

**Wisconsin Department of Natural Resources
Natural Resources Board Agenda Item**

Item No.

SUBJECT:

Request that the Board adopt Board Order ER-27-11, proposed rules affecting Chapter NR 27 related to revising Wisconsin Endangered/Threatened Species List to remove 15 plants and animals and add 8 animals, and to update 20 scientific names.

FOR: May 2013 Board meeting

PRESENTER'S NAME AND TITLE: Erin Crain, Endangered Resources Bureau Director

SUMMARY:

The proposed E/T list revision includes the following species as well as updating of 20 scientific names: * Add 8 Animals: A Leafhopper (*Attenuipyga vanduzeei*) , Upland Sandpiper, Black Tern, Beach-dune Tiger Beetle, Kirtland's Warbler, An Issid Planthopper, Ottoe Skipper, and Fawnsfoot. * Remove 7 Animals: Snowy Egret, Blanding's Turtle, Greater Redhorse, Pygmy Snaketail, Butler's Gartersnake, Bewick's Wren, and Barn Owl. * Remove 8 plants: Yellow Giant Hyssop, Prairie Indian-Plantain, Drooping Sedge, Canada Horse-balm, Yellow Gentian, American Fever-few, Bog Bluegrass, and Snowy Campion.

The Department believes the impact of these rule changes on businesses and municipalities will be minimal. A Fiscal Estimate and Economic Impact Analysis was prepared. The Department solicited comments and input on the economic impact Board Order ER-27-11 will have on affected parties, including municipal governments, small businesses, consultants, researchers, and the agricultural and forestry industries.

The board approved the Scope Statement and Pink Sheet at the March 2012 meeting. A public hearing was held on Wednesday March 6, and a public meeting on Monday March 11, 2013. A total of 14 people participated at the public hearing/meeting, and 38 written comments were received. Department staff considered all comments. One change to the proposed rule, based by public comments, was made. The Department recommends keeping Hemlock parsley (*Conioselinum chinense*), a plant considered extirpated, on the E/T list until a thorough survey of recently found potential habitat is made. Delisting of the Blanding's turtle generated the most amount of interest and opposition. The Department thoroughly reviewed the comments and reanalyzed the data, but did not change its recommendation. Attachment C of the Background Memo contains the DNR's response to public comments as well as a description of the analysis.

Request for board adoption is now being requested.

RECOMMENDATION: That the Board adopt Board Order ER-27-11.

LIST OF ATTACHED MATERIALS (check all that are applicable):

- | | |
|---|--|
| <input type="checkbox"/> (choose one) | <input checked="" type="checkbox"/> Attachments to background memo |
| <input type="checkbox"/> Statement of scope | <input type="checkbox"/> Governor approval of statement of scope |
| <input checked="" type="checkbox"/> Fiscal estimate and economic impact analysis (EIA) form | <input checked="" type="checkbox"/> Environmental assessment or impact statement |
| <input checked="" type="checkbox"/> Response summary | <input checked="" type="checkbox"/> Board order/rule |

Approved by	Signature	Date
Erin Crain, Bureau Director		
Kurt Thiede, Administrator		
Cathy Stepp, Secretary		

Staff review – Natural Resources Board agenda item

Reminder:

Have the following questions been answered under the summary section of this form?

- Why is the rule needed?
- What are the significant changes?
- What are the key issues/controversies?
- What was the last action of the Board?
- Will the proposed rule have an economic impact on small business, and if so, will it be minimal (level 3), moderate (level 2), or significant (level 1)?

List of attached materials required for rule proposals:

Statement of scope	Hearing authorization	Final adoption
<ul style="list-style-type: none"> • Memo to the Board • Statement of scope • Governor approval letter 	<ul style="list-style-type: none"> • Background memo • Fiscal estimate and EIA form • Environmental assessment (if needed) • Board order/rule 	<ul style="list-style-type: none"> • Background memo • Response summary • Fiscal estimate and EIA form • Environmental assessment (if needed) • Board order/rule

Program and reviewer	Signature	Date	Comments
<p>Enforcement and Science James Pardee Environmental Analyst</p> <p>William Walker Economist</p>			
<p>Management and Budget William P. Christianson</p>			
<p>Legal Services Chandra Harvey Attorney</p> <p>Linda Haddix Dept. rule coordinator</p>			
<p>Other reviewers Type names of other reviewers, each on a new line; if none, type "Not applicable"</p>			

DATE: April 18th, 2013

TO: All members of the Natural Resources Board

FROM: Cathy Stepp
Secretary, Department of Natural Resources

SUBJECT: Background memo on adoption of Board Order ER-27-11, proposed revisions to Chapter NR 27, Wis. Adm. Code, regarding the Wisconsin Endangered/Threatened Species List.

Summary:

The department is requesting board adoption of the proposed revision of Chapter NR 27, Wis. Adm. Code, pertaining to the Wisconsin Endangered/Threatened (E/T) species list. State statute, s. 29.604 (3) (b) Wis. Stats., gives the DNR the authority to periodically review and, after public hearing, to revise the E/T list.

Between January 2010 and August 2011, BER initiated and completed a scientific review of Wisconsin's rare species. This review found that a total of 16 animal species changes (8 list additions and 7 list removals) and 9 plant changes (all list removals) should be proposed; and an additional 20 scientific names should be updated on the published rule.

Between September 24-October 24th, 2012 the Department solicited input on the economic impact of the proposed rule. With the input received, a draft EIA was developed. Additionally, an Environmental Assessment was drafted and was available for comments during the public comment period on the rule. No comments were received.

The Department scheduled public hearings in Madison and a video-conference with sites in Eau Claire, Green Bay, and Milwaukee on Tuesday March 5th, but had to reschedule due to the potential for severe winter weather. The originally scheduled public hearing in Wausau on March 6th was held as scheduled. The Department rescheduled the cancelled hearings to March 11th in Madison at the State Natural Resources building and offered the option to participate via LiveMeeting for those who could not attend in person. A total of 14 people attended and 8 provided verbal comment at the public hearings. Written comments were accepted until March 11, 2013. The department received a total of 38 written comments (note, 5 public hearing attendees also submitted written comments/speaking notes). Of the 49 comments, 10 noted support and 23 noted opposition for all or portions of the proposed rule. The public comments and summary are included as Attachment C to this background memo.

The majority of comments received, were in opposition of the delisting of the Blanding's turtle. The Department reanalyzed the population condition and state conservation rank using the feedback and input received. The methods and results of that analysis are included in the attachment. The revised conservation rank, using the public comments, was calculated as S3S4. Given the number of populations with excellent-good viability and the results of the analysis, the Department feels delisting is still warranted. However, the Department will consider proposing listing the Blanding's turtle as a Protected Wild Animal under s. NR 10.02, Wis. Admin. Code, if the species is delisted.

The Department made one change to the proposed rule, based by public comments. The Department recommends keeping Hemlock parsley (*Conioselinum chinense*), a plant considered extirpated, on the E/T list until a thorough survey of recently found potential habitat is made. With this change, the number of

species in this list revision now include 15 animal species changes (8 list additions and 7 list removals) and 8 plant changes (all list removals); and an additional 20 scientific names should be updated on the published rule. The addition of 8 species and removal of 15 species would bring the total number of plants and animals on the E/T list from 239 to 232.

Request for board adoption is now being requested.

1. Why is the rule being proposed?

The state E/T species list [NR 27.03 (2) and (3)] was created in 1975 in order to provide legal protection for those species of plants and animals whose populations are critically low and are in danger of becoming extirpated from the state. Subsection 29.604 (3)(b) requires the Department to periodically review and revise the E/T species list.

In 2006, the Bureau of Endangered Resources (BER) drafted and the BER Policy Team approved program guidance that lays out the process for reviewing and making recommendations to revise the E/T list. The guidance document recommends conducting a list-wide review at least every 5 years and earlier as needed, based on changes in species population condition.

Between January 2010 and August 2011, BER initiated and completed a review of Wisconsin's rare species using the 2006 E/T list revision document as guidance. The review resulted in a list of recommended revisions to the E/T species list.

Department biologists focused attention and resources on conducting status assessments on species that are at risk of extirpation in the state and where application of Wisconsin's Endangered Species Law (ESL) would be effective in their protection. Because minimal protection is afforded to plants through Wisconsin's application of the ESL, it was decided that no plants would be proposed for listing at this time regardless of rarity. The process was documented including the creation of a database to capture the recommendations and information provided. Status assessments were conducted and resulted in the following proposed changes to the Wisconsin's E/T list. Also included is a summary statement supporting the E/T list change.

All species on the current NHI working list were reviewed for potential listing. This review found that a total of 15 animal species changes (8 list additions and 7 list removals) and 9 plant changes (all list removals) should be proposed; and an additional 20 scientific names should be updated on the published rule. The addition of 8 species and removal of 16 species would bring the total number of plants and animals on the E/T list from 239 to 231. Public comments prompted the removal of one plant from the original proposal.

The primary short-term and long-term effects of this revision are to provide greater protection for those plants and animals that are critically rare in Wisconsin and will likely be lost or undergo severe population declines if not granted protection, by focusing conservation efforts and avoidance/minimization measures on the most at risk species. And remove the protection for those that are no longer considered critically rare. As the endangered species law (s. 29.415, Stats.) is already in effect, there will be no change in Department policy regarding means to conserve these species.

2. Summary of the Rule - Proposed E/T List Revisions

ANIMAL SPECIES - REMOVE FROM E/T

- Snowy Egret (*Egretta thula*)
- Blanding's Turtle (*Emydoidea blandingii* = *Emydoidea blandingi*)
- Greater Redhorse (*Moxostoma valenciennesi*)
- Pygmy Snaketail (*Ophiogomphus howei*)
- Butler's Gartersnake (*Thamnophis butleri*)
- Bewick's Wren (*Thryomanes bewickii*)
- Barn Owl (*Tyto alba*)

PLANT SPECIES - REMOVE FROM E/T

- Yellow Giant Hyssop (*Agastache nepetoides*)
- Prairie Indian-Plantain (*Arnoglossum plantagineum* = *Cacalia tuberosa*)
- Drooping Sedge (*Carex prasina*)
- Canada Horse-balm (*Collinsonia canadensis*)
- Yellow Gentian (*Gentiana alba*)
- American Fever-few (*Parthenium integrifolium*)
- Bog Bluegrass (*Poa paludigena*)
- Snowy Campion (*Silene nivea*)

ANIMAL SPECIES - ADD TO E/T

- A Leafhopper (*Attenuipyga vanduzeei*)
- Upland Sandpiper (*Bartramia longicauda*)
- Black Tern (*Chlidonias niger*)
- Beach-dune Tiger Beetle (*Cicindela hirticollis rhodensis*)
- Kirtland's Warbler (*Dendroica* (= *Setophaga*) *kirtlandii*)
- An Issid Planthopper (*Fitchiella robertsoni*)
- Ottoe Skipper (*Hesperia ottoe*)
- Fawnsfoot (*Truncilla donaciformis*)

ANIMAL AND PLANT SPECIES - UPDATE SCIENTIFIC NAME:

- Northern Cricket Frog also known as Blanchard's Cricket Frog (*Acris blanchardii* change to *Acris crepitans*), endangered
- Worm-eating Warbler (*Helmitheros vermivorus* change to *Helmitheros vermivorum*), endangered
- Pallid Shiner (*Notropis annis* change to *Hybopsis annis*), endangered
- Shoal Chub also known as Speckled Chub (*Macrhybopsis aestivalis* change to *Macrhybopsis hyostoma*), threatened
- Spatterdock Darner Dragonfly (*Aeshna mutata* change to *Rhionaeschna mutata*), threatened
- Obovate Beak Grass (*Diarrhena americana* change to *Diarrhena obovata*), endangered
- Canada Gooseberry also known as Hawthorn-leaved Gooseberry (*Ribes oxycanthoides* change to *Ribes oxycanthoides* ssp. *oxycanthoides*), threatened
- Cliff Cudweed (*Gnaphalium saxicola* change to *Pseudognaphalium saxicola*), threatened
- Early Anemone (*Anemone multifida* change to *Anemone multifida* var. *multifida*), endangered
- Forked Aster (*Aster furcatus* change to *Eurybia furcata*), threatened
- Green Spleenwort (*Asplenium trichomanes-namosum* change to *Asplenium trichomanes-ramosum*), endangered
- Hall's Bulrush (*Scirpus hallii* change to *Schoenoplectus hallii*), endangered
- Hoary Whitlow-cress (*Draba lanceolata* change to *Draba cana*), endangered

- Large-leaved Sandwort (*Moehringia macrophylla* change to *Arenaria macrophylla*), endangered
- Long-beaked Baldrush also known as Bald Rush (*Rhynchospora scirysoides* change to *Rhynchospora scirpoides*), threatened
- Plains Ragwort (*Senecio indecorus* change to *Packera indecora*), threatened
- Sticky False-asphodel also known as False Asphodel (*Tofieldia glutinosa* change to *Triantha glutinosa*), threatened
- Tea-leaved Willow also known as Flat-leaved Willow (*Salix planifolia* change to *Salix planifolia* ssp. *planifolia*), threatened
- Thickspike also known as Thickspike Wheatgrass (*Elymus lonceolatus* ssp. change to *Elytrigia dasystachya* ssp. *psammophilus*), threatened
- Tufted Bulrush also known as Tussock Bulrush (*Scirpus cespitosus* change to *Trichophorum cespitosum*), threatened

Species summary descriptions and maps can be found in Attachment A of the background memo. The maps depict occurrences of each species by township or county as recorded in the NHI database. Both historical (generally, records which are 25 years or more old) and current occurrences are shown. Townships or counties with only extirpated observations (populations disappeared/destroyed) are depicted differently as they are not considered during the environmental review process. Full status assessments and state rarity rank worksheets are available online on the WDNR's "ET List" web pages.

3. How does this affect existing policy?

No new policies proposed. Wisconsin's E/T List is governed by Wisconsin Adm. Codes, NR 27 and NR 10.02 and State statute, s. 29.604 (3) (b) Wis. Stats.

4. Hearing synopsis

The Department scheduled public hearings in Madison and a video-conference with sites in Eau Claire, Green Bay, and Milwaukee on Tuesday March 5th, but had to reschedule due to the potential for severe winter weather. The originally scheduled public hearing in Wausau on March 6th was held as scheduled. The Department rescheduled the cancelled hearings to March 11th in Madison at the State Natural Resources building and offered the option to participate via LiveMeeting for those who could not attend in person. A total of 14 people attended and 8 provided verbal comment at the public hearings/meetings. The department received a total of 38 written comments. Written comments were accepted until March 11, 2013.

Of the 49 comments, 10 noted support and 23 noted opposition for all or portions of the proposed rule. Species specific comments and position (support:oppose) were made on the following species: barn owl (1:3), Bewick's wren (1:0), black tern (2:0), Blanding's turtle (3:18), Butler's gartersnake (3:4), Canada horse-balm (0:2), fawnsfoot (1:0), greater redhorse (1:0), hemlock parsley (0:2), Kirtland's warbler (2:0), snowy egret (1:2), and upland sandpiper (3:0). Given the number of comments on the Blanding's turtle population status in Wisconsin, the Department reanalyzed the species population condition and state conservation rank using the feedback and input received.

The Department made one change to the proposed rule, based on public comments. The Department recommends keeping Hemlock parsley (*Conioselinum chinense*), a plant considered extirpated, on the E/T list until a thorough survey of recently discovered potential habitat is made.

Attachment C to the background memo summarizes comments received on the proposed rule and the Department's response.

5. Has the Board dealt with these issues before?

State statute, s. 29.604 (3) (b) Wis. Stats., gives the DNR the authority to periodically review and, after public hearing, to revise the E/T list. Since the first list of Wisconsin E/T species was developed in 1972, the list has been revised 10 times. The major list revisions, where greater than 5 species were removed or added, took place in 1978-1979, 1985, 1989, and 1997. While the last major list revision was in 1997, the list has been occasionally revised for individual species: Gray Wolf (delisted in 2004), Bald Eagle (delisted in 2007), Osprey (delisted in 2009), Trumpeter Swan (delisted in 2009), and 4 cave bat species (listed in 2011).

6. Who will be impacted by the proposed rule? How?

Groups likely to be impacted or interested in the issue include the conservation community, project applicants through the environmental review process, and the general public, including agricultural and forestry industries, commercial and development businesses, natural resources consultants, utilities, road builders and wildlife rehabilitators.

In development of the Economic Impact Analysis (EIA), a list of affected parties was developed, along with the positive and negative impacts of both listing and delisting.

The affected parties identified are:

- Agricultural community
- County and municipal governments
- Department of Transportation (DOT)
- Development community
- Environmental consultants
- Federal agencies (NRCS, USFWS, USFS, NPS, USACE)
- Habitat (e.g., wetland, forest, prairie, beach, barrens, streams)
- Land management and conservation groups (NGOs)
- Private landowners
- Utility companies and the Public Service Commission
- Researchers
- The species
- Tourism
- Wisconsin Department of Natural Resources (WDNR)
- Forest Industry
- Small businesses

Updating the E/T list to focus conservation efforts and avoidance/minimization measures on WI's most at risk species will ultimately save money. All actions that the Department conducts, funds or approves on public or private lands must be screened for potential impacts to rare species. Endangered Resources Screening relies on NHI data for records of rare species occurrences. The number of NHI records for species proposed for addition to the E/T list is far fewer than the number of records for species proposed for delisting – eight species are proposed for listing (with a total of 217 NHI occurrences) versus 15 species proposed for delisting (with a total of 1049 NHI occurrences). Reducing the number of E/T species records will lessen regulatory impacts to businesses and individuals.

The regulatory impact of listing a species:

- E/T species are checked for when department staff conduct, fund or approve an activity. Avoidance measures are provided to project applicants to enable them to avoid take of the species.
- For projects that are not able to avoid take, Wisconsin's endangered species law allows for the issuance of incidental take permits. Incidental take permits allow for projects to occur where take of an endangered or threatened species is likely and where take can also be minimized and mitigated.
- The department has also created several broad incidental take permits to provide blanket incidental take coverage for routine activities. A broad incidental take permit, unlike an individual incidental take permit, does not require an application, processing time or a fee. The most recent broad incidental take permits cover grassland management and cave bats.

The regulatory impact of delisting a species:

- More flexibility in project design that had been altered based on the presence of an E/T species that is now being proposed for delisting.

7. Information on environmental analysis:

The primary short-term and long-term effects of this revision are to provide greater protection for those plants and animals that are critically rare in Wisconsin and will likely be lost or undergo severe population declines if not granted protection, by focusing conservation efforts and avoidance/minimization measures on the most at risk species.

Species not on the endangered and threatened list may also indirectly receive protection through measures meant for listed species and as a result may never become rare (and require listing) themselves. Alternatively, species not on the endangered and threatened list occupying the same habitat as a species proposed for delisting, may no longer receive protection measures in the future that were meant for listed species.

An environmental assessment (EA) was prepared and was available for comment during the public comment period, and is included with this background memo as Attachment B. No comments were received on the EA.

8. Small business analysis:

Most often the public and small businesses become aware of the endangered species law through one of DNR's permitting processes. Wisconsin's endangered species law is implemented by the department in that any activity that the department conducts, funds or approves must consider impacts to listed species (s.29.604 Wis. Stats.). Both endangered and threatened species have the same level of legal protection. Under Wisconsin's law listed animals are protected on all public and private land. Plants are only protected on public land and agricultural, forestry, and utility activities are exempt from this protection (s. 29.604 Wis. Stats.).

In most instances, a permit applicant provides a description of the proposed project. Department staff perform an endangered resources review utilizing the Natural Heritage Inventory database to determine if 1) there is a listed species that may be present, and if 2) the project area has suitable habitat for that species. If either of these criteria are not present the applicant is informed that there is

no potential impact and the project proceeds. Over 2/3 of projects fall into this category. If **both** the species is known to be in the area **and** there is suitable habitat on the project site, the department works with the applicant to see if impacts to a listed species may be avoided through seasonal adjustments, temporary removals or barriers. If it can, the project proceeds. If impacts can't be avoided, an incidental take permit is issued to the applicant that allows take of the species. State law requires that all projects under an incidental take permit must minimize and mitigate these impacts. (s.29.604 Wis. Stats.). When the minimization and mitigation measures are in place, the permit is publicly noticed and the project may proceed. Very few projects require an incidental take permit, typically fewer than 20 a year are issued.

Affected constituencies include agricultural and forestry industries, commercial and development businesses, natural resources consultants, utilities, road builders and wildlife rehabilitators.

Pursuant to s. 227-137 Wis. Stats., the department was required to solicit comments on the economic impact of the proposed rule, and if requested to coordinate with local governments in the preparation of an EIA. Comments were collected between 9/24/2012 and 10/24/2012. A total of 18 comments were received; 8 were economic comments that were incorporated into the EIA. No local governments submitted comments or requested we coordinate with them in the preparation of the EIA. A summary of the EIA comments and a detailed EIA report are included with the Fiscal Estimate and Economic Impact Analysis form (DOA-2049). The EIA report is organized by the types of small businesses, organizations, and units of government that could be affected.

The economic cost of listing and delisting a species is highly dependant on its range and distribution, seasonal occurrence, habitat requirements, management needs, sensitivity to disturbance, etc. Effects of listing/delisting will be highly variable among different types of businesses and their locations and hard to predict, however the overall economic impact of the proposed revisions will be reduced because of the location and number of NHI records. The 15 species being proposed for removal from the endangered and threatened species list have a total of 1049 records in the NHI database which is used for conducting an endangered resources review. There are a total of 217 records in the NHI database for the eight species being proposed for addition.

None of the public hearing attendees indicated that they represented a small business as defined by s. 227.114, Wis. Stats.

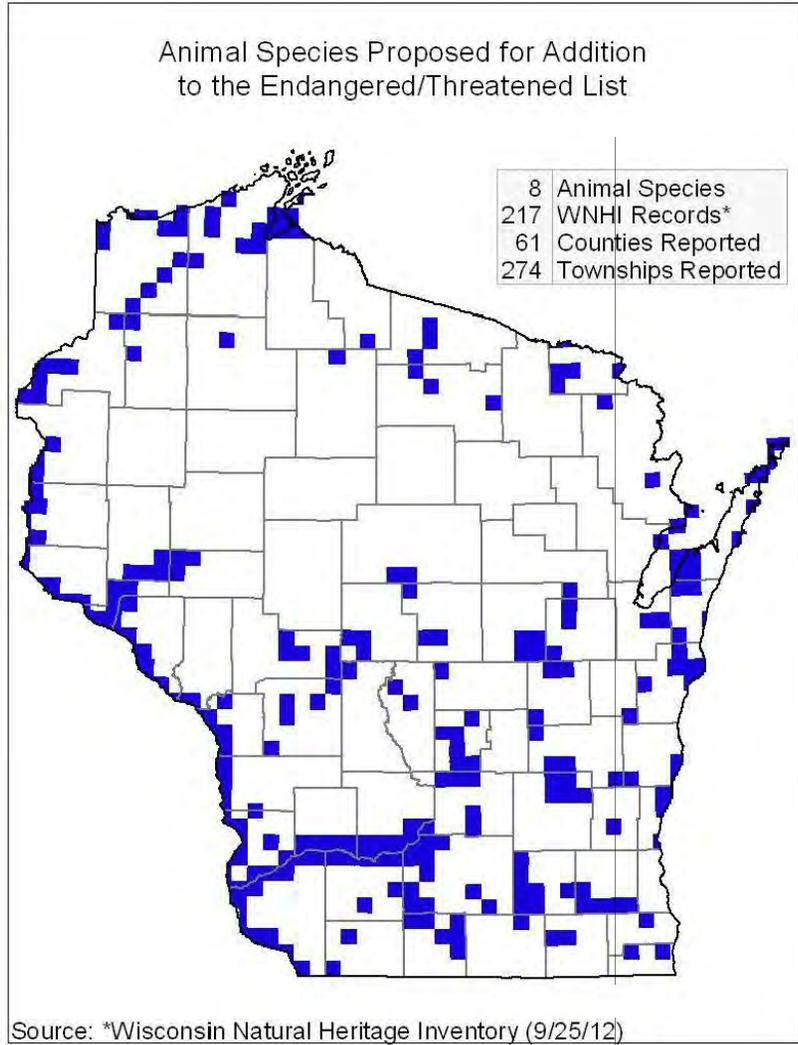
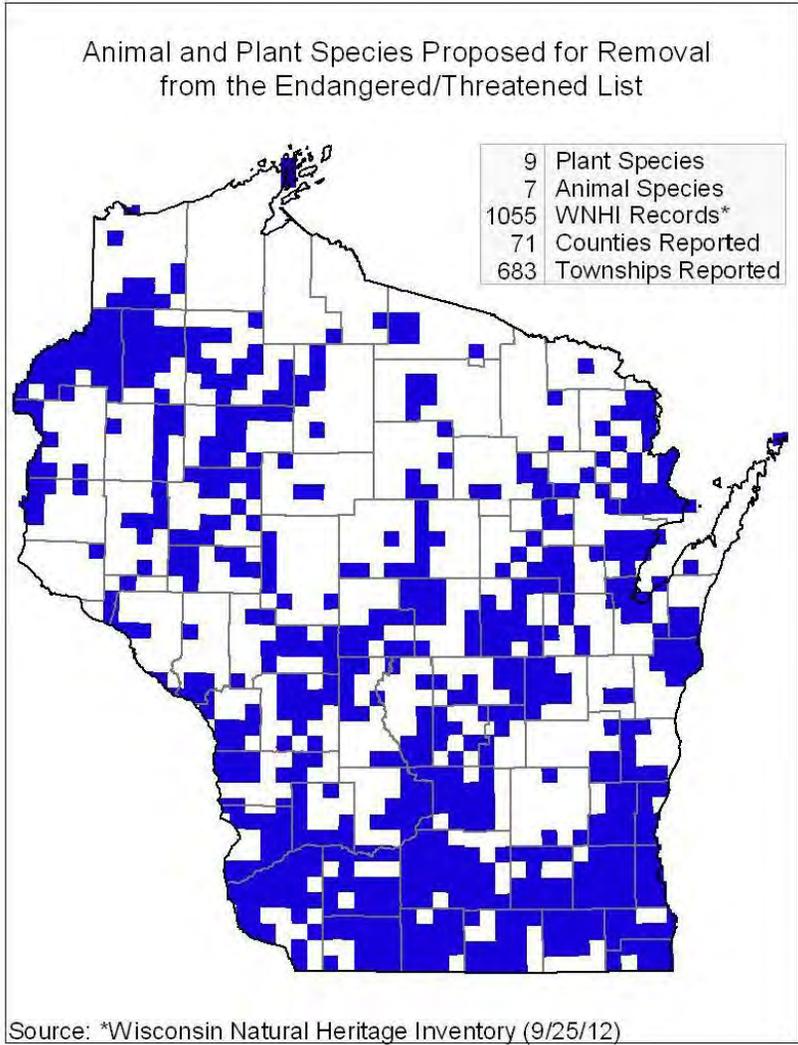
9. Hearing Summary/Response to Comments

A brief summary of the location and attendance of the public hearings along with the Department's response to all of the public comments received are included in Attachment C.

10. Attachments

- A. Species narrative and Wisconsin NHI township/county maps
- B. Environmental Assessment
- C. DNR Response to Comments

Contact Person: Erin Crain, Bureau Director, Endangered Resources Program, Department of Natural Resources, P. O. Box 7921, Madison, WI 53707-7921, (608) 267-7479, Erin.Crain@Wisconsin.gov

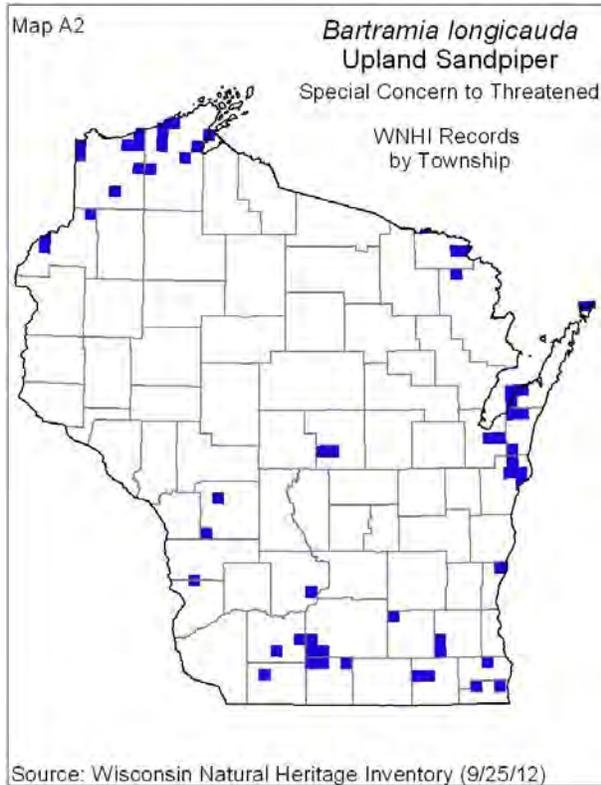


Attachment A. [ER-27-11] Biological descriptions and Natural Heritage Inventory township/county maps for the proposed revisions to the Endangered and Threatened Species List of Wisconsin.

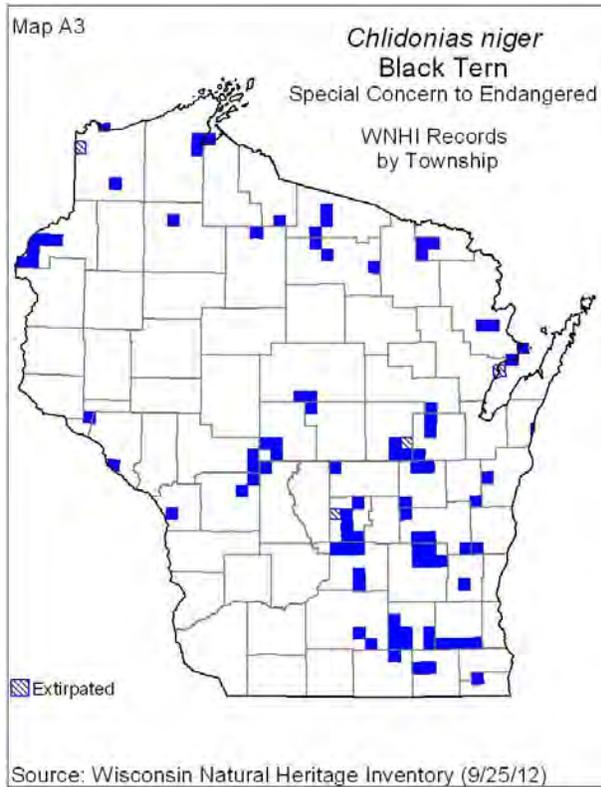
ANIMAL SPECIES - ADD TO ENDANGERED/THREATENED



A Leafhopper (*Attenuipyga vanduzeei*), a small terrestrial insect also known as “a prairie leafhopper” or “shovel-headed leafhopper”, is found in the highest quality prairie remnants near the Mississippi and Lower Wisconsin Rivers. This species is very rare in Wisconsin. Only 4 extant populations are known. This species has poor dispersal ability and is sensitive to management and woody encroachment. Add to endangered list [NR27.03(2)]. Map A1.



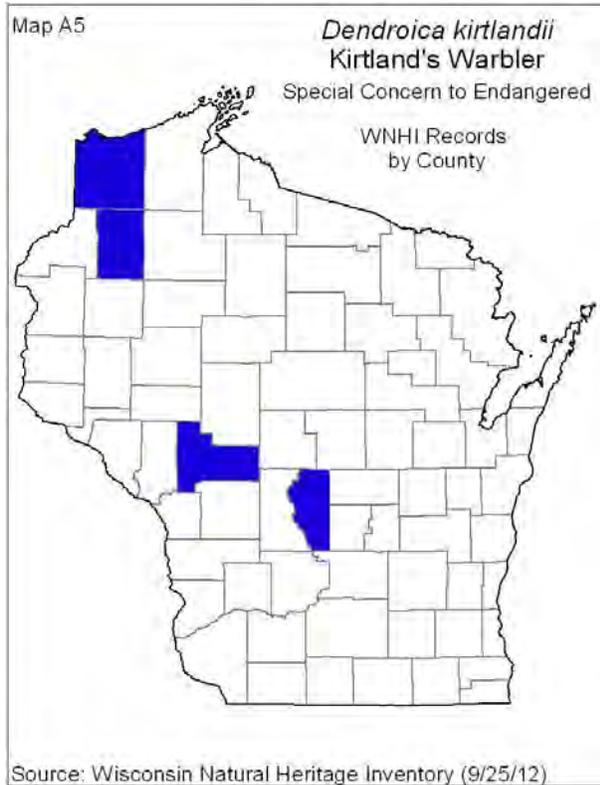
Upland Sandpiper (*Bartramia longicauda*), a bird, is found primarily in the southwest, northwest sands, and northeastern part of the state. Other secondary areas are in the central, southeast, and western parts of the state. This species prefers large, open landscapes with short to mid-height grassy vegetation, including remnant prairie, lightly grazed pastures, barrens, old fields, and other idle grasslands, and hay fields. This species is in decline in Wisconsin, some of the largest declines in its range; once reported at 55 sites. It may disappear from Wisconsin without large blocks of idle and/or grazed grasslands. Add to threatened list [NR27.03(3)]. Map A2.



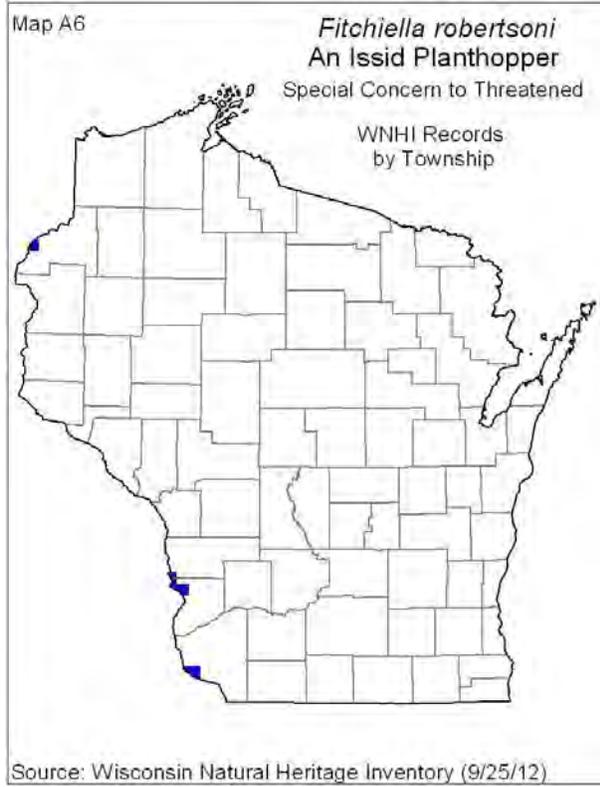
Black Tern (*Chlidonias niger*), a bird, is found in northern, eastern, and central Wisconsin in marshes, river sloughs, rivers, lakeshores, impoundments, and wet meadows, typically in sites with mixture of emergent vegetation and open water. The species is in decline in Wisconsin. Surveys indicate declines as much as 36% in recent years and a 78% decline over 30 years. Once reported at 79 sites, was found only at 7 breeding colonies in 2010. Add to endangered list [NR27.03(2)]. Map A3.



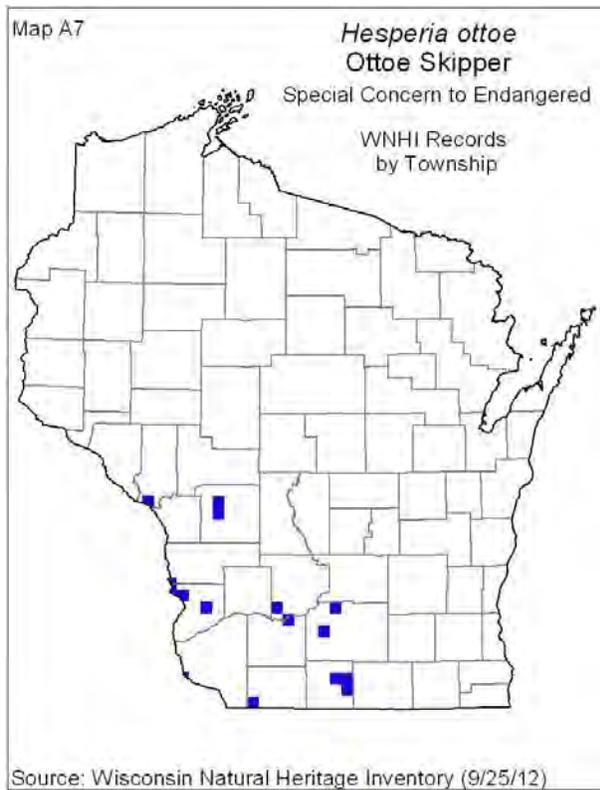
Beach-dune Tiger Beetle (*Cicindela hirticollis rhodensis*), a beetle also known as the “hairy-necked tiger beetle”, is found on beaches of Lakes Superior and Michigan. This species is rare and declining in Wisconsin (30%). Once reported from 9-10 sites statewide, now only one known viable population remains. Add to endangered list [NR27.03(2)]. Map A4.



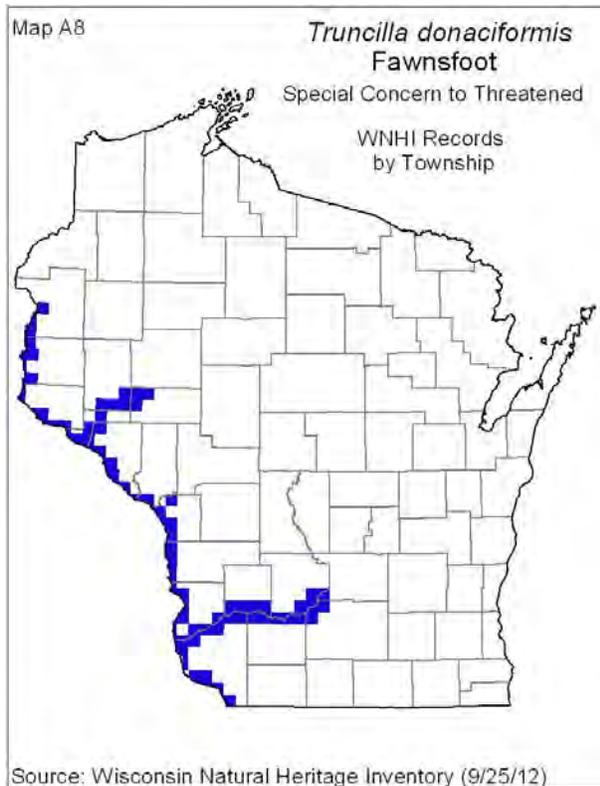
Kirtland's Warbler (*Dendroica kirtlandii*), a bird, is found in Adams and Marinette counties in areas at least 30 hectares in size, where scrubby jack pine (2 to 6 meters high) is interspersed with many small openings and minimal ground cover. This species is considered to be “critically imperiled” globally and is currently on the Federal list of endangered species. This species has nested in Wisconsin consistently since 2007; twelve new populations are now known. There are historic records of individuals in the state. Add to endangered list [NR27.03(2)]. Map A5.



An Issid Planthopper (*Fitchiella robertsoni*), a small terrestrial insect also known as “Fitch's Elephanthopper” or “Robertson's Flightless Planthopper” or “Fitch's Planthopper”, is found in high quality remnant dry to dry-mesic grasslands in the bluffs along the Mississippi River and in the sand country of northwest Wisconsin. This species is very rare in Wisconsin. Only 4 extant populations are known. Add to threatened list [NR27.03(3)]. Map A6.

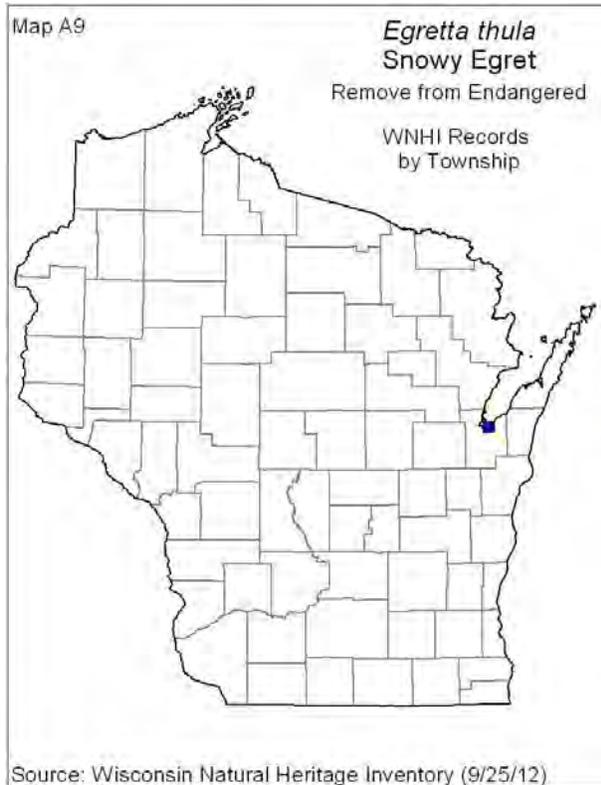


Ottoe Skipper (*Hesperia ottoe*), a butterfly, is found in nine counties in the southwestern corner of the state on dry to dry-mesic hill prairies, sand prairies, and sand barrens. This species is very rare and in decline in Wisconsin. Once known to 16 sites; as of 2011 only 4 are extant (a 75% decline since the mid-1990s). Many populations are gone range wide. Very few sites have the size, quality, structure, or connectivity to sustain this species. Add to endangered list [NR27.03(2)]. Map A7.

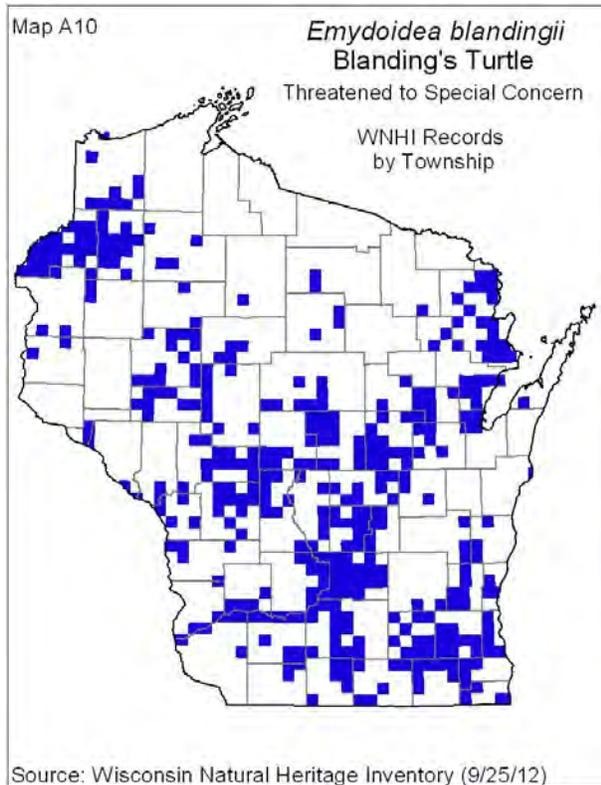


Fawnsfoot (*Truncilla donaciformis*), a freshwater mussel, is only known from the Mississippi River and portions of its major tributaries in Wisconsin (St. Croix and Wisconsin River). This species is in decline in Wisconsin. Populations are disappearing range wide. Once widespread and abundant, this species is rarely found in recent years. Numbers have greatly declined in WI's remaining viable populations (St. Croix and Lower Wisconsin Rivers). Add to threatened list [NR27.03(3)]. Map A8.

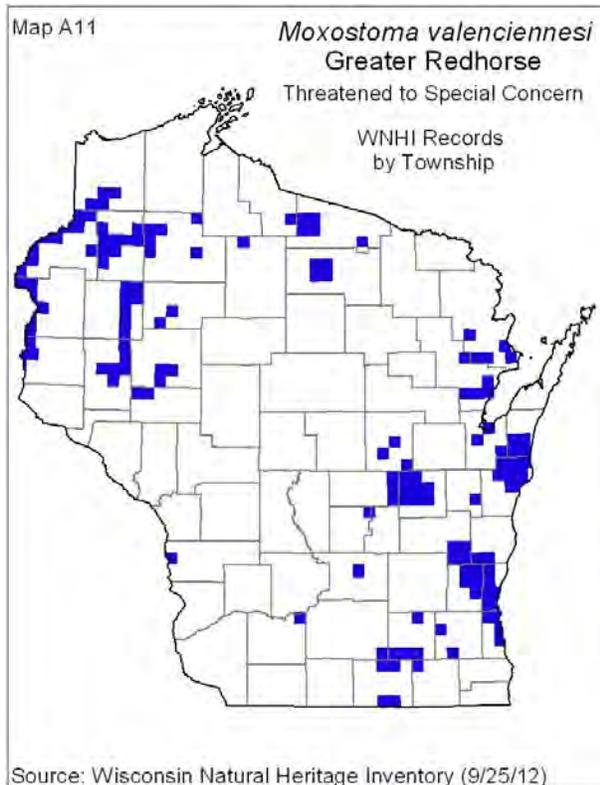
ANIMAL SPECIES - REMOVE FROM ENDANGERED/THREATENED



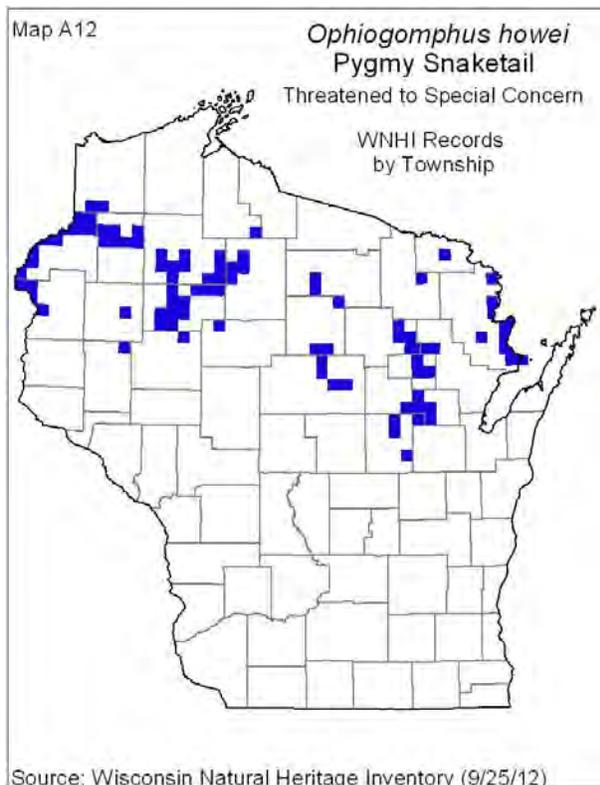
Snowy Egret (*Egretta thula*), a waterbird, utilizes a wide variety of wetland habitats in their range, but does not breed in Wisconsin. The species has always been on the edge of its range in Wisconsin and is not considered a regular breeder in the state. Remove from the endangered list [NR27.03(2)]. Map A9.



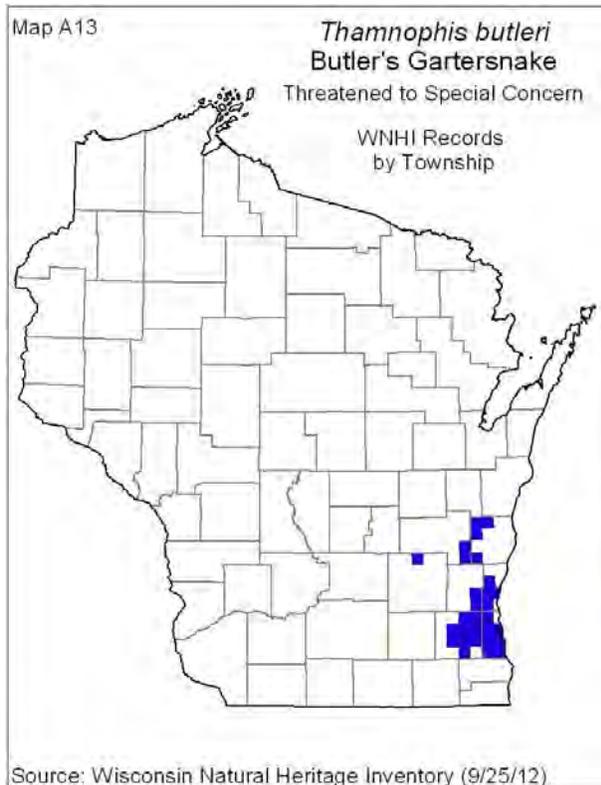
Blanding's Turtle (*Emydoidea blandingii*), a turtle, is often found in slow moving rivers, streams, ponds, lakes, marshes, swamps, sloughs, and backwater areas, as well as adjacent terrestrial habitats found in the majority of Wisconsin's counties, except for the north-central tier. Species still slightly declining in WI, however large population numbers and wide distribution. Species is not imperiled in the state. Remove from the threatened list [NR27.03(3)]. Map A10.



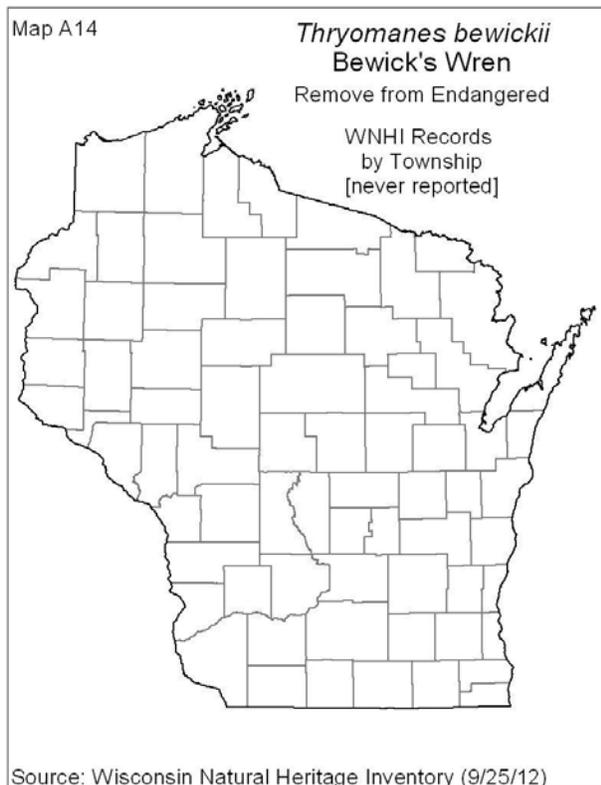
Greater Redhorse (*Moxostoma valenciennesi*), a large fish, is found in widely scattered locations in the Lake Michigan and Mississippi River basins. The species appears stable in WI; found consistently in multiple watersheds. Remove from the threatened list [NR27.03(3)]. Map A11.



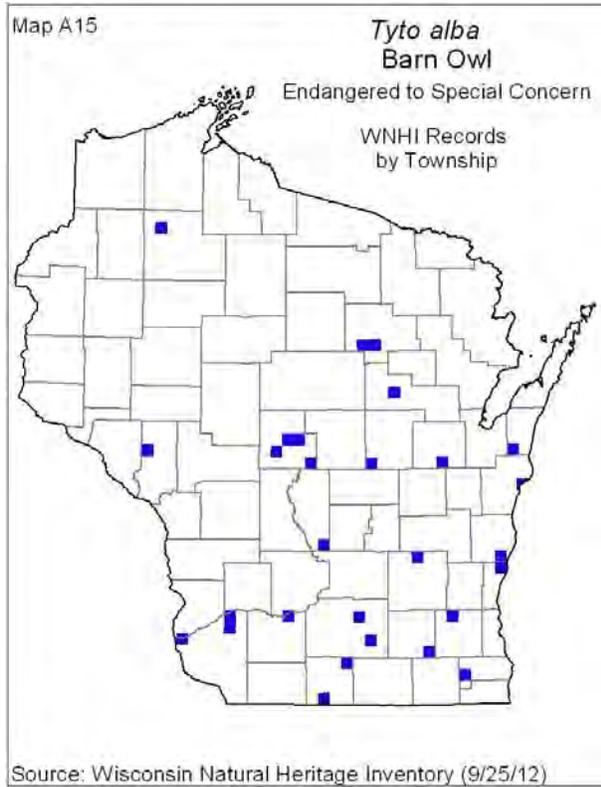
Pygmy Snaketail (*Ophiogomphus howei*), a small dragonfly, is found in clean, fast flowing, medium to large streams with abundant gravel or sand substrates in northern Wisconsin. These streams are also in largely forested watersheds. Species appears stable in the state. New populations found using modeling of habitat and targeted surveys. Remove from the threatened list [NR27.03(3)]. Map A12.



Butler's Gartersnake (*Thamnophis butleri*), a snake, is found in open to semi-open canopy wetland and upland habitat, including prairies, sedge meadows, shrub carr, wet meadows, marshes, grasslands, savannas, old fields, pastures, grassy roadsides, and vacant lots in Dodge, Fond du Lac, Milwaukee, Ozaukee, Sheboygan, Washington, and Waukesha counties. Species appears stable in WI. New information on abundance, range, and hybridization support delisting. Remove from the threatened list [NR27.03(3)]. Map A13.

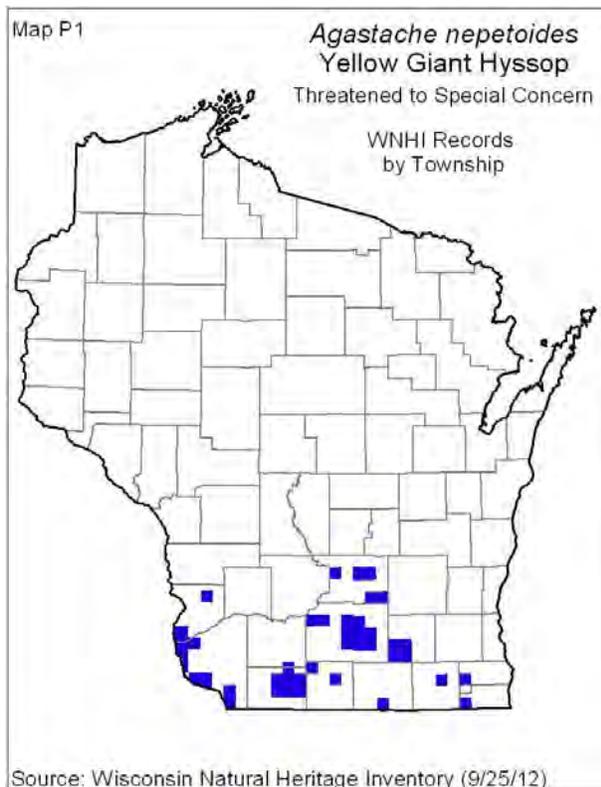


Bewick's Wren (*Thryomanes bewickii*), a small migratory bird, has not been observed breeding in Wisconsin or neighboring states for over 40 years; it is extirpated. Remove from the endangered list [NR27.03(2)]. Map A14.

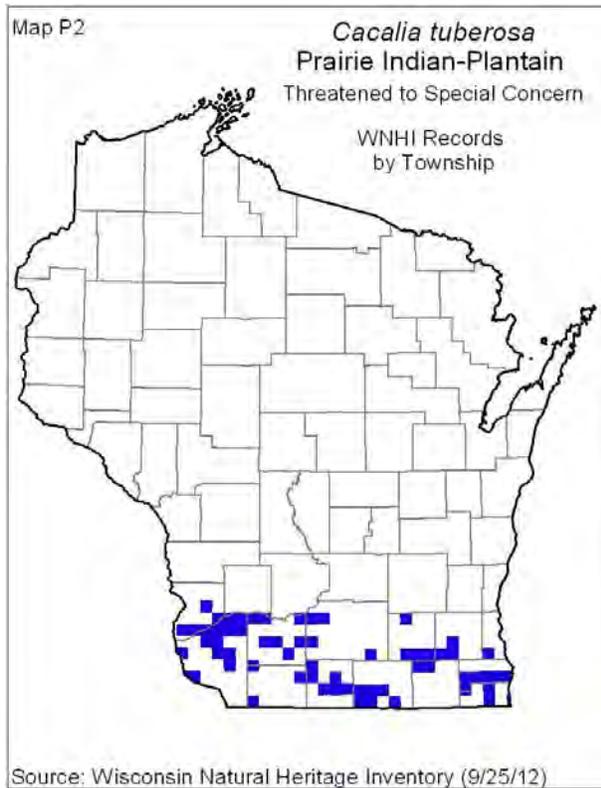


Barn Owl (*Tyto alba*), an owl, has a scattered and irregular distribution in the state, mostly the southern half. The species has always been on the edge of its range in Wisconsin and is not considered a regular breeder. In their range, they are found in rural lands or grasslands with some combination of wet meadows, wetland edges, pastures, old-fields, grain crops, hayfields, hedges, and fencerows; usually within 1-2km of permanent water and adjacent to woodlot edge. Nest sites include concrete-domed silos, barns, tree cavities, abandoned farm buildings, church steeples, bank or cliff cavities, and barn owl nest boxes. Remove from the endangered list [NR27.03(2)]. Map A15.

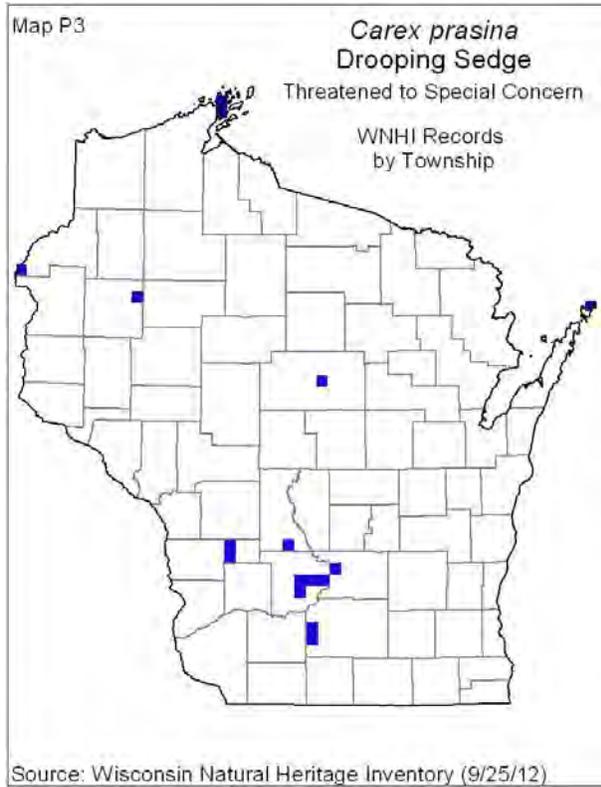
PLANT SPECIES - REMOVE FROM ENDANGERED/THREATENED



Yellow Giant Hyssop (*Agastache nepetoides*), a plant in the mint family, is found in areas with partial sun within dry and dry mesic forests, oak woodlands, oak openings, alluvial forests, as well as the edges of meadows, fencerows, and thickets; primarily found in southern Wisconsin in Crawford, Grant, Lafayette, Green, Rock, Walworth, Racine, Jefferson, Dane, and Columbia counties. The population in Wisconsin is stable to increasing. It has responded well to savanna management and restoration. Remove from the threatened list [NR27.03(3)]. Map P1.



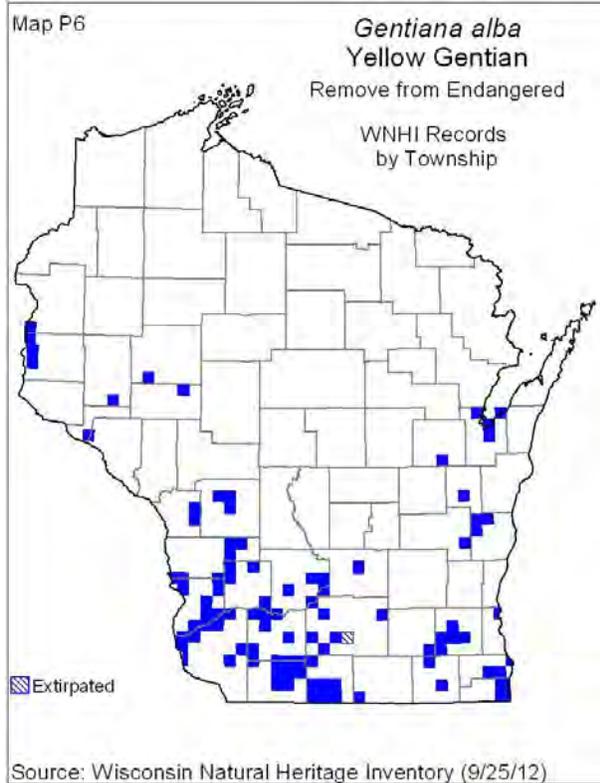
Prairie Indian-Plantain (*Cacalia tuberosa* = *Arnoglossum plantagineum*), a plant in the aster family, is found in open, deep-soiled wet to wet-mesic to dry prairies that are usually calcareous; has been reported from the southern two tiers of counties in Wisconsin, including Grant, Crawford, Lafayette, Iowa, Green, Dane, Rock, Jefferson, Walworth, Waukesha, Kenosha, and Racine counties. It inhabits moist prairies on lakeplains, outwash plains and low moraines in southeastern Wisconsin as well as dry oak openings and bluff prairies in central and southwestern Wisconsin. The population in Wisconsin is stable to increasing; It has responded well to prairie management. Remove from the threatened list [NR27.03(3)]. Map P2.



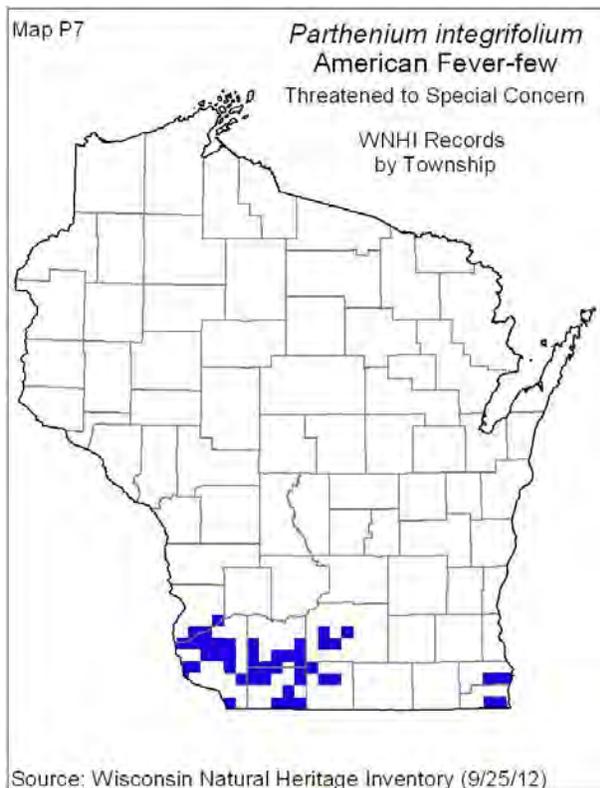
Drooping Sedge (*Carex prasina*), a plant in the sedge family, is found in good-quality, mesic hardwood forests encompassing seepages, spring heads, and streamlets and has been found in 11 counties mostly representing widely scattered populations. The population in Wisconsin is stable. It has a narrow habitat preference; however it has a fairly wide distribution and is found regularly in suitable habitat. Remove from the threatened list [NR27.03(3)]. Map P3.



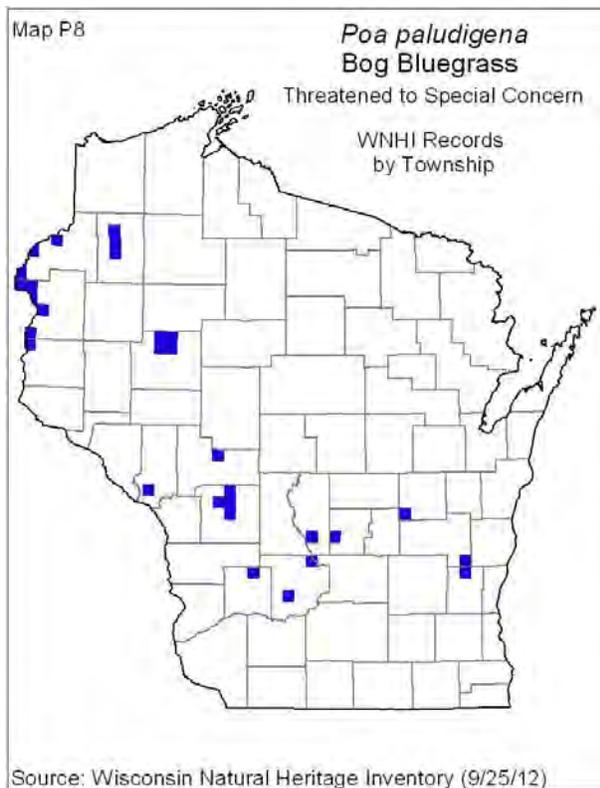
Canada Horse-balm (*Collinsonia canadensis*), is a plant in the mint family is also known as Stoneroot, and is considered extirpated in Wisconsin. Elsewhere in its range it has been found in rich beech-maple deciduous forests, as well as occasionally in swampy deciduous forests or oak-hickory and sassafras forests. Documented at only 2 locations in Wisconsin; one is presumed extirpated and the other has not been observed for 150 years. This species is conspicuous and easy to identify. Remove from the endangered list [NR27.03(2)]. Map P4.



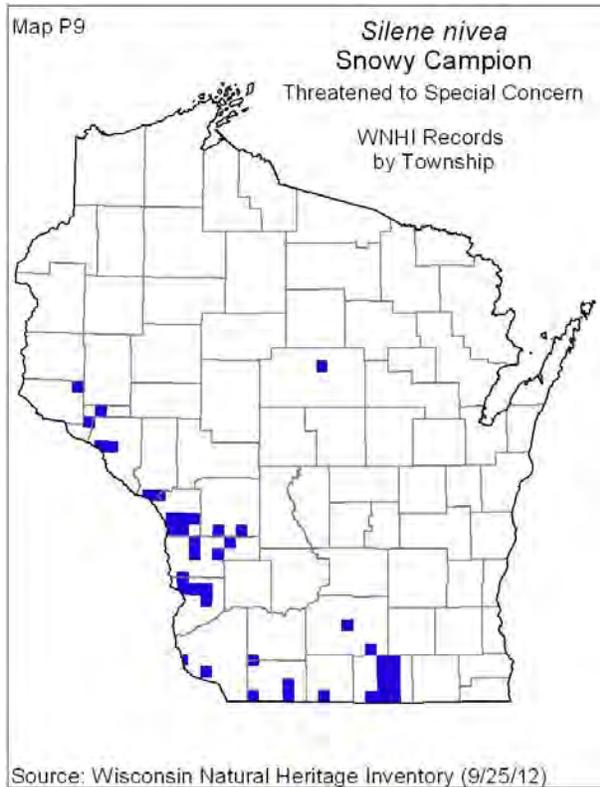
Yellow Gentian (*Gentiana alba*), a plant in the gentian family is also known as Yellowish Gentian, and is found in dry to moist prairies, savannas and open woods in a wide variety of soil types. In Wisconsin it has been found in 32 counties, mostly in the south-central portion of the state. The population in Wisconsin is increasing. Most of the population expansion and increases have occurred in old fields. Remove from the threatened list [NR27.03(3)]. Map P6.



American Fever-few (*Parthenium integrifolium*), a composite plant also known as Wild Quinine, is found in dry-mesic to mesic (sometimes wet-mesic) prairie and savanna in mostly loamy to moderately sandy soils in the southwest and southeast corners of the state. The population in Wisconsin appears stable. It is reproducing well on managed and restored sites, and on newly planted sites. Remove from the threatened list [NR27.03(3)]. Map P7.



Bog Bluegrass (*Poa paludigena*), a grass, is found most often growing on banks and atop hummocks, tussocks, and moss-covered logs along small creeks, rivulets, and pools in black ash/yellow birch, black ash/red maple, and black ash/elm swamps throughout the state, perhaps most common in west-central and northwestern Wisconsin in areas bordering the driftless region. Population in Wisconsin appears stable. New records have resulted from inventories. Remove from the threatened list [NR27.03(3)]. Map P8.



Snowy Campion (*Silene nivea*), a plant in the pink family, is found in rich woods and alluvial, disturbed floodplains and streambanks, old grasslands, sand prairie, and roadsides. Primarily known from the Driftless area in south-central, southwestern, and western portion of the state. The population in Wisconsin appears stable. It is able to persist with reed canary grass and in degraded streamside habitats and roadside, railroad and utility rights-of-way. Species no longer considered imperiled. Remove from the threatened list [NR27.03(3)]. Map P9.

**Environmental Assessment on Proposed Rule Revision to Update
Wisconsin's Endangered and Threatened Species List
[ER-27-11]**

Wisconsin Department of Natural Resources

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Kelly S. Kearns
Rori Paloski
William A. Smith**

December 2012

Bureau of Endangered Resources staff has made the preliminary determination that these rule revisions are a Type II action under Chapter 150, Wis. Adm. Code, thus requiring an Environmental Assessment.

Bureau of Endangered Resources staff has made the preliminary determination these rule revisions are not a major and significant action under s. 1.11, Wis. Stats., and therefore an Environmental Impact Statement is not required.

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I. EIS Recommendation

The Environmental Assessment (EA) and the Economic Impact Analysis (EIA) report of the impacts of this proposal are of sufficient scope and detail to conclude that this is not a major action which would significantly affect the quality of the human environment. Therefore an Environmental Impact Statement (EIS) is not required prior to final action by the Department.

A. Significance

1. Environmental Effects. The primary short-term and long-term effects of this revision are to provide greater protection for the species that are critically rare in Wisconsin and will likely be lost or undergo severe population declines if not granted protection, by focusing conservation efforts and avoidance/minimization measures on the most at risk species. As the endangered species law (s. 29.604, Stats.) is already in effect, there will be no change in Department policy regarding means to conserve these species. The removal and addition of species to the endangered and threatened (E/T) list will likely require increased consultation initially with Department staff during environmental assessments and endangered resources reviews. Overtime there will be a net decrease, as the proposed list revision reduces the number of regulated species. Enforcement requirements will not be significantly increased.
2. Cumulative Effects. Other rare species not on the E/T list, but sharing habitat with listed species, may also indirectly receive protection through measures meant for listed species and as a result may never become rare (and require listing) themselves. Alternatively, species not on the E/T list, but sharing habitat with listed species that is being proposed for delisting, may lose indirect protection.
3. Risk of Uncertainty. The degree of risk or uncertainty in predicting environmental impacts or effectively controlling potential environmental impacts is low and there are no known public safety and health impacts. As the endangered species law (s. 29.604, Stats.) is already in effect, there will be no change in Department policy regarding means to conserve species on the E/T list. Reduced protection and management efforts for species proposed for delisting and conversely increased efforts for species proposed for listing are expected, but the amount of and the impact to the species are uncertain. Future protection and management afforded under different programs and agencies are unknown and may adversely or favorably affect these species. Population status and trends will continue to be monitored by the Natural Heritage Inventory (NHI) program for future E/T list revisions.

4. Precedent. No precedent is set with this proposed revision. The proposed list revision is consistent with s. 29.604, Stats.
5. Controversy. There may be controversy regarding adding species to and removing species from the threatened and endangered list. The controversy may come from groups or individuals who believe that species should not be protected from extirpation from the state, or that legal protection will have socio-economic impacts that outweigh the benefits of conserving the species. Conversely, groups or individuals may oppose removing species from the E/T list, as the species may become eligible for harvest or taking thus placing the species at risk. And associated species and habitat may potentially experience reduced protection and management efforts provided for E/T species; Or that it is premature to delist, as more monitoring is needed to confirm population trends. Potential controversy also exists from groups or individuals who believe the proposed list and delist does not include as many species as they believe it should. With this range of values as a backdrop, the Department must carry out its responsibility to protect the native plants and animals of the state, of which rare species are a part.

All suggestions for changes have been carefully reviewed. Those species whose rarity, decline, or improvement can be demonstrated through use of the best data available and consultation with specialists and would benefit from the protection and management tools afforded under the Endangered Species Law are proposed for listing or delisting. (The biological thought process used in developing the proposed list is detailed in the section on History and Background.) Some of the species for which there were listing recommendations by species experts and are not being proposed are highlighted in the section addressing Alternatives and Their Impacts (VI). The potential controversy of this proposed revision regarding specific potentially affected parties is detailed in relation to economic consequences (V. Environmental Consequences).

II. History and Background

The state E/T species list [NR 27.03 (2) and (3)] was created in 1975 in order to provide legal protection for those species of plants and animals whose populations are critically low and are in danger of becoming extirpated from the state. Subsection 29.604 (3)(b) requires the Department to periodically review and revise the E/T species list. Since the first list of Wisconsin E/T species was developed in 1972, the list has been revised 10 times. The major list revisions, where greater than 5 species were removed or added, took place in 1978–1979, 1985, 1989, and 1997. While the last major list revision was in 1997, the list has been occasionally revised for individual species: Gray Wolf (delisted in 2004), Bald Eagle (delisted in 2007), Osprey (delisted in 2009), Trumpeter Swan (delisted in 2009), and 4 cave bat species (listed in 2011).

The purpose of revising the state E/T species list is to provide protection for Wisconsin's critically rare species. Section 29.604, Stats., prohibits certain actions which may be detrimental to rare species and provides the Department with the authority to establish the list of E/T species and enforce the laws. This law prohibits "taking" of any listed species of animal by any action in the state. Listed plants are protected from taking on public lands except in the course of forestry, agriculture, and utility activities.

An amendment to the state's endangered species law allows for the taking of E/T species when the taking is incidental to another lawful action and when the taking will not jeopardize the survival of the species within the state [Section 29.604(6m)(6r), Stats.]. This amendment brings Wisconsin's law in line with the Federal Endangered Species Act regarding incidental take. Specific broad incidental take authorizations have been developed for listed cave bats, Butler's gartersnake, and grassland and savanna management. The Broad Incidental Take permit and authorization for grassland and savanna management, as provided for under s. 29.604 Wis. Stats., allows for the incidental taking (mortality) of certain E/T species that may occur as a result of specific grassland and savanna management activities. These species are dependent upon management to set back natural succession, and although the disturbance may result in some mortality, take is minimized by protocols designed for each species.

The federal and state laws remain different in regards to requirements for recovery plans. The federal law requires that a recovery plan be developed and implemented for each E/T species. The state law does not have this requirement.

In 2006, the Bureau of Endangered Resources (BER) drafted and the BER Policy Team approved program guidance that lays out the process for reviewing and making recommendations to revise the E/T list. The 2006 E/T list revision procedures document recommends conducting a list-wide review at least every 5 years and earlier as needed, based on changes in species population condition. As changes in population condition of species typically occur more frequently than the E/T list is revised, they are reflected in the Natural Heritage Inventory (NHI) Working List and NHI system of global and state rarity ranks. Global and state rarity ranks are assigned to every species following standardized methodology developed by NatureServe, a non-governmental umbrella organization for NHI and similar programs throughout the U.S., Canada, and Latin America. The NHI system of global and state rarity ranks is the primary trigger for initiating a status assessment of a species, which inform the E/T list revision process.

NHI Programs and NatureServe use a suite of factors to assess the extinction or extirpation risk of plants, animals, and ecosystems, and to assign conservation ranks at global, national, and state levels. The set of factors used to assess conservation status, by category, are:

- **Rarity:** Population Size, Range Extent, Area of Occupancy, Number of Occurrences, Number of Occurrences or Percent Area with Good Viability/Ecological Integrity, and Environmental Specificity (used only when the Number of Occurrences and Area of Occupancy are unknown).
- **Trends:** Long-term and Short-term Trend in population size or area.
- **Threats:** Threat Impact (generated by considering the scope and severity of the major threats), and Intrinsic Vulnerability (used only if Threat Impact is unknown).

Between January 2010 and August 2011, BER initiated and completed a review of Wisconsin's rare species using the 2006 E/T list revision procedures document as guidance. The review resulted in over 1000 state rarity rank changes and a list of recommended revisions to the E/T species list. Biologists from a variety of state and national agencies, organizations, and universities, as well as naturalists throughout the state with taxonomic expertise provided new or updated information on the population condition and distribution of rare species in the state.

Department biologists focused attention and resources on conducting status assessments on species that are at risk of extirpation in the state and where application of Wisconsin's Endangered Species Law (ESL) would be effective in their protection. Sources of information used during this process, included:

- Historical and existing occurrences of the species as tracked in the NHI database, which is a compilation of the most current information in the state.
- Results of WDNR and other surveys.
- Consultation with experts both in and out of state, and other state heritage programs for information, rangewide threats, and management/protection efforts/response.
- Published literature on various species.

III. Proposal Description

The state E/T species list [NR 27.03 (2) and (3)] was created in 1975 in order to provide legal protection for those species of plants and animals whose populations are critically low and are in danger of becoming extirpated from the state. Subsection 29.604 (3)(b) requires the Department to periodically review and revise the E/T species list.

Section 29.604 (3)(a), Stats., requires the Department to develop a list of endangered and threatened species based on the "best scientific and commercial data available." These data were compiled through the use of the NHI database, as described in sec.II. All species on the current NHI working list were reviewed for potential listing. Through the public comment process, the Department recommended removing Hemlock Parsley (*Conioselinum chinense*) from the list revision proposal.

This review and subsequent update, found that a total of 15 animal species changes (8 list additions and 7 list removals) and 8 plant changes (all list removals) should be proposed; and an additional 20 scientific names should be updated on the published rule. The addition of 8 species and removal of 15 species would bring the total number of plants and animals on the E/T list from 239 to 232.

Species summary descriptions can be found in the plain language analysis section of the proposed rule (Board Order ER-27-11), and maps and narratives can be found in Attachment A of the background memo. The maps depict occurrences of each species by township or county as recorded in the NHI database. Both historical (generally, records which are 25 years or more old) and current occurrences are shown. Townships or counties with only extirpated observations (populations disappeared/destroyed) are depicted differently as they are not considered during the environmental review process. Full status assessments and state rarity rank worksheets are available online on the WDNR's "ET List" web pages.

ANIMAL SPECIES - ADD TO E/T

- A Leafhopper (*Attenuipyga vanduzeei*)
- Upland Sandpiper (*Bartramia longicauda*)
- Black Tern (*Chlidonias niger*)
- Beach-dune Tiger Beetle (*Cicindela hirticollis rhodensis*)
- Kirtland's Warbler (*Dendroica (=Setophaga) kirtlandii*)

- An Issid Planthopper (*Fitchiella robertsoni*)
- Ottoe Skipper (*Hesperia ottoe*)
- Fawnsfoot (*Truncilla donaciformis*)

ANIMAL SPECIES - REMOVE FROM E/T

- Snowy Egret (*Egretta thula*)
- Blanding's Turtle (*Emydoidea blandingii* = *Emydoidea blandingi*)
- Greater Redhorse (*Moxostoma valenciennesi*)
- Pygmy Snaketail (*Ophiogomphus howei*)
- Butler's Gartersnake (*Thamnophis butleri*)
- Bewick's Wren (*Thryomanes bewickii*)
- Barn Owl (*Tyto alba*)

PLANT SPECIES - REMOVE FROM E/T

- Yellow Giant Hyssop (*Agastache nepetoides*)
- Prairie Indian-Plantain (*Arnoglossum plantagineum* = *Cacalia tuberosa*)
- Drooping Sedge (*Carex prasina*)
- Canada Horse-balm (*Collinsonia canadensis*)
- Yellow Gentian (*Gentiana alba*)
- American Fever-few (*Parthenium integrifolium*)
- Bog Bluegrass (*Poa paludigena*)
- Snowy Campion (*Silene nivea*)

ANIMAL AND PLANT SPECIES - UPDATE SCIENTIFIC NAME:

- Northern Cricket Frog also known as Blanchard's Cricket Frog (*Acris blanchardii* change to *Acris crepitans*), endangered
- Worm-eating Warbler (*Helmitheros vermivorus* change to *Helmitheros vermivorum*), endangered
- Pallid Shiner (*Notropis annis* change to *Hybopsis amnis*), endangered
- Shoal Chub also known as Speckled Chub (*Macrhybopsis aestivalis* change to *Macrhybopsis hyostoma*), threatened
- Spatterdock Darner Dragonfly (*Aeshna mutata* change to *Rhionaeschna mutata*), threatened
- Obovate Beak Grass (*Diarrhena americana* change to *Diarrhena obovata*), endangered
- Canada Gooseberry also known as Hawthorn-leaved Gooseberry (*Ribes oxycanthoides* change to *Ribes oxycanthoides* ssp. *oxycanthoides*), threatened
- Cliff Cudweed (*Gnaphalium saxicola* change to *Pseudognaphalium saxicola*), threatened
- Early Anemone (*Anemone multifida* change to *Anemone multifida* var. *multifida*), endangered
- Forked Aster (*Aster furcatus* change to *Eurybia furcata*), threatened
- Green Spleenwort (*Asplenun trichomanes-namosum* change to *Asplenium trichomanes-ramosum*), endangered
- Hall's Bulrush (*Scirpus hallii* change to *Schoenoplectus hallii*), endangered
- Hoary Whitlow-cress (*Draba lanceolata* change to *Draba cana*), endangered
- Large-leaved Sandwort (*Moehringia macrophylla* change to *Arenaria macrophylla*), endangered
- Long-beaked Baldrush also known as Bald Rush (*Rhynchosjora scirysoides* change to *Rhynchospora scirpoides*), threatened
- Plains Ragwort (*Senecio indecorus* change to *Packera indecora*), threatened
- Sticky False-asphodel also known as False Asphodel (*Tofieldia glutinosa* change to *Triantha glutinosa*), threatened
- Tea-leaved Willow also known as Flat-leaved Willow (*Salix planifolia* change to *Salix planifolia* ssp. *planifolia*), threatened
- Thickspike also known as Thickspike Wheatgrass (*Elymus lonceolatus* ssp. change to *Elytrigia dasystachya* ssp. *psammophilus*), threatened

- Tufted Bulrush also known as Tussock Bulrush (*Scirpus cespitosus* change to *Trichophorum cespitosum*), threatened

IV. Affected Environment

A. The affected biological or physical environment associated with the proposed rule may be found throughout the state, wherever any of the proposed species occur. Many of the species proposed for listing occur in specialized habitat, often in only a few locations around the state. For example, the beach-dune tiger beetle (*Cicindela hirticollis rhodensis*), a beetle proposed for listing as endangered, is only found on wide sandy beaches of Wisconsin's Great Lakes near river mouths. Ottoe Skipper (*Hesperia ottoe*) is found in dry to dry-mesic hill prairies, sand prairies, and sand barrens in southwestern Wisconsin. Specific affected environments are described in the plain language section of the proposed rule (Board ER-27-11) and in the background memo. Maps and narratives can be found in Attachment A of the background memo. Detailed habitat information is included in the status assessments which are found on the WDNR's "ET List" web pages.

V. Environmental Consequences

A. The primary impact of this rule revision will be to improve the protection and management for the most critically rare species (and remove the protection for those that are no longer considered critically rare). Legal protection by inclusion on NR 27.03(2) and (3) limits taking and selling of these species. The listing of some of these species may preclude or alter certain management activities in certain locations. These types of concerns can be addressed by using the ecosystem management approach in analyzing impacts to listed species and in planning land management activities. The ecosystem management approach seeks a diverse mosaic of land uses and habitats across a large area of the landscape. An action precluded at one location may be carried out at other locations where threatened or endangered species do not occur. Also, using ecosystem management, an action may be acceptable at a site harboring an endangered or threatened species if its survival can be secured in the ecosystem as a whole. The Grassland and Savanna Protocols (see section III) were created to deal with many of these situations. The ecosystem management approach is the means by which the broadest array of species can potentially be protected from becoming rare, because large landscapes which encompass the array of natural community types and the interactions between them are emphasized rather than individual sites. In cases where one or more endangered or threatened animals are found on the site of a proposed development project, there may be further need for consultation with the Department to avoid impacts to the population. For example, in a proposal for a new solid waste disposal facility, because of Endangered Species Law, the applicant must avoid take of E/T species and typically accomplishes this by contacting the Department directly. If there are listed species present, the applicant would work with the Department to locate an alternate site which would not impact listed species or to develop project specifications at the same site that would avoid take of listed species.

Without mandatory avoidance measures, species that are proposed for delisting may experience population declines. Species may become eligible for harvest or taking thus placing the species at risk. And associated species and habitat may potentially experience reduced protection and

management efforts provided for E/T species. Loss of E/T funding for research and habitat conservation may also impact the species and its environment.

B. Potential economic impacts of the revision of NR 27.03(2) and (3) are listed in the Fiscal Estimate and Economic Impact Analysis (EIA) report that was drafted with input from the public [form DOA-2049]. Pursuant to s. 227.137 Wis. Stats., the Department was required to solicit comments on the economic impact of the proposed rule, and if requested to coordinate with local governments in the preparation of the EIA. Comments were collected between 9/24/2012 and 10/24/2012. A total of 18 comments were received; 8 were economic comments that were incorporated into the EIA. No local governments requested the Department coordinate with them in the preparation of the EIA. A summary of the EIA comments and the EIA report is attached with the background memo [form DOA-2049]. The EIA report is organized by the types of small businesses, organizations, and units of government that could be affected. Effects of listing/delisting will be highly variable among different groups and locations, however the overall economic impact will lessen because of the location and total number of records of species being delisted and listed.

VI. Alternatives and Their Impacts

A. No action. If this proposed revision of NR 27.03 does not occur, research by the Department and others indicate there will be ongoing, and for some species, escalated threats to the continued existence of these animals in the state. For most of these species there is no other means to provide adequate legal protection. Many of these species are now being threatened by habitat destruction or collection. The future viability of these species in Wisconsin without human intervention is unlikely, as human-caused disturbances have generally led to the species' rarity and will continue to impact populations. Not adding these species to the list would limit the research, management, and protection efforts that must be made in order to ensure the continued survival and recovery of these species. This would also eliminate the impetus (i.e., legal protection) needed to engage many partners in these cooperative efforts.

Updating the E/T list to focus conservation efforts and avoidance/minimization measures on WI's most at risk species will ultimately save money. All actions that the Department conducts, funds or approves on public or private lands must be screened for potential impacts to rare species. Endangered Resources Screening relies on NHI data for records of rare species. The number of NHI records for species proposed for addition to the E/T list is far fewer than the number of records for species proposed for delisting – eight species are proposed for listing (with a total of 217 NHI occurrences) versus 16 species proposed for delisting (with a total of 1055 NHI occurrences). If the proposed revision does not occur and thus the number of E/T species records is not decreased, regulatory impacts to businesses and individuals will not be reduced.

B. One potential alternative to the proposed list revision is to include the many more species of rare plants and animals whose status was reviewed by the NHI Program in conjunction with the current proposal but were determined to not merit listing/delisting at this time. These species were not included in this revision due to a number of reasons.

The species proposed for listing was limited to those that are not only appropriate for listing because they are at risk of extirpation, but also where application of the Endangered Species Law (ESL) would be effective in their protection. For example, the application of the ESL for plants

applies only to public lands and because only approximately 17% of state land is in public conservation ownership, it was decided not to proceed with listing any new plants in this revision. That will not preclude plants from being considered again in a future list revision. While the ESL governs what is protected through the Environmental Review process, individuals and organizations have the ability to voluntarily conserve E/T plants, Special Concern species and Natural Communities.

Following is a list of species whose addition to, or removal from the E/T list was considered but not proposed at this time. Given how the Scope Statement is written, these species could not be added to the current E/T List change proposal without starting the rule revision process over. They can however be considered in future E/T list reviews and revisions.

1. Animals. Forty-three animals were recommended by species experts for a status assessment; fifteen are included in this proposal for addition or removal. The remaining 28 animal species which were considered for addition or removal are listed below.

Currently Endangered/Threatened, Assessment recommends no change

- Acadian Flycatcher (*Empidonax virescens*)
- Ellipse (*Venustaconcha ellipsiformis*)
- Gilt Darter (*Percina evides*)
- Hooded Warbler (*Wilsonia citrina*)
- Yellow-throated Warbler (*Dendroica dominica*)

Currently Special Concern, Assessment recommends no change

- Rusty Blackbird (*Euphagus carolinus*)
- Swainson's Thrush (*Catharus ustulatus*)
- Western Meadowlark (*Sturnella neglecta*)
- Rosyface Shiner (*Notropis rubellus*)
- Western Grebe (*Aechmophorus occidentalis*)
- Yellow-breasted Chat (*Icteria virens*)

Currently Special Concern, E/T listing determined not appropriate &/or ineffective

- Zigzag Darner (*Aeshna sitchensis*) - only 1 site in WI on NPS land - water level biggest threat - ESA would not affect.
- Short-eared Owl (*Asio flammeus*) - WI not important for breeding population.
- American Eel (*Anguilla rostrata*) - legitimate decline/rarity, however minimal WI management impacts.
- A Grasshopper (*Arphia simplex*) - possibly edge of range; need more targeted surveys.
- Redhead (*Aythya americana*) - best managed at the regional scale.
- Little White Tiger Beetle (*Cicindela lepida*) - more inventory and research needed.
- North American Racer (*Coluber constrictor*) - needs targeted surveys; lack of WI info; only tracked as SC since 2000.
- Shortjaw Cisco (*Coregonus zenithicus*) - legitimate decline, however WI management minimal; predator-prey balance biggest issue.
- Timber Rattlesnake (*Crotalus horridus*) - continue to monitor population; Srank S2S3-S3; not imperiled currently; ESL protects dens not bluff tops. "Protected Wild Species" under NR 10.02
- A Leafhopper (*Driotura robusta*) - needs more surveys and research into life history.

- Cobweb Skipper (*Hesperia metea*) - more inventory and research needed.
- Black-crowned Night-Heron (*Nycticorax nycticorax*) - continue wetland management programs; and continue to monitor population.
- Sand Snaketail (*Ophiogomphus smithi*) - more inventory and research needed.
- Wilson's Phalarope (*Phalaropus tricolor*) - continue wetland management programs; and continue to monitor population.
- Gophersnake (*Pituophis catenifer*) - continue to monitor population; Srank S2S3-S3; not imperiled currently; Population numbers not known.
- King Rail (*Rallus elegans*) - edge of range; always rare in WI; continue wetland management programs.
- Wisconsin Well Amphipod (*Stygobromus putealis*) - too little is known, only site under state highway.

2. Plants. Ninety-one plants were recommended for a status assessment by species experts; nine are included in this proposal for removal. The remaining 82 plant species which were considered for addition or removal are listed below.

Currently Endangered/Threatened, Assessment recommends no change

- Hill's Thistle (*Cirsium hillii*)
- Small White Lady's-slipper (*Cypripedium candidum*)
- Pale Purple Coneflower (*Echinacea pallida*)
- Slender Spike-rush (*Eleocharis nitida*)
- Arrow-leaved Sweet-coltsfoot (*Petasites sagittatus*)
- Braun's Holly-fern (*Polystichum braunii*)
- Algae-like Pondweed (*Potamogeton confervoides*)
- Spotted Pondweed (*Potamogeton pulcher*)
- Sheathed Pondweed (*Potamogeton vaginatus*)
- Seaside Crowfoot (*Ranunculus cymbalaria*)
- Small Yellow Water Crowfoot (*Ranunculus gmelinii*)
- Snow Trillium (*Trillium nivale*)

Currently Special Concern, Assessment recommends no change

- Maidenhair Spleenwort (*Asplenium trichomanes*)
- Bushy Aster (*Aster dumosus* var. *strictior*)
- Azure Bluets (*Houstonia caerulea*)
- American Shoreweed (*Littorella uniflora* var. *americana*)
- Pale Beardtongue (*Penstemon pallidus*)
- Christmas Fern (*Polystichum acrostichoides*)
- Pin Oak (*Quercus palustris*)

Currently Special Concern, Assessment recommends adding to the E/T List

- Striped Maple (*Acer pensylvanicum*)
- Clustered Poppy-mallow (*Callirhoe triangulata*)
- Autumnal Water-starwort (*Callitriche hermaphroditica*)
- Wilcox's Panic Grass (*Dichantherium wilcoxianum*)
- Water-purslane (*Didiplis diandra*)
- Male Fern (*Dryopteris filix-mas*)

- Longstem Water-wort (*Elatine triandra*)
- Russet Cotton-grass (*Eriophorum chamissonis*)
- Wild Licorice (*Glycyrrhiza lepidota*)
- Prairie False-dandelion (*Nothocalais cuspidata*)
- Canada Mountain-ricegrass (*Piptatherum canadense*)
- Hill's Pondweed (*Potamogeton hillii*)
- Slender Bulrush (*Scirpus heterochaetus*)
- Maryland Senna (*Senna marilandica*)
- Oregon Woodsia (*Woodsia oregana* ssp. *cathcartiana*)

Currently Special Concern, Assessment needed

- Earleaf Foxglove (*Agalinis auriculata*)
- Rock Stitchwort (*Arenaria stricta* ssp. *dawsonensis*)
- Shinners' Three-awned Grass (*Aristida dichotoma*)
- Dragon Wormwood (*Artemisia dracuncululus*)
- Fragile-stemmed Aster (*Aster fragilis* var. *subdumosus*)
- Long-leaved Aster (*Aster longifolius*)
- Twining Screwstem (*Bartonia paniculata*)
- Mingan's Moonwort (*Botrychium minganense*)
- Blunt-lobe Grape-fern (*Botrychium oneidense*)
- Rugulose Grape-fern (*Botrychium rugulosum*)
- Spoon-leaf Moonwort (*Botrychium spathulatum*)
- Low Calamint (*Calamintha arkansana*)
- Yellow Evening Primrose (*Calylophus serrulatus*)
- Dry Woods Sedge (*Carex artitecta*)
- Hair-like Sedge (*Carex capillaris*)
- Clustered Sedge (*Carex cumulata*)
- Straw Sedge (*Carex straminea*)
- Prairie Straw Sedge (*Carex suberecta*)
- Swan Sedge (*Carex swanii*)
- Torrey's Sedge (*Carex torreyi*)
- Spreading Chervil (*Chaerophyllum procumbens*)
- Narrow-leaved Dayflower (*Commelina erecta* var. *deamiana*)
- Arrow-headed Rattle-box (*Crotalaria sagittalis*)
- Laurentian Bladder Fern (*Cystopteris laurentiana*)
- Hoary Tick-trefoil (*Desmodium canescens*)
- Buttonweed (*Diodia teres* var. *teres*)
- Jeweled Shooting Star (*Dodecatheon amethystinum*)
- Engelmann's Spike-rush (*Eleocharis engelmannii*)
- Mamillate Spike-rush (*Eleocharis mamillata*)
- Swamp Bedstraw (*Galium brevipes*)
- Marsh Bedstraw (*Galium palustre*)
- Catfoot (*Gnaphalium helleri* var. *micradenium*)
- Giant Rattlesnake-plantain (*Goodyera oblongifolia*)
- Northern Oak Fern (*Gymnocarpium jessoense* ssp. *parvulum*)
- Fir Clubmoss (*Huperzia selago*)

- Grassleaf Rush (*Juncus marginatus*)
- Violet Bush-clover (*Lespedeza violacea*)
- Large-flowered Ground-cherry (*Leucophysalis grandiflora*)
- Silvery Scurf Pea (*Pediomelum argophyllum*)
- Hairy Beardtongue (*Penstemon hirsutus*)
- Cleft Phlox (*Phlox bifida*)
- Lanced-leaved Buckthorn (*Rhamnus lanceolata* ssp. *glabrata*)
- Georgia Bulrush (*Scirpus georgianus*)
- Low Nutrush (*Scleria verticillata*)
- Shining Lady's-tresses (*Spiranthes lucida*)
- October Lady's-tresses (*Spiranthes ovalis* var. *erostellata*)
- Veined Meadowrue (*Thalictrum venulosum*)
- Purple Meadow-parsnip (*Thaspium trifoliatum* var. *flavum*)

VII. A second potential alternative to the proposed list revision is to remove species from the proposed list revision (i.e., keep their status as it currently is). Comments were received during the two public comment periods, recommending that the state does not delist certain species in the proposed list revision. Several recommendations were received on the proposed species for addition to the E/T list, including the timber wolf and several grassland bird species. No species that the Department proposed to add to the E/T list had opposition. Many individuals opposed the delisting of several species. All removals from the currently proposed list and delist revision were considered and Hemlock Parsley (*Conioselinum chinense*) a plant considered extirpated, was removed from the current rule revision package. Attachment C captured the public comments and response.

VIII. State, Federal, or Local Approvals

This rule revision does not involve multiple states or federal regulatory actions, there are no required state or federal approvals needed. No local-zoning approvals are needed for this rule revision, as the endangered species law (s. 29.604, Stats.) is already in effect.

IX. State or Federal Analysis

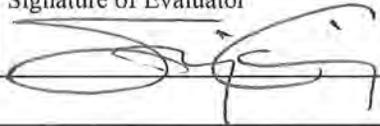
There are no related analyses required under another rule, statute, or federal regulation or law which does not conflict with the purpose of the environmental analysis.

Project Name: NRB Order ER-27-11 - Revisions to E/T List County: Statewide

PRELIMINARY DECISION

In accordance with s. 1.11, Wis. Stats., and Ch. NR 150, Wis. Adm. Code, the Department is authorized and required to determine whether it has complied with s. 1.11, Wis. Stats., and ch. NR 150, Wis. Adm. Code.

The Department has made a preliminary determination that the Environmental Impact Statement process will not be required for this action/project. This recommendation does not represent approval from other DNR sections which may also require a review of the action/project.

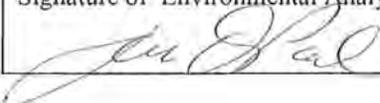
Signature of Evaluator 	Date Signed 12/5/12
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FINAL DECISION

The public review process has been completed. The Department received and fully considered ⁴⁹ responses to the news release or other notice.

Pursuant to s. NR 150.22(2)a., Wis. Adm. Code, the attached analysis of the expected impacts of this proposal is of sufficient scope and detail to conclude that this is not a major action, and therefore the environmental impact statement process is not required prior to final action by the Department.

The Department has determined that it has complied with s. 1.11, Wis. Stats., and ch. NR 150, Wis. Adm. Code. This decision does not represent approval from other DNR sections which may also require a review of the action/project.

Signature of Environmental Analysis Program Staff 	Date Signed 04/10/2013
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NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to sections 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to section 227.42, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with section NR 2.05(5), Wis. Adm. Code, and served on the Secretary in accordance with section NR 2.03, Wis. Adm. Code. The filing of a request for a contested case hearing does not extend the 30 day period for filing a petition for judicial review.

ATTACHMENT C
DNR Response to Comments
Proposed Revisions to Ch. NR 27, Wis. Adm. Code
Board Order ER-27-11

I. General Summary

The Department scheduled public hearings in Madison and a video-conference with sites in Eau Claire, Green Bay, and Milwaukee on Tuesday March 5th, but had to reschedule due to the potential for severe winter weather. The originally scheduled public hearing in Wausau on March 6th was held as scheduled. The Department rescheduled the cancelled hearings to a public meeting on March 11th in Madison at the State Natural Resources building and offered the option to participate via LiveMeeting for those who could not attend in person. A total of 14 people attended and 8 provided verbal comment at the public hearing/meeting. Of the 14, 7 indicated their position was “as interest may appear”, 1 indicated “in support”, 3 indicated “in opposition”, and 3 did not mark a position on the slip. None of the attendees indicated that they represented a small business as defined by s. 227.114, Wis. Stats. The Department received a total of 38 written comments (5 public hearing/meeting attendees also submitted written comments/speaking notes). Written comments were accepted through March 11, 2013. Comments from the Rules Clearinghouse were received on February 21, 2013.

Of the 47 people who attended a hearing or provided written comment, 39 represented themselves and 8 represented the following organizations: The Botanical Club of Wisconsin, Dairyland Power Company, Menominee Indian Tribe of Wisconsin, Northwoods Alliance and Timberwolf Alliance, Turtles for Tomorrow, Wisconsin Society for Ornithology, Wisconsin Builders Association, and Wisconsin Wildlife Federation.

Eleven non-rule related comments/questions were received. Two comments were received regarding additional listing recommendations and one NR 27 edit, that could not be considered under the current rule revision process due to the Scope Statement.

Of the 49 comments, 10 noted support and 23 noted opposition for all or portions of the proposed rule. Species specific comments and position (support:oppose) were made on the following species: barn owl (1:3), Bewick’s wren (1:0), black tern (2:0), Blanding’s turtle (3:18), Butler’s gartersnake (3:4), Canada horse-balm (0:2), fawnsfoot (1:0), greater redhorse (1:0), hemlock parsley (0:2), Kirtland’s warbler (2:0), snowy egret (1:2), and upland sandpiper (3:0).

The Department made one change to the proposed rule, based on public comments. The Department recommends keeping Hemlock parsley (*Conioselinum chinense*), a plant considered extirpated, on the E/T list until a thorough survey of recently discovered potential habitat is made.

Given the number of comments on the Blanding’s turtle population status in Wisconsin, the Department reanalyzed the species population condition and state conservation rank using the feedback and input received. The methods and results of that analysis are included at the end of this document. The revised conservation rank, using the public comments, was calculated as S3S4 (“uncommon-apparently secure”). Given the number of populations with excellent-good viability, the Department feels delisting is warranted. Turtle regulations will remain in place that limits collection and harvest. Additionally, the Department will propose listing the Blanding’s turtle as a Protected Wild Animal under s. NR 10.02, Wis. Admin. Code, if the species is delisted.

This document includes the comments received on the proposed rule and the Department’s response. The comments received by the Rules Clearinghouse are addressed first. The comments received during the public comment period are addressed next and include “support/oppose” comments received during the public comment period on the economic impacts (September 24 - October 24, 2012). The

Department's response to the economic comments were incorporated into the Economic Impact Analysis (EIA) and are reflected in the Fiscal Estimate/EIA report.

II. Comments from the Rules Clearinghouse

2. Form, Style and Placement in Administrative Code

a. *The statutory authority section states that the statutes that authorize the department to promulgate this rule “include ss. 29.604 [and] 227.11” Stats. “Include” implies that these are not the only statutes that authorize this rule. If there are other statutes the department believes supports this rule-making? If so, it should cite them. Additionally, the department should cite the specific subpart of the statute it relies upon. For example, it appears the department is relying on ss. 29.604 (3) (b) and 227.11 (2) (a), Stats.*

Response: The word “include” was replaced with “are” and the specific subpart of the statute it relies upon was added.

b. *Under the explanation of agency authority section, the department should replace “These sections” with “Sections 29.604 (3) (b) and 227.11 (2) (a), Stats.,”.*

Response: This change was made.

c. *The plain language analysis section indicates that this rule adds ottoe skipper (*Hesperia ottoe*) to the endangered species list. However, it does not appear that the ottoe skipper is added in the text of the proposed rule.*

Response: The ottoe skipper (*Hesperia ottoe*) was added to the text of the proposed rule, as NR 27.03 (2) (f) 2w. Ottoe Skipper — *Hesperia ottoe*.

d. *The word “section”, when referring to the sequentially numbered sections of the rule, should be in small caps (SECTION). [s. 1.04, Manual.]*

Response: This change was made.

e. *The department has treated all of the revisions it proposes in one rule SECTION and characterized all of these changes as amending s. NR 27.03 (2) and (3). However, the proposed rule repeals certain subdivisions, creates new subdivisions, and amends others. For example, the addition of the Black Tern entails creating s. NR 27.03 (2) (b) 2., and the removal of the Barn Owl entails repealing s. NR 27.03 (2) (b) 11. Where the department has revised the scientific names of species, it appears to be revising as if it intends to repeal and recreate the subdivisions. These revisions may be accomplished more directly by amending the affected subdivisions, striking only the language that is changing, and replacing that language with the new name underscored. Thus, the department should repeal, create, or amend the individual provisions that are affected by this rule, rather than treating all changes by amending s. NR 27.03 (2) and (3). In doing so, the department should follow the procedure in s. 104 (2), Manual, for arranging the rule text and should revise the introductory clause to reflect the treatment changes described in this comment. [ss 1.02 (1), 1.04, and 1.06, Manual.]*

Response: The rule order has been revised to reflect the type of change (repeal, create, amend, or renumber and amend) sequentially for each subdivision. For subdivisions that are amended because of scientific and common name changes, only the text that changed was struck-out and underlined.

f. *In s. NR 27.03 (2) (b) 3l., the subdivision should be renumbered as “3L”, not “3l”. In drafting, “l” (the lowercase “L”) is not used in numbering because its use creates confusion between the capital letter “I” and the lowercase “L”.*

Response: This change was made.

g. SECTION 2 of the rule contains the phrase: “The rule contained herein shall take effect....” This phrase should be changed to “This rule shall take effect....” [ss. 1.01 (9) (c) and 1.02 (4), Manual.]

Response: This change was made.

5. Clarity, Grammar, Punctuation and Use of Plain Language

a. A comma should be inserted before the word “relating” in the introductory clause. [s. 1.02 (1), Manual.]

Response: This change was made.

b. The plain language analysis section contains numerous incomplete sentences. For example, in the paragraph pertaining to the Black Tern, the department wrote, “Once reported at 79 sites, was found only at 7 breeding colonies in 2010.” That sentence lacks a subject. The plain language analysis section should be written in plain, simple English and should conform to standard grammatical conventions. [s. 1.02 (2) (b), Manual.]

Response: The plain language analysis section was edited for grammatical errors.

c. In the plain language analysis section, the department explained the reason for each proposed addition or removal to the endangered or threatened species list. The department should also explain the reason for changing the scientific names of other species.

Response: The following paragraph was added to the plain language analysis section, introducing the list of species receiving a scientific name change and explaining the reason for change.

“The 20 species receiving a scientific name change are listed below. These changes reflect current understanding of the scientific community and include mostly placement of species into a different Genus or taxonomic group. Several discrepancies in spelling are also corrected. All of these taxa are still regarded as valid species:”

III. Comments received during the public comment periods.

1. Comments not under the Rule’s Scope Statement

- a. Comment:* Wants to go on record with the state, opposing timber wolf trapping and hunting with dogs and recommends relisting the species.
- b. Comment:* Recommends adding several bird species to the Endangered Species list.
- c. Comment:* Correction on NR27 – the peregrine falcon is no longer listed as US Endangered.

2. General Comments on the Rule

- a. Comment:* Concerned that the Department is “jumping the gun” on delisting species that are still considered rare or uncommon (S2, S3, or S3S4).

Response: There are species with ranks of S3 (“rare-uncommon”) or S3S4 (“uncommon-apparently secure”) that are being proposed for delisting, as species with these ranks are not considered imperiled or at risk of imperilment in our state. An S3 species can be considered rare or uncommon, because they are only found in a certain region of our state, or in a specific habitat and will therefore never be common or widespread. The comment about delisting an S2 (“imperiled”) species prompted a review of the state conservation ranks and a mistake was found in the rank for snowy campion (*Silene nivea*) on the Department’s Natural Heritage Inventory (NHI) Working List. The status assessment which is available on the Department’s E/T List web page, recommends updating the state

rank to S3 because the species has been repeatedly found in recent surveys, and thriving even in degraded habitats. Its rank however, was not updated on the NHI Working List but now is correct. This was the only species with an S2 rank.

b. *Comment:* Supports the proposed revisions, specifically the removal of the Butler's gartersnake and the Blanding's turtle because of the significant negative property impacts. Believes the scientific research support these determinations.

c. *Comment:* What is the purpose for delisting species that have not been seen for years, which may be re-found or may move into the state because of climate change?

Response: Keeping species on the list that do not occur here anymore or are not considered residents, erodes confidence in the E/T list and may direct conservation and management efforts away from our rarest species still present.

d. *Comment:* Multiple individuals expressed concerned that the delisting proposals are politically or economically driven.

Response: The Department has been careful to separate the technical, science-based part of the listing/delisting process from the socio-economic part. A science-based process was used to determine species conservation status and the need for listing/delisting. Economic impacts from the Department's proposed list revision, were compiled and quantified with public input. Citizen and stakeholder involvement was reserved for the public hearings. The E/T list review and revision project, which started in November of 2009, under multiple administrations, followed the list revision procedures and documented each step in the process and was not politically influenced. The process and results can be found on the Department's website (keywords "ET List").

e. *Comment:* Concerned that a species needs to be near extinction to be added.

Response: A species does not need to be near extinction to be added to the list. The definition of endangered and threatened as defined by state statues, mean that a species' continued existence in the state is in jeopardy or appears likely in the foreseeable future to be in jeopardy based on scientific evidence. In addition to the Endangered and Threatened designation, the state also has a Special Concern designation. Special Concern species are rare species designated by the Department because there are concerns about their abundance or distribution in Wisconsin. The main purpose of this category is to focus attention on certain species before they become Endangered or Threatened. The Special Concern list is dynamic with species added or removed as additional information is collected and consolidated by the WNHI program. A decline in the status and/or distribution of a Special Concern species may warrant proposing it for listing as Endangered or Threatened.

f. *Comment:* Commends the Department on the process and supports the listing and delisting proposal, specifically the listing of the fawnsfoot mussel and the delisting of the Blanding's turtle, and greater redhorse.

g. *Comment:* Two individuals wonder about future protections for species proposed for delisting.

Response: Protections afforded under Wisconsin's Endangered Species Law will not be in place after delisting occurs, however for many of the species other protection tools will remain in place. The birds are covered under the Federal Migratory Bird Act. All species being delisted will automatically be added to the State's Special Concern list. Special Concern species are tracked and monitored using the same system as E/T species, for voluntary conservation and management efforts.

3. Plant Comments

a. *Comment:* Opposes delisting all nine plants.

Response: Maintaining the list and keeping it up to date allows us to focus our resources on our most at risk species. The species that are being proposed for delisting are not considered imperiled. While there were no plants proposed for listing during this rule revision proposal, many were recommended during the initial E/T list review phase, and may be considered during a subsequent E/T list review.

b. *Comment:* Opposes the delisting of the two extirpated plants, as there still remains potential to rediscover them.

Response: Canada horse-balm (*Collinsonia canadensis*) has only been observed twice in Wisconsin, and is in the far northwest corner of its range here. The habitat of one of these observations has been destroyed and the second population has not been observed in over 145 years. Hemlock parsley (*Conioselinum chinense*) has not been observed in Wisconsin in more than 45 years; the habitat has not been degraded to the point that hemlock parsley clearly cannot exist there. A recent, non-exhaustive survey found limited but potential habitat at the site of a former observation and additional surveys are needed to determine the species' status. The Department recommends the removal of hemlock parsley from the current delist proposal given the remaining potential habitat.

4. Bird Comments

a. *Comment:* Commend and support efforts to protect the black tern, Kirtland's warbler, and upland sandpiper.

b. *Comment:* Listing of the upland sandpiper, black tern, and Kirtland's warbler is warranted when considering their rarity, population trends, along with the ongoing threats they face.

c. *Comment:* Supports delisting of the barn owl, snowy egret, and Bewick's wren.

d. *Comment:* Supports listing of the upland sandpiper.

e. *Comment:* Concerned about Kirtland's warbler recovery, and the need for habitat management given that Jack Pine cover is shrinking in the state.

Response: This species is also Federally listed and Wisconsin is part of the Federal recovery goals. Currently there is a program to work with private landowners (mostly industrial and county forests) to enhance habitat. They have found many opportunities for Jack Pine management. As Jack Pine matures, it becomes unsuitable for Kirtland's warblers. Federal, state, and county agencies and partners are aware of this and are working on developing partnerships and management opportunities.

f. *Comment:* Opposes delisting snowy egret, in case climate change brings more individuals in the state that we should manage for.

Response: The snowy egret has only historically had 1 breeding location in the state. It is on protected lands in a colony with other E/T species. The Department considered the rationale in protecting species like these through the E/T list. Are these species colonizing? Pioneering? Do they benefit from keeping them on the E/T list? The Department has tried that approach and it does not help this species, Wisconsin is simply just too far north and keeping them on the E/T does not directly aid in their conservation.

g. *Comment:* Opposes delisting barn owl, in case climate change brings more individuals in the state that we should manage for.

Response: With the barn owl, breeding records analyzed since the late nineteenth century show that the species has always been rare. Wisconsin may be just too far from any 'source' population to have young birds dispersing here, especially considering the extremely low density of this species in all of the adjoining states.

h. *Comment:* Barn owl populations are not stable, increasing, predictable, or subject to population estimation using modern avian survey methods. Their population status remains poorly understood.

Response: The barn owl's population status in Wisconsin can be described accurately as "rare" based on a careful review of all known breeding occurrences since the nineteenth century through 2006, when the Wisconsin Breeding Bird Atlas was published, and from known reports of barn owl occurrences that have come to ER's attention since 2006. Robbins (1991) summarized its status as: "Rare summer resident south and central south. Rare winter resident south and central." Although two decades have passed since Robbins' assessment, there are no data to lead one to a different conclusion. The number of reported nest records from 1899-1985 totaled 55, with 1-2 pairs the norm for most years (Matteson and Petersen 1988). During the Wisconsin Breeding Bird Atlas (1995-200), there were only three confirmed barn owl breeding records in the state (Cutright et al. 2006); neither the Breeding Bird Survey (Robbins et al. 1996) nor the Wisconsin Checklist Project (Temple et al. 1997) recorded barn owls. Regarding the issue of recovery and recovered population, the Department was very careful to describe their barn owl 1988 plan as a "management" plan and not a "recovery" plan because there has never been a basis for determining a population level to which the species could or would be considered "recovered."

i. *Comment:* Considerable research on barn owls is still needed. Habitat loss is cited as a possible reason for declines, without elaboration on why those losses are necessarily irreversible, or why dedicated grassland and wetland habitat management programs in place and development for other rare and declining species do not hold out similar promise for barn owls.

Response: Dr. Bruce Colvin, the preeminent barn owl expert in the Midwest during the 1980s when he was at Bowling Green State University, served as an adviser to Wisconsin barn owl management program during 1985-1988. Colvin, who received his Ph.D. on barn owl foraging behavior, carefully analyzed the reasons for barn owl population declines in the Midwest (particularly in Ohio where barn owls formerly occurred over most of the state) and concluded that long-term habitat loss was primarily responsible. What happened in Ohio and Wisconsin during 1930 and the early 1980s was the replacement of grass-associated agriculture by row-crop (grain-related) farming together with a general decline in farm acreage, and in Wisconsin a concomitant decline in wetland acreages (Matteson and Petersen 1988). Barn owls are highly dependent on small mammals, especially microtine prey, associated with grassland and wet meadow habitats (Colvin 1984, 1986). Loss of these habitats leads to a reduction of these populations, thereby threatening barn owl productivity. For a short-lived species (on average only 1.5-2 years—B. Colvin, pers. comm.) that has always been rare in Wisconsin, historical losses of grassland and wetland habitats created unfavorable conditions promoting barn owl population growth. Recent WDNR grassland restoration and protection initiatives in south-central and southwestern WI, however, notably the Military Ridge Prairie Heritage Area and the Southwestern Wisconsin Grassland and Stream Conservation Area, aim to reverse historic losses to a large extent, and likely will provide suitable habitat conditions in Dane, Iowa, Green, and Lafayette counties (a project area totaling 473,900 acres) for breeding barn owls.

j. *Comment:* The barn owl nest box efforts made in the 1970's and 1980's appear to have been numerically insufficient to expect success, were not always located in suitable habitat, did not take advantage of recent research on sentinel box locations, and largely ignored the possible negative effects of GH and barred owl predation or competition, which until a change of strategy, seriously challenged efforts to recover peregrine falcons at historic cliff-nesting locations. Similarly, while it is true that captive breeding programs sometimes contribute to species recovery, do not consider a lack of success of captive breeding efforts to determine whether wild populations can independently recover, due to inherent differences and challenges within species

Response: After consultations with UW-Madison Department of Wildlife Ecology, WDNR wildlife managers at the time (early to mid-1980s), FWS staff (Paul Hegdal), and Dr. Bruce Colvin, a

concerted effort was made to place over 100 barn owl nest boxes in or near appropriate grassland habitats in southern and southeastern Wisconsin. The Department's management plan (Matteson and Petersen 1988) specifically stated that nest boxes "must be properly designed and installed in areas with a history of barn-owl presence, or if there is excellent grassland habitat ... Mass box installations by untrained volunteers that attempt to saturate areas must be discouraged; only sentinel boxes (that serve as census points to test owl presence or absence) need be established." It is quite possible that several of the sites with barn owl nest boxes are no longer suitable due to habitat changes that have occurred over the past 30 years. Regarding the efficacy of placing more barn owl nest boxes into grassland habitats, WDNR's grassland bird research expert David Sample (pers. comm.) commented in 2010: "I can see barn owls hanging on in PA, OH, IN, IL, MO, but it is a different story perhaps in MI, WI, MN. Climate change can only help, I suppose, once the snowy winters subside ... [but] not sure who will do the installation work, [and] I wonder about asking landowners to install a bunch with some expectation for success, when we really don't know what the response will be, and the birds probably won't stick around year to year. It's an intriguing idea, but I am having a hard time getting really excited about it."

Regarding captive-breeding, the State of Wisconsin initiated a captive-breeding program in 1980 that resulted in 98 barn owls entering the wild during 1982-1987. The captive propagation and release program was discontinued because of no apparent recruitment to the population. In 1985, a radio telemetry study focused on 5 captive-reared individuals in Sheboygan County. Three of the birds disappeared within 8 days of release; the other two died—one hit by a car, and the second apparently died from malnourishment. Colvin's (pers. comm. to S. Matteson) assessment of such a program for Wisconsin was that released birds would either migrate out of the state, or likely perish. "We now know," he wrote in 1986, "that there is no biological justification for propagation of barn-owls as a 'recovery' mechanism at the level of 20-30 years ago. It simply will not work given the current land use patterns in Midwestern states; the necessary habitat and specific prey no longer exist as they once did." Further, Colvin (pers. comm. to S. Matteson) added: "... even local populations may be largely extirpated in any given year under conditions of low vole numbers and weather extremes. These factors make propagation and release approaches highly questionable as a management tool."

k. *Comment:* Climate change and barn owls. By their nature, climate change effects are noted with uncertainty in the literature, although due to the barn owl's known difficulties with harsh winter weather, they are of course a species that may benefit from moderating winters. They may also benefit from increases in irruptive rodent populations due to warmer temperatures.

Response: Barn owls may indeed benefit from climate change in Wisconsin. Time will tell. Going forward, barn owls may benefit from the identification and preservation of grassland foraging habitats, the proper design and installation of nest boxes (particularly sentinel boxes, as advocated by Matteson and Petersen 1988), and systematic field surveys in appropriate grassland/wet meadow habitats. Despite future nest box placement and increasing grassland habitat availability, however, the long-term outcome for barn owls in Wisconsin is not likely to differ much from the conclusion of Matteson and Petersen (1988) that no more than 5-10 breeding pairs are expected in any given year, probably because the species is at the edge of its range in Wisconsin.

l. *Comment:* Edge of range effects and barn owls. From a biological perspective, don't understand why species at the edge of their historic range are sometimes considered to be due more protection; and other edge of range species due less. If it is assumed that species' distributions should generally be allowed to expand to changes in their natural limits, such as suitable climate above, less they be doomed to inevitable range contraction, then presenting barn owls as worthy of delisting simply because they are at the edge of their historic range seems wrong.

Response: Edge of range is one factor among several to consider when listing or delisting a species. Barn owls have always been rare in Wisconsin, and a case can be made that they should never have

been listed. Rarity per se does not mean that a species will be designated “endangered” or “threatened.” Has the bird’s population declined over a period of time? With the barn owl, breeding records analyzed since the late nineteenth century show that the species has always been rare. Regarding the relative rarity of barn owls in Wisconsin (and in Illinois), ornithologist Bill Mueller (pers. comm.) had the following comment in 1998: "I keep thinking we are just too far from any 'source' population to have young birds dispersing into WI, anymore, especially considering the extremely low density of this species in all of the states adjoining ours. But I keep hoping, too....after 20 years of birding all over Wisconsin, I have yet to encounter this species here. I worked with the late Prof. Chuck Weise at the UWM Field Station the last few years before his death. He told me that when he was a doctoral student at the U. of Illinois (in Champaign; early 1950's), he could easily find them within 30 minutes of town. Now anyone finding one anywhere in IL is almost as rare an event as here in WI." Having stated the above, climate change may mean over the long term that conditions favorable to the expansion of the barn owl’s range and population in Wisconsin could occur, which might at some distant point lead to a reexamination of the bird’s status.

5. Butler’s Gartersnake Comments

a. *Comment:* The Butler’s gartersnake is being delisted for political/economic reasons.

Response: The Department has been careful to separate the technical, science-based part of the listing/delisting process from the socio-economic part. A science-based process was used to determine species conservation status and the need for listing/delisting. Economic impacts from the Department’s proposed list revision, were compiled and quantified with public input. Citizen and stakeholder involvement was reserved for the public hearings. The E/T list review and revision project, which started in November of 2009, under multiple administrations, followed the list revision procedures and documented each step in the process and was not politically influenced. The process and results can be found on the Department’s website (keywords “ET List”).

b. *Comment:* What has changed since the Butler’s gartersnake was listed in 1997?

Response: Since 1997, the Department has obtained additional information regarding abundance, range, and threat from hybridization of the Butler’s gartersnake. In 2007, the Department started a 3 year long genetics study looking at the threat of hybridization. Over a 1000 snakes were collected in the region. Results of the genetics work showed that hybridization is occurring, however is not overwhelming the population and is not a threat. Every site surveyed found a pure Butler’s gartersnake. Sites had good numbers of individuals and many additional sites were located extending the known range in the state. This species is a generalist species and has persisted in degraded habitats. A discussion of the data can be found in the Butler’s Gartersnake Species Assessment that was prepared for the E/T list revision process:

http://dnr.wi.gov/topic/endangeredresources/documents/Thamnophis_butleri_3-13-12.pdf.

c. *Comment:* The Butler’s gartersnake has not reached a pre-determined level and therefore recovery has not been achieved.

Response: The Department has historically relied on professional judgment for recommending species for listing/delisting. For a small number of species that have recovery plans or technical teams in place, numerical goals trigger the delisting process. Most species do not have a recovery plan or a formal rule based criteria for delisting. The need for flexibility and the complexity of factors to be weighed for a given species have been a key factor in use of professional judgment in past list revisions. A 1993 decision of the Wisconsin Supreme Court upheld professional judgment as a basis for revising the E/T list.

d. *Comment:* The Butler’s gartersnake should not be delisted because it could be genetically distinct.

Response: Recent genetic research has shown that the Butler's gartersnake in Wisconsin is not genetically distinct from other populations of Butler's gartersnakes in North America:

<http://dnr.wi.gov/topic/EndangeredResources/documents/SlossReport.pdf>.

e. *Comment:* The Butler's gartersnake should not be delisted because it has a limited range and specialized diet.

Response: The Butler's gartersnake does have a limited range in Wisconsin, however this species tolerates a moderate level of urbanization and is not in danger of becoming extirpated from the state in the foreseeable future (legal definition of threatened). The diet of the Butler's gartersnake is considered specialized because it primarily feeds on earthworms, however given the abundance of earthworms, this species' specialized diet is not considered a limiting factor or threat.

f. *Comment:* It was stated that new data exists on the Butler's gartersnake but it hasn't be presented.

Response: The new data that exists was presented in the Butler's Gartersnake Species Assessment for the E/T list revision process and can be found here:

http://dnr.wi.gov/topic/endangeredresources/documents/Thamnophis_butleri_3-13-12.pdf.

g. *Comment:* Wait until a species is confirmed common before delisting it, rather than "appears stable".

Response: Given the new information gathered in the genetics study, the state conservation rank was revised from S2 ("imperiled") when it was listed in 1997 to S3S4 ("uncommon-apparently secure") 2011. Many species will never be common given their habitat preference and distribution in the state.

h. *Comment:* Two individuals support delisting the Butler's gartersnake, primarily because of negative economic impacts.

i. *Comment:* Informed the Department of a land transfer of a publically owned Butler's gartersnake site.

6. Blanding's Turtle Comments

The Department reanalyzed Blanding's turtle population data and status in Wisconsin in response to comments received. Methods and results of that analysis follow the comments/response section of this document.

a. *Comment:* The DNR is overestimating Blanding's turtle "element occurrences" because one turtle could be counted multiple times over many years. And the DNR is incorrectly looking at the number of Blanding's turtle observations (element occurrences) rather than the number of populations.

Response: As defined by the NHI network, an element occurrence (EO) is a locational record representing habitat, which sustains or otherwise contributes to the survival of a population. In somewhat simpler terms, an EO is a population of a species occurring at a specific, ecologically appropriate location. "Element occurrences" of turtles are based on an original observation and include a 5-10 km radius; any additional sightings made within that 5-10 km radius are still considered part of the original element occurrence depending on amount of available habitat and barriers to movement (e.g., 20 sightings of Blanding's turtles within a 10 km wetland complex are only considered to be 1 element occurrence). One reason turtle element occurrences are recorded in this way is because element occurrences are meant to approximately represent populations. The original EOs were lumped into groups based on a more rigorous application of these separation distances for the analysis. The odds of counting a single individual over many years are very low. Of the 357 mapped EOs in the NHI database, the average number of times an EO has been visited is 4.8 times. The average span of years an EO has been visited is 11 years.

b. *Comment:* The Blanding's turtle is being delisted to benefit construction and development interests.

Response: The Blanding's turtle is not being delisted to benefit construction and development interests. The species is being delisted because it is not in danger of becoming endangered in the state (per the definition of threatened) and thus no longer meets the criteria for listing under Wisconsin's Endangered Species Law.

c. *Comment:* There are still many threats facing the Blanding's turtle: habitat destruction, road mortality, agricultural mortality, nest predation, climate change, unforeseen disease, wetland fill and prescribed burns. The biology of the Blanding's turtle (late age at maturity, important environmental niche, sex ratios favor males, age ratios favor adults, nesting occurs only once per year, specialized habitat) also puts the turtle at a disadvantage and is a threat.

Response: There are still threats facing the Blanding's turtle, however there are threats facing many, if not most, native wildlife species in Wisconsin. Listing/delisting under Wisconsin's Endangered Species Law is not based only on threats, it is based on the likelihood of a species becoming extirpated ("endangered") or from becoming endangered in the state ("threatened"). The determination has been made that in spite of the threats the Blanding's turtle is facing, the statewide distribution and large number of healthy populations of this species offset the threats. The Blanding's turtle is not in jeopardy of becoming endangered. In the reanalysis of the state conservation rank, the threat level was raised to high-medium given the number and severity of threats. However, given the number of populations (EOs) and the number of EOs with at least a good viability ranking, many of which are on public lands, the rank remained as S3S4 ("uncommon-apparently secure"). A rank which is not considered imperiled or in jeopardy.

Unfortunately the majority of threats that face this species are not threats that Wisconsin's Endangered Species Law can address (e.g., habitat destruction, road mortality, nest predation). However, in response to the increasing trend in highway collisions of migrating turtles and vehicles, the Department designed and implemented The Wisconsin Turtle Conservation Program, a citizen-based monitoring program: <http://wiatri.net/Inventory/WiTurtles/index.cfm>.

d. *Comment:* Wisconsin's Endangered Species Law should protect against habitat destruction, not just direct mortality.

Response: It is correct that Wisconsin's Endangered Species Law does not protect habitat.

e. *Comment:* If the Blanding's turtle is delisted, collection and harvest will occur. How will collection/harvest be controlled in the future? The Blanding's turtle should be listed as a Protected Wild Animal under s. NR 10.02, Wis. Admin. Code to protect against harvest and collection.

Response: The protections afforded the Blanding's turtle under Wisconsin's Endangered Species Law will not be in place after delisting occurs, however turtle regulations are still in place that limit collection/harvest (ss. NR 16.12, NR 16.13, NR 19.275, NR 21.13, NR 22.13, Wis. Admin. Code; ss. 169.12, 169.15, Wis. Stats.). While the Blanding's turtle was being examined for potential delisting, the Department's Law Enforcement Program was consulted regarding the threat of collection and harvest and few violations had been noted. However, the Department will consider listing the Blanding's turtle as a Protected Wild Animal under s. NR 10.02, Wis. Admin. Code, if the species is delisted.

f. *Comment:* The threats listed in Wisconsin's Wildlife Action Plan (WAP) for the Blanding's turtle still exist and therefore the species shouldn't be delisted.

Response: The threats listed for all species in the WAP were not intended to be used as a basis for delisting/listing. Most wildlife species faces threats of some kind; however the primary criteria used for listing/delisting is the likelihood of becoming endangered from the state. In 1979, when the

species was listed, the Department had only 20 element occurrence records, and the state conservation rank was S2 (“imperiled”). With inventory and monitoring efforts and observation reporting, over 250 records of extant populations (357 grouped EOs) are now known and its rank has been updated to S3S4 (“uncommon-apparently secure”).

g. *Comment:* Wetland regulations in Wisconsin have been lessened and this will negatively impact the Blanding’s turtle.

Response: The recent changes in Wisconsin’s wetland regulations could have some impact on Blanding’s turtles however these changes do not affect all wetlands in the state. Furthermore, habitat has never been protected under Wisconsin’s Endangered Species Law.

h. *Comment:* The Blanding’s turtle is being delisted at the expense of other species being listed.

Response: There is no set number of species that can be listed/delisted at any given time, therefore the Blanding’s turtle is not being delisted at the expense of other species being listed.

i. *Comment:* This species is listed in surrounding states and delisting it will negatively affect other states.

Response: The Blanding’s turtle is listed as threatened in Illinois, Iowa and Minnesota but is not listed in Michigan (Special Concern designation). Changes to the Blanding’s turtle status in Wisconsin will not directly impact any other state.

j. *Comment:* What does it hurt to keep them on the list. It costs nothing.

Response: All actions that the Department conducts, funds or approves on public or private lands and waters must be screened for potential impacts to rare species. Not keeping the E/T list updated to focus conservation efforts and avoidance/minimization measures on WI’s most at risk species will cost money.

k. *Comment:* There is sufficient uncertainty regarding the stability of the Blanding’s turtle population status, to keep them on the list until a thorough scientific study documents a stable and sustainable population.

Response: The nearly statewide distribution and large number of populations of this species offset the threats and the Blanding’s turtle is not in jeopardy of becoming endangered in Wisconsin. Department staff reviewed and re-analyzed the NHI element occurrence data using the comments received during the public comment period. There is sufficient data to demonstrate, that the species while uncommon and rare in certain parts of the state, is secure and locally common in others. This species has around 60 populations with excellent-good viability.

III. Analysis of Blanding’s Turtle Population Status in WI in Response to Public Comments

In response to public comments received through March 11, 2013, the Department reanalyzed the state conservation rank and population status of the Blanding’s turtle.

1. Categories of Population Status Comments:

- a. The number of Element Occurrences (EO’s) as used by the Department’s Natural Heritage Inventory (NHI) Program do not necessarily reflect the number of actual populations in WI.
- b. Age structure is skewed towards old individuals and reflects on poor viability.
- c. Current threats from road crossings, habitat fragmentation, nest predation, and collection are severe enough to continue listing as Threatened.

2. Department Review of the Population Status:

a. Number of actual populations in Wisconsin – Combined original EOs into new records based on EO specifications developed by NatureServe and modified by WI NHI, using the below definitions and process. **Result: 357 mapped EOs grouped into 250 EO groups (= populations).**

- As defined by the NHI network, an element occurrence (EO) is a locational record representing habitat, which sustains or otherwise contributes to the survival of a population. In somewhat simpler terms, an EO is a population of a species occurring at a specific, ecologically appropriate location.
- “Element occurrences” of turtles are based on an original observation and include a 5-10 km radius; any additional sightings made within that 5-10 km radius are considered part of the original element occurrence depending on amount of available habitat and barriers to movement (e.g., 20 sightings of Blanding’s turtles within a 10 km wetland complex are only considered to be 1 element occurrence). The 5-10km radius is also known as a separation distance.
- When new observation records are received by the Department, they are mapped into the NHI database as updates to an existing EO or as a new EO based on proximity to an original EO, suitability of habitat between, and separation barriers.
- The WI NHI program has 357 mapped EOs (March 2013). With inventory, monitoring, and reporting efforts over the years, new EOs have been mapped filling in gaps between existing EOs. Thus there are areas in the state that have multiple EOs within the 5-10km separation distance.
- The Department analyzed the 357 mapped Blanding’s turtle EOs for wetland or aquatic connectivity to adjacent EOs. Also the amount of barriers to Blanding’s Turtle movement was assessed between adjacent EOs. This generally included the amount of roads, the type of roads involved, and the amount of other human development such as urban area. Finally public vs. private ownership between EO’ was evaluated. All of this was done for the area within 5km and 10 km from each EO center. As a result there are 250 EOs which better reflects truly separated populations. One reason turtle element occurrences are recorded in this way is because element occurrences are meant to approximately represent populations.

b. Number of viable/healthy populations in Wisconsin – Assigned an EO “viability” rank to the 357 original EOs, and the 250 EO groups currently in NHI, using the below definitions and process.

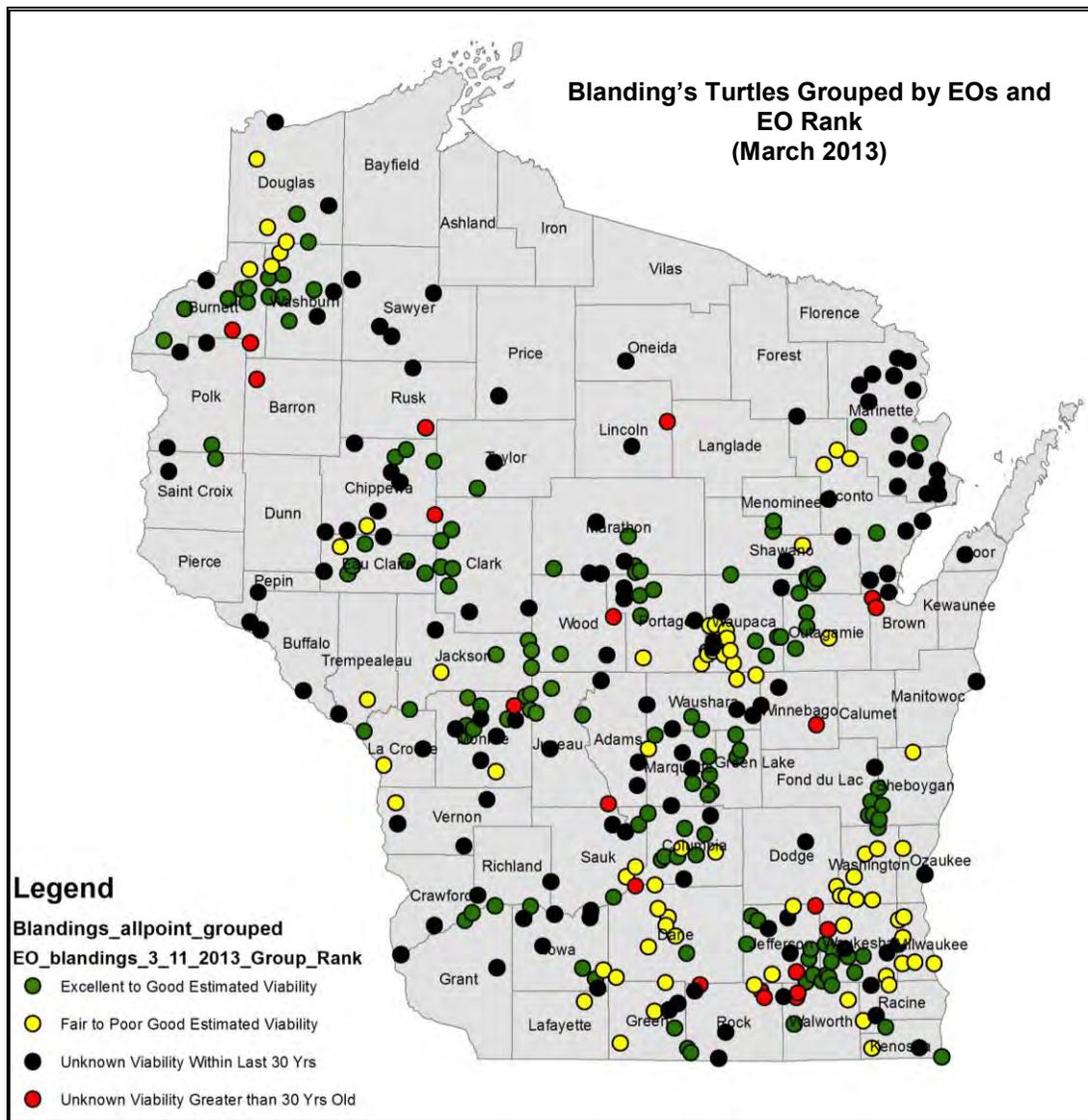
Result: 68 grouped EOs with excellent to good probability of persisting 20-100 years.

- EO ranks reflect the probability of persistence/viability and are a standard tool of Heritage Programs in assessing conservation status. EO ranks provide an assessment of the likelihood (Excellent, Good, Fair, or Poor) that if current conditions prevail the occurrence will persist for a defined period of time, typically 20-100 years.
- In response to comments, the Department assigned EO ranks to both the original 357 EOs and the 250 grouped EOs. EO rank categories: excellent, good, fair, poor, and unknown.
- EO rank factors considered include information in the original observation reports such as number, sex, reproductive status, detection method, etc. The number of observations and the span of years over which observations occurred were calculated and considered as well. Also considered was landscape condition within 5km of each EO which included ownership, degree of development, proximity to permanent roads and wetland connectivity using GIS.
- Many EOs could not be assigned an EO rank due to lack of information about the population’s health, and were given an “unknown” rank.
- EO’s not observed since 1983 were automatically considered “unknown” for the purpose of this analysis, because of general habitat loss/degradation over time.

- As a result 68 populations were assessed as having good or better chance of persistence for the next 20-100 years. All excellent/good ranked EOs, were reviewed by multiple Department staff familiar with the species and the sites. While viability is unknown for the majority of EOs, enough information is known to have identified 68 EOs with good or better viability, illustrating the overall persistence in the state is good or better for the next 20-100 years.

EO Viability	Number of grouped EOs
Excellent to Good	68
Fair to Poor	53
Unknown recent (>1983)	111
Unknown old (<1983)	18

- Managed areas with good or better viable EOs include: Necedah Wildlife Area, Fort McCoy, Lower Wisconsin Riverway, Kickapoo River, Bong State Recreation Area, Sandhill Wildlife Area, Wood County Forest Area, Black River State Forest, and Meadow Valley Wildlife Area.
- Hatchlings and juveniles are especially difficult to detect, however of the 357 EOs, 14% had observations of hatchlings and young adults (35 EOs).
- Average number of visits per EO was 4.8 times, and average span of years was 11 years.



c. Road density analysis

- A GIS specialist developed a project which calculates the length of public road within 1, 5 and 10km of each population center. This information may be used to help protect important sites. In addition, in response to the increasing trend in highway collisions of migrating turtles and vehicles, the Department designed and implemented The Wisconsin Turtle Conservation Program, a citizen-based monitoring program: <http://wiatri.net/Inventory/WiTurtles/index.cfm>.
- d. Reviewed species population status.

- As was done with all species recommended for a change in protection status the Element Rank Estimator was used to recalculate the conservation status (SRANK) of Blanding's turtles. In 1979, when the species was listed, the Department had only 20 element occurrence records, and the state conservation rank was S2 ("imperiled"). With inventory and monitoring efforts and observation reporting, over 250 records of extant populations (357 grouped EOs) are now known and its rank was updated to S3S4 ("uncommon - apparently secure") in 2010 and was confirmed during the reanalysis as part of the Department's response to comments, using the below factors:
 - the estimated number of EOs throughout the state;
 - the estimated numbers of those EO with good viability;
 - the estimated abundance (measured in terms of population as well as occupied area);
 - the estimated size of the range;
 - the short- and long-term trends;
 - the estimated number of adequately protected EOs;
 - the scope, severity, and immediacy of threats;
 - the specificity of environmental requirements.

ADMINISTRATIVE RULES Fiscal Estimate & Economic Impact Analysis

1. Type of Estimate and Analysis

Original Updated Corrected

2. Administrative Rule Chapter, Title and Number

Chapter NR 27, Wisconsin's List of Endangered/Threatened Species NR 27.03(2) and (3).

3. Subject

Revisions to NR 27.03 list of Endangered/Threatened Species [Board Order ER-27-11] to add 8 animals and remove 15 plants and animals, and to update 20 scientific names.

4. Fund Sources Affected

GPR FED PRO PRS SEG SEG-S

5. Chapter 20, Stats. Appropriations Affected

6. Fiscal Effect of Implementing the Rule

No Fiscal Effect Increase Existing Revenues Increase Costs
 Indeterminate Decrease Existing Revenues Could Absorb Within Agency's Budget
 Decrease Cost

7. The Rule Will Impact the Following (Check All That Apply)

State's Economy Specific Businesses/Sectors
 Local Government Units Public Utility Rate Payers
 Small Businesses (if checked, complete Attachment A)

8. Would Implementation and Compliance Costs Be Greater Than \$20 million?

Yes No

9. Policy Problem Addressed by the Rule

State statute, s. 29.604 (3) (b) Wis. Stats., gives the DNR the authority to periodically review and, after public hearing, to revise the Endangered and Threatened species (E/T) list.

Updating the E/T list to focus conservation efforts and avoidance/minimization measures on WI's most at risk species will ultimately save money. All actions that the Department conducts, funds or approves on public or private lands must be screened for potential impacts to rare species. Most often the public and small businesses become aware of the endangered species law through one of DNR's permitting processes. Wisconsin's endangered species law is implemented by the department in that any activity that the department conducts, funds or approves must consider impacts to listed species (s.29.604 Wis. Stats.). Both endangered and threatened species have the same level of legal protection. Under Wisconsin's law listed animals are protected on all public and private land. Plants are only protected on public land and agricultural, forestry, and utility activities are exempt from this protection (s. 29.604 Wis. Stats.).

Endangered Resources Screening relies on Natural Heritage Inventory (NHI) data for records of rare species occurrences. The number of NHI records for species proposed for addition to the E/T list is far fewer than the number of records for species proposed for delisting – eight species are proposed for listing (with a total of 217 NHI occurrences) versus 15 species proposed for delisting (with a total of 1049 NHI occurrences). Reducing the number of E/T species records will lessen regulatory impacts to businesses and individuals.

10. Summary of the businesses, business sectors, associations representing business, local governmental units, and individuals that may be affected by the proposed rule that were contacted for comments.

Groups likely to be impacted or interested in the issue include the conservation community, project applicants through the environmental review process, and the general public. Affected constituencies include agricultural and forestry industries, commercial and development businesses, natural resources consultants, utilities, road builders and wildlife rehabilitators.

11. Identify the local governmental units that participated in the development of this EIA.

Pursuant to s. 227-137 Wis. Stats., the department was required to solicit comments on the economic impact of the

ADMINISTRATIVE RULES Fiscal Estimate & Economic Impact Analysis

proposed rule, and if requested to coordinate with local governments in the preparation of an Economic Impact Analysis (EIA). The notice to solicit comments was sent to the county and town associations in the state. Comments were collected between 9/24/2012 and 10/24/2012. A total of 18 comments were received; 8 were economic comments that were incorporated into the EIA. No local governments submitted comments or requested we coordinate with them in the preparation of the EIA.

12. Summary of Rule's Economic and Fiscal Impact on Specific Businesses, Business Sectors, Public Utility Rate Payers, Local Governmental Units and the State's Economy as a Whole (Include Implementation and Compliance Costs Expected to be Incurred)

The economic cost of listing and delisting a species is highly dependant on its range and distribution, seasonal occurrence, habitat requirements, management needs, sensitivity to disturbance, etc. Effects of listing/delisting will be highly variable among different types of businesses and their locations and hard to predict, however the overall economic impact of the proposed revisions will be reduced because of the location and number of NHI records. The 16 species being proposed for removal from the endangered and threatened species list have a total of 1055 records in the NHI database which is used for conducting an endangered resources review. There are a total of 217 records in the NHI database for the eight species being proposed for addition.

13. Benefits of Implementing the Rule and Alternative(s) to Implementing the Rule

Updating the E/T list to focus conservation efforts and avoidance/minimization measures on WI's most at risk species will ultimately save money. All actions that the Department conducts, funds or approves on public or private lands must be screened for potential impacts to rare species. Endangered Resources Screening relies on NHI data for records of rare species occurrences. The number of NHI records for species proposed for addition to the E/T list is far fewer than the number of records for species proposed for delisting – eight species are proposed for listing (with a total of 217 NHI occurrences) versus 15 species proposed for delisting (with a total of 1049 NHI occurrences). Reducing the number of E/T species records will lessen regulatory impacts to businesses and individuals.

14. Long Range Implications of Implementing the Rule

The primary short-term and long-term effects of this revision are to provide greater protection for those plants and animals that are critically rare in Wisconsin and will likely be lost or undergo severe population declines if not granted protection, by focusing conservation efforts and avoidance/minimization measures on the most at risk species. As the endangered species law (s. 29.415, Stats.) is already in effect, there will be no change in Department policy regarding means to conserve these species. The removal and addition of species to the list will likely require increased consultation with Department staff during environmental assessments and reviews. Enforcement requirements will not be significantly increased.

15. Compare With Approaches Being Used by Federal Government

The United States Fish and Wildlife Service maintains the list of Federal endangered and threatened species. The Kirtland's Warbler (*Dendroica (=Setophaga) kirtlandii*) is the only Federally Listed species that is being proposed for state listing in Wisconsin under this proposal.

16. Compare With Approaches Being Used by Neighboring States (Illinois, Iowa, Michigan and Minnesota)

Minnesota, Illinois, Iowa, and Michigan all have an endangered species law and maintain a state list of endangered and threatened plants and animals. Sixteen of the 24 species being proposed for addition or removal from the list are listed or are being considered for listing in a neighboring state.

17. Contact Name

Erin Crain

18. Contact Phone Number

608/267-747

This document can be made available in alternate formats to individuals with disabilities upon request.

ADMINISTRATIVE RULES Fiscal Estimate & Economic Impact Analysis

ATTACHMENT A

1. Summary of Rule's Economic and Fiscal Impact on Small Businesses (Separately for each Small Business Sector, Include Implementation and Compliance Costs Expected to be Incurred)

[Detailed EIA report attached]

2. Summary of the data sources used to measure the Rule's impact on Small Businesses

Bureau of Endangered Resources staff; WDNR's Economist; and from the public comments received during the EIA comment period.

3. Did the agency consider the following methods to reduce the impact of the Rule on Small Businesses?

- Less Stringent Compliance or Reporting Requirements
- Less Stringent Schedules or Deadlines for Compliance or Reporting
- Consolidation or Simplification of Reporting Requirements
- Establishment of performance standards in lieu of Design or Operational Standards
- Exemption of Small Businesses from some or all requirements
- Other, describe:

Because this rule does not create new regulatory requirements of small businesses, the proposed rules will not have a significant economic impact on a substantial number of small businesses.

4. Describe the methods incorporated into the Rule that will reduce its impact on Small Businesses

Most often the public and small businesses become aware of the endangered species law through one of DNR's permitting processes. Wisconsin's endangered species law is implemented by the department in that any activity that the department conducts, funds or approves must consider impacts to listed species (s.29.604 Wis. Stats.). Both endangered and threatened species have the same level of legal protection. Under Wisconsin's law listed animals are protected on all public and private land. Plants are only protected on public land and agricultural, forestry, and utility activities are exempt from this protection (s. 29.604 Wis. Stats.).

In most instances, a permit applicant provides a description of the proposed project. Department staff perform an endangered resources review utilizing the NHI database to determine if 1) there is a listed species that may be present, and if 2) the project area has suitable habitat for that species. If either of these criteria are not present the applicant is informed that there is no potential impact and the project proceeds. Over 2/3 of projects fall into this category. If both the species is known to be in the area and there is suitable habitat on the project site, the department works with the applicant to see if impacts to a listed species may be avoided through seasonal adjustments, temporary removals or barriers. If it can, the project proceeds. If impacts can't be avoided, an incidental take permit is issued to the applicant that allows take of the species. State law requires that all projects under an incidental take permit must minimize and mitigate these impacts. (s.29.604 Wis. Stats.). When the minimization and mitigation measures are in place, the permit is publicly noticed the project may proceed. Very few projects require an incidental take permit, typically fewer than 20 a year are issued. The department has also created several broad incidental take permits to provide blanket incidental take coverage for routine activities. A broad incidental take permit, unlike an individual incidental take permit, does not require an application, processing time or a fee. The most recent broad incidental take permits cover grassland management and cave bats.

The removal and addition of species to the list will likely require increased consultation with Department staff during environmental assessments and reviews.

5. Describe the Rule's Enforcement Provisions

Enforcement and administration programs for rules and permits are already in place. No changes are expected in rule enforcement costs or the costs of issuing permits for endangered and threatened species. Increases can be expected in the amount of time required to administer the resulting list of endangered and threatened species, but costs are expected to be absorbed within existing DNR budgets. Management and protection costs will increase with the addition of new species

ADMINISTRATIVE RULES
Fiscal Estimate & Economic Impact Analysis

to the list and decrease with removals; given the number of species and records of occurrences, it is expected that costs will decrease.

6. Did the Agency prepare a Cost Benefit Analysis (if Yes, attach to form)

Yes No

DOA 2049. Detailed Economic Impact Analysis Report [ER-27-11], pertaining to the Wisconsin Endangered/Threatened Species List (Chapter NR 27, Wis. Adm. Code)

Additional data for Fiscal Estimate and Economic Impact Analysis (form DOA-2049):

Summary of Rule's Economic and Fiscal Impact:

Pursuant to s. 227.137 Wis. Stats., the Department was required to solicit comments on the economic impact of the proposed rule, and if requested to coordinate with local governments in the preparation of the Economic Impact Analysis (EIA). Comments were collected between 9/24/2012 and 10/24/2012. A total of 18 comments were received. No local governments requested the Department coordinate with them in the preparation of the EIA. One species was removed from the rule revision proposal, after the public comment period, but will not have any economic impact as it is considered extirpated in the state.

To determine implementation and compliance costs expected to be incurred, Bureau of Endangered Resources staff compiled a list of individuals and organizations who might be economically impacted by the proposed rule revisions. Types of positive and negative effects from both listing/delisting were identified along with a method on how they might be quantified. Given the unknowns and the complexity of assessing the impacts, a relative impact of low-moderate-high (L/M/H) was determined. The economic cost of listing a species is highly dependant on its range and distribution, seasonal occurrence, habitat requirements, management needs, sensitivity to disturbance etc.

Examples of relative impacts of currently listed species:

* Henslow's Sparrow (*Ammodramus henslowii*) - Since only the species is protected and not its habitat, impacts to birds can easily be avoided by scheduling activity outside of the breeding season. Henslow's sparrow does not often come into conflict with development projects because of the location and distribution of this species in the state. Low = Little to no economic impact.

* Ellipse mussel (*Venustaconcha ellipsiformis*) – Since mussels occupy the same site annually with little movement, relocations are often necessary for projects impacting the ellipse, such as bridge repairs or replacements, utility crossings, and other river alterations. Medium = Potential to have moderate economic impacts.

This detailed EIA report includes the economic-related comments received during the EIA public comment period as well as economic impacts known to the Department. The report is organized by the types of small businesses, organizations, units of government, etc. that could be affected. The 20 species proposed for a scientific name update are not included in this report, because there is no impact.

Effects of listing/delisting will be highly variable among different types of businesses and their location; however the overall economic impact of the proposed revisions will be reduced due to the net loss of because of the location and number of NHI records. The 15 species being proposed for delisting have a total of 1049 records in the NHI database which is used for conducting an endangered resources review. There are a total of 217 records in the NHI database for the eight species being proposed for listing.

Agricultural community

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Greater flexibility in agricultural practices. Do not have to follow avoidance measures (e.g., install silt fencing, delay work to avoid breeding season, alter project locations). Shorter environmental review time and lower costs.	Loss of landowner pride for providing habitat for an E/T species. Loss of grant opportunities and set-aside programs that are only given for management of an E/T species (e.g., CRP, Landowner Incentive Program).	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Grants lost or not eligible for in the future (e.g., CRP, Landowner Incentive Program).	Low. Few agricultural projects with impacts to E/T species enter the environmental review process.
LIST	Increase in grant opportunities or set-aside programs that are only given for lands with an E/T species. Landowner pride, especially for farming operations that support these species (e.g., cranberry growers that maintain appropriate water levels during the breeding season may support Black Tern population).	Increased regulation for agricultural projects where these species are present. Avoidance and minimization measures may include project delay, additional fencing, etc.	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Grants and set-aside program incentives (e.g., CRP).	Low. Few agricultural projects with impacts to E/T species enter the environmental review process.

Species with specific impacts

- * Upland Sandpiper (*Bartramia longicauda*), list: Increase in environmental review as this species is sometimes found in lightly grazed pastures, old fields, idle grasslands, and hay fields. This species is protected under the federal Migratory Bird Treaty Act. This species can be added to the Grassland and Savanna Protocols (broad incidental take permit) for management activities. CRP and other set-aside programs will benefit this species and the agricultural community.
- * Plants (all), delist: Minimal change as plants are not protected through Wisconsin's Endangered Species Law on private lands. In addition, agricultural, forestry and utility activities are exempt from the law on public lands.
- * Black Tern (*Chlidonias niger*), list: It is expected that agricultural exemptions which allow farmers to drain and ditch low, wet fields will continue to occur. While these areas might be occupied by this species, the areas would not maintain viable populations and could be altered outside of the breeding season. Little change in the environmental review process is expected to occur, as this species is already protected under the federal Migratory Bird Treaty Act and its habitat is protected by wetland regulations.

County and municipal governments

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Reduced environmental review time. Do not need to follow avoidance measures. Greater flexibility in land use planning and management.	Loss of landowner pride for providing habitat for an E/T species. Loss of grant opportunities and set-aside programs that are only given for management of an E/T species (e.g., CRP, Landowner Incentive Program).	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review staff time. Potential loss of grants.	Moderate. In the last 10 years, there have been many development projects impacted by the presence of the Butler's gartersnake.
LIST	Increase in grant opportunities for lands with an E/T species. Landowner and community pride in giving refuge to an E/T species.	Increased regulation for projects where this species is present. Avoidance and minimization measures may include project delay, additional fencing, etc.	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Grants and set-aside program incentives (e.g., CRP).	Low. Proximity of proposed species to urban areas is low.

Species with specific impacts

- * Plants (all), delist: Reduced costs in translocating plants, especially for road projects.
- * Butler's Gartersnake (*Thamnophis butleri*), delist: Reduced costs for county and municipal government development projects in the SE portion of the state. A city of New Berlin resident points to the City Center project as an example of how removing land from development or redesigning projects to protect this species means loss of time, money, and hence potential of loss of revenue to the municipality and its residents. A Menomonee Falls resident estimates that this species cost them \$7000.
- * Beach-dune Tiger Beetle (*Cicindela hirticollis rhodensis*), list: Mostly found on state and private beach. Only a few at most are found on county/municipal beaches.
- * Upland Sandpiper (*Bartramia longicauda*), list: Very few sites occur on many county/municipal lands.
- * Blanding's Turtle (*Emydoidea blandingii*), delist: Few county and municipal environmental reviews have been recorded in the WDNR-Central Office for Blanding's Turtle.
- * Black Tern (*Chlidonias niger*), list: Little change in the environmental review process is expected to occur, as this species is already protected under the federal Migratory Bird Treaty Act and its habitat is protected by wetland regulations.

Department of Transportation (DOT)

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Cost and project management time savings. Do not have to follow avoidance measures (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc), although they are still	Existing projects and programs built around the species needs to be assessed for continuation or revamping. DOT typically plans 5+ years out; will have to modify existing plans to accommodate changes in the E/T list. Staff need to be trained to revise actions.	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review and regional DNR liason staff time and WDOT staff time.	Low. Little change in the environmental review process is expected to occur, as WDOT often includes Special Concern plants and animals in their project planning.
LIST	Increased opportunity for avoidance success stories.	Increased costs and project management time in the enviromental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc). DOT typically plans 5+ years out; will have to modify existing plans to accommodate changes in the E/T list.	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Wetland mitigation would already exist as a cost.	Low. Little change in the environmental review process is expected to occur, as WDOT often includes Special Concern plants and animals in their project planning.

Species with specific impacts

- * Butler's Gartersnake (*Thamnophis butleri*), delist: Reduced costs for road projects in the SE portion of the state.
- * Plants (all), delist: Little change in the environmental review process is expected to occur, as WDOT often includes Special Concern plants and animals in their project planning. Many of the plants proposed for delisting will become Special Concern and remain on the Natural Heritage Working List.
- * Greater Redhorse (*Moxostoma valenciennesi*), delist: Decreased costs and project management time savings for bridge and dam replacement/removal projects that may impact breeding habitat.
- * Fawnsfoot (*Truncilla donaciformis*), list: Potential for increased impacts with bridge and dam replacement/removal projects, however little change in the environmental review process is expected to occur, as there are typically other state and federally listed species in the same waterbodies where this species occurs.
- * Pygmy Snaketail (*Ophiogomphus howei*), delist: Decreased costs and project management time savings for bridge and dam replacement/removal projects that may impact the species, however few projects have entered the environmental review permitting process for this species.
- * Blanding's Turtle (*Emydoidea blandingii*), delist: DOT is the primary creator of road underpasses for Blanding's Turtles that a large number of other species have benefited from. While DOT often includes Special Concern plants and animals in their project planning, they may not undertake large expensive projects like road underpasses for Special Concern species.
- * Black Tern (*Chlidonias niger*), list: Little change in the environmental review process is expected to occur, as Black Tern's are already protected under the federal Migratory Bird Treaty Act and its habitat is protected by wetland regulations.

Development community

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Cost and project management time savings. Do not have to follow avoidance measures (e.g., install silt fencing, delay work to avoid breeding season, alter project locations). Shorter environmental review time and lower costs.	Existing projects and programs built around a species need to be assessed for continuation or revamping. Loss of landowner pride for providing habitat for an E/T species. Loss of grant opportunities and set-aside programs that are only given for management of an E/T species (e.g., CRP, Landowner Incentive Program).	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review staff time.	Moderate-High. There are 1055 NHI records (used for environmental review) for the species proposed for delisting. Except for a few exceptions (Butler's gartersnake), the species proposed for listing, generally occur in "wild" areas that are typically not under large commercial development pressure.
LIST	Increased opportunity for avoidance success stories.	Increased costs and project management time in the environmental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc).	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review staff time.	Low. There are only 217 NHI records (used for environmental review) for the species proposed for listing. The species proposed for listing, generally occur in "wild" areas that are typically not under large commercial development pressure.

Species with specific impacts

- * Butler's Gartersnake (*Thamnophis butleri*), delist: This species is primarily found in the SE portion of the state and has come up frequently through the environmental review process.
- * Plants (all), delist: Minimal change as plants are not protected through Wisconsin's Endangered Species Law on private lands.
- * Blanding's Turtle (*Emydoidea blandingii*), delist: While this species is widely distributed with a large number of EOs, this species occurs in "wild" areas that are typically not under large commercial development pressure.
- * Black Tern (*Chlidonias niger*), list: This species occurs in "wild" areas that are typically not under large commercial development pressure.

Environmental consultants

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Greater flexibility in developing project plans that had species management recommendations. Reduced time spent on following the Grassland and Savanna Incidental Take Protocol, or to resolve management recommendation conflicts. Shorter environmental review time and lower costs.	Potential loss of revenue for surveys and project consultation. Loss of landowner pride for providing habitat for an E/T species.	Project expenditures and budgets (cost of staff time to alter project plans to implement avoidance and minimization measures). Environmental Review staff time. Number of consulting projects.	Low-Moderate. The economic impacts will vary with size and goals of organization (i.e., if the organization is diverse in what species/habitats it surveys for and consults on, the economic impact would be lower than one that is dependent on projects that center on a single species).
LIST	Increased opportunity for avoidance success stories. Increased business for consulting firms and experts who specialize in E/T research and management.	Increased costs and project management time in the environmental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc).	Project expenditures and budgets (cost of staff time to develop and implement avoidance and minimization measures). Environmental Review staff time.	Low-Moderate. The economic impacts will vary with size, goals and specialties of the organization.

Species with specific impacts

- * Butler's Gartersnake (*Thamnophis butleri*), delist: As this species has come up frequently through the environmental review process, there will be a significant decrease in revenue for surveys and project consultation.
- * Blanding's Turtle (*Emydoidea blandingii*), delist: Reduced staff time developing Blanding's Turtle management plans and building avoidance measures into project plans. Greater flexibility in developing project plans that had species management recommendations for Blanding's Turtle that conflicted with another Endangered/Threatened species.

Federal agencies (NRCS, USFWS, USFS, NPS, USACE)

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Reduced environmental review staff time and permits. Do not need to follow avoidance measures. Greater flexibility in land use planning and management.	Revamping of existing grant, management, and monitoring programs that focus on these species (e.g., CRP "points"). Decreased opportunities for partnerships.	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review staff time.	Low-Moderate. Some federal agencies make considerations for Special Concern species as well as E/T species. Issues with the number of Blanding's turtle records and conflicts will be lessened.
LIST	Increased opportunity for avoidance success stories. Increase in partnering opportunities.	Increased costs and project management time in the environmental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc).	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review staff time. Number of grants and partnering opportunities.	Low. There are only 217 NHI records (used for environmental review) for the species proposed for listing. Migratory Bird Treaty Act will still be in place.

Species with specific impacts

* Blanding's Turtle (*Emydoidea blandingii*), delist: Reduced staff time developing Blanding's Turtle management plans and building avoidance measures into project plans. Greater flexibility in developing project plans that had species management recommendations for Blanding's Turtle that conflicted with another Endangered/Threatened species.

* Fawnsfoot (*Truncilla donaciformis*), list: Increased opportunity to propagate and augment the remaining populations in the St. Croix and Lower Wisconsin Rivers, through use of the Federal Genoa Hatchery, which is available for propagation efforts for State Listed species. This species is found in medium to large rivers, most of which already have E/T mussels and thus projects in these areas already employ avoidance measures for mussels. Avoidance measures for this species would be identical to those required for other mussel species - minimizing sedimentation into the river and using erosion/siltation controls during and immediately following construction, and relocations. These measures are often already required by DNR stormwater permits.

Forest Industry

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Greater flexibility in forestry practices, management, and development. Do not have to follow avoidance measures (e.g., install silt fencing, delay work to avoid breeding season, alter project locations). Shorter environmental review time and lower costs.	Loss of landowner pride for providing habitat for an E/T species. Loss of grant opportunities and set-aside programs that are only given for management of an E/T species (e.g., CRP, Landowner Incentive Program).	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Grants and set-aside programs lost or not eligible for in the future (e.g., CRP, Landowner Incentive Program).	Low. Few forestry projects with impacts to E/T species enter the environmental review process.
LIST	Increase in grant opportunities or set-aside programs that are only given for lands with an E/T species. Landowner pride, especially for forestry operations that support rare species (e.g., Jack pine stands that are 7-21 years old may support Kirtland's Warbler).	Increased costs and project management time in the environmental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc).	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Grants and set-aside program incentives (e.g., MFL). Number of partnerships and collaborative efforts.	Low. Few forestry projects with impacts to E/T species enter the environmental review process.

Species with specific impacts

* Kirtland's Warbler, list: As this species is currently Federally Listed and is protected under the Federal Migratory Bird Treaty Act, little change in regulatory or administrative processes are anticipated. While the Department has developed management guidelines that describe actions that will help maintain or enhance habitat for the species, they are typically not mandatory unless required by a permit, authorization or approval. They would be mandatory under Federal regulations. If a project comes into the environmental review process, because a permit or grant is issued by the state at a location with a known population with suitable habitat, the simplest and preferred method to avoid impacts to the Kirtland's Warbler is to ensure suitable habitat remains intact. If suitable breeding habitat will be compromised, project-related disturbance must take place during the non-breeding season (1 October to 30 April) to avoid take of the species. If the breeding season cannot be avoided, then project applicants must work with the USFWS Kirtland's Warbler biologist to determine project alternatives.

* Plants (all), delist: Minimal change as plants are not protected through Wisconsin's Endangered Species Law on private lands. In addition agricultural, forestry and utility activities are exempt from the law on public lands.

Habitat (e.g., wetland, forest, prairie, beach, barrens, streams)

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Species success story.	Decreased protections that were provided because of the presence of an E/T species.	Acerage of land altered/degraded. Reduced ecosystem services.	Moderate. Ecosystem services provided by habitats are hard to measure. Individuals and organizations have expressed concern over habitat protections, specifically wetland habitat. Ecosystem services for wetlands in Wisconsin have been estimated to provide \$617-28432 per acre/per year.
LIST	Increase in incentives for habitat creation, restoration, and protection.	Public opinion of the habitat may turn negative by the regulated community.	Acerage of land enhanced, altered, destroyed, created, etc.	Low. Ecosystem services provided by habitats are hard to measure.

Species with specific impacts

- * Plants (prairie), delist: Removing limits on growing and selling these plants may result in more being planted which is good, however the source of plant material (plants, seeds, seedlings, etc) will be unknown and may have detrimental effects on native populations.
- * Beach-dune Tiger Beetle (*Cicindela hirticollis rhodensis*), list: Increased grant opportunities for Great Lakes beach/dune preservation/restoration that would benefit the species. Designated trails and boardwalks would protect habitat while allowing state parks, forests, and natural area visitors access.
- * Blanding's Turtle (*Emydoidea blandingii*), delist: Wetland regulations may change, the outcome to wetlands and associated species without an E/T species is unknown. Earth Economics in a publication, estimated that "Wisconsin wetland's have been estimated to provide from \$617-28,432 per acre/per year" (2/9/2012).
- * Black Tern (*Chlidonias niger*), list: This specis occurs in small, isolated wetlands. Ecosystem services of wetlands include flood control, groundwater replenshment, shoreline stabilization, sediment/nutrient retention, water purification, water reservoir, recreation and tourism, and habitat for many species. While hard to assess, some estimate that at a worldwide scale wetlands provide services worth trillions of US dollars every year (Ramsar Convention).

Land management and conservation groups (NGOs)

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Land managers would not be required to follow avoidance measures in the Incidental Take Protocol when conducting land management activities. Greater flexibility in developing and implementing management plans that had species management recommendations that conflicted with another E/T species.	Loss of landowner pride for providing habitat for an E/T species. Loss of grant opportunities and set-aside programs that are only given for management of an E/T species (e.g., CRP, Landowner Incentive Program).	Project expenditures and budgets (cost of silt fencing, cost of staff time to plan for and implement avoidance and minimization measures). Environmental Review staff time. Grants and habitat incentives lost or not eligible for in the future.	Low-Moderate. Low-Moderate. The economic impacts will vary with size and goals of organization (i.e., if the organization is diverse in what species/habitats it surveys for and consults on, the economic impact would be lower than one that is dependent on projects that center on a single species). Fewer management conflicts and number of projects with an E/T species. Many clients may still voluntarily protect Special Concern species.
LIST	Increase in grant opportunities or set-aside programs that are only given for lands with an E/T species. Organization pride in giving refuge to an E/T species.	Increased costs and project management time in the environmental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc). Updated Incidental Take Protocols that include these species will need to be followed.	Project expenditures and budgets (cost of silt fencing, cost of staff time to plan for and implement avoidance and minimization measures). Environmental Review staff time. Grants and habitat incentives gained.	Low-Moderate. The economic impacts will vary with size and goals of the organization. Greater protection and management considerations can be given to more imperiled species. More management conflicts and number of projects with an E/T species.

Species with specific impacts

- * Upland Sandpiper (*Bartramia longicauda*), list: This species can be added to the Grassland and Savanna Protocols (broad incidental take permit) for management activities.
- * A Leafhopper (*Attenuipyga vanduzeei*), list: This species can be added to the Grassland and Savanna Protocols (broad incidental take permit) for management activities.
- * An Issid Planthopper (*Fitchiella robertsoni*), list: This species can be added to the Grassland and Savanna Protocols (broad incidental take permit) for management activities.
- * Ottoe Skipper (*Hesperia ottoe*), list: This species can be added to the Grassland and Savanna Protocols (broad incidental take permit) for management activities.
- * Blanding's Turtle (*Emydoidea blandingii*), delist: Species avoidance and management recommendations often conflict with other E/T species and savanna/grassland management recommendations.

Private landowners

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Greater flexibility in the species private landowners want to manage for and what management tools they want to use. Greater flexibility in land development options.	Loss of landowner pride for providing habitat for an E/T species. Loss of grant opportunities and set-aside programs that are only given for management of an E/T species (e.g., CRP, Landowner Incentive Program).	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Grants lost or not eligible for in the future.	Moderate. There are 1055 NHI records (used for environmental review) for the species proposed for delisting. Except for a few exceptions (Butler's gartersnake), the species proposed for listing, generally occur in "wild" areas that are typically not under large commercial development pressure.
LIST	Increase in grant opportunities or set-aside programs that are only given for lands with an E/T species. Landowner pride in giving refuge to an E/T species.	Increased costs and project management time in the environmental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc).	Project expenditures and staff time. Alteration of project timing, avoidance measures, etc. Grants and habitat incentives gained.	Low. There are only 217 NHI records (used for environmental review) for the species proposed for listing. The species proposed for listing, typically occur in "wild" areas that are typically not under large commercial development pressure. Private landowners can still manage their own land. Native communities and associated species benefit from outreach and education efforts targeted at endangered and threatened species.

Species with specific impacts

* Plants (all), delist: Minimal change as plants are not protected through Wisconsin's Endangered Species Law on private lands.

* Butler's Gartersnake (*Thamnophis butleri*), delist: Private landowners having to alter or delay projects because of the species presence. Estimate of \$7000 for one homeowner.

Researchers

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Reduced costs, as projects will not require an E/T permit for work. Greater flexibility in research design and methods.	Potential loss of grant opportunities that fund research on E/T species only. Fewer research, management, monitoring studies on these species and their habitats.	E/T scientific collector permit costs. Grants lost or not eligible for in the future.	Low. Scientific collectors permits will still apply. Existing research projects may need to be revised, because of funding source or application of results.
LIST	Potential increase in grant opportunities that fund research on E/T species only.	Increased costs. Projects will require an E/T permit for work. Greater oversight in research design and methods.	E/T scientific collector permit costs. Grant opportunities.	Low. Existing research projects may need to be revised, because of funding source or application of results.

Species with specific impacts

* Blanding's Turtle (*Emydoidea blandingii*), delist: Several research projects are currently underway studying this species. Delisting may impact funding source or application of the study's results.

Small businesses

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Greater flexibility in the species private landowners want to manage for and what management tools they want to use. Greater flexibility in land development options.	Loss of landowner pride for providing habitat for an E/T species. Loss of grant opportunities that are only given for management of an E/T species.	Project expenditure (cost of time to alter project plans to implement avoidance and minimization measures). Grants lost or not eligible for in the future.	Low. Few small businesses with impacts to E/T species (other than the groups specifically mentioned in this report) enter the environmental review process.
LIST	Partnering and collaboration opportunity. Increase in grant opportunities and set-aside programs. Success stories for their customers when protecting an E/T species.	Increased costs and project management time in the environmental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc).	Project expenditures and staff time. Alteration of project timing, avoidance measures, etc. Grants and set-aside program incentives and awards (e.g., CRP).	Low. Few small businesses with impacts to E/T species (other than the groups specifically mentioned in this report) enter the environmental review process.

Species with specific impacts

- * Plants (all), delist: Removing limits on growing and selling these plants may result in more being planted which is good for the nursery industry and potentially for the plant, however the source of plant material (plants, seeds, seedlings, etc) will be unknown and may have detrimental effects on native populations.
- * Blanding's Turtle (*Emydoidea blandingii*), delist: In the pet industry, as a Special Concern species, Blanding's Turtles could be kept as a pet (less than 6 individuals). May need a study to determine if illegal take/harvest is occurring. Could be added to the Protected Wild Animals list (NR 10.02).

Species

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	E/T species success story. Focuses attention and funds on the most at risk species.	Without mandatory avoidance measures, species declines may increase. Loss of E/T funding for research and habitat conservation may also impact the species.	Species population status.	Moderate. Loss of protections may directly cause harm to the species via harvesting or collection. Associated species and habitats also benefit from avoidance, minimization, conservation efforts (e.g., DOT road underpasses). Many organizations and individuals will continue to voluntarily employ avoidance, minimization efforts.
LIST	Keep the species from becoming extirpated in the state. E/T protection will increase protection, funding, partnerships, education/outreach, research, monitoring opportunities.	Public opinion of the species may turn negative by the regulated community.	Non-use value for keeping this species from becoming extirpated. Inherent value.	Moderate. Inherent value of a species is impossible to calculate. Associated species and habitats also benefit from avoidance, minimization, conservation efforts (e.g., DOT road underpasses).

Species with specific impacts

- * Plants (all), delist: Removing limits on growing and selling these plants may result in more being planted which is good, however the source of plant material (plants, seeds, seedlings, etc) will be unknown and may have detrimental effects on native populations.
- * Upland Sandpiper (*Bartramia longicauda*), list: Umbrella species for other grassland inhabitants.
- * Kirtland's Warbler (*Dendroica kirtlandii*), list: Reinforces the USFWS intent to delist at the Federal level. Increased partnerships.
- * Blanding's Turtle (*Emydoidea blandingii*), delist: Without mandatory avoidance measures, species declines may increase. The population dynamics of this species (slow growing and long-lived) might be too complex to accurately monitor and react to population declines caused by increased trading and take. Concerns over bag limits, as this species is large enough to be a food turtle and is a pet species. Found values ranging between \$150-555/per individual on the pet trade. Turtle shells also valued in medicine/herbal trade. Loss of E/T funding for research and habitat conservation may also impact the species. Consider study to determine if it should be added to the Protected Wild Animals list (NR 10.02).
- * Black Tern (*Chlidonias niger*), list: Umbrella species for other wetland inhabitants.

Tourism

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Rare species success story.	Decrease in focus/attention on the species.	Number of tours/visitors focusing on the species.	Low. Few tours/visitors focus on a single species. Hard to assess impacts to local businesses that benefit from tour groups that patronize restaurants, motels, filling stations, etc.
LIST	Education and outreach for viewing, and conservation opportunities.	May need to close or restrict areas during breeding season showing stress from proximity and numbers of tourists.	Number of tours/visitors focusing on the species.	Low. Few tours/visitors focus on a single species. Hard to assess impacts to local businesses that benefit from tour groups that patronize restaurants, motels, filling stations, etc. Recreation (canoeing, bird watching, hiking, etc) are typically compatible with protection efforts.

Species with specific impacts

- * Kirtland's Warbler (*Dendroica kirtlandii*), list: Much interest and publicity about Wisconsin's population and management for the species. In Michigan there are tours for viewing Kirtland's Warbler.
- * Ottoe Skipper (*Hesperia ottoe*), list: Education and outreach for viewing, conservation opportunities. Butterfly viewing/photographing and trips focusing on rare species is becoming very popular.
- * Upland Sandpiper (*Bartramia longicauda*), list: Education and outreach for viewing, conservation opportunities.
- * Beach-dune Tiger Beetle (*Cicindela hirticollis rhodensis*), list: Multi-use issues on public beaches may occur. Opportunity for partnerships and construction of Great Lakes board walks.
- * Plants (all), delist: Botanical tours and field trips are frequented by individuals and groups who are interested in viewing/photographing rare E/T species.
- * Black Tern (*Chlidonias niger*), list: Some of the larger colonies that are inhabited provide good viewing and canoeing opportunities, bringing money into the state and local economies. Recreation (canoeing, bird watching) and fishing are compatible with Black Tern protections.

Utility companies and the Public Service Commission

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Decreased costs and project management time savings. Do not have to follow avoidance measures (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc). Focuses attention and financial resources and recovery efforts and partnerships on the most at-risk species.	Existing projects and programs built around these species need to be assessed for continuation or revamping.	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review staff time.	Low. Utility activities are exempt from following the Endangered Species Law for plants on public lands. Process to review projects proactively will continue between WDNR and Utility companies. Fewer NHI records to consider.
LIST	Partnering and collaboration opportunity. Success stories for their customers when protecting an E/T species.	Increased costs and project management time in the environmental review process (e.g., install silt fencing, delay work to avoid breeding season, alter project locations, create mitigation sites, etc).	Project expenditures and staff time. Alteration of project timing, avoidance measures, etc.	Low. Utility activities are exempt from following the Endangered Species Law for plants on public lands. Process to review projects proactively will continue between WDNR and Utility companies.

Species with specific impacts

* Blanding's Turtle (*Emydoidea blandingii*), delist: Existing projects and programs built around Blanding's Turtles need to be assessed for continuation or revamping.

* Black Tern (*Chlidonias niger*), list: May impact projects which alter wetland hydrology or alter flowage water levels

Wisconsin Department of Natural Resources (WDNR)

Proposed action	Types of positive effects from the action	Types of negative effects from the action	Methods for assessing the effects	Relative Impact and Complexity Factors
DELIST	Reduced environmental review staff time in processing and reviewing project applications. Reduced NHI database mapping time. Greater flexibility for state land managers for land use planning and management, as avoidance measures would be recommended, not required. Focus and funds spent will be redirected to the rarest species in the state.	Maintaining a viable population without the regulatory tools available through Wisconsin's Endangered Species laws. Potential loss of Endangered Resources program support and partnerships from conservation and volunteer groups.	Project expenditures and budgets (cost of silt fencing, cost of staff time to develop and implement avoidance and minimization measures). Environmental Review and WDNR permitting staff time. NHI mapping staff time. Species status. Hours donated by volunteers and friends groups. Number of partnerships.	Low. Existing monitoring programs for need to be assessed for continuation or revamping. Funds spent on ER and management are already allocated to those programs, therefore there will not be a net gain or loss. Focus and funds spent will be redirected.
LIST	Funds spent on ER and management are already allocated to those programs, therefore there will not be a net gain or loss. Focus and funds spent will be redirected.	Avoidance and management recommendations will need to be developed and implemented. Potential gain of Endangered Resources program support and partnerships from conservation and volunteer groups.	Staff time. Hours donated by volunteers and friends groups.	Low. Funds spent on ER and management are already allocated to those programs, therefore there will not be a net gain or loss. Focus and funds spent will be redirected.

Species with specific impacts

- * Plants (extirpated species), delist: Hemlock Parsley (*Conioselinum chinense*) and Canada Horse-balm (*Collinsonia canadensis*) are considered extirpated from the state. If they are re-discovered, there will be costs associated with potential relisting. Is there a cost associated with keeping these species on the E/T list?
- * Birds (non-resident and extirpated), delist: Barn Owl (*Tyto alba*) and Snowy Egret (*Egretta thula*) are considered non-residents and Bewick's Wren (*Thryomanes bewickii*) is considered extirpated. If they are re-discovered or if their ranges shift or expand, there will be costs associated with potential relisting. Is there a cost associated with keeping these species on the E/T list?
- * Butler's Gartersnake (*Thamnophis butleri*), delist: Significant Department funds have been spent on protection, management, research efforts for this species. Delisting will allow funds to be spent on the rarest species in the state.
- * Beach-dune Tiger Beetle (*Cicindela hirticollis rhodensis*), list: Increased grant opportunities for Great Lakes beach/dune preservation/restoration that would benefit the species. Designated trails and boardwalks would protect habitat and the beetle while allowing state parks, forests, and natural area visitors access.

Species with no or low anticipated impacts

- * Bewick's Wren (*Thryomanes bewickii*), delist: No effects. Species is extirpated; has not been observed breeding in WI or neighboring states for over 40 years.
- * Snowy Egret (*Egretta thula*), delist: No effects. Species is not considered a regular breeder in the state. Minimal WDNR costs for mapping occasional breeding records.
- * Barn Owl (*Tyto alba*), delist: No effects. Species is not considered a regular breeder in the state. Minimal WDNR costs for mapping occasional breeding records.
- * Canada Horse-balm (*Collinsonia canadensis*), delist: None - species is extirpated
- * Beak Grass (*Diarrhena americana*): Update scientific name to *Diarrhena obovata**
- * Canada Gooseberry (*Ribes oxycanthoides*): Update scientific name to *Ribes oxycanthoides* ssp. *oxycanthoides*
- * Cliff Cudweed (*Gnaphalium obtusifolium* var. *saxicola*): Update scientific name to *Pseudognaphalium saxicola*
- * Early Anemone (*Anemone multifida* var. *hudsoniana*): Update scientific name to *Anemone multifida* var. *multifida*
- * Forked Aster (*Aster furcatus*): Update scientific name to *Eurybia furcata*
- * Green Spleenwort (*Asplenium viride*): Update scientific name to *Asplenium trichomanes-ramosum*
- * Hall's Bulrush (*Scirpus hallii*): Update scientific name to *Schoenoplectus hallii*
- * Lanceolate Whitlow-cress (*Draba lanceolata*): Update scientific name to *Draba cana*
- * Large-leaved Sandwort (*Moehringia macrophylla*): Update scientific name to *Arenaria macrophylla*
- * Long-beaked Baldrush (*Psilocarya scirpoides*): Update scientific name to *Rhynchospora scirpoides*
- * Northern Cricket Frog (*Acris crepitans blanchardi*): Update scientific name to *Acris crepitans**
- * Pallid Shiner (*Notropis amnis*): Update scientific name to *Hybopsis amnis*
- * Plains Ragwort (*Senecio indecorus*): Update scientific name to *Packera indecora*
- * Shoal Chub (*Macrhybopsis aestivalis*): Update scientific name to *Macrhybopsis hyostoma*
- * Spatterdock Darner (*Aeshna mutata*): Update scientific name to *Rhionaeschna mutata**
- * Sticky False-asphodel (*Tofieldia glutinosa*): Update scientific name to *Triantha glutinosa*
- * Tea-leaved Willow (*Salix planifolia*): Update scientific name to *Salix planifolia* ssp. *planifolia*
- * Thickspike (*Elymus lanceolatus* ssp. *psammophilus*): Update scientific name to *Elytrigia dasystachya*
- * Tufted Bulrush (*Scirpus cespitosus*): Update scientific name to *Trichophorum cespitosum*
- * Worm-eating Warbler (*Helmitheros vermivorus*): Update scientific name to *Helmitheros vermivorum*

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

The statement of scope for this rule, ER-27-11, was approved by the Governor on November 14, 2011, published in Register No. 671 on November 30, 2011, and approved by the Natural Resources Board on March 28, 2012. This permanent rule was approved by the Governor on _____.

The Wisconsin Natural Resources Board proposes an order to **repeal** NR 27.03 (2) (b) 3m., 27.03 (2) (b) 10., 27.03 (2) (b) 11., 27.03 (2) (i) 14., 27.03 (3) (c) 2., 27.03 (3) (c) 3., 27.03 (3) (e) 7., 27.03 (3) (f) 2t., 27.03 (3) (i) 3., 27.03 (3) (i) 4g., 27.03 (3) (i) 20., 27.03 (3) (i) 31., 27.03 (3) (i) 43., 27.03 (3) (i) 45., and 27.03 (3) (i) 51w.; to **renumber and amend** NR 27.03 (2) (e) 7., 27.03 (2) (i) 25d., 27.03 (3) (f) 1., 27.03 (3) (i) 8., 27.03 (3) (i) 32m., 27.03 (3) (i) 51p., and 27.03 (3) (i) 51t.; to **amend** NR 27.03 (2) (b) 5., 27.03 (2) (d) 1m., 27.03 (2) (i) 2., 27.03 (2) (i) 5m., 27.03 (2) (i) 16., 27.03 (2) (i) 17., 27.03 (2) (i) 40d., 27.03 (3) (e) 5t., 27.03 (3) (i) 28m., 27.03 (3) (i) 50p., 27.03 (3) (i) 51., 27.03 (3) (i) 51m., and 27.03 (3) (i) 53.; and to **create** NR 27.03 (2) (b) 2., 27.03 (2) (b) 3L., 27.03 (2) (f) 2g., 27.03 (2) (f) 2r., 27.03 (2) (f) 2w., 27.03 (3) (b) 1g., 27.03 (3) (f) 1m., and 27.03 (3) (g) 7m., relating to revising Wisconsin's endangered and threatened species list.

ER-27-11

Analysis Prepared by Department of Natural Resources

1. 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.

2. Statutory Authority: The state statutes that authorize the promulgation of this rule are ss. 29.604 (3) (b) and 227.11 (2) (a), Wis. Stats.

3. Explanation of Agency Authority: Sections 29.604 (3) (b) and 227.11 (2) (a), Stats., grant rule-making authority for the establishment of an endangered and threatened species list to the department.

4. Related Statutes 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.

5. Plain Language Analysis: The department's Bureau of Endangered Resources initiated and completed a review of Wisconsin's rare species, resulting in changes to Ch. NR 27, Wis. Admin. Code, which adds 8 species and removes 15 species in Wisconsin to the Wisconsin endangered and threatened species list, and updates 20 scientific names.

The 8 species being added to the endangered and threatened list are:

Upland Sandpiper (*Bartramia longicauda*), a bird, is found primarily in the southwest, northwest sands, and northeastern part of the state. Other secondary areas are in the central, southeast, and western parts of the state. This species prefers large, open landscapes with short to mid-height grassy vegetation, including remnant prairie, lightly grazed pastures, barrens, old fields, and other idle grasslands, and hay fields. This species is in decline in

Wisconsin, with some of the largest declines in its range. It was once reported at 55 sites. It may disappear from Wisconsin without large blocks of idle and/or grazed grasslands. Add to threatened list [NR27.03(3)].

Black Tern (*Chlidonias niger*), a bird, is found in northern, eastern, and central Wisconsin in marshes, river sloughs, rivers, lakeshores, impoundments, and wet meadows, typically in sites with mixture of emergent vegetation and open water. The species is in decline in Wisconsin. Surveys indicate declines as much as 36% in recent years and a 78% decline over 30 years. This species was once reported at 79 sites, and was found only at 7 breeding colonies in 2010. Add to endangered list [NR27.03(2)].

Kirtland's Warbler (*Dendroica (=Setophaga) kirtlandii*), a bird, is found in Adams and Marinette counties in areas at least 30 hectares in size, where scrubby jack pine (2 to 6 meters high) is interspersed with many small openings and minimal ground cover. This species is considered to be “critically imperiled” globally and is currently on the Federal list of endangered species. This species has nested in Wisconsin consistently since 2007 with 12 known populations. There are historic records of individuals in the state. Add to endangered list [NR27.03(2)].

Beach-dune Tiger Beetle (*Cicindela hirticollis rhodensis*), a beetle also known as the “hairy-necked tiger beetle”, is found on beaches of Lakes Superior and Michigan. This species is rare and declining in Wisconsin (30%). It was once reported from 9-10 sites statewide, and now only one known viable population remains. Add to endangered list [NR27.03(2)].

Fawnsfoot (*Truncilla donaciformis*), a freshwater mussel, is only known from the Mississippi River and portions of its major tributaries in Wisconsin (St. Croix and Wisconsin River). This species is in decline in Wisconsin. Populations are disappearing range wide. It was once widespread and abundant, and is rarely found in recent years. Numbers have greatly declined in Wisconsin’s remaining viable populations (St. Croix and Lower Wisconsin Rivers). Add to threatened list [NR27.03(3)].

Ottoe Skipper (*Hesperia ottoe*), a butterfly, is found in nine counties in the southwestern corner of the state on dry to dry-mesic hill prairies, sand prairies, and sand barrens. This species is very rare and in decline in Wisconsin. It was once known to 16 sites, and as of 2011 only 4 are extant, a 75% decline since the mid-1990s.. Many populations are gone range wide. Very few sites have the size, quality, structure, or connectivity to sustain this species. Add to endangered list [NR27.03(2)].

A Leafhopper (*Attenuipyga vanduzeei*), a small terrestrial insect also known as “a prairie leafhopper” or “shovel-headed leafhopper”, is found in the highest quality prairie remnants near the Mississippi and Lower Wisconsin Rivers. This species is very rare in Wisconsin. Only 4 extant populations are known. This species has poor dispersal ability and is sensitive to management and woody encroachment. Add to endangered list [NR27.03(2)].

An Issid Planthopper (*Fitchiella robertsoni*), a small terrestrial insect also known as “Fitch's Elephanthopper” or “Robertson's Flightless Planthopper” or “Fitch’s Planthopper”, is found in high quality remnant dry to dry-mesic grasslands in the bluffs along the Mississippi River and in the sand country of northwest Wisconsin. This species is very rare in Wisconsin. Only 4 extant populations are known. Add to threatened list [NR27.03(3)].

The 15 species being removed from the endangered and threatened list are:

Barn Owl (*Tyto alba*), an owl, has a scattered and irregular distribution in the state, mostly in the southern half. The species has always been on the edge of its range in Wisconsin and is not considered a regular breeder. In their range, they are found in rural lands or grasslands with some combination of wet meadows, wetland edges, pastures, old-fields, grain crops, hayfields, hedges, and fencerows. And are usually within 1-2km of permanent water and

adjacent to woodlot edge. Nest sites include concrete-domed silos, barns, tree cavities, abandoned farm buildings, church steeples, bank or cliff cavities, and barn owl nest boxes. Remove from the endangered list [NR27.03(2)].

Bewick's Wren (*Thryomanes bewickii*), a small migratory bird, has not been observed breeding in Wisconsin or neighboring states for over 40 years. It is considered extirpated in Wisconsin. Remove from the endangered list [NR27.03(2)].

Snowy Egret (*Egretta thula*), a waterbird, utilizes a wide variety of wetland habitats in their range, but does not breed in Wisconsin. The species has always been on the edge of its range in Wisconsin and is not considered a regular breeder in the state. Remove from the endangered list [NR27.03(2)].

Greater Redhorse (*Moxostoma valenciennesi*), a large fish, is found in widely scattered locations in the Lake Michigan and Mississippi River basins. The species appears stable in Wisconsin and is found consistently in multiple watersheds. Remove from the threatened list [NR27.03(3)].

Blanding's Turtle (*Emydoidea blandingii*), a turtle, is often found in slow moving rivers, streams, ponds, lakes, marshes, swamps, sloughs, and backwater areas, as well as adjacent terrestrial habitats found in the majority of Wisconsin's counties, except for the north-central tier. This species is still slightly declining in Wisconsin, however it is not in jeopardy due to the large population numbers and wide distribution. This species is not imperiled in the state. Remove from the threatened list [NR27.03(3)].

Butler's Gartersnake (*Thamnophis butleri*), a snake, is found in open to semi-open canopy wetland and upland habitat, including prairies, sedge meadows, shrub carr, wet meadows, marshes, grasslands, savannas, old fields, pastures, grassy roadsides, and vacant lots in Dodge, Fond du Lac, Milwaukee, Ozaukee, Sheboygan, Washington, and Waukesha counties. This species appears stable in Wisconsin. New information on abundance, range, and hybridization support delisting. Remove from the threatened list [NR27.03(3)].

Pygmy Snaketail (*Ophiogomphus howei*), a small dragonfly, is found in clean, fast flowing, medium to large streams with abundant gravel or sand substrates in northern Wisconsin. These streams are also in largely forested watersheds. New populations found using modeling of habitat and targeted surveys. This species appears stable in the state. Remove from the threatened list [NR27.03(3)].

American Fever-few (*Parthenium integrifolium*), a composite plant also known as Wild Quinine, is found in dry-mesic to mesic (sometimes wet-mesic) prairie and savanna in mostly loamy to moderately sandy soils in the southwest and southeast corners of the state. It is reproducing well on managed and restored sites, and on newly planted sites. The population in Wisconsin appears stable. Remove from the threatened list [NR27.03(3)].

Bog Bluegrass (*Poa paludigena*), a grass, is found most often growing on banks and atop hummocks, tussocks, and moss-covered logs along small creeks, rivulets, and pools in black ash/yellow birch, black ash/red maple, and black ash/elm swamps throughout the state. It is perhaps most common in west-central and northwestern Wisconsin in areas bordering the driftless region. New records have resulted from inventories. The population in Wisconsin appears stable. Remove from the threatened list [NR27.03(3)].

Canada Horse-balm (*Collinsonia canadensis*), is a plant in the mint family is also known as Stoneroot, and is considered extirpated in Wisconsin. Elsewhere in its range it has been found in rich beech-maple deciduous forests, as well as occasionally in swampy deciduous forests or oak-hickory and sassafras forests. It has been documented at only 2 locations in Wisconsin; one is presumed extirpated and the other has not been observed for 150 years. This species is conspicuous and easy to identify. Remove from the endangered list

[NR27.03(2)].

Drooping Sedge (*Carex prasina*), a plant in the sedge family, is found in good-quality, mesic hardwood forests encompassing seepages, spring heads, and streamlets and has been found in 11 counties mostly representing widely scattered populations. It has a narrow habitat preference, however it has a fairly wide distribution and is found regularly in suitable habitat. The population in Wisconsin is stable. Remove from the threatened list [NR27.03(3)].

Prairie Indian-Plantain (*Arnoglossum plantagineum* = *Cacalia tuberosa*), a plant in the aster family, is found in open, deep-soiled wet to wet-mesic to dry prairies that are usually calcareous. It has been reported from the southern two tiers of counties in Wisconsin, including Grant, Crawford, Lafayette, Iowa, Green, Dane, Rock, Jefferson, Walworth, Waukesha, Kenosha, and Racine counties. It inhabits moist prairies on lakeplains, outwash plains and low moraines in southeastern Wisconsin as well as dry oak openings and bluff prairies in central and southwestern Wisconsin. The population in Wisconsin is stable to increasing. It has responded well to prairie management. Remove from the threatened list [NR27.03(3)].

Snowy Campion (*Silene nivea*), a plant in the pink family, is found in rich woods and alluvial, disturbed floodplains and streambanks, old grasslands, sand prairie, and roadsides. Primarily known from the driftless area in south-central, southwestern, and western portion of the state. It is able to persist with reed canary grass and in degraded streamside habitats and roadside, railroad and utility rights-of-way. The population in Wisconsin appears stable and the species is no longer considered imperiled. Remove from the threatened list [NR27.03(3)].

Yellow Gentian (*Gentiana alba*), a plant in the gentian family is also known as Yellowish Gentian, is found in dry to moist prairies, savannas and open woods in a wide variety of soil types. In Wisconsin it has been found in 32 counties, mostly in the south-central portion of the state. The population in Wisconsin is increasing. Most of the population expansion and increases have occurred in old fields. Remove from the threatened list [NR27.03(3)].

Yellow Giant Hyssop (*Agastache nepetoides*), a plant in the mint family, is found in areas with partial sun within dry and dry mesic forests, oak woodlands, oak openings, alluvial forests, as well as the edges of meadows, fencerows, and thickets. It has been primarily found in southern Wisconsin in Crawford, Grant, Lafayette, Green, Rock, Walworth, Racine, Jefferson, Dane, and Columbia counties. It has responded well to savanna management and restoration. The population in Wisconsin is stable to increasing. Remove from the threatened list [NR27.03(3)].

The 20 species receiving a scientific name change are listed below. These changes reflect current understanding of the scientific community and include mostly placement of species into a different Genus or taxonomic group. Several discrepancies in spelling are also corrected. All of these taxa are still regarded as valid species:

- Northern Cricket Frog also known as Blanchard's Cricket Frog (*Acris blanchardii* change to *Acris crepitans*), endangered
- Worm-eating Warbler (*Helmitheros vermivorus* change to *Helmitheros vermivorum*), endangered
- Pallid Shiner (*Notropis annis* change to *Hybopsis annis*), endangered
- Shoal Chub also known as Speckled Chub (*Macrhybopsis aestivalis* change to *Macrhybopsis hyostoma*), threatened
- Spatterdock Darner Dragonfly (*Aeshna mutata* change to *Rhionaeschna mutata*), threatened

- Obovate Beak Grass (*Diarrhena americana* change to *Diarrhena obovata*), endangered
- Canada Gooseberry also known as Hawthorn-leaved Gooseberry (*Ribes oxyacanthoides* change to *Ribes oxyacanthoides* ssp. *oxyacanthoides*), threatened
- Cliff Cudweed (*Gnaphalium saxicola* change to *Pseudognaphalium saxicola*), threatened
- Early Anemone (*Anemone multifida* change to *Anemone multifida* var. *multifida*), endangered
- Forked Aster (*Aster furcatus* change to *Eurybia furcata*), threatened
- Green Spleenwort (*Asplenun trichomanes-namosum* change to *Asplenium trichomanes-ramosum*), endangered
- Hall's Bulrush (*Scirpus hallii* change to *Schoenoplectus hallii*), endangered
- Hoary Whitlow-ress (*Draba lanceolata* change to *Draba cana*), endangered
- Large-leaved Sandwort (*Moehringia macrophylla* change to *Arenaria macrophylla*), endangered
- Long-beaked Baldrush also known as Bald Rush (*Rhynchosjsora scirysoides* change to *Rhynchospora scirpoides*), threatened
- Plains Ragwort (*Senecio indecorus* change to *Packera indecora*), threatened
- Sticky False-asphodel also known as False Asphodel (*Tofieldia glutinosa* change to *Triantha glutinosa*), threatened
- Tea-leaved Willow also known as Flat-leaved Willow (*Salix planifolia* change to *Salix planifolia* ssp. *planifolia*), threatened
- Thickspike also known as Thickspike Wheatgrass (*Elymus lonceolatus* ssp. change to *Elytrigia dasystachya* ssp. *psammophilus*), threatened
- Tufted Bulrush also known as Tussock Bulrush (*Scirpus cespitosus* change to *Trichophorum cespitosum*), threatened

6. Summary of, and Comparison with, Existing or Proposed Federal Regulations: The United States Fish and Wildlife Service maintains the list of Federal endangered and threatened species. The Kirtland's Warbler (*Dendroica kirtlandii* = *Setophaga kirtlandii*) is the only Federally Listed species under this rule change.

7. Comparison with Rules in Adjacent States: Minnesota, Illinois, Iowa, and Michigan all have an endangered species law and maintain a state list of endangered and threatened plants and animals. Below are links to their laws and lists, as well as species under this rule change that are currently listed as endangered or threatened in those states.

- Illinois (1972 law, list last revised in 2009/2010):
<http://www.dnr.illinois.gov/ESP/ESP/Default.aspx>.
- Iowa (1975 law, list last amended in 2009):
<http://www.iowadnr.gov/environment/threatenedendangered.aspx>.
- Michigan (1974/1994 law, list last revised in 2009):
http://www.michigan.gov/documents/dnr/2007-007_NR_Threatened_Endangered_Species_nonstrike_9-12_274586_7.pdf.

- Minnesota (1972 law, list last revised in 1996): <http://www.dnr.state.mn.us/rsg/laws.html>. Minnesota is currently undergoing a formal rule revision process to update the list; Over 270 changes have been proposed: <http://files.dnr.state.mn.us/input/rules/ets/all.pdf>.

Species currently on Wisconsin's adjacent states' endangered and threatened lists in this rule change:

Species	WI Proposed Rule Change	Adjacent States' status [IA, IL, MI, & MN]
Upland Sandpiper (<i>Bartramia longicauda</i>)	List	▪ IL endangered
Black Tern (<i>Chlidonias niger</i>)	List	▪ IL endangered
Kirtland's Warbler (<i>Dendroica kirtlandii</i>)	List	▪ MI endangered
Snowy Egret (<i>Egretta thula</i>)	Delist	▪ IL endangered
Bewick's Wren (<i>Thryomanes bewickii</i>)	Delist	▪ IL endangered
Barn Owl (<i>Tyto alba</i>)	Delist	▪ IA endangered ▪ IL endangered ▪ MI endangered
Greater Redhorse (<i>Moxostoma valenciennesi</i>)	Delist	▪ IL endangered
Blanding's Turtle (<i>Emydoidea blandingii</i>)	Delist	▪ IA threatened ▪ IL endangered ▪ MN threatened
Fawnsfoot (<i>Truncilla donaciformis</i>)	List	▪ MI threatened ▪ MN special concern; proposed threatened
Ottoo Skipper (<i>Hesperia ottoe</i>)	List	▪ IL endangered ▪ MI threatened ▪ MN threatened list; proposed endangered
Pygmy Snaketail (<i>Ophiogomphus howei</i>)	Delist	▪ MI threatened
Beach-dune Tiger Beetle (<i>Cicindela hirticollis rhodensis</i>)	List	▪ MN special concern; proposed endangered
Bog Bluegrass (<i>Poa paludigena</i>)	Delist	▪ MI threatened ▪ MN threatened
Drooping Sedge (<i>Carex prasina</i>)	Delist	▪ IL threatened
Hemlock Parsley (<i>Conioselinum chinense</i>)	Delist	▪ IL endangered
Snowy Campion (<i>Silene nivea</i>)	Delist	▪ MI threatened ▪ MN threatened

8. Summary of Factual Data and Analytical Methodologies:

The department's Bureau of Endangered Resources (ER) initiated and completed a review of Wisconsin's endangered and threatened species list, culminating in a list of recommended revisions.

Guiding the list review was the Endangered and Threatened List Revision Process document which was developed and approved in 2006 by the ER Policy Team. This guidance document recommends conducting a list-wide review at least every 5 years and earlier as needed, based on changes in species population condition. "As needed" triggers include significant change in the state or global conservation rank, taxonomic change, recovery goals met, immediate need for protection, or significant new data on a single species or group of species.

Per the revision process document, the international Natural Heritage Inventory (NHI) system of global and state conservation ranks is the primary trigger for initiating a comprehensive

assessment of a species. NHI Programs and NatureServe, the NHI umbrella organization, use a suite of factors to assess the extinction or extirpation risk of plants, animals, and ecosystems, and to assign conservation ranks at global, national, and state levels. In 2009, NatureServe developed a rank calculator tool to support the process of assigning conservation status ranks. NatureServe's Element Rank Calculator Tool was used to update state conservation ranks and is used by NatureServe to update Global and National Conservation Ranks. The category of factors used to assess conservation status are rarity, trends, and threats.

Because state conservation ranks are dynamic and can reflect changes in population condition and new information quickly, they have proven useful in directing action toward species most in need of conservation. Updates to conservation ranks for Wisconsin's endangered, threatened, and special concern species are published almost annually in the NHI Working List. The most recent version of the NHI Working List was last published on 6/1/2011 and incorporates many of the results of the review process.

Biologists from a variety of state and national agencies, organizations, and universities, as well as naturalists throughout the state with taxonomic expertise provided new or updated information on the population condition and distribution of rare species in the state. Department biologists focused attention and resources on species that are most at risk of extirpation in the state and where application of Wisconsin's Endangered Species Law would be effective in their protection.

Status assessments were conducted and resulted in proposed list changes. A database was created to capture information received and decisions made to promote consistency and transparency in the process. Details on the process and the results, including species distribution maps and status reviews can be found on the department's website (keywords "ET List").

These rule changes were developed with the assistance of the Bureaus of Endangered Resources, Science Services, Wildlife Management, and Legal Services.

9. Analysis and supporting documents used to determine effect on small business or in preparation of economic impact report:

Pursuant to s. 227.137, Wis. Stats., the department is required to solicit comments on the economic impact of proposed rule. Small businesses, as defined in s. 227.114(1), Wis. Stats., are asked to identify themselves as a small business in their comments. Comments were collected between 9/24/2012 and 10/24/2012. A total of 18 comments were received. Eight of the comments included economic impacts and were incorporated into an Economic Impact Analysis (EIA). No small businesses submitted comments and no local governments submitted comments or requested we coordinate with them in the preparation of the EIA. A summary of the EIA comments and a detailed EIA report are included with the Fiscal Estimate and Economic Impact Analysis form (DOA-2049).

The Environmental Assessment and EIA reports on the impacts of these rule changes are of sufficient scope and detail to conclude that this is not a major action which would significantly affect the quality of the human environment. Therefore an Environmental Impact Statement is not required.

10. Effect on small business: Affected constituencies include agricultural and forestry industries, commercial and development businesses, natural resources consultants, utilities, road builders and wildlife rehabilitators.

Most often the public and small businesses become aware of the endangered species law through one of DNR's permitting processes. Wisconsin's endangered species law is implemented by the department in that any activity that the department conducts, funds or approves must consider impacts to listed species (s.29.604 Wis. Stats.). Both endangered and threatened species have the same level of legal protection. Under Wisconsin's law listed animals are protected on all public

and private land. Plants are only protected on public land and agricultural, forestry, and utility activities are exempt from this protection (s. 29.604 Wis. Stats.)

In most instances, a permit applicant provides a description of the proposed project. Department staff perform an endangered resources review utilizing the Natural Heritage Inventory database to determine if 1) there is a listed species that may be present, and if 2) the project area has suitable habitat for that species. If either of these criteria are not present the applicant is informed that there is no potential impact and the project proceeds. Over 2/3 of projects fall into this category. If **both** the species is known to be in the area **and** there is suitable habitat on the project site, the department works with the applicant to see if impacts to a listed species may be avoided through seasonal adjustments, temporary removals or barriers. If it can, the project proceeds. If impacts can't be avoided, an incidental take permit is issued to the applicant that allows take of the species. State law requires that all projects under an incidental take permit must minimize and mitigate these impacts. (s.29.604 Wis. Stats.). When the minimization and mitigation measures are in place, the permit is publicly noticed the project may proceed. Very few projects require an incidental take permit, typically fewer than 20 a year are issued.

The economic cost of listing and delisting a species is highly dependant on its range and distribution, seasonal occurrence, habitat requirements, management needs, sensitivity to disturbance, etc. Effects of listing/delisting will be highly variable among different types of businesses and their locations and hard to predict, however the overall economic impact of the proposed revisions will be reduced because of the location and number of NHI records. The 15 species being proposed for removal from the endangered and threatened species list have a total of 1049 records in the NHI database which is used for conducting an endangered resources review. There are a total of 217 records in the NHI database for the eight species being proposed for addition. As such, the promulgation of these rule changes should not have an impact on small businesses.

11. A copy of any comments and opinion prepared by the Board of Veterans Affairs under s. 45.03 (2m), Stats., for rules proposed by the Department of Veterans Affairs:

Not applicable.

12. Agency Contact Person:

Erin Crain, Department of Natural Resources, Endangered Resources – ER/6, P.O. Box 7921, Madison, WI 53707-792; Telephone: (608) 267-7479; Email: Erin.Crain@wisconsin.gov

SECTION 1. NR 27.03 (2) (b) subdivision 2. is created to read:
NR 27.03 (2) (b) 2. Black Tern — *Chlidonias niger*

SECTION 2. NR 27.03 (2) (b) subdivision 3L. is created to read:
NR 27.03 (2) (b) 3L. Kirtland's Warbler — *Dendroica kirtlandii*.

SECTION 3. NR 27.03 (2) (b) subdivision 3m. is repealed.
NR 27.03 (2) (b) 3m. Snowy Egret — *Egretta thula*.

SECTION 4. NR 27.03 (2) (b) subdivision 5. is amended to read:
NR 27.03 (2) (b) 5. ~~Worm-Eating Warbler — *Helmitheros vermivorus*~~ Worm-Eating Warbler — *Helmitheros vermivorum*.

SECTION 5. NR 27.03 (2) (b) subdivisions 10. and 11. are repealed.
NR 27.03 (2) (b) 10. Bewick's Wren — *Thyromanes bewickii*.
NR 27.03 (2) (b) 11. Barn Owl — *Tyto alba*.

SECTION 6. NR 27.03 (2) (d) subdivision 1m. is amended to read:
NR 27.03 (2) (d) 1m. ~~Blanchard's Cricket Frog — *Acris blanchardii*~~ Northern Cricket Frog — *Acris crepitans*.

SECTION 7. NR 27.03 (2) (e) subdivision 7. is renumbered 5m. and amended to read:
NR 27.03 (2) (e) ~~7.~~ 5m. Pallid Shiner — ~~*Notropis annis*~~ *Hybopsis annis*.

SECTION 8. NR 27.03 (2) (f) subdivision 2g. is created to read:
NR 27.03 (2) (f) 2g. A Leafhopper — *Attenuipyga vanduzeei*.

SECTION 9. NR 27.03 (2) (f) subdivisions 2r. and 2w. are created to read:
NR 27.03 (2) (f) 2r. Beach-dune Tiger Beetle — *Cicindela hirticollis rhodensis*.
NR 27.03 (2) (f) 2w. Ottoo Skipper — *Hesperia ottoo*.

SECTION 10. NR 27.03 (2) (i) subdivision 2. is amended to read:
NR 27.03 (2) (i) 2. ~~*Anemone multifida* — no common name~~ *Anemone multifida* var. *multifida* — *Early Anemone* (Ranunculaceae: Crowfoot family).

SECTION 11. NR 27.03 (2) (i) subdivision 5m. is amended to read:
NR 27.03 (2) (i) 5m. ~~*Asplenium trichomanes - ramosum* — Green Spleenwort~~ *Asplenium trichomanes - ramosum* — Green Spleenwort (Polypodiaceae: Fern Family).

SECTION 12. NR 27.03 (2) (i) subdivisions 14. and 15. are repealed.
NR 27.03 (2) (i) 14. *Collinsonia canadensis* — Stoneroot (Lamiaceae: Mint Family).

SECTION 13. NR 27.03 (2) (i) subdivisions 16. and 17. are amended to read:
NR 27.03 (2) (i) 16. ~~*Diarrhena americana* — Beak Grass~~ *Diarrhena obovata* — Obovate Beak Grass (Poaceae: Grass Family).
NR 27.03 (2) (i) 17. ~~*Draba lanceolata* — no common name~~ *Draba cana* — Hoary Whitlow-cress (Brassicaceae: Mustard Family).

SECTION 14. NR 27.03 (2) (i) subdivision 25d. is renumbered 3. and amended to read:
NR 27.03 (2) (i) ~~25d.~~ 3. ~~*Moehringia macrophylla* — no common name~~ *Arenaria macrophylla* — Large-leaved Sandwort (Caryophyllaceae: Pink Family).

SECTION 15. NR 27.03 (2) (i) subdivision 40d. is amended to read:
NR 27.03 (2) (i) 40d. ~~*Scirpus hallii* — Hall's bulrush~~ *Schoenoplectus hallii* — Hall's bulrush (Cyperaceae: Sedge Family).

SECTION 16. NR 27.03 (3) (b) subdivision 1g. is created to read:
NR 27.03 (3) (b) 1g. Upland Sandpiper — *Bartramia longicauda*.

SECTION 17. NR 27.03 (3) (c) subdivisions 2. and 3. are repealed.
NR 27.03 (3) (c) 2. Blanding's Turtle — *Emydoidea blandingi*.
NR 27.03 (3) (c) 3. Butler's Gartersnake — *Thamnophis butleri*.

SECTION 18. NR 27.03 (3) (e) subdivision 5t. is amended to read:

NR 27.03 (3) (e) 5t. ~~Speckled Chub — *Macrhybopsis aestivalis*~~ Shoal Chub — *Macrhybopsis hyostoma*.

SECTION 19. NR 27.03 (3) (e) subdivision 7. is repealed.
NR 27.03 (3) (e) 7. Greater Redhorse — *Moxostoma valenciennesi*.

SECTION 20. NR 27.03 (3) (f) subdivision 1. is renumbered 3. and amended to read:
NR 27.03 (3) (f) ~~1. 3. Spatterdock darner dragonfly — *Aeshna mutata*~~ Spatterdock darner dragonfly — *Rhionaeschna mutata*.

SECTION 21. NR 27.03 (3) (f) subdivision 1m. is created to read:
NR 27.03 (3) (f) 1m. An Issid Planthopper — *Fitchiella robertsoni*.

SECTION 22. NR 27.03 (3) (f) subdivision 2t. is repealed.
NR 27.03 (3) (f) 2t. Pygmy Snaketail Dragonfly — *Ophiogomphus howei*.

SECTION 23. NR 27.03 (3) (g) subdivision 7m. is created to read:
NR 27.03 (3) (g) 7m. Fawnsfoot — *Truncilla donaciformis*.

SECTION 24. NR 27.03 (3) (i) subdivisions 3. and 4g. are repealed.
NR 27.03 (3) (i) 3. Agastache nepetoides — Yellow Giant Hyssop (Lamiaceae: Mint Family).
NR 27.03 (3) (i) 4g. Arnoglossum plantagineum — Prairie Indian Plaintain (Asteraceae: Aster Family).

SECTION 25. NR 27.03 (3) (i) subdivision 8. is renumbered 28t. and amended to read:
NR 27.03 (3) (i) ~~8. 28t. Aster furcatus — Forked Aster~~ Eurybia furcata — Forked Aster (Asteraceae: Aster Family).

SECTION 26. NR 27.03 (3) (i) subdivision 20. is repealed.
NR 27.03 (3) (i) 20. Carex prasina — Drooping Sedge (Cyperaceae: Sedge Family).

SECTION 27. NR 27.03 (3) (i) subdivision 28m. is amended to read:
NR 27.03 (3) (i) 28m. ~~Elymus lanceolatus ssp. — Thickspike Wheatgrass~~ Elytrigia dasystachya ssp. psammophila — Thickspike Wheatgrass (Poaceae: Grass Family).

SECTION 28. NR 27.03 (3) (i) subdivision 31. is repealed.
NR 27.03 (3) (i) 31. Gentiana alba — Yellowish Gentian (Gentianaceae: Gentian Family).

SECTION 29. NR 27.03 (3) (i) subdivision 32m. is renumbered 49m. and amended to read:
NR 27.03 (3) (i) ~~32m. 49m. Gnaphalium saxicola — Cliff Cudweed~~ Pseudognaphalium saxicola — Cliff Cudweed (Asteraceae: Aster Family).

SECTION 30. NR 27.03 (3) (i) subdivision 43. is repealed.
NR 27.03 (3) (i) 43. Parthenium integrifolium — Wild Quinine (Asteraceae: Composite Family).

SECTION 31. NR 27.03 (3) (i) subdivision 45. is repealed.
NR 27.03 (3) (i) 45. Poa paludigena — Bog Bluegrass (Poaceae: Grass Family).

SECTION 32. NR 27.03 (3) (i) subdivisions 50p., 51, and 51m are amended to read:
NR 27.03 (3) (i) 50p. ~~Rhynchospora scirysoides — Bald Rush~~ Rhynchospora scirpoides — Long-beaked Baldrush (Cyperaceae: Sedge Family).

NR 27.03 (3) (i) 51. ~~Ribes oxycanthoides — Hawthorn-leaved Gooseberry~~ Ribes oxycanthoides ssp. oxycanthoides — Canada Gooseberry (Saxifragaceae: Saxifrage Family).
NR 27.03 (3) (i) 51m. ~~Salix planifolia — Flat-leaved willow~~ Salix planifolia ssp. planifolia — Tea-leaved willow (Salicaceae: Willow Family).

SECTION 33. NR 27.03 (3) (i) subdivisions 51p. and 51t. are renumbered 53m. and 41m. and amended to read:

NR 27.03 (3) (i) ~~51p. 53m. Scirpus cespitosus — Tussock Bulrush~~ Trichophorum cespitosum — Tussock Bulrush (Cyperaceae: Sedge Family).

NR 27.03 (3) (i) ~~51t. 41m. Senecio indecorus — Plains Ragwort~~ Packera indecora — Plains Ragwort (Asteraceae: Aster Family).

SECTION 34. NR 27.03 (3) (i) subdivision 51w. is repealed.

NR 27.03 (3) (i) 51w. *Silene nivea* — Snowy Campion (Caryophyllaceae: Pink Family).

SECTION 35. NR 27.03 (3) (i) subdivision 53. is amended to read:

NR 27.03 (3) (i) 53. ~~Tofieldia glutinosa — False Asphodel~~ Triantha glutinosa — False Asphodel (Liliaceae: Lily Family).

SECTION 36. EFFECTIVE DATE. The rule shall take effect on the first day of the month following publication in the Wisconsin administrative register, as provided in s. 227.22 (2), Stats.

SECTION 37. 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 _____
Cathy Stepp, Secretary

(SEAL)