrictions.
2. Projects occurring from June 1 – August 31 where there is no evidence of bat presence (see Appendix 3) do not have any restrictions.
3. Projects occurring from June 1 – August 31 where there is evidence of bat presence (see Appendix 3):
 - For roofing projects, bats must be excluded from the building 5-7 days prior to the project. If bats are found during the initial stages of repair, new construction must include suitable open exits until September 1. Beginning September 1, the open exits may be sealed.
 - If painting or siding and bats are found behind shutters or siding, set the shutters or siding down and leave the area, once the bats have left continue with repairs.

G. Wind Energy Development

Wind energy projects typically affect tree bat species (not currently proposed for listing) and only impact cave bat species in certain situations (e.g., projects located near cave bat hibernacula may increase the occurrence of impacts to cave bats during fall migration in August and September). Further, there is not enough data at this time to determine the impact of potential mortality to local bat populations. Because of this uncertainty and the scope of impacts, no additional actions, above those currently requested by the Department, will be required of this industry at this time. The Department will work collaboratively with stakeholders to develop minimization measures and produce a conference report containing recommendations for reducing adverse impacts that will be presented to the Natural Resources Board. These recommendations will be advisory until such time that WNS is discovered in the state.

Take covered under this permit must be reported within 5 working days. Take not reported within 5 working days is not legally covered and is in violation of the Wisconsin Endangered Species Law (s. 29.604, Wis. Stats.). Reports can be submitted via email (DNRBats@wi.gov), phone (DNR Bat Hotline: 608-266-5216) or mail (Wisconsin Department of Natural Resources, Bureau of Endangered Resources, Bat Reporting, P.O. Box 7921, Madison, WI 53707-7921).

Appendix 1: Health Information

The following information was created by the Center for Disease Control and Prevention (CDC): <http://www.cdc.gov/rabies/bats/contact/index.html>. This information should be followed when handling or testing bats for rabies or histoplasmosis.

Recent data suggest that transmission of rabies virus can occur from minor, seemingly unimportant, or unrecognized bites from bats. Human and domestic animal contact with bats should be minimized, and bats should never be handled by untrained and unvaccinated persons or be kept as pets.

In all instances of potential human exposures involving bats, the bat in question should be safely collected, if possible, and submitted for rabies diagnosis. Rabies postexposure prophylaxis is recommended for all persons with bite, scratch, or mucous membrane exposure to a bat, unless the bat is available for testing and is negative for evidence of rabies.

Postexposure prophylaxis should be considered when direct contact between a human and a bat has occurred, unless the exposed person can be certain a bite, scratch, or mucous membrane exposure did not occur.

In instances in which a bat is found indoors and there is no history of bat-human contact, the likely effectiveness of postexposure prophylaxis must be balanced against the low risk such exposures appear to present. Postexposure prophylaxis can be considered for persons who were in the same room as a bat and who might be unaware that a bite or direct contact had occurred (e.g., a sleeping person awakens to find a bat in the room or an adult witnesses a bat in the room with a previously unattended child, mentally disabled person, or intoxicated person) and rabies cannot be ruled out by testing the bat. Postexposure prophylaxis would not be warranted for other household members.

If you woke up because a bat landed on you while you were sleeping or if you awakened and found a bat in your room, you should try to safely capture the bat and have it tested. The same precautions should be used if you see a bat in a room with an unattended child, or see a bat near a mentally impaired or intoxicated person.

The small teeth of the bat can make a bite difficult to find. Be safe and in these situations, try to safely capture the bat, have the bat tested, and seek medical advice.



Appendix 2

Bat Exclusion

Method used by The Wisconsin Bat Program

A PROVEN SOLUTION

Do you have bats that you would like to remove from your living space? The following description is the widely accepted, non-lethal approach for excluding bats from your home. Killing the bats you will find does not solve the root problem which involves locating and sealing the actual access point that the bats are using. The remaining bats and future bats will still find their way into your attic or similar roosting space until you locate and seal all access points. Bats are NOT rodents and therefore will NOT chew their way into your house if you close off the opening. They use only existing openings.

As you may already know, bats are extremely beneficial to have in your neighborhood and many property owners spend a lot of effort trying to attract bats to their area by providing artificial roosts for them. If you have bats in your home you are half-way to experiencing the benefits of these insect-eating mammals without having to share your living space. The first step is already done; you have the bats interested in your location. The second step involves providing these bats with alternative roosting options that allows them to remain on the property without having access to your home. Finally, after a successful exclusion, the bats you saved will have a good chance of staying nearby. Why should you care if they stay? A single bat can eat 1,000 or more mosquito-sized insects in one hour

and the equivalent of the bat's own body weight per night. As that is just a single bat, you can imagine what a colony of 20 to 100 bats can eat in one night.

Bats will NOT attack you while you are enjoying an evening on your porch. Instead, they are enjoyable to view as they capture 100's and 1,000's of insect pests that would normally be interrupting your relaxing night outside. They conduct this service to you for free. You simply need to provide these bats with an alternative place to live that is not in your home. Like bird houses, a bat house is relatively easy to build yourself, inexpensive to purchase, and readily available from a variety of organizations.

Let's get started with the process.

First of all, timing is important when excluding bats from the home. Do not attempt to exclude bats during the summer months when the colony is established and the young are unable to fly. Bat exclusions should not be conducted from May 1st through August 31. Exclusions occurring during this time period will separate mothers from their pups, leaving the pups to die of starvation. Frantic mothers, searching for an opening to reach their pups, may enter your living space and be more difficult to deal with than what you started with. By trapping the flightless young inside, you may also have created another unexpected

problem involving the smell of dead animals.

Step 1: OBSERVE

Where are the bats entering?

At sunset or just before sunrise, have one or more persons located around the house observe where the bats are exiting the building. Observers should be able to see the entire structure without turning their heads; bats can exit and take flight in a matter of seconds. Make observations



Bat Guano

for several nights. This will ensure that all or most exit-points are identified. Pay special attention to areas in which bats commonly find access to your home: corners, eaves, louvers, loose siding, window air conditioners, and loose or damaged screens. Search the building for other various structural defects needing maintenance as the bats may search for alternative openings to their former roosting site after exclusion. It may take a second year of observation to ensure you have located all possible entry points.

Visible signs such as staining and guano (bat droppings) will also help identify openings. The body oils of bats can cause



Bat guano in front of garage

staining on the main access areas of the building, though you will need to look carefully because it is not always obvious. One of the best ways to find an opening is somewhat counter-intuitive: looking down instead of up. Guano found on the ground indicates bat activity from their opening above. When you find a concentration of these small droppings on the ground next to the foundation, you will often have a better chance of finding the access point.

Step 2: INSTALL

Can we still keep the bats here in my yard by putting up a bat house?

YES. Want to provide bats with a home, just not your own? We recommend installing an alternative roost, commonly referred to as a "bat house", in the general vicinity of the entry-points. If you exclude in the fall, installing the bat house a year before the exclusion or during the start of summer, provides the best chance for



Two types of bat houses

success. As bats come and go, they will become familiar with the structure. Upon exclusion, this familiarity will provide the best possible chance for the successful inhabitation of the bat house by the recently excluded bats. If you are interested in purchasing or building bat houses, contact the Wisconsin Bat Monitoring program. The program staff can help you decide on where to purchase the best bat house design with proven success. The Wisconsin Bat Monitoring program can also give you instructions for building your own bat house. Read our information pamphlet titled: "Building a Bat House" to learn how to build and locate your bat house. Location and design are critical pieces as bats are more difficult to attract to a bat house than birds are to a bird house.

Step 3: EXCLUDE

- 1. One-way doors**
- 2. One-week wait,**
- 3. Seal all of the holes.**

After all openings have been discovered, install one-way exits. These exits will allow bats to leave, but will not allow them to re-enter. Keep in mind the time of year as you do not want to trap the flightless young inside. Avoid excluding bats between May 1st and August 31st.

One-way exclusion devices can be created using plastic netting with one-sixth inch (0.4 centimeter) or smaller mesh. Shape the plastic netting so that it covers the opening entirely and extends at least two feet below it. Using staples or duct tape, attach the top and side edges of the



Applying screen for one-way door

plastic netting to the building, leaving the bottom edge open. Be conscious of the netting's tautness; you should be able to slide your hand into the bottom opening though not so loose that the bats may easily crawl back up the opening. At sunset the following night, some of the bats will escape through the open, bottom portion. Leave the netting up for five to seven days; this will ensure that all bats have exited the building. After all bats have been excluded, you may then seal the openings permanently with appropriate construction materials.



Space on bottom for bats to escape

Remember that bats will not chew their way back inside your house. So, after you've found and sealed all of the access points you will have successfully excluded the bats from your living space.

Other materials can be used to create one-way exits, such as plastic sheeting or PVC pipe. Install the plastic sheeting in the exact manner as the plastic netting. A portion of PVC pipe, which should be similar in size to a tube of caulk, can be inserted into the opening. Seal the



PVC one-way door

remaining portion of the opening that surrounds the outer rim of the pipe.

Clean-up

After the bats have been successfully excluded, most people will want to clean the guano out of the building. When cleaning enclosed spaces, there is one simple precaution you should take in protecting yourself from being exposed to a disease known as histoplasmosis. Histoplasmosis is a respiratory disease caused by a fungus that can grow on accumulations of bird and bat guano and may become airborne if disturbed during the cleaning process. The fungus is not necessarily present at your site; however it is best to approach any clean-up with some safety measures. Symptoms of histoplasmosis usually appear within 3 to 17 days after exposure, and may resemble a cold or chronic cough. The risk of histoplasmosis can be reduced and even prevented by wearing a face mask and gloves while working. Wash all clothes and equipment after cleaning out the

previously occupied space. If you want nothing to do with a possible risk to your health there are professional cleaning services that can do this for you. Search online or in your phone directory for a local business. There are also a number of exclusion professionals that deal specifically with bat removal in the State of Wisconsin if you are not comfortable with the do-it-yourself method.

Summary

This is how you conduct widely accepted, non-lethal approach to excluding bats from your living space.

1. Observe your building around sunset or sunrise to detect all locations bats are using for access.
2. Install a bat house prior to conducting exclusion in order to maintain the beneficial insect-eating service of the bats in your back yard.
3. Install a one-way door over the opening(s) and wait a week until all of the bats have left.
4. Permanently seal the access points with appropriate materials.
5. Enjoy a night on your deck or patio and watch your relocated colony of bats eat 100's to 1,000's of mosquito-sized insects.
6. Let us know how it worked out as we would like to hear your success story about relocating bats from your attic to their own bat house.
7. For additional information on bats of Wisconsin check out our bat website.

Wisconsin Bat Monitoring Program

<http://wiatri.net/inventory/bats>

Bat Access points to your living space

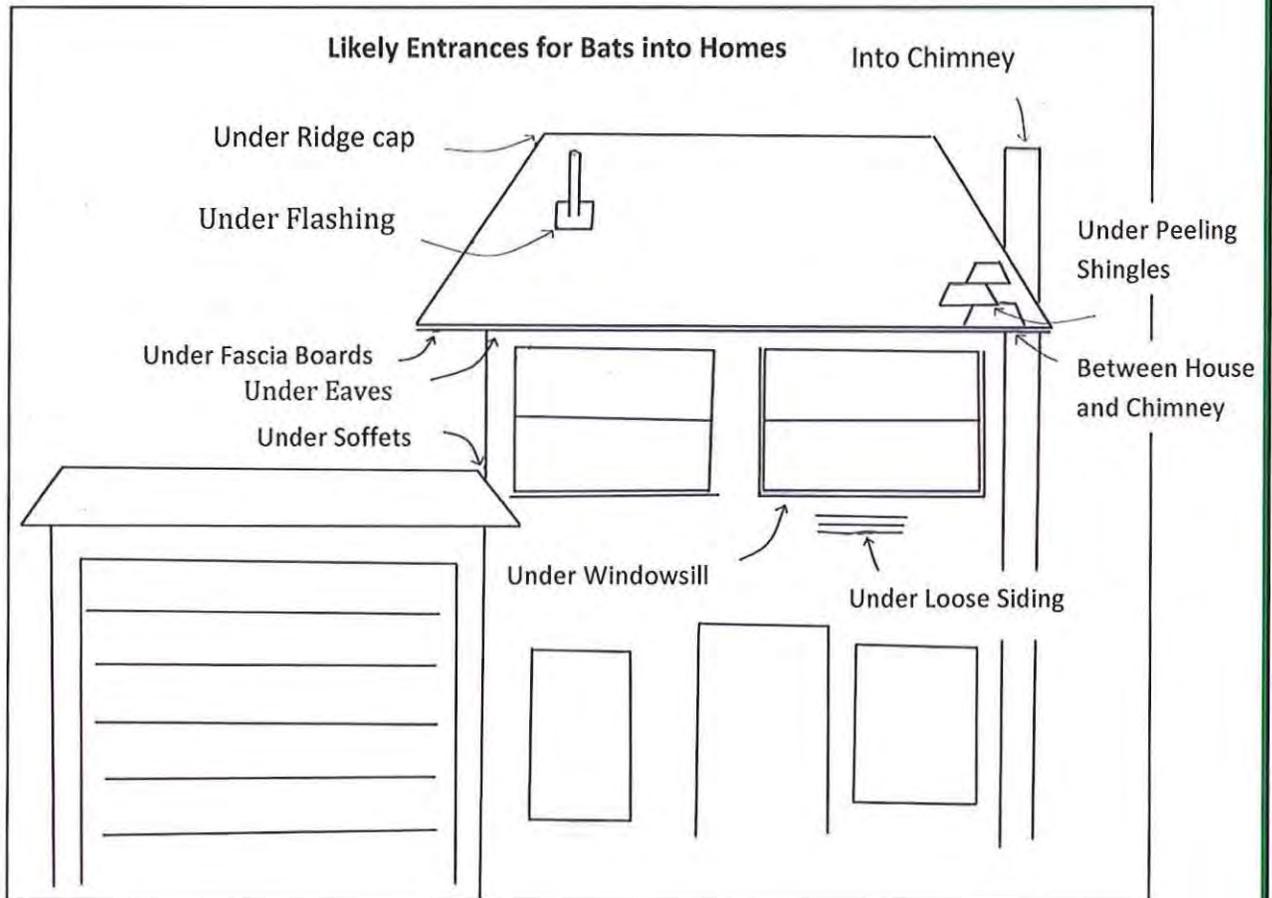


Figure 1: There are several common entry points for bats to find their way into your home. Check for guano piles and stains around these points first in locating the entry points.

Exit Only

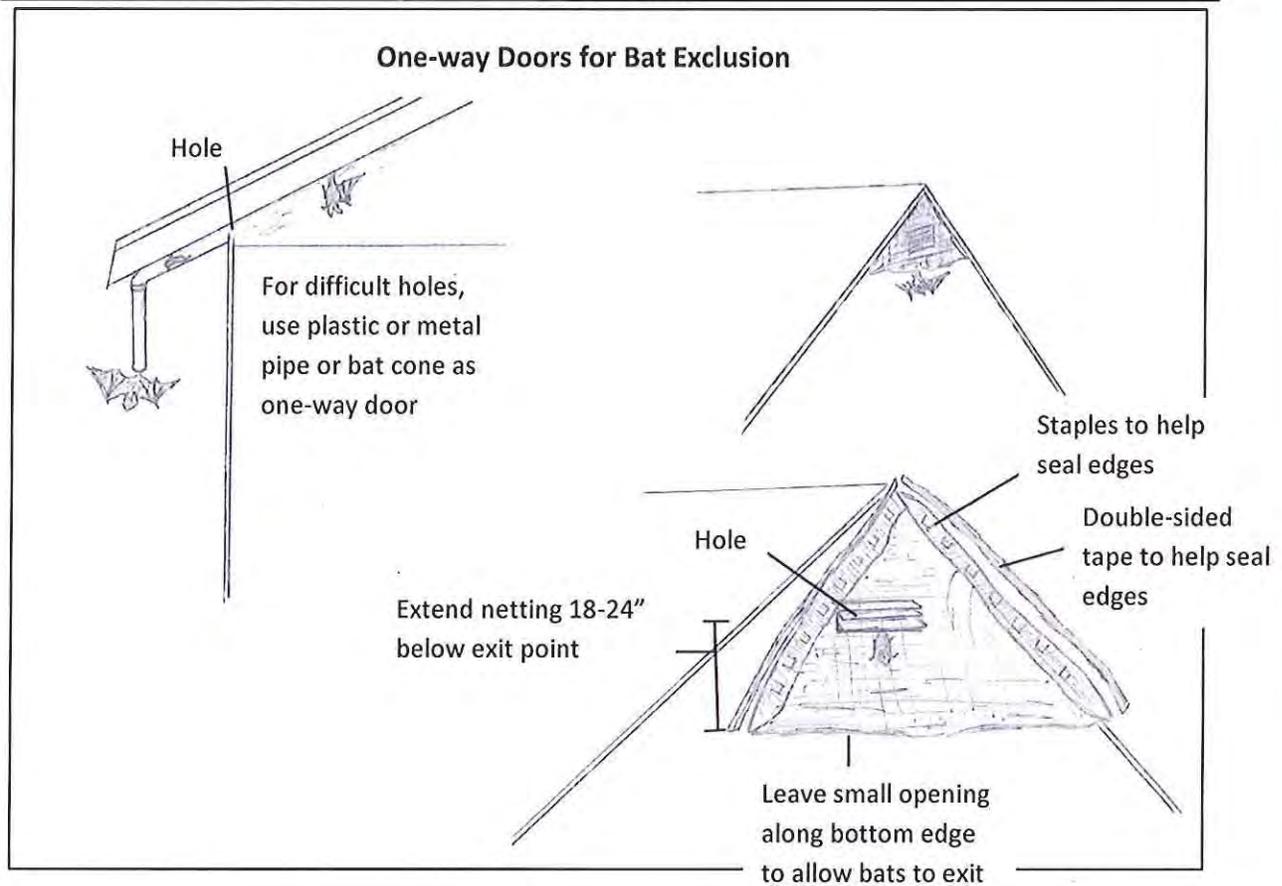


Figure 2: Two common one-way door designs: PVC tube for a small oddly-shaped hole, and netting or mesh for larger holes.

Appendix 3: Determining Bat Presence

1. Take note of places where bats are likely to enter your home. Bats can enter through holes smaller than a quarter in size. Places like fascia boards, where two buildings meet, between the building and a chimney, under loose shingles, under ridge caps, under windows, through vents into attics, under flashing, under eaves and under loose siding are all common places for bats to enter.
2. Look for evidence on the ground. Bats will defecate while they roost, and piles of guano usually indicate where bats are roosting.
3. Look for evidence on the building itself. Places where bats enter and exit often have stains from urine and skin oils on the siding and holes. These can be good indications of where bats are entering.
4. Monitor in the evening. Even if no visible signs occur, bats may still be roosting in a building. Observe the building at dusk to see if any bats fly out of openings. Listening at this time can also alert the observer to the presence of bats. Bats will often become very vocal 5-10 minutes before they take flight to forage. Bats make an audible buzzing and clicking while they are roosting.

Fiscal Estimate — 2009 Session

- Original Updated
 Corrected Supplemental

LRB Number	Amendment Number If Applicable
Bill Number	Administrative Rule Number ER-35-10 and ER-37-10 (E)

Subject

Revisions to add cave bats to the Wisconsin endangered and threatened species list.

Fiscal Effect

- State: No State Fiscal Effect
 Indeterminate

Check columns below only if bill makes a direct appropriation or affects a sum sufficient appropriation.

- Increase Existing Appropriation Increase Existing Revenues
 Decrease Existing Appropriation Decrease Existing Revenues
 Create New Appropriation

- Increase Costs — May be possible to absorb within agency's budget.
 Yes No
 Decrease Costs

- Local: No Local Government Costs
 Indeterminate

1. Increase Costs
 Permissive Mandatory
2. Decrease Costs
 Permissive Mandatory

3. Increase Revenues
 Permissive Mandatory
4. Decrease Revenues
 Permissive Mandatory

5. Types of Local Governmental Units Affected:
 Towns Villages Cities
 Counties Others
 School Districts WTCS Districts

Fund Sources Affected

- GPR FED PRO PRS SEG SEG-S

Affected Chapter 20 Appropriations

Assumptions Used in Arriving at Fiscal Estimate

Rule Summary: The proposed rule package amends Ch. NR 27, Wis. Adm. Code to add four species of bats to the endangered and threatened species list. This addition to the invasives list is being proposed as both an emergency rule, ER-37-10 (E), and a permanent rule, ER-35-10.

State Fiscal Estimate:

The proposed rule package will require time by DNR staff to prepare the rule and administer rule hearings. Endangered Resources review staff may see an increase in time associated with the listing of bats. There will be an increase in the time associated with management of the broad incidental take permit. It is assumed there will not be a significant increase in staff time, and that this time can be covered by existing appropriations.

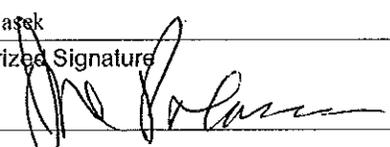
Local Fiscal Estimate:

No Local Government impact.

Private Fiscal Impacts:

It is assumed the Department will be issuing a broad incidental take permit associated with the listing. Many private companies such as pest control operators, construction companies, and wind energy development will be covered under this broad incident take permit.

Long-Range Fiscal Implications

Prepared By: Joe Polasek	Telephone No. 266-2794	Agency Department of Natural Resources
Authorized Signature 	Telephone No. 266-2794	Date (mm/dd/ccyy) 09-17-10

Fiscal Estimate — 2009 Session

**Page 2 Assumptions Narrative
Continued**

LRB Number	Amendment Number if Applicable
Bill Number	Administrative Rule Number ER-35-10 and ER-37-10(E)

Assumptions Used in Arriving at Fiscal Estimate – Continued

Private Fiscal Impacts – Continued: It is assumed the impact to farmers of this rule change will be positive; especially, in light of the fact that if bat populations in the state were to be devastated, the costs to agriculture from pest destruction and pesticide use would increase.

Fiscal Estimate Worksheet — 2009 Session
 Detailed Estimate of Annual Fiscal Effect

Original Updated
 Corrected Supplemental

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Bill Number	Administrative Rule Number ER-35-10 and ER-37-10(E)

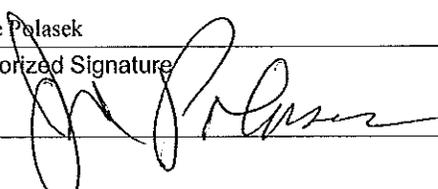
Subject
 Revisions to add cave bats to the Wisconsin endangered and threatened species list.

One-time Costs or Revenue Impacts for State and/or Local Government (do not include in annualized fiscal effect):

Annualized Costs:		Annualized Fiscal Impact on State Funds from:	
		Increased Costs	Decreased Costs
A. State Costs by Category			
State Operations — Salaries and Fringes	\$	\$ -	
(FTE Position Changes)	(FTE)	(- FTE)
State Operations — Other Costs		-	
Local Assistance		-	
Aids to Individuals or Organizations		-	
Total State Costs by Category	\$	\$ -	
B. State Costs by Source of Funds			
GPR	\$	\$ -	
FED		-	
PRO/PRS		-	
SEG/SEG-S		-	
State Revenues	Complete this only when proposal will increase or decrease state revenues (e.g., tax increase, decrease in license fee, etc.)	Increased Revenue	Decreased Revenue
GPR Taxes		\$	\$ -
GPR Earned			-
FED			-
PRO/PRS			-
SEG/SEG-S			-
Total State Revenues	\$	\$ -	

Net Annualized Fiscal Impact

	State	Local
Net Change in Costs	\$	\$
Net Change in Revenues	\$	\$

Prepared By: Joe Palasek	Telephone No. 266-2794	Agency Department of Natural Resources
Authorized Signature 	Telephone No. 266-2794	Date (mm/dd/ccyy) 09-17-10

**ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD
AMENDING AND CREATING RULES**

The Wisconsin Natural Resources Board proposes an order to create NR 27.03 (3)(a) relating to adding cave bats to Wisconsin's threatened species list via **emergency rule**.

ER-37-10(E)

Analysis Prepared by Department of Natural Resources

Statutory Authority: The state statutes that authorize the promulgation of this rule include ss. 29.604, 227.11 and 227.24, Wis. Stats.

Explanation of Agency Authority: These sections grant rule-making authority for the establishment of an endangered and threatened species list to the department.

Statutes Interpreted: In promulgating this rule, s. 227.11(2)(a), Wis. Stats., has been interpreted as allowing the department the authority to create and amend rules. Section 29.604 (3)(b), Wis. Stats., has been interpreted as allowing the department the authority to create and amend the list of Wisconsin's endangered and threatened species, NR 27.03, Wis. Admin. Code.

Related Statute or Rules: Section 29.604 (3), Wis. Stats., requires the Department to establish an endangered and threatened species list. Chapter NR 27, Wis. Admin. Code, provides the list of endangered and threatened species.

Plain Language Analysis: The proposed changes to Ch. NR 27, Wis. Admin. Code, will add the four cave bat species in Wisconsin to the Wisconsin threatened species list. The four species include the little brown bat (*Myotis lucifugus*), big brown bat (*Eptesicus fuscus*), northern long-eared bat (*Myotis septentrionalis*), and eastern pipistrelle (*Perimyotis subflavus*).

Summary of, and Comparison with, Existing or Proposed Federal Regulations: Although several species of cave bats are listed federally by the United States Fish and Wildlife Service (USFWS), we are not aware of any listings that have occurred specifically due to white-nose syndrome. However, USFWS has received a petition to list two cave bat species due to white-nose syndrome and is in the process of reviewing the petition.

Comparison with Rules in Adjacent States: Vermont, New York and Massachusetts are in the process of listing several cave bat species due to white-nose syndrome. The Minnesota Department of Natural Resources has recently proposed the little brown bat (*Myotis lucifugus*) and big brown bat (*Eptesicus fuscus*) as species of special concern because of the eminent threat of white-nose syndrome in the state. The other two species of cave bats in Minnesota, northern long-eared bat (*Myotis septentrionalis*) and eastern pipistrelle (*Perimyotis subflavus*) are already listed as species of special concern in Minnesota.

Summary of Factual Data and Analytical Methodologies: The proposed emergency rule is related to the addition of Wisconsin's four cave bat species to the state's threatened species list. The four species include the little brown bat (*Myotis lucifugus*), big brown bat (*Eptesicus fuscus*), northern long-eared bat (*Myotis septentrionalis*), and eastern pipistrelle (*Perimyotis subflavus*).

The proposed rule change seeks to provide protection to Wisconsin cave bat species, which face the imminent threat of white-nose syndrome. White-nose syndrome has spread across 14 states and 2 Canadian provinces in the last 3 years, spreading up to 800 miles per year. Mortality rates of affected bat colonies reach 100%. The disease was located last spring within 225 miles of Wisconsin's southern boarder and 300 miles from the northern boarder. Because the known dispersal distance of the little brown bat is 280 miles, an affected cave is now located within the dispersal range of Wisconsin little

brown bats. Based on the current location and known rate of spread of the disease, we anticipate the presence of white-nose syndrome in Wisconsin as early as January 2011.

Wisconsin has one of the highest concentrations of cave bat hibernacula in the Midwest and large numbers of cave bats from neighboring states hibernate in Wisconsin. Consequently, Wisconsin's cave bat population, and those of surrounding states, is threatened by this devastating disease. All Wisconsin bat species are among the species fatally affected by the white-nose syndrome.

Cave bats were assessed for changes in population condition, using the following criteria:

1. Significant change in the Natural Heritage Inventory State Rank since 1997
2. Significant change in the Natural Heritage Inventory Global Rank since 1997
3. Change in United States Endangered Species Act status since 1997
4. Is there a need for immediate protection (i.e., new threat)
5. Change in other statuses, e.g., International Union for Conservation of Nature (IUCN), Convention on International Trade in Endangered Species (CITES)
6. New data on population condition available
7. Recommended for listing/delisting since 1997
8. Taxonomic change
9. For currently listed species, have recovery goals been met

All four cave bat species met triggers #1 and #4, and the little brown bat also met trigger #7 (recommended for listing by stakeholders), therefore indicating the need for the emergency rule change.

Listing these species before WNS has been detected in Wisconsin will allow collaboration with stakeholders to ensure that appropriate conservation measures, such as the protection of refuge hibernacula, are developed and actually in place in the event that WNS affects Wisconsin.

These rule changes were developed in consultation with the stakeholders involved with development of Wisconsin's white-nose response plan and with the assistance of the Bureau of Endangered Resources and Legal Services.

Analysis and supporting documents used to determine effect on small business or in preparation of economic impact report: None.

Effect on small business: Affected constituencies include commercial caves and mines, private cave and mine owners, recreational cavers, wildlife rehabilitators, animal control operators, the conservation community, wind utilities, farmers and homeowners. Concerns will likely include how listing the bats will affect current activities. Many of these potential concerns will be addressed through a broad incidental take permit/authorization and voluntary agreements so that the listing does not have a significant economic impact on a substantial number of small businesses.

A broad incidental take permit/authorization would be created, as provided for under s. 29.604, Wis. Stats. An incidental take permit/authorization is only needed when a bat is present or suspected to be present (e.g., Natural Heritage Inventory report of bats in the area, evidence of bat presence). The broad incidental take permit/authorization would allow for the incidental taking of state listed cave bats that may occur as a result of specific public health concerns, bat removals, building demolitions, forestry activities, bridge demolitions, miscellaneous building repairs and wind energy development projects (see the "Broad Incidental Take Permit/Authorization for Cave Bats" attachment for more information). Some take of bats may still occur as a result of these activities, however take will be minimized by following specific minimization measures and the department has concluded that the projects covered under this permit are not likely to jeopardize the continued existence and recovery of the state population of these bats or the whole plant-animal community of which they are a part; and has benefit to the public health, safety or welfare that justifies the action.

Agency Contact Person: Erin Crain, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921.
(608) 267-7479, erin.crain@wisconsin.gov.

Deadline for written comments: The deadline for submission of written comments is November 1, 2010.

Section 1. NR 27.03 (3)(a) is created to read:

NR 27.03 (3)(a) *Mammals*.

1. Little brown bat – *Myotis lucifugus*.
2. Big brown bat – *Eptesicus fuscus*.
3. Northern long-eared bat – *Myotis septentrionalis*.
4. Eastern pipistrelle – *Perimyotis subflavus*.

Section 2. EFFECTIVE DATE. This rule shall take effect the day of publication in the official state newspaper, as provided in s. 227.24(1), Wis. Stats.

Section 3. STATEMENT OF EMERGENCY. The emergency rule procedure, pursuant to s. 227.24, Wis. Stats., is necessary and justified in establishing rules to protect the public welfare. The proposed rule change seeks to provide protection to Wisconsin cave bat species, which face the imminent threat of white-nose syndrome. White-nose syndrome has spread across 14 states and 2 Canadian provinces in the last 3 years, spreading up to 800 miles per year. Mortality rates of affected bat colonies reach 100%. The disease was located last spring within 225 miles of the Wisconsin's southern boarder and 300 miles from the northern boarder. Because the known dispersal distance of the little brown bat is 280 miles, an affected cave is now located within the dispersal range of Wisconsin little brown bats. Listing the cave bat species before white-nose syndrome has been detected in Wisconsin will allow the Department time to work collaboratively with stakeholders to ensure that appropriate conservation measures are developed and in place when white-nose syndrome is first detected. Because of the speed of white-nose syndrome, the Department would not have time to develop appropriate conservation measures if normal rule-making procedures were used and listing was delayed until after white-nose syndrome was detected in Wisconsin. Based on the current location and known rate of spread of the disease, we anticipate the presence of white-nose syndrome in Wisconsin as early as January 2011.

Section 4. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on _____.

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By _____
Matthew J. Frank, Secretary

(SEAL)

**ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD
AMENDING AND CREATING RULES**

The Wisconsin Natural Resources Board proposes an order to create NR 27.03 (3)(a) relating to adding cave bats to Wisconsin's threatened species list.

ER-35-10

Analysis Prepared by Department of Natural Resources.

Statutory Authority: The state statutes that authorize the promulgation of this rule include ss. 29.604 227.11, Wis. Stats.

Explanation of Agency Authority: These sections grant rule-making authority for the establishment of an endangered and threatened species list to the department.

Statutes Interpreted: In promulgating this rule, s. 227.11(2)(a), Wis. Stats., has been interpreted as allowing the department the authority to create and amend rules. Section 29.604 (3)(b), Wis. Stats., has been interpreted as allowing the department the authority to create and amend the list of Wisconsin's endangered and threatened species, NR 27.03, Wis. Admin. Code.

Related Statute or Rules: Section 29.604 (3), Wis. Stats., requires the Department to establish an endangered and threatened species list. Chapter NR 27, Wis. Admin. Code, provides the list of endangered and threatened species.

Plain Language Analysis: The proposed changes to Ch. NR 27, Wis. Admin. Code, will add the four cave bat species in Wisconsin to the Wisconsin threatened species list. The four species include the little brown bat (*Myotis lucifugus*), big brown bat (*Eptesicus fuscus*), northern long-eared bat (*Myotis septentrionalis*), and eastern pipistrelle (*Perimyotis subflavus*).

Summary of, and Comparison with, Existing or Proposed Federal Regulations: Although several species of cave bats are listed federally by the United States Fish and Wildlife Service (USFWS), we are not aware of any listings that have occurred specifically due to white-nose syndrome. However, USFWS has received a petition to list two cave bat species due to white-nose syndrome and is in the process of reviewing the petition.

Comparison with Rules in Adjacent States: Vermont, New York and Massachusetts are in the process of listing several cave bat species due to white-nose syndrome. The Minnesota Department of Natural Resources has recently proposed the little brown bat (*Myotis lucifugus*) and big brown bat (*Eptesicus fuscus*) as species of special concern because of the eminent threat of white-nose syndrome in the state. The other two species of cave bats in Minnesota, northern long-eared bat (*Myotis septentrionalis*) and eastern pipistrelle (*Perimyotis subflavus*) are already listed as species of special concern in Minnesota.

Summary of Factual Data and Analytical Methodologies: The proposed rule is related to the addition of Wisconsin's four cave bat species to the state's threatened species list. The four species include the little brown bat (*Myotis lucifugus*), big brown bat (*Eptesicus fuscus*), northern long-eared bat (*Myotis septentrionalis*), and eastern pipistrelle (*Perimyotis subflavus*).

The proposed rule change seeks to provide protection to Wisconsin cave bat species, which face the imminent threat of white-nose syndrome. White-nose syndrome has spread across 14 states and 2 Canadian provinces in the last 3 years, spreading up to 800 miles per year. Mortality rates of affected bat colonies reach 100%. The disease was located last spring within 225 miles of Wisconsin's southern boarder and 300 miles from the northern boarder. Because the known dispersal distance of the little brown bat is 280 miles, an affected cave is now located within the dispersal range of Wisconsin little

brown bats. Based on the current location and known rate of spread of the disease, we anticipate the presence of white-nose syndrome in Wisconsin as early as January 2011.

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5. Change in other statuses, e.g., International Union for Conservation of Nature (IUCN), Convention on International Trade in Endangered Species (CITES)
6. New data on population condition available
7. Recommended for listing/delisting since 1997
8. Taxonomic change
9. For currently listed species, have recovery goals been met

All four cave bat species met triggers #1 and #4, and the little brown bat also met trigger #7 (recommended for listing by stakeholders), therefore indicating the need for the rule change.

Listing these species before WNS has been detected in Wisconsin will allow collaboration with stakeholders to ensure that appropriate conservation measures, such as the protection of refuge hibernacula, are developed and actually in place in the event that WNS affects Wisconsin.

These rule changes were developed in consultation with stakeholders involved with the development of Wisconsin's white-nose syndrome response plan and with the assistance of the Bureau of Endangered Resources and Legal Services.

Analysis and supporting documents used to determine effect on small business or in preparation of economic impact report: None.

Effect on small business: Affected constituencies include commercial caves and mines, private cave and mine owners, recreational cavers, wildlife rehabilitators, animal control operators, the conservation community, wind utilities, farmers and homeowners. Concerns will likely include how listing the bats will affect current activities. Many of these potential concerns will be addressed through a broad incidental take permit/authorization and voluntary agreements so that the listing does not have a significant economic impact on a substantial number of small businesses.

A broad incidental take permit/authorization would be created, as provided for under s. 29.604, Wis. Stats. An incidental take permit/authorization is only needed when a bat is present or suspected to be present (e.g., Natural Heritage Inventory report of bats in the area, evidence of bat presence). The broad incidental take permit/authorization would allow for the incidental taking of state listed cave bats that may occur as a result of specific public health concerns, bat removals, building demolitions, forestry activities, bridge demolitions, miscellaneous building repairs and wind energy development projects (see the "Broad Incidental Take Permit/Authorization for Cave Bats" attachment for more information). Some take of bats may still occur as a result of these activities, however take will be minimized by following specific minimization measures and the department has concluded that the projects covered under this permit are not likely to jeopardize the continued existence and recovery of the state population of these bats or the whole plant-animal community of which they are a part; and has benefit to the public health, safety or welfare that justifies the action.

Agency Contact Person: Erin Crain, 101 S. Webster St., P.O. Box 7921, Madison, WI 53707-7921.
(608) 267-7479, erin.crain@wisconsin.gov.

Deadline for written comments: The deadline for submission of written comments is November 1, 2010.

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NR 27.03 (3)(a) *Mammals*.

1. Little brown bat – *Myotis lucifugus*.
2. Big brown bat – *Eptesicus fuscus*.
3. Northern long-eared bat – *Myotis septentrionalis*.
4. Eastern pipistrelle – *Perimyotis subflavus*.

Section 2. EFFECTIVE DATE. This rule shall take effect the day of publication in the official state newspaper, as provided in s. 227.24(1), Wis. Stats.

Section 3. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on _____.

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By _____
Matthew J. Frank, Secretary

(SEAL)