



Notice Soliciting Comments Regarding an Economic Impact Analysis

Subject: Natural Resources Board Order SS-04-12 relating to the revision of the invasive species rule [NR 40].

Notice Date: October 28, 2013

End of Comment Period: December 31, 2013

The Department of Natural Resources is in the process of preparing an economic impact analysis (EIA) for the proposed rule revision relating to invasive species that includes revising and clarifying the rule language, listing additional species, delisting currently regulated species, and updating scientific names of species. The proposed rule package revises Chapter NR 40, Wis. Adm. Code. A preliminary draft of the EIA and a draft of the rule order are available for download as a clickable link by going to the following site: <http://dnr.wi.gov> and searching for the keywords "Administrative Rules" or at <http://adminrules.wisconsin.gov>.

If you are not able to access or download the information, please send an email to the following address: invasive.species@wisconsin.gov or call (608) 264-8590.

Pursuant to s. 227.137, Wis. Stats., the department is required to solicit comments on the economic impact of proposed rule SS-04-12 and, if requested, to coordinate with local governments in the preparation of the EIA. Notice is hereby given that the Department of Natural Resources will accept written comments on the EIA until December 31, 2013. Comments may be submitted electronically to: invasive.species@wisconsin.gov or mailed to: WDNR – Bureau of Science Services, Invasive Species EIA Solicitation, P.O. Box 7921, Madison, WI 53707. Comments are to be postmarked no later than December 31, 2013.

Any local governmental unit that is affected by the rule may also request to coordinate with the department on the EIA. If a local governmental unit wishes to coordinate with the department on preparation of the EIA, the governmental unit must notify the department of its request to coordinate at the time comments on the EIA are submitted. The department will then contact all local governmental units requesting an opportunity to coordinate and incorporate their comments into the EIA to the extent feasible.

Pursuant to Executive Order #50 (2011) and s. 227.137, Wis. Stats., the department must include the information below in an EIA. To review all of the information that must be included in an EIA, you may refer to the Executive Order and statutory provisions. When submitting comments, please provide specific information in these areas and include any supporting economic data, studies, or reports. Please do NOT submit comments on the revisions to the rule language at this time. The department is soliciting information on the following from you and others:

Would you, your business, your association, or your local unit of government be affected in a material economic way if the state's regulated invasive species list be revised and the language changed as noted?

If you expect to be affected economically by this rule proposal please provide as much information as possible to the department regarding the following:

1. Any implementation or compliance costs that are reasonably expected to be incurred.
2. Actual quantifiable benefits of the proposed rule.
3. Whether the proposed rule would adversely affect in a material way the economy, a sector of the economy, productivity, jobs, or the overall economic competitiveness of the state.
4. Whether the proposed rule will have an economic impact (savings or increased costs) on public utilities or their rate payers.

If you are a small business as defined in s. 227.114(1), Wis. Stats., please identify yourself as a small business in your comments. Small business means a business entity, including its affiliates, which is independently owned and operated and not dominant in its field, and which employs 25 or fewer full-time employees or which has gross annual sales of less than \$5,000,000. Please refer to s. 227.19(3)(e) 3. and 4. for further information when you are preparing your comments as a small business.

Following the public comment period for the EIA, a revised “Fiscal Analysis and Economic Impact Analysis” will be prepared containing relevant information that the department receives. Once the EIA process is completed, the department will submit the rule package and economic impact analysis to the Wisconsin Legislative Council under s. 227.15, Wis. Stats., and hearings on the proposed rule will be held by the department after proper notice in accordance with ss. 227.17 and 227.18 Wis. Stats. If the EIA indicates that the proposed rule is reasonably expected to have a total impact of \$20,000,000 in implementation and compliance costs, the department shall submit the rule to the Department of Administration in accordance with s. 227.137(6), Wis. Stats.

NOTE: Chapter 227 of the statutes may be found at the following web site:

<http://docs.legis.wisconsin.gov/statutes/statutes/227.pdf>

Further information on the process for enacting rules is contained in Executive Order #50 signed by Governor Walker on November 2, 2011 available here:

http://docs.legis.wisconsin.gov/code/executive_orders/2011_scott_walker/2011-50.pdf

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

The statement of scope for this rule, SS-04-12, was approved by the Governor on March 12, 2012, published in Register No. 675 on March 31, 2012, and approved by the Natural Resources Board on June 27, 2012. This rule was approved by the Governor on _____.

The Wisconsin Natural Resources Board proposes an order to **repeal** NR 40.04 (2) (b) 6., 40.04 (2) (c) 4., 40.04 (2) (c) 5., 40.04 (2) (c) 12. d. (Note), 40.04 (2) (e) 2., 40.04 (2) (e) 5., 40.04 (3) (d) (Note), 40.05 (2) (f), 40.05 (2) (f) 1., 40.05 (3) (d) (Note) and 40.05 (3) (g); to **renumber** NR 40.04 (2) (a) 1., 40.04 (2) (b) 1., 40.05 (2) (b) 1. and 40.05 (2) (e) 1.; to **renumber and amend** NR 40.04 (2) (b) 31. and 40.05 (2) (b) 37; to **amend** NR 40.02 (14), 40.02 (17), 40.02 (24) (Note), 40.02 (29), 40.02 (30), 40.02 (31), 40.02 (37), 40.02 (48), 40.02 (53), 40.03 (Note), 40.04 (2) (b), 40.04 (2) (b) 2., 40.04 (2) (b) 3., 40.04 (2) (b) 7., 40.04 (2) (b) 8., 40.04 (2) (b) 11., 40.04 (2) (b) 12., 40.04 (2) (b) 13., 40.04 (2) (b) 14., 40.04 (2) (b) 16, 40.04 (2) (b) 22., 40.04 (2) (b) 30., 40.04 (2) (b) 32., 40.04 (2) (b) 36., 40.04 (2) (c) 12. d., 40.04 (3) (d), 40.04 (3) (e), 40.04 (3) (g) (note), 40.04 (4) (f), 40.05 (2) (b), 40.05 (2) (b) 3., 40.05 (2) (b) 4., 40.05 (2) (b) 11., 40.05 (2) (b) 14., 40.05 (2) (b) 20., 40.05 (2) (b) 25., 40.05 (2) (b) 27., 40.05 (2) (b) 28., 40.05 (2) (b) 43., 40.05 (3) (d), 40.05 (3) (e), 40.05 (3) (f), 40.05 (3) (k), 40.06 (1) (a) (Note) and 40.07 (8) (d) (Note); to **create** NR 40.02 (9m), 40.04 (2) (a) 1g., 40.04 (2) (b) 1e., 40.04 (2) (b) 1m., 40.04 (2) (b) 2e., 40.04 (2) (b) 2m., 40.04 (2) (b) 2s., 40.04 (2) (b) 4c., 40.04 (2) (b) 4g., 40.04 (2) (b) 4n., 40.04 (2) (b) 4r., 40.04 (2) (b) 4w., 40.04 (2) (b) 10g., 40.04 (2) (b) 10r., 40.04 (2) (b) 12g., 40.04 (2) (b) 12r., 40.04 (2) (b) 13e., 40.04 (2) (b) 13s., 40.04 (2) (b) 18d., 40.04 (2) (b) 18h., 40.04 (2) (b) 18p., 40.04 (2) (b) 18t., 40.04 (2) (b) 22g., 40.04 (2) (b) 22r., 40.04 (2) (b) 24m., 40.04 (2) (b) 27m., 40.04 (2) (b) 28e., 40.04 (2) (b) 28m., 40.04 (2) (b) 28s., 40.04 (2) (b) 29e., 40.04 (2) (b) 29m., 40.04 (2) (b) 29s, 40.04 (2) (b) 33g., 40.04 (2) (b) 33r., 40.04 (2) (b) 34b., 40.04 (2) (b) 34f., 40.04 (2) (b) 34k., 40.04 (2) (b) 34p., 40.04 (2) (b) 34s., 40.04 (2) (b) 34w., 40.04 (2) (b) 34y., 40.04 (2) (b) 37e., 40.04 (2) (b) 37m., 40.04 (2) (b) 37s., 40.04 (2) (b) 40., 40.04 (2) (b) 41., 40.04 (2) (d) 5m., 40.04 (2) (d) 8m., 40.04 (2) (e) 5e., 40.04 (2) (e) 5m., 40.04 (2) (e) 5s., 40.04 (2) (e) 6m., 40.04 (2) (e) 8., 40.04 (2) (f) 1m., 40.04 (3) (b) (Note), 40.04 (3) (e) 1., 40.04 (3) (e) 2., 40.04 (3) (h) 3., 40.05 (2) (b) 1e., 40.05 (2) (b) 1m., 40.05 (2) (b) 2m., 40.05 (2) (b) 3g., 40.05 (2) (b) 3r., 40.05 (2) (b) 6m., 40.05 (2) (b) 10e., 40.05 (2) (b) 10m., 40.05 (2) (b) 10s., 40.05 (2) (b) 14m., 40.05 (2) (b) 21m., 40.05 (2) (b) 23r., 40.05 (2) (b) 24m., 40.05 (2) (b) 27e., 40.05 (2) (b) 27m., 40.05 (2) (b) 27s., 40.05 (2) (b) 28m., 40.05 (2) (b) 32g., 40.05 (2) (b) 32r., 40.05 (2) (b) 33e., 40.05 (2) (b) 33m., 40.05 (2) (b) 33s., 40.05 (2) (b) 34m., 40.05 (2) (b) 35m., 40.05 (2) (b) 36m., 40.05 (2) (b) 37m., 40.05 (2) (b) 40g., 40.05 (2) (b) 40r., 40.05 (2) (b) 41m., 40.05 (2) (b) 45g., 40.05 (2) (b) 45r., 40.05 (2) (c) 5., 40.05 (2) (d) 1m., 40.05 (2) (d) 3., 40.05 (2) (d) 4., 40.05 (2) (e) 1m., 40.05 (2) (e) 2., 40.05 (3) (b) (Note), 40.05 (3) (e) 1., 40.05 (3) (f) (Note), 40.05 (3) (k) (Note), 40.05 (3) (o) 3., 40.05 (3) (p) and 40.05 (3) (p) (Note), relating to NR 40 including clarification to the language and changes to the species listed under NR 40.04(2) and NR 40.05(2) Wisconsin's regulated invasive species list, and affecting small business.

SS-04-12

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 23.22 (2) (a) and (b) 6., Wis.

Stats., has been interpreted as allowing the department the authority to create and amend the list of invasive species in Wisconsin and create related provisions, NR 40, Wis. Admin. Code.

2. Statutory Authority: The state statutes that authorize the promulgation of this rule are ss. 23.09 (2) (intro), 23.091, 23.11 (1), 23.22 (2) (a) and (b) 6., 23.28 (3), 27.01 (2) (j), 29.014 (1), 29.039 (1) 29.041, and 227.11 (2) (a), Wis. Stats.

3. Explanation of Agency Authority: Sections 23.22 (2) (a) and (b) 6. grant rule-making authority for regulation of invasive species.

4. Related Statutes or Rules: Section 23.22 (2) (b) 6. Wis. Stats., required the department to establish an invasive species rule. Chapter NR 40, Wis. Admin. Code, provides the lists of invasive species and associated requirements for preventing the introduction and spread of invasive species.

5. Plain Language Analysis: The department's Invasive Species Team worked with the Wisconsin Invasive Species Council and affected stakeholders to review and propose revisions to ch. NR 40, Wis. Admin. Code, relating to the lists of regulated invasive species.

Revisions classify additional invasive species into existing categories established in ch. NR 40, Wis. Admin. Code, making them subject to existing administrative rules and statutes that regulate the introduction, possession, transfer, and transport of invasive species in order to prevent them from becoming established in Wisconsin or to prevent already-established invasive species from spreading within the state.

In 2009, during the public input and initial rule drafting of ch. NR 40, it was recognized that many additional species may need to be evaluated and, if appropriate, categorized and listed under this rule. Most of these species are used by some sector of society and require input from the affected stakeholders. The proposed revisions in this Board Order will add species of plants, vertebrates, and invertebrates to the invasive species rule, and will clarify rule language, facilitate compliance, and improve organization of the rule.

A summary of the proposed revisions follows, ordered by Board Order SECTION and grouped by the type of revision. Additional supporting documents including the literature reviews for each of the proposed invasive species are available on the DNR's website (dnr.wi.gov) keyword "invasives."

SECTION 1 creates a definition for crayfish in ch. NR 40.

SECTION 2 revises the following NR 40 definitions:

- The definition of "disposal" is amended to include the consumption of an invasive species as food or other purposes that do not lead to the establishment, introduction, or spread of the species as disposal.
- The note under the definition of "invasive species" is amended to clarify that the definition of "invasive species" does not apply to organisms that are dead.
- The definition of "nonnative" or "nonnative species" is amended to include genetically modified (GM) variants of both native and nonnative fish and crayfish. GM fish are available for sale or may soon be available for aquaculture. Potential GM alterations, such as increased rate of growth, substantially alter how these organisms interact with the environment. The invasive species rule defines what it means to be genetically modified but does not differentiate GM fish

from their parent species. Given that the risk they pose may differ, a mechanism to evaluate them separately is needed. These proposed revisions would allow for the continued sale of nonviable genetically modified aquarium fish such as the “GloFish™”.

- The definitions of “nonnative fish species in the aquaculture industry” and “nonnative viable fish species in the aquarium trade” are amended to exclude GM variants of fish and crayfish of the species listed for the same reasons listed above in the “nonnative” definition amendment.
- The definition of “pet” is amended to exclude fish, crayfish and other aquatic invertebrates. Due to the risk posed by fish, crayfish and by other aquatic invertebrates the definition is revised to exclude these organisms from the exemption provided for pets.
- The definition of “species” is amended to exclude GM fish and crayfish species, cultivars, hybrids, and sub-specific taxa for the same reasons listed above in the “nonnative” definition amendment.
- The definition of “wild animal” is amended to exclude other aquatic invertebrates.

SECTIONS 2 and 30 remove eastern and western mosquitofish from the list of prohibited species under NR 40.04 and adds them to the list of “established nonnative fish species and established nonnative crayfish species” as defined in ch. NR 40.02. “Established nonnative fish species and established nonnative crayfish species” are regulated as a restricted species under ch. NR 40.05 (c) (1). Best management practices (BMPs) to reduce the risk of importing mosquitofish (*Gambusia affinis*) have been made available, but concerns remain because the BMPs do not provide a guarantee against possible enforcement action. In order to accommodate the use of imported bait that may be contaminated with the species, these revisions move the species from the prohibited category to the in the restricted fish category, “established nonnative fish species.” This revision will not in itself authorize possession of mosquitofish, but would allow the department to permit possession in bait shipments and registered fish farm raceways, subject to specified conditions. This would enable the department to address concerns regarding the potential for dispersal of mosquitofish by bait dealers through additional requirements in permit conditions.

SECTION 3 clarifies the note on non-regulated species classification and removes the reporting and in-store education suggestions. Additionally, language on the beneficial use of non-restricted invasive species is removed as it creates the false impression that any beneficial use will exempt a species from listing.

SECTIONS 4 and 7 renumber the initial species listed in the NR 40 Prohibited Category to maintain alphabetical order.

SECTIONS 5, 8, 10, 12, 15, 17, 19, 21, 23, 27, 29, 33, and 35 add new species to the NR 40 Prohibited Category. The below species proposed for addition to the prohibited category are invasive species that the department has determined are likely to survive and spread if introduced into the state, potentially causing economic or environmental harm or harm to human health, but which are not found in the state or in those regions of the state where the species are listed as prohibited in s. NR 40.04 (2), with the exception of isolated individuals, small populations or small pioneer stands of terrestrial species, or in the case of aquatic species, that are isolated to a specific watershed in the state or the Great Lakes, and for which statewide or regional eradication or containment may be feasible.

- *Caulerpa taxifolia* (Killer algae)
- *Achyranthes japonica* (Japanese chaff flower)
- *Akebia quinata* (Fiveleaf akebia or Chocolate vine)
- *Arundo donax* (Giant reed)

- *Azolla pinnata* (Mosquito fern)
- *Berberis vulgaris* (Common barberry)
- *Cardamine hirsuta* (Bittercress)
- *Cardamine impatiens* (Narrow leaf bittercress)
- *Celastrus loeseneri* (Asian loeseneri bittersweet)
- *Centaurea diffusa* (Diffuse knapweed)
- *Centaurea repens* (Russian knapweed)
- *Digitalis lanata* (Grecian foxglove)
- *Dioscorea batatas* or *Dioscorea polystacha* (Chinese yam)
- *Eichhornia azurea* (Anchored water hyacinth)
- *Eichhornia crassipes* (Water hyacinth, floating)
- *Fallopia x bohemicum* or *F. x bohémica* or *Polygonum x bohémicum* (Bohemian knotweed)
- *Glossostigma cleistanthum* (Mudmat)
- *Hydrocotyle ranunculoides* (Floating marsh pennywort)
- *Hygrophila polysperma* (Indian swampweed)
- *Impatiens glandulifera* (Policeman's helmet)
- *Ipomoea aquatica* (Water spinach)
- *Limnophila sessiliflora* (Asian marshweed)
- *Linaria dalmatica* (Dalmatian toadflax) except in Juneau and Bayfield counties
- *Lythrum virgatum* (Wanded loosestrife)
- *Nelumbo nucifera* (Sacred lotus)
- *Oenanthe javanica* (Java waterdropwort or Vietnamese parsley)
- *Oplismenus hirtellus* ssp. *undulatifolius* (Wavy leaf basket grass)
- *Ottelia alismoides* (Ducklettuce)
- *Petasites hybridus* (Butterfly dock)
- *Phellodendron amurense* (Amur cork tree) except male cultivars and seedling rootstock
- *Pistia stratiotes* (Water lettuce)
- *Ranunculus ficaria* (Lesser celandine)
- *Rubus armeniacus* (Himalayan blackberry)
- *Sagittaria sagittifolia* (Hawaii arrowhead)
- *Salvinia herzogii* (Giant salvinia)
- *Salvinia molesta* (Giant salvinia)
- *Solidago sempervirens* (Seaside goldenrod) except in Kenosha, Milwaukee and Racine counties
- *Sorghum halepense* (Johnsongrass)
- *Stratiotes aloides* (Water soldiers)
- *Taeniatherum caput-medusae* (Medusahead)
- *Tussilago farfara* (Colt's foot)
- *Typha domingensis* (Southern cattail)
- *Typha laxmannii* (Graceful cattail)
- *Wisteria floribunda* (Japanese wisteria)
- *Wisteria sinensis* (Chinese wisteria)
- *Dikerogammarus villosus* (Killer shrimp)
- *Melanoides tuberculata* (Malaysian trumpet snail)
- *Dendroctonus ponderosae* (Mountain pine beetle)
- *Geosmithia morbida* (Thousand cankers disease of walnut)
- *Grosmannia clavigera* (Blue stain fungus)

- *Ophiostoma montium* (Blue stain fungus)
- *Pityophthorus juglandis* (Walnut twig beetle)
- *Myocastor coypus* (Nutria)

SECTIONS 6 and 43 clarify that certain invasive plants are listed under both the prohibited and restricted categories in ch. NR 40. These plant species are sometimes called split listed plants. Split listed plants are currently isolated to a specific region in the state but if introduced into other parts of the state are likely to survive and spread, potentially causing significant environmental or economic harm or harm to human health. These plants are regulated as restricted in the counties listed that have known populations and are prohibited elsewhere in the state.

SECTIONS 9, 11, 14, 18, 20, 22 and 28 update the list of county exceptions for split listed plants in the NR 40 Prohibited Category. Species are restricted in the listed counties and are prohibited elsewhere.

- *Anthriscus sylvestris* (Wild chervil) except in Adams, Barron, Crawford, Columbia, Dane, Dodge, Fond du Lac, Green, Green Lake, Iowa, Jefferson, Juneau, Kenosha, Lacrosse, Lafayette, Marquette, Milwaukee, Monroe, Ozaukee, Polk, Racine, Richland, Rock, Sauk, Sheboygan, Taylor, Vernon, and Walworth, Waukesha, and Washington counties
- *Bunias orientalis* (Hill mustard) except in Dane, Grant, Green, Iowa, and Lafayette, and Rock counties
- *Cirsium palustre* (European marsh thistle) except in Ashland, Bayfield, Chippewa, Clark, Door, Florence, Forest, Iron, Langlade, Lincoln, Marathon, Marinette, Menominee, Oconto, Oneida, Price, Rusk, Sawyer, Shawano, Taylor and Vilas counties
- *Conium maculatum* (Poison hemlock) except in Crawford, Dane, Grant, Green, Iowa, Jefferson, Kenosha, Lafayette, Milwaukee, Ozaukee, Racine, Richland, Rock, and Sauk, Sheboygan, Walworth, and Waukesha counties
- *Epilobium hirsutum* (Hairy willow herb) except in Brown, Calumet, Door, Kenosha, Kewaunee, and Manitowoc county counties
- *Glyceria maxima* (Tall or reed mannagrass) except in Brown, Calumet, Columbia, Dane, Dodge, Door, Fond du Lac, Green, Jefferson, Kenosha, Kewaunee, Manitowoc, Milwaukee, Outagamie, Ozaukee, Racine, Rock, Sheboygan, Walworth, Washington, Waukesha and Winnebago counties
- *Humulus japonicus* (Japanese hops) except in Buffalo, Crawford, Dane, Grant, Green, Iowa, Jackson, La Crosse, Lafayette, Monroe, Pepin, Richland, Sauk, Trempealeau, and Vernon counties
- *Leymus arenarius* or *Elymus arenarius* (Lyme grass or sand ryegrass) except in Door, Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, and Sheboygan counties
- *Torilis japonica* (Japanese hedgeparsley or erect hedgeparsley) in ~~Ashland, Barron, Bayfield, Buffalo, Burnett, Chippewa, Clark, Douglas, Dunn, Eau Claire, Florence, Forest, Iron, Jackson, Lincoln, Oneida, Pepin, Pierce, Polk, Price, Rusk, St. Croix, Sawyer, Trempealeau, Taylor, Washburn, and Wood~~ except in Adams, Brown, Calumet, Columbia, Crawford, Dane, Dodge, Door, Fond du Lac, Grant, Green, Green Lake, Iowa, Jefferson, Juneau, Kenosha, Kewaunee, La Crosse, Lafayette, Langlade, Manitowoc, Marathon, Marinette, Marquette, Menominee, Milwaukee, Monroe, Oconto, Outagamie, Ozaukee, Portage, Racine, Richland, Rock, Sauk, Shawano, Sheboygan, Vernon, Walworth, Washington, Waukesha, Waupaca, Waushara, and Winnebago counties

SECTIONS 13 and 34 remove the following species from the NR 40 Prohibited Category.

- *Chelidonium majus* (Celandine), a split listed plant, is proposed to be listed in the Restricted Category statewide.

- *Agrilus planipennis* (Emerald ash borer) is proposed to be moved from the Prohibited Category to the Restricted Category.
- *Cryptococcus fagisuga* (Scale associated with beech bark disease) is proposed for delisting from both of Wisconsin's regulated invasive species lists.

SECTIONS 16, 24, 25, and 26 revise scientific and common names in the NR 40 Prohibited Category to include accepted synonyms. Giant knotweed is renumbered to maintain alphabetical order.

- *Dioscorea oppositifolia* (~~Chinese~~ Indian yam)
- *Egeria densa* (Brazilian waterweed or wide-leaf anacharis)
- *Polygonum perfoliatum* or Persicaria perfoliata (Mile-a-minute vine)
- *Fallopia sachalinensis* or Polygonum sachalinense (Giant knotweed)
- *Pueraria montana* or P. lobata (Kudzu)

SECTIONS 31 and 32 simplify the rule language and facilitate compliance by removing the list of nonviable fish species the department has determined to date and by referencing the definition of nonviable. The department has a definition of nonviable and a protocol for determining if a fish is nonviable.

SECTIONS 35 and 65 clarify that the department has made the formal determination that compliance with the conditions of permits issued for activities in navigable waters (Chapters 30 and 31), constitute reasonable precautions as defined in NR40 that will prevent the spread of prohibited and restricted invasive species.

SECTIONS 36 and 66 clarify that the exemption for pets only applies to pets obtained prior to their being listed as prohibited and restricted and the exemption would not allow for possession of offspring covered under the exemption to be transferred, except as a gift for restricted species only.

SECTIONS 37 and 67 remove the unnecessary note defining "wild animal" as it is already defined in NR 40.02 of this chapter.

SECTIONS 38, 39, 68, and 69 clarify that the transport, possession, transfer, or introduction of forest pests under quarantine is allowed within quarantine zones. Both prohibited and restricted forest pests may be subject to quarantine zones. If a quarantine is in effect, the intent of the invasive species rule in restricting the movement of invasive species has been met. Revisions specify that if movement of regulated materials such as untreated wood is taking place within a quarantine zone then the invasive species rule does not apply.

SECTIONS 40 and 75 update the list of DNR reporting and permitting contacts to a single "Statewide Invasive Species Coordinator, SS/7" in Wisconsin's regulated invasive species rule to simplify the reporting and permitting process and to enable the department to issue and monitor permits and reports statewide.

SECTIONS 41 and 74 create an exemption for the department staff to transport, possess, transfer, or introduce a regulated invasive plant, in the performance of their official duties.

SECTIONS 42, 70, 71, and 72 remove reporting requirement for restricted aquatic plants, algae and cyanobacteria and would allow the use of any restricted aquatic/wetland plants for identification, education, control or disposal without a permit.

SECTIONS 44 and 62 renumber the initial species listed in the NR 40 Restricted Category to maintain alphabetical order

SECTIONS 45, 47, 49, 51, 53, 55, 57, 59, 61, and 63 add new species to the NR 40 Restricted Category. The below species proposed for addition to the restricted category are invasive species that the department has determined are already established in the state or in that region of the state where the species are listed as restricted in s. NR 40.05 (2) and that causes or has the potential to cause economic or environmental harm or harm to human health, and for which statewide or regional eradication or containment may not be feasible. Plants proposed for addition to the restricted list will have the rule's effective date listed, added by the Legislative Reference Bureau when the rule is published. Restricted plants not also listed as prohibited under s. NR 40.04 (2) (b) and located in Wisconsin prior to the date the species is listed in NR 40.05 (2) may be transported, transferred, and introduced without a permit for a period not to exceed 3 years for herbaceous plants and woody vines, or 5 years for trees and shrubs, from the time that the species were included for listing by the department under this chapter.

- *Acer tataricum* subsp. *ginnala* (Amur maple) except all cultivars
- *Aegopodium podagraria* (Bishop's goutweed)
- *Alnus glutinosa* (Black alder) except all cultivars and hybrids
- *Artemisia absinthium* (Wormwood)
- *Berberis thunbergii* (Japanese barberry). This restriction only applies to the parent type, the variety *atropurpurea*, the hybrid of *B. thunbergii* x *B. Koreana*, and the following cultivars. *Berberis thunbergii* cultivars: Sparkle, 'Anderson' Lustre Green™, Erecta, 'Bailgreen' Jade Carousel®, Angel Wings, Painter's Palette, Inermis ('Thornless'), Pow Wow, Golden Ring, Kellersii, Kobold, 'JN Variegated' Stardust™ and Antares. Variety *atropurpurea* cultivars: Marshall Upright ('Erecta'), Crimson Velvet, 'Bailtwo' Burgundy Carousel®, Red Rocket, 'Monomb' Cherry Bomb™, 'Bailone' Ruby Carousel®, JN Redleaf, Rose Glow and Silver Mile. Hybrid of *B. thunbergii* x *B. koreana* cultivars: Tara and 'Bailsel' Golden Carousel®.
- *Caragana arborescens* (Siberian peashrub) except the cultivars Lorbergii, Pendula, and Walkerii
- *Centaurea jacea* (Brown knapweed)
- *Centaurea nigra* (Black knapweed)
- *Centaurea nigrescens* (Tyrol knapweed)
- *Coronilla varia* (Crown vetch)
- *Euonymus alatus* (Burning bush) including the cultivar 'Nordine' and excluding all other cultivars
- *Filipendula ulmaria* (Queen of the meadow)
- *Galium mollugo* (White bedstraw)
- *Impatiens balfourii* (Balfour's touch-me-not)
- *Iris pseudacorus* (Yellow iris)
- *Knautia arvensis* (Field scabiosa)
- *Linaria dalmatica* (Dalmation toadflax) in Juneau and Bayfield counties
- *Lysimachia nummularia* (Moneywort) except the cultivar Aurea
- *Lysimachia vulgaris* (Garden yellow loosestrife)
- *Morus alba* (White mulberry) except male cultivars
- *Myosotis scorpioides* (Aquatic forget-me-not)
- *Myosotis sylvaticum* (Woodland forget-me-not)
- *Najas marina* (Spiny naiad)
- *Phalaris arundinacea* var. *picta* (ribbon grass or gardener's garters) and other ornamental variegated varieties and cultivars. This restriction only applies to the ornamental variegated varieties and cultivars of *Phalaris arundinacea* and does not include the parent type reed canary

grass.

- *Pimpinella saxifraga* (Scarlet pimpernel)
- *Populus alba* (White poplar)
- *Robinia hispida* (Rose acacia)
- *Robinia pseudoacacia* (Black locust) except all cultivars
- *Solidago sempervirens* (Seaside goldenrod) in Kenosha, Milwaukee and Racine counties
- *Ulmus pumila* (Siberian elm) except hybrids and individuals used as rootstock
- *Valeriana officinalis* (Garden heliotrope)
- *Cipangopaludina japonica* (Japanese trapdoor snail or Japanese mystery snail)
- *Valvata piscinalis* (European valve snail)
- *Viviparus georgianus* (Banded mystery snail)
- *Agrilus planipennis* (Emerald ash borer)

SECTION 46, 48, 50, 52, 54, 56 and 60 update the list of counties with restricted designations for species in the NR 40 Restricted Category (prohibited elsewhere in the state):

- *Anthriscus sylvestris* (Wild chervil) in Adams, Barron, Crawford, Columbia, Dane, Dodge, Fond du Lac, Green, Green Lake, Iowa, Jefferson, Juneau, Kenosha, Lacrosse, Lafayette, Marquette, Milwaukee, Monroe, Ozaukee, Polk, Racine, Richland, Rock, Sauk, Sheboygan, Taylor, Vernon, and Walworth, Waukesha, and Washington counties
- *Bunias orientalis* (Hill mustard) in Dane, Grant, Green, Iowa, and Lafayette, and Rock counties
- *Chelidonium majus* (Celandine) ~~except in Ashland, Barron, Bayfield, Burnett, Chippewa, Douglas, Dunn, Florence, Forest, Iron, Langlade, Lincoln, Marinette, Oconto, Oneida, Polk, Price, Rusk, St. Croix, Sawyer, Taylor, Vilas and Washburn counties~~
- *Conium maculatum* (Poison hemlock) in Crawford, Dane, Grant, Green, Iowa, Jefferson, Kenosha, Lafayette, Milwaukee, Ozaukee, Racine, Richland, Rock, and Sauk, Sheboygan, Walworth, and Waukesha counties
- *Epilobium hirsutum* (Hairy willow herb) in Brown, Calumet, Door, Kenosha, Kewaunee, and Manitowoc county counties
- *Glyceria maxima* (Tall or reed mannagrass) in Brown, Calumet, Columbia, Dane, Dodge, Door, Fond du Lac, Green, Jefferson, Kenosha, Kewaunee, Manitowoc, Milwaukee, Outagamie, Ozaukee, Racine, Rock, Sheboygan, Walworth, Washington, Waukesha and Winnebago counties
- *Humulus japonicus* (Japanese hops) in Buffalo, Crawford, Dane, Grant, Green, Iowa, Jackson, La Crosse, Lafayette, Monroe, Pepin, Richland, Sauk, Trempealeau, and Vernon counties
- *Leymus arenarius* or *Elymus arenarius* (Lyme grass or sand ryegrass) in Door, Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, and Sheboygan counties
- *Torilis japonica* (Japanese hedgeparsley or erect hedgeparsley) ~~except in Ashland, Barron, Bayfield, Buffalo, Burnett, Chippewa, Clark, Douglas, Dunn, Eau Claire, Florence, Forest, Iron, Jackson, Lincoln, Oneida, Pepin, Pierce, Polk, Price, Rusk, St. Croix, Sawyer, Trempealeau, Taylor, Washburn, and Wood~~ in Adams, Brown, Calumet, Columbia, Crawford, Dane, Dodge, Door, Fond du Lac, Grant, Green, Green Lake, Iowa, Jefferson, Juneau, Kenosha, Kewaunee, La Crosse, Lafayette, Langlade, Manitowoc, Marathon, Marinette, Marquette, Menominee, Milwaukee, Monroe, Oconto, Outagamie, Ozaukee, Portage, Racine, Richland, Rock, Sauk, Shawano, Sheboygan, Vernon, Walworth, Washington, Waukesha, Waupaca, Waushara, and Winnebago counties

SECTION 58 revises scientific names in the NR 40 Restricted Category to include accepted synonyms and renumbers to maintain alphabetical order.

- ~~*Fallopia japonica* var. *japonica*~~ or *Polygonum cuspidatum* (Japanese knotweed)

SECTION 61 adds viable genetically modified fish species to the list of restricted species.

SECTION 64 removes the red-eared slider with a carapace (top shell) less than 4 inches from the NR 40 Restricted Category as the sale of turtles of the size are already banned via Code of Federal Regulation – Title 21.

SECTION 73 removes the rusty crayfish from the list of species that may be transported, possessed, or transferred without a permit. Additionally this section clarifies that the rusty crayfish may be taken from the Mississippi River for use as bait on the Mississippi River as authorized under ch. NR 19.27 (4) (a) 1. a. While rusty crayfish (*Orconectes rusticus*) are abundant in many lakes, there are many lakes that are free of this species and their movement should be limited as with other restricted species. This revision will allow live crayfish to be used as bait on the Mississippi River as per NR 19 and will eliminate the exemption that allows live rusty crayfish to be transported.

SECTION 74 clarifies rule language pertaining to dead crayfish as bait, and creates a phase out period for restricted plants to facilitate compliance. The department exemption is explained with SECTION 41.

- The use of dead crayfish, including rusty crayfish, on all waters as bait are not prohibited under NR 40, but may be restricted under other applicable department rules relating to the use of bait for fishing purposes.
- A phase out period for restricted plants is created, where they may be transported, transferred, and introduced without a permit for a period not to exceed 3 years for herbaceous plants and woody vines, or 5 years for trees and shrubs, from the time that the species was added to the NR 40 Restricted Category. All plants listed in the NR 40 Prohibited Category are not included in this exemption. Plants added to the restricted list after 2009 have the rule's effective date listed. All plants without an effective date have been restricted since 2009 and remain restricted. Growing out potted trees and shrubs to a marketable size takes several years. When new species that are grown commercially in Wisconsin are added to the invasive species rule, businesses that have these species in inventory may have several years invested in their production. A phase out period for newly listed, restricted plants will reduce the burden for businesses to comply with the invasive species rule. As a similar but shorter investment may be made in planting crops for seed production or herbaceous perennial plants, a two tiered 3 and 5 year phase out period is proposed. This phase out applies only to restricted plants, not prohibited or split-listed species.

SECTION 76 updates the department's website address.

6. Summary of, and Comparison with, Existing or Proposed Federal Regulations: There are no known proposed federal regulations that would provide the ability for the state to act when newly establishing invasive species are discovered. Existing regulations address a narrow subset of noxious weeds under the Federal Noxious Weed Act (7 U.S.C. 2801 etseq; 88 Stat, 2148) or animals under the Lacey Act (18 U.S.C. 42-43, 16 U.S.C. 3371-3378), primarily species that are already too widespread for a more cost-effective prevention approach.

7. Comparison with Rules in Adjacent States:

- Illinois: The Illinois Department of Agriculture maintains a statutory list under Illinois Noxious Weed Law of about 9 species (www.agr.state.il.us/Laws/Regs/8iac220.pdf) and the Illinois Department of

Natural Resources links to a more comprehensive list of 102 invasive species and a shorter list of plants, animals, insects and diseases (www.invasive.org/illinois/SpeciesofConcern.html).

- Iowa: Regulates several species of aquatic invasive plants, aquatic invasive invertebrates, and invasive fish (www.iowadnr.gov/idnr/Fishing/AboutFishinginIowa/FightingInvasiveSpecies/AquaticInvasiveInvertebrates.aspx)
- Michigan: Regulates a number of invasive aquatic plants - 18, fish - 12 plus all snakeheads, and other animals - 11 through Act 451 and requires prevention actions especially for aquatic invasive species ([www.legislature.mi.gov/\(S\(brw3y4554cagkv4554a24a45\)\)/documents/mcl/pdf/mcl-451-1994-iii-2-1-wildlife-conservation-413.pdf](http://www.legislature.mi.gov/(S(brw3y4554cagkv4554a24a45))/documents/mcl/pdf/mcl-451-1994-iii-2-1-wildlife-conservation-413.pdf))
- Minnesota: Regulates both aquatic and terrestrial invasive species in a process similar to Wisconsin with prohibited, restricted, and non-regulated categories as well as prevention requirements including regulating the transport of water. The species regulated as prohibited include aquatic plants - 14 plus all federally listed species except *Ipomoea aquatica*, fish - 14, aquatic invertebrates - 5, mammals - 4. The species regulated as restricted include aquatic plants - 6, birds - 3, fish - 5, and aquatic invertebrates - 3. In addition all crayfish are regulated.

8. Summary of factual data and analytical methodologies:

Following the enactment of ch. NR 40, Wis. Adm. Code in September of 2009, a list of species remained in need of assessment. These species and additional species presented to the department formed the list of species considered during NR 40 revisions. For each considered species, department staff completed a literature review to establish the potential ecological and economic threats presented by the species.

In 2012, at the request of the Wisconsin Invasive Species Council, species assessment groups (SAGs) convened with the charge of recommending a regulatory category (Prohibited or Restricted) or non-regulatory category (Caution, Pending, Non-restricted, or not invasive) for each considered species to the Council. SAGs are comprised of taxa experts representing governmental, industrial, environmental, educational, and scientific organizations. SAGs are facilitated by DNR staff species experts. Each group utilized the completed literature reviews and professional expert knowledge of the species to make their determinations. The literature reviews are available for review.

For the revision process, eleven SAGs were formed:

- 1) Terrestrial Plants: Trees, Shrubs and Vines
- 2) Terrestrial Plants: Ornamental Forbs and Grasses
- 3) Terrestrial Plants: Other Forbs and Grasses
- 4) Terrestrial Plants: Forage, Turf and Biofuels
- 5) Aquatic Plants, Algae and Cyanobacteria
- 6) Aquatic Invertebrates (besides crayfish)
- 7) Fish and Crayfish
- 8) Plant Pests
- 9) Terrestrial Invertebrates
- 10) Vertebrates (except fish)
- 11) Fish and Wildlife Diseases (Funguses)

After complete review of the species at hand, each SAG formalized a recommended designation for each species via Species Assessment Group Forms. These forms are available for review. On October 22, 2012 the SAGs presented their recommendations to the Wisconsin Invasive Species Council. The Council subsequently voted and approved the SAG recommendations with minor amendments. The

Council then advised the DNR to consider the Council recommendations to revise the invasive species rule.

DNR staff experts on the department Invasive Species Team met in 2012 to consider language changes that were needed in the rule to clarify meaning, ensure consistency with existing rules, and assure practicality of the rule. These language changes were developed with input from SAG groups and industry experts as appropriate and are reflected in the board packet. An overview of these changes was presented to the Council for review and to solicit feedback.

In the winter of 2012-2013, DNR staff presented the Council's recommendations to the public in a series of informal public meetings. The department concurrently solicited public comments from scientific and industry partners as well as the general public. In the spring and summer of 2013 DNR staff used these comments and additional research to further refine DNR's recommended amendments to the rule.

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

Small Business Regulatory Flexibility Analysis

Pursuant to s. 227.127, Wis. Stats., the department is required to solicit comments on the economic impact of a 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. Following the public comment period on the economic impacts, a revised "Fiscal Analysis and Economic Impact Analysis" (EIA) will be prepared containing relevant information that the department receives. Once the EIA process is completed, the department will submit the rule package and economic impact analysis to the Wisconsin Legislative Council under s. 227.15, Wis. Stats., and hearings on the proposed rule will be held by the department after proper notice in accordance with ss. 227.17 and 227.18, Wis. Stats. If the EIA indicates that the proposed rule is reasonably expected to have a total impact of \$20,000,000 in implementation and compliance costs, the department shall submit the rule the Department of Administration in accordance with s. 227.137 (6), Wis. Stats.

A small business regulatory flexibility analysis that contains the following provisions in s. 227.19 (3) (e), Stats., will be included in the final rule order:

1. The agency's reason for including or failing to include in the proposed rule any of the methods specified under s. 227.114 (2) for reducing its impact on small businesses.
2. A summary of the issues raised by small businesses during the hearings on the proposed rule, any changes in the proposed rule as a result of alternatives suggested by small businesses and the reasons for rejecting any alternatives suggested by small businesses.
3. The nature of any reports and the estimated cost of their preparation by small businesses that must comply with the rule.
4. The nature and estimated cost of other measures and investments that will be required of small businesses in complying with the rule.
5. The additional cost, if any, to the agency of administering or enforcing a rule which includes any of the methods specified under s.227.114 (2).
6. The impact on public health, safety and welfare, if any, caused by including in the rule any of the methods specified under s 227.114 (2).

The department's email distribution list used to solicit comments includes small businesses and small business associations. The distribution list will be submitted to the Governor's Office of Regulatory

Compliance.

10. Effect on small businesses: We expect considerable interest in the proposed rule revisions. Interested parties may include the nursery, landscape, forestry, seed and agriculture industries, fish farmers, bait dealers, commercial fishers and wholesale fish dealers, aquarium and ornamental fish dealers, game farms, anglers, landowners, gardeners, county and municipal governments, Native American Indian tribes, lake districts, state agencies, and environmental and conservation organizations. The Wisconsin Invasive Species Council reviewed and assessed a list of species for inclusion in the proposed rule revision and actively engaged their contacts in the process. The Council includes representatives the Departments of Natural Resources; Administration; Agriculture, Trade and Consumer Protection; Tourism; Transportation and seven other Council members that are drawn from agriculture; nursery industry; NGOs (TNC); UW; and forestry.

As part of the information gathering and outreach process, Invasive Species Outreach Specialist Chrystal Schreck sent a letter to 600 retailers and growers and approximately 1100 licensed growers and dealers from the November 2, 2012 DATCP list of license holders updating them on the process in December, 2012. A series of informal public information sessions about the proposed changes to the rule were held from February 25 - March 15 in Madison, Milwaukee, Spooner, Rhinelander, and La Crosse to inform interested parties that the revisions were under development and to solicit informal comments on the potential impact of the rule. Approximately 41 people attended, and 52 public comments have been received during the informal discussion period.

For small businesses growing woody plants, a number of years have been invested into the infrastructure to grow particular species. To minimize economic impact of listing new species that are invasive in Wisconsin a phase out period of 5 years for trees and shrubs, and 3 years for all other plants once listed as Restricted would both reduce the economic impact and provide a defined period for achieving compliance without using permits for commercial activities. The compliance period would begin once the rule is in effect. Prohibited species would be immediately subject to regulation.

Through staff work with pet stores and other small businesses that had not previously been regulated by the DNR we learned that personal communication, clear and concise guides to regulated species, and education were important. Ensuring personal contact and taking an "education first" approach is consistent with DNR's policy of stepped enforcement and will be maintained for all taxa groups regulated under the invasive species rule.

Enforcement and administration for the invasive species rule and permits are already in place. Some changes due to the increased number of species requiring review and training for identification are anticipated but cost are expected to be absorbed within existing DNR budgets and by DATCP staff who enforce provisions of the rule at licensed nurseries. Staff from both agencies have met and developed guidelines to continue a partnership of joint and cooperative enforcement. Management costs may rise with the addition of new species to the list but as the options for cost-sharing for control have not been funded in the past, it is unlikely that there will be any discernible operational impact. The policy of stepped enforcement is compatible with the changes proposed to the rule as "education first" is the priority for compliance.

Effect on local governmental units: Pursuant to s. 227.137 Wis. Stats., the department will be 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 Economic Impact Analysis (EIA). The notice to solicit comments will be sent to the county and town associations in the state.

Summary of Expected Economic and Fiscal Impacts: The economic cost of listing a species is highly dependent on the impact it is having now, how wide spread it already is, how it is currently being used in trade, and the availability of species that can be substituted for the proposed species. The assumption of a significant impact is a conservative estimate that does not generally take into account the availability of substitute non-invasive species or the value of preventing the introductions of invasive species. The impact of removing newly regulated organisms from trade has a potentially high short term impact. It is anticipated that businesses will substitute alternative, non-invasive species over time. The high estimate also reflects the diversity of species under assessment, as well as the fact that a number of these species may be used by various sectors of society. During the species assessment process, the economic costs and benefits were discussed for each species considered for inclusion in the rule revisions. Certain species may have larger potential economic impacts than others and will be highlighted in the discussion that follows.

Summary of Expected Benefits of Revisions to the Rule: Updating the regulated list of invasive species under NR 40 to include species that if removed from trade, or subject to reasonable precautions to prevent their spread can be contained, slowed, or prevented from establishing in Wisconsin reduces the ecological and economic harm caused by these invasive species in the future. Listing species under the invasive species rule encourages action across jurisdictions and can focus control and containment efforts, improving their effectiveness. Invasive species are species that are non-native to Wisconsin and cause or have the potential to cause economic or environmental harm or harm to human health. By regulating these species that have been identified as causing or potentially causing harm and that have the potential to be controlled through regulation the intent is to create the largest possible benefit to both the economy and the department's mission to protect and manage the resources of the state. These rule revisions provide valuable economic benefits by reducing future control and management costs for regulated invasive species.

The alternative considered in the detailed Economic Impact Analysis report is not listing additional invasive species for regulation. Past efforts to quantify where the economic impact from controlling invasive species falls have identified that individual landowners generally bear the highest cost to mitigate the damage these species cause while the economic benefits of continued use of a species are limited to a much smaller contingent. The distributed impact of not listing species that are invasive species is likely to be greater.

Long Range Projections: The long range economic impacts include control costs, costs to comply with both the list of regulated species and with the required reasonable precautions, and increased enforcement burdens. The control costs for prohibited species where control is required when feasible will increase somewhat with the increased number of species listed as some of these species are likely to be introduced to Wisconsin and spread. However, it is anticipated that with a changing climate, continually increasing trade and exchange of materials, and the dispersal from populations already established, that the cost to control invasive species in Wisconsin will increase independent of the proposed regulation, and that regulation will reduce the number of these species being introduced.

The increased number of regulated species will reduce or eliminate those particular species in trade without restricting commerce overall since substitution of non-regulated species is likely. The long range implications for businesses are generally low as the initial cost to remove a species from sale and develop sources and propagation methods for substitute species will occur over a 1-7 year period and not reoccur. Costs to comply with reasonable precautions will be ongoing and are likely to decrease with time as new methods and tools increase the efficiency of these actions. The required reasonable precautions

will continue to have benefits by reducing the likelihood that multiple species will spread through known pathways such as mowing equipment, forestry activities, boating, and nursery sales. The benefits of preventing the spread of invasive species will continue as long as the requirement to employ reasonable precautions remains in place.

The increased enforcement burden will require that both Department of Natural Resources and Department of Agriculture, Trade and Consumer Protection staff will spend more time reviewing and learning the listed species and working with regulated parties. It is anticipated that these increased costs will be absorbed by the existing staff and program.

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: No information.

12. Agency Contact Person: Dreux Watermolen, Section Chief, Science Information Services Section, 101 S. Webster St., P.O. Box 7921 SS/7, Madison, WI 53707-7921. (608) 266-8931, Invasive.Species@Wisconsin.gov.

13. Place where comments are to be submitted and deadline for submission: Comments on this proposed rule may be submitted to the agency contact person listed above. Written comments may also be submitted at a public hearing. Hearings dates and comment submission deadlines

SECTION 1. NR 40.02 (9m) is created to read:

NR 40.02 (9m) "Crayfish" means any decapod crustacean from the following families: *Astacidae*, *Cambaridae* and *Parastacidae*.

SECTION 2. NR 40.02 (14), (17), (24) (Note), (29), (30), (31), (37), (48) and (53) are amended to read:

NR 40.02 (14) "Disposal" means the lawful discharge, deposit, dumping or placing of any invasive species into or on any land or water in a manner that prevents the establishment, introduction or spread of the disposed species, or the consumption of the species as food or use for other purposes that will not lead to the establishment, introduction or spread of the species.

(17) "Established nonnative fish species and established nonnative crayfish species" means alewife (*Alosa pseudoharengus*), common carp (*Cyprinus carpio*), eastern mosquitofish (*Gambusia holbrooki*), rainbow smelt (*Osmerus mordax*), round goby (*Neogobius melanostomus*), ruffe (*Gymnocephalus cernuus*), sea lamprey (*Petromyzon marinus*), three-spine stickleback (*Gasterosteus aculeatus*), tubenose goby (*Proterorhinus marmoratus*), white perch (*Morone americana*), ~~and~~ rusty crayfish (*Orconectes rusticus*), and western mosquitofish (*Gambusia affinis*).

(24) (Note) Note: Section 23.22 (1) (c), Stats., states that "invasive species" means nonindigenous species whose introduction causes or is likely to cause economic or environmental harm or harm to human health. The requirements set forth under this chapter do not apply to dead specimens or organisms that are dead, not revivable and no longer capable of living, growing, developing, and functioning.

(29) "Nonnative" or "nonnative species" means a species not indigenous to Wisconsin, and includes an individual specimen and genetically modified variants of any native or nonnative fish or crayfish species.

(30) "Nonnative fish species in the aquaculture industry" means arctic char (*Salvelinus alpinus*), Atlantic salmon (*Salmo salar*), brown trout (*Salmo trutta*), chinook salmon (*Oncorhynchus tshawytscha*),

coho salmon (*Oncorhynchus kisutch*), rainbow trout (*Oncorhynchus mykiss*), pink salmon (*Oncorhynchus gorbuscha*), redear sunfish (*Lepomis microlophus*), tiger trout (a hybrid of *Salvelinus fontinalis* and *Salmo trutta*) and tilapia (*Tilapia* spp). Notwithstanding sub. (29), “nonnative fish species in the aquaculture industry” does not include genetically modified variants of these species.

(31) “Nonnative viable fish species in the aquarium trade” means goldfish (*Carassius auratus*), koi carp (*Cyprinus carpio*), sterlet (*Acipenser ruthenus*), Chinese hi-fin banded shark (*Myxocyprinus asiaticus*), bitterling (*Rhodeus* spp.), ide (*Leuciscus idus*) and weather loach (*Misgurnus anguillicaudatus*). Notwithstanding sub. (29), “nonnative viable fish species in the aquarium trade” does not include genetically modified variants of these species.

(37) “Pet” means an animal raised or kept for companionship and generally kept indoors, in an enclosure or otherwise confined or restrained, and not allowed to roam freely out-of-doors. This does not apply to fish and crayfish, or to other aquatic invertebrates.

(48) “Species” means monera, protista, fungi, plantae, animalia, viruses, phytoplasmata, mycoplasma-like organisms and prions and includes seeds, propagules and individual living specimens, eggs, larvae, and any other viable life-stages of such species. Except for fish and crayfish species, “species” “Species” includes genetically modified species, cultivars, hybrids and sub-specific taxa.

(53) “Wild animal” means any mammal, bird, or other creature of a wild nature endowed with sensation and the power of voluntary motion, except fish and crayfish and other aquatic invertebrates.

SECTION 3. NR 40.03 (Note) is amended to read:

NR 40.03 (Note) Note: For informational and educational purposes, the department informally maintains and updates as needed a caution list of invasive species and a list of non-restricted invasive species. Caution list invasive species are either not found in the state, or if they are, the extent of their presence or impact is not sufficiently documented. Caution list species may have shown evidence of invasiveness in similar environments in other states and could potentially spread in Wisconsin. Unlike the prohibited and restricted categories, caution list category invasive species are not regulated under this chapter. Additional information is needed to determine if caution list species belong in another category. ~~Any person finding a caution list species or knowing of its spread or lack thereof is encouraged to report the location, spread and impact (if known) to the department and to contain the spread of the species. Any person selling or distributing a caution list plant species is encouraged to distribute educational materials asking that the plants not be planted near wild, natural or environmentally sensitive areas. Non-restricted invasive species may have beneficial uses, but they also may have adverse environmental, recreational or economic impacts or cause harm to human health. Most of the non-restricted species are already integrated into Wisconsin’s ecosystems, and state-wide control or eradication is not practical or feasible. Non-restricted category invasive species are not regulated under this chapter. All other non-native species recommended for listing as invasive but not yet assessed for this rule are put on an informal pending list. Future rule revisions will involve assessing some species from this list.~~

~~Note: A copy of the latest caution list and non-restricted list may be obtained at no cost at <http://dnr.wi.gov/invasives> or by writing to the department at the following address:~~

~~Invasive Plant Coordinator—ER/6
Wisconsin Department of Natural Resources
PO Box 7921
Madison, WI 53707-7921~~

SECTION 4. NR 40.04 (2) (a) 1. is renumbered NR 40.04 (2) (a) 1r.

SECTION 5. NR 40.04 (2) (a) 1g. is created to read:

NR 40.04 (2) (a) 1g. *Caulerpa taxifolia* (Killer algae)

SECTION 6. NR 40.04 (2) (b) is amended to read:

NR 40.04 (2) (b) *Plants*. The following plant invasive species are prohibited statewide except in the counties listed where they are restricted under s. NR 40.05 (2) (b):

SECTION 7. NR 40.04 (2) (b) 1. is renumbered NR 40.04 (2) (b) 1s.

SECTION 8. NR 40.04 (2) (b) 1e. and 1m. are created to read:

NR 40.04 (2) (b) 1e. *Achyranthes japonica* (Japanese chaff flower)

1m. *Akebia quinata* (Fiveleaf akebia or Chocolate vine)

SECTION 9. NR 40.04 (2) (b) 2. is amended to read:

NR 40.04 (2) (b) 2. *Anthriscus sylvestris* (Wild chervil) except in Adams, Barron, Crawford, Columbia, Dane, Dodge, Fond du Lac, Grant, Green, Green Lake, Iowa, Jefferson, Juneau, Kenosha, La Crosse, Lafayette, Marquette, Milwaukee, Monroe, Ozaukee, Polk, Racine, Richland, Rock, Sauk, Sheboygan, Taylor, Vernon, and Walworth, Waukesha, and Washington counties

SECTION 10. NR 40.04 (2) (b) 2e., 2m. and 2s. are created to read:

NR 40.04 (2) (b) 2e. *Arundo donax* (Giant reed)

2m. *Azolla pinnata* (Mosquito fern)

2s. *Berberis vulgaris* (Common barberry)

SECTION 11. NR 40.04 (2) (b) 3. is amended to read:

NR 40.04 (2) (b) 3. *Bunias orientalis* (Hill mustard) except in Dane, Grant, Green, Iowa, and Lafayette, and Rock counties

SECTION 12. NR 40.04 (2) (b) 4c., 4g., 4n., 4r. and 4w. are created to read:

NR 40.04 (2) (b) 4c. *Cardamine hirsuta* (Bittercress)

4g. *Cardamine impatiens* (Narrow leaf bittercress)

4n. *Celastrus loeseneri* (Asian loeseneri bittersweet)

4r. *Centaurea diffusa* (Diffuse knapweed)

4w. *Centaurea repens* (Russian knapweed)

SECTION 13. NR 40.04 (2) (b) 6. is repealed.

SECTION 14. NR 40.04 (2) (b) 7. and 8. are amended to read:

NR 40.04 (2) (b) 7. *Cirsium palustre* (European marsh thistle) except in Ashland, Bayfield, Chippewa, Clark, Door, Florence, Forest, Iron, Langlade, Lincoln, Marathon, Marinette, Menominee, Oconto, Oneida, Price, Rusk, Sawyer, Shawano, Taylor and Vilas counties

8. *Conium maculatum* (Poison hemlock) except in Buffalo, Crawford, Dane, Grant, Green, Iowa, Jefferson, Kenosha, La Crosse, Lafayette, Milwaukee, Monroe, Ozaukee, Racine, Richland, Rock, and Sauk, Sheboygan, Trempealeau, Vernon, Walworth, and Waukesha counties

SECTION 15. NR 40.04 (2) (b) 10g. and 10r. are created to read:

NR 40.04 (2) (b) 10g. *Digitalis lanata* (Grecian foxglove)

NR 40.04 (2) (b) 10r. *Dioscorea batatas* or *Dioscorea polystacha* (Chinese yam)

SECTION 16. NR 40.04 (2) (b) 11. and 12. are amended to read:

NR 40.04 (2) (b) 11. *Dioscorea oppositifolia* (~~Chinese Indian~~ yam)

12. *Egeria densa* (Brazilian waterweed or wide-leaf anacharis)

SECTION 17. NR 40.04 (2) (b) 12g. and 12r. are created to read:

NR 40.04 (2) (b) 12g. *Eichhornia azurea* (Anchored water hyacinth)
12r. *Eichhornia crassipes* (Water hyacinth, floating)

SECTION 18. NR 40.04 (2) (b) 13. is amended to read:

NR 40.04 (2) (b) 13. *Epilobium hirsutum* (Hairy willow herb) except in Brown, Calumet, Door, Kenosha, Kewaunee, and Manitowoc county counties

SECTION 19. NR 40.04 (2) (b) 13e. and 13s. are created to read:

NR 40.04 (2) (b) 13e. *Fallopia x bohemicum* or *F. x bohémica* or *Polygonum x bohémicum* (Bohemian knotweed)
13s. *Glossostigma cleistanthum* (Mudmat)

SECTION 20. NR 40.04 (2) (b) 14. and 16 are amended to read:

NR 40.04 (2) (b) 14. *Glyceria maxima* (Tall or reed mannagrass) except in Brown, Calumet, Columbia, Dane, Dodge, Door, Fond du Lac, Green, Jefferson, Kenosha, Kewaunee, Manitowoc, Milwaukee, Outagamie, Ozaukee, Racine, Rock, Sheboygan, Walworth, Washington, Waukesha and Winnebago counties

16. *Humulus japonicus* (Japanese hops) except in Buffalo, Crawford, Dane, Grant, Green, Iowa, Jackson, La Crosse, Lafayette, Monroe, Pepin, Richland, Sauk, Trempealeau, and Vernon counties

SECTION 21. NR 40.04 (2) (b) 18d., 18h., 18p. and 18t. are created to read:

NR 40.04 (2) (b) 18d. *Hydrocotyle ranunculoides* (Floating marsh pennywort)
18h. *Hygrophila polysperma* (Indian swampweed)
18p. *Impatiens glandulifera* (Policeman's helmet)
18t. *Ipomoea aquatica* (Water spinach)

SECTION 22. NR 40.04 (2) (b) 22. is amended to read:

NR 40.04 (2) (b) 22. *Leymus arenarius* or *Elymus arenarius* (Lyme grass or sand ryegrass) except in Door, Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, and Sheboygan counties

SECTION 23. NR 40.04 (2) (b) 22g., 22r., 24m., 27m., 28e., 28m., 28s., 29e., 29m. and 29s are created to read:

NR 40.04 (2) (b) 22g. *Limnophila sessiliflora* (Asian marshweed)
22r. *Linaria dalmatica* (Dalmatian toadflax) except in Juneau and Bayfield counties
24m. *Lythrum virgatum* (Wanded loosestrife)
27m. *Nelumbo nucifera* (Sacred lotus)
28e. *Oenanthe javanica* (Java waterdropwort or Vietnamese parsley)
28m. *Oplismenus hirtellus* ssp. *undulatifolius* (Wavy leaf basket grass)
28s. *Ottelia alismoides* (Ducklettuce)
29e. *Petasites hybridus* (Butterfly dock)
29m. *Phellodendron amurense* (Amur cork tree) except male cultivars and seedling rootstock
29s. *Pistia stratiotes* (Water lettuce)

SECTION 24. NR 40.04 (2) (b) 30. is amended to read:

NR 40.04 (2) (b) 30. *Polygonum perfoliatum* or *Persicaria perfoliata* (Mile-a-minute vine)

SECTION 25. NR 40.04 (2) (b) 31. is renumbered NR 40.04 (2) (b) 13m. and amended to read:
NR 40.04 (2) (b) ~~34.~~ 13m. *Fallopia sachalinensis* or *Polygonum sachalinense* (Giant knotweed)

SECTION 26. NR 40.04 (2) (b) 32. is amended to read:
NR 40.04 (2) (b) 32. *Pueraria montana* or *P. lobata* (Kudzu)

SECTION 27. NR 40.04 (2) (b) 33g., 33r., 34b., 34f., 34k., 34p., 34s., 34w. and 34y. are created to read:
NR 40.04 (2) (b) 33g. *Ranunculus ficaria* (Lesser celandine)
33r. *Rubus armeniacus* (Himalayan blackberry)
34b. *Sagittaria sagittifolia* (Hawaii arrowhead)
34f. *Salvinia herzogii* (Giant salvinia)
34k. *Salvinia molesta* (Giant salvinia)
34p. *Solidago sempervirens* (Seaside goldenrod) except in Kenosha, Milwaukee and Racine counties
34s. *Sorghum halepense* (Johnsongrass)
34w. *Stratiotes aloides* (Water soldiers)
34y. *Taeniatherum caput-medusae* (Medusahead)

SECTION 28. NR 40.04 (2) (b) 36. is amended to read:
NR 40.04 (2) (b) 36. *Torilis japonica* (Japanese hedgeparsley or erect hedgeparsley) ~~in Ashland, Barron, Bayfield, Buffalo, Burnett, Chippewa, Clark, Douglas, Dunn, Eau Claire, Florence, Forest, Iron, Jackson, Lincoln, Oneida, Pepin, Pierce, Polk, Price, Rusk, St. Croix, Sawyer, Trempeleau, Taylor, Washburn, and Wood~~ except in Adams, Brown, Calumet, Columbia, Crawford, Dane, Dodge, Door, Fond du Lac, Grant, Green, Green Lake, Iowa, Jefferson, Juneau, Kenosha, Kewaunee, La Crosse, Lafayette, Langlade, Manitowoc, Marathon, Marinette, Marquette, Menominee, Milwaukee, Monroe, Oconto, Outagamie, Ozaukee, Portage, Racine, Richland, Rock, Sauk, Shawano, Sheboygan, Vernon, Walworth, Washington, Waukesha, Waupaca, Waushara, and Winnebago counties

SECTION 29. NR 40.04 (2) (b) 37e., 37m., 37s., 39. and 40. are created to read:
NR 40.04 (2) (b) 37e. *Tussilago farfara* (Colt's foot)
37m. *Typha domingensis* (Southern cattail)
37s. *Typha laxmannii* (Graceful cattail)
40. *Wisteria floribunda* (Japanese wisteria)
41. *Wisteria sinensis* (Chinese wisteria)

SECTION 30. NR 40.04 (2) (c) 4. and 5. are repealed.

SECTION 31. NR 40.04 (2) (c) 12. d. is amended to read:
NR 40.04 (2) (c) 12. d. ~~Fish species that the department has determined are nonviable~~ Nonviable fish species

SECTION 32. NR 40.04 (2) (c) 12. d. (Note) is repealed.

SECTION 33. NR 40.04 (2) (d) 5m. and 8m. are created to read:
NR 40.04 (2) (d) 5m. *Dikerogammarus villosus* (Killer shrimp)
8m. *Melanoides tuberculata* (Malaysian trumpet snail)

SECTION 34. NR 40.04 (2) (e) 2. and 5. are repealed

SECTION 35. NR 40.04 (2) (e) 5e., 5m., 5s., 6m., 8., (2) (f) 1m. and (3) (b) (Note) are created to read:

NR 40.04 (2) (e) 5e. *Dendroctonus ponderosae* (Mountain pine beetle)

5m. *Geosmithia morbida* (Thousand cankers disease of walnut)

5s. *Grosmannia clavigera* (Blue stain fungus)

6m. *Ophiostoma montium* (Blue stain fungus)

8. *Pityophthorus juglandis* (Walnut twig beetle)

(2) (f) 1m. *Myocastor coypus* (Nutria)

(3) (b) (Note) Compliance with the conditions of permits issued under chs. 30 and 31, Wis. Stats., constitute reasonable precautions under this subsection.

SECTION 36. NR 40.04 (3) (d) is amended to read:

NR 40.04 (3) (d) A legally obtained nonnative wild animal that is a pet may be possessed, transported or transferred without a permit issued by the department under this chapter if obtained prior to and located in the State of Wisconsin on the date the species is listed as prohibited under this section, but may not be introduced. The offspring of pets possessed under this subsection may not be transferred.

SECTION 37. NR 40.04 (3) (d) (Note) is repealed.

SECTION 38. NR 40.04 (3) (e) is amended to read:

NR 40.04 (3) (e) Paragraph (a) does not apply to a person who transports, possesses, transfers or introduces a terrestrial invertebrate or plant disease-causing microorganism that is regulated under a quarantine imposed by DATCP under s. 94.01, Stats., or a United States Department of Agriculture Animal and Plant Health Inspection Service quarantine area declared under 7 USC section 7714 or 7715 ~~if the person is in compliance with a DATCP-USDA APHIS compliance agreement applicable to the terrestrial invertebrate or plant disease-causing microorganism.~~

SECTION 39. NR 40.04 (3) (e) 1. and 2. are created to read:

NR 40.04 (3) (e) 1. The person is in compliance with a DATCP-USDA APHIS compliance agreement applicable to the terrestrial invertebrate or plant disease-causing microorganism, or

2. The transport, possession, transfer or introduction takes place entirely within the quarantine applicable to the terrestrial invertebrate or plant disease-causing microorganism.

SECTION 40. NR 40.04 (3) (g) (note) is amended to read:

NR 40.04 (3) (Note) Note: Paragraph (g) does not apply to transport of identified carriers of invasive species as described in s. NR 40.07 (5) (a).

~~Note: Reports for fish may be sent to:~~

~~Attn: FH/4~~

~~Wisconsin Department of Natural Resources~~

~~PO Box 7921~~

~~Madison, WI 53707-7921~~

~~Note: Reports for other vertebrates may be sent to:~~

~~Attn: Wildlife Regulation Policy Specialist, WM/6~~

~~Wisconsin Department of Natural Resources~~

~~PO Box 7921~~

~~Madison, WI 53707-7921~~

~~Note: Reports for terrestrial plants may be sent to:~~

~~Attn: Forestry Invasive Species Coordinator — FR/4~~

~~Wisconsin Department of Natural Resources~~

~~PO Box 7921~~

~~Madison, WI 53707-7921~~

~~Note: Reports for aquatic species except fish may be sent to:~~

~~Attn: Aquatic Invasive Species Coordinator
Wisconsin Department of Natural Resources
141 NW Barstow St., Room 180
Waukesha, WI 53188~~

~~Note: Reports for terrestrial invertebrates and plant disease-causing microorganisms may be sent to:~~

~~Forest Health Protection Program Coordinator
Wisconsin Department of Natural Resources
3911 Fish Hatchery Rd.
Fitchburg, WI 53711~~

Note: Reports for invasive species may be sent to:

Attn: Statewide Invasive Species Coordinator, SS/7
Wisconsin Department of Natural Resources
PO Box 7921
Madison, WI 53707-7921

Note: Reports may also be sent by email to ~~Bureau.EndangeredResources@wisconsin.gov~~
invasive.species@wisconsin.gov

SECTION 41. NR 40.04 (3) (h) 3. is created to read:

NR 40.04 (3) (h) 3. Employees or duly authorized agents of the Department in the performance of their official duties.

SECTION 42. NR 40.04 (4) (f) is amended to read:

NR 40.04 (4) (f) The department may remove, or cause to be removed any detrimental fish or other ~~aquatic~~ prohibited invasive species from waters of the state.

SECTION 43. NR 40.05 (2) (b) is amended to read:

NR 40.05 (2) (b) *Plants*. The following plant invasive species are restricted statewide except in the counties not listed where they are prohibited under s. NR 40.04 (2) (b):

SECTION 44. NR 40.05 (2) (b) 1. is renumbered NR 40.05 (2) (b) 1s.

SECTION 45. NR 40.05 (2) (b) 1e., 1m. and 2m. are created to read:

NR 40.05 (2) (b) 1e. *Acer tataricum* subsp. *ginnala* (Amur maple) except all cultivars. Effective on [LRB inserts date]

1m. *Aegopodium podagraria* (Bishop's goutweed). Effective on [LRB inserts date]

2m. *Alnus glutinosa* (Black alder) except all cultivars and hybrids. Effective on [LRB inserts date]

SECTION 46. NR 40.05 (2) (b) 3. is amended to read:

NR 40.05 (2) (b) 3. *Anthriscus sylvestris* (Wild chervil) in Adams, Barron, Crawford, Columbia, Dane, Dodge, Fond du Lac, Green, Green Lake, Iowa, Jefferson, Juneau, Kenosha, Lacrosse, Lafayette, Marquette, Milwaukee, Monroe, Ozaukee, Polk, Racine, Richland, Rock, Sauk, Sheboygan, Taylor, Vernon, and Walworth, Waukesha, and Washington counties

SECTION 47. NR 40.05 (2) (b) 3g. and 3r. are created to read:

NR 40.05 (2) (b) 3g. *Artemisia absinthium* (Wormwood). Effective on [LRB inserts date]

3r. *Berberis thunbergii* (Japanese barberry). This restriction only applies to the parent type, the

variety *atropurpurea*, the hybrid of *B. thunbergii* x *B. Koreana*, and the following cultivars. *Berberis thunbergii* cultivars: Sparkle, 'Anderson' Lustre Green™, Erecta, 'Bailgreen' Jade Carousel®, Angel Wings, Painter's Palette, Inermis ('Thornless'), Pow Wow, Golden Ring, Kelleriis, Kobold, 'JN Variegated' Stardust™ and Antares. Variety *atropurpurea* cultivars: Marshall Upright ('Erecta'), Crimson Velvet, 'Bailtwo' Burgundy Carousel®, Red Rocket, 'Monomb' Cherry Bomb™, 'Bailone' Ruby Carousel®, JN Redleaf, Rose Glow and Silver Mile. Hybrid of *B. thunbergii* x *B. koreana* cultivars: Tara and 'Bailsel' Golden Carousel®. Effective on [LRB inserts date]

SECTION 48. NR 40.05 (2) (b) 4. is amended to read:

NR 40.05 (2) (b) 4. *Bunias orientalis* (Hill mustard) in Dane, Grant, Green, Iowa, and Lafayette, ~~and Rock~~ counties

SECTION 49. NR 40.05 (2) (b) 6m., 10e., 10m. and 10s. are created to read:

NR 40.05 (2) (b) 6m. *Caragana arborescens* (Siberian peashrub) except the cultivars Lorbergii, Pendula, and Walkerii. Effective on [LRB inserts date]

10e. *Centaurea jacea* (Brown knapweed). Effective on [LRB inserts date]

10m. *Centaurea nigra* (Black knapweed). Effective on [LRB inserts date]

10s. *Centaurea nigrescens* (Tyrol knapweed). Effective on [LRB inserts date]

SECTION 50. NR 40.05 (2) (b) 11. and 14. are amended to read:

NR 40.05 (2) (b) 11. *Chelidonium majus* (Celandine) ~~except in Ashland, Barron, Bayfield, Burnett, Chippewa, Douglas, Dunn, Florence, Forest, Iron, Langlade, Lincoln, Marinette, Oconto, Oneida, Polk, Price, Rusk, St. Croix, Sawyer, Taylor, Vilas and Washburn counties~~

14. *Conium maculatum* (Poison hemlock) in Crawford, Dane, Grant, Green, Iowa, Jefferson, Kenosha, Lafayette, Milwaukee, Ozaukee, Racine, Richland, Rock, ~~and Sauk,~~ Sheboygan, Walworth, and Waukesha counties

SECTION 51. NR 40.05 (2) (b) 14m. is created to read:

NR 40.05 (2) (b) 14m. *Coronilla varia* (Crown vetch). Effective on [LRB inserts date]

SECTION 52. NR 40.05 (2) (b) 20. is amended to read:

NR 40.05 (2) (b) 20. *Epilobium hirsutum* (Hairy willow herb) in Brown, Calumet, Door, Kenosha, ~~Kewaunee, and Manitowoc county~~ counties

SECTION 53. NR 40.05 (2) (b) 21m., 23r. and 24m. are created to read:

NR 40.05 (2) (b) 21m. *Euonymus alatus* (Burning bush) including the cultivar 'Nordine' and excluding all other cultivars. Effective on [LRB inserts date]

23r. *Filipendula ulmaria* (Queen of the meadow). Effective on [LRB inserts date]

24m. *Galium mollugo* (White bedstraw). Effective on [LRB inserts date]

SECTION 54. NR 40.05 (2) (b) 25. and 27. are amended to read:

NR 40.05 (2) (b) 25. *Glyceria maxima* (Tall or reed mannagrass) in Brown, Calumet, Columbia, Dane, Dodge, Door, Fond du Lac, Green, Jefferson, Kenosha, Kewaunee, Manitowoc, Milwaukee, Outagamie, Ozaukee, Racine, Rock, Sheboygan, Walworth, Washington, Waukesha and Winnebago counties

27. *Humulus japonicus* (Japanese hops) in Buffalo, Crawford, Dane, Grant, Green, Iowa, Jackson, La Crosse, Lafayette, Monroe, Pepin, Richland, Sauk, Trempealeau, and Vernon counties

SECTION 55. NR 40.05 (2) (b) 27e., 27m. and 27s. are created to read:

NR 40.05 (2) (b) 27e. *Impatiens balfourii* (Balfour's touch-me-not). Effective on [LRB inserts date]

27m. *Iris pseudacorus* (Yellow iris). Effective on [LRB inserts date]

27s. *Knautia arvensis* (Field scabiosa). Effective on [LRB inserts date]

SECTION 56. NR 40.05 (2) (b) 28. is amended to read:

NR 40.05 (2) (b) 28. *Leymus arenarius* or *Elymus arenarius* (Lyme grass or sand ryegrass) in Door, Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, and Sheboygan counties

SECTION 57. NR 40.05 (2) (b) 28m., 32g., 32r., 33e., 33m., 33s., 34m., 35m. and 36m. are created to read:

NR 40.05 (2) (b) 28m. *Linaria dalmatica* (Dalmation toadflax) in Juneau and Bayfield counties
32g. *Lysimachia nummelaria* (Moneywort) except the cultivar Aurea. Effective on [LRB inserts date]

32r. *Lysimachia vulgaris* (Garden yellow loosestrife). Effective on [LRB inserts date]

33e. *Morus alba* (White mulberry) except male cultivars. Effective on [LRB inserts date]

33m. *Myosotis scorpioides* (Aquatic forget-me-not). Effective on [LRB inserts date]

33s. *Myosotis sylvaticum* (Woodland forget-me-not). Effective on [LRB inserts date]

34m. *Najas marina* (Spiny naiad). Effective on [LRB inserts date]

35m. *Phalaris arundinacea* var. *picta* (ribbon grass or gardener's garters) and other ornamental variegated varieties and cultivars. This restriction does not include the parent type - reed canary grass.

36m. *Pimpinella saxifraga* (Scarlet pimpernel). Effective on [LRB inserts date]

SECTION 58. NR 40.05 (2) (b) 37 is renumbered NR 40.05 (2) (b) 23g. and amended to read:

NR 40.05 (2) (b) 23g. *Fallopia japonica* or *Polygonum cuspidatum* (Japanese knotweed)

SECTION 59. NR 40.05 (2) (b) 37m., 40g., 40r. and 41m. are created to read:

NR 40.05 (2) (b) 37m. *Populus alba* (White poplar). Effective on [LRB inserts date]

40g. *Robinia hispida* (Rose acacia). Effective on [LRB inserts date]

40r. *Robinia pseudoacacia* (Black locust) except all cultivars. Effective on [LRB inserts date]

41m. *Solidago sempervirens* (Seaside goldenrod) in Kenosha, Milwaukee and Racine counties

SECTION 60. NR 40.05 (2) (b) 43. is amended to read:

NR 40.05 (2) (b) 43. *Torilis japonica* (Japanese hedgeparsley or erect hedgeparsley) ~~except in Ashland, Barron, Bayfield, Buffalo, Burnett, Chippewa, Clark, Douglas, Dunn, Eau Claire, Florence, Forest, Iron, Jackson, Lincoln, Oneida, Pepin, Pierce, Polk, Price, Rusk, St. Croix, Sawyer, Trempeleau, Taylor, Washburn, and Wood~~ in Adams, Brown, Calumet, Columbia, Crawford, Dane, Dodge, Door, Fond du Lac, Grant, Green, Green Lake, Iowa, Jefferson, Juneau, Kenosha, Kewaunee, La Crosse, Lafayette, Langlade, Manitowoc, Marathon, Marinette, Marquette, Menominee, Milwaukee, Monroe, Oconto, Outagamie, Ozaukee, Portage, Racine, Richland, Rock, Sauk, Shawano, Sheboygan, Vernon, Walworth, Washington, Waukesha, Waupaca, Waushara, and Winnebago counties

SECTION 61. NR 40.05 (2) (b) 45g., 45r., (c) 5., (d) 1m., 3., and 4. are created to read:

NR 40.05 (2) (b) 45g. *Ulmus pumila* (Siberian elm) except hybrids and individuals used as rootstock. Effective on [LRB inserts date]

45r. *Valeriana officinalis* (Garden heliotrope). Effective on [LRB inserts date]

(c) 5. Viable genetically modified fish species.

(d) 1m. *Cipangopaludina japonica* (Japanese trapdoor snail or Japanese mystery snail)

3. *Valvata piscinalis* (European valve snail)

4. *Viviparus georgianus* (Banded mystery snail)

SECTION 62. NR 40.05 (2) (e) 1. is renumbered NR 40.05 (2) (e) 3.

SECTION 63. NR 40.05 (2) (e) 1m. is created to read:
NR 40.05 (2) (e) 1m. *Agrius planipennis* (Emerald ash borer)

SECTION 64. NR 40.05 (2) (f) and (f) 1. are repealed.

SECTION 65. NR 40.05 (3) (b) (Note) is created to read:
NR 40.05 (3) (b) (Note) Compliance with the conditions of permits issued under chs. 30 and 31, Wis. Stats., constitute reasonable precautions under this subsection.

SECTION 66. NR 40.05 (3) (d) is amended to read:
NR 40.05 (3) (d) A legally obtained nonnative wild animal that is a pet may be possessed, transported or transferred without a permit issued by the department under this chapter if obtained prior to [and located in the State of Wisconsin on] the date the species is listed as restricted under this section. The offspring of pets possessed under this subsection may not be transferred except as a gift.

SECTION 67. NR 40.05 (3) (d) (Note) is repealed.

SECTION 68. NR 40.05 (3) (e) is amended to read:
NR 40.05 (3) (e) Paragraph (a) does not apply to a person who transports, possesses, transfers or introduces a terrestrial invertebrate or plant disease-causing microorganism that is regulated under a quarantine imposed by DATCP under s. 94.01, Stats., or a United States Department of Agriculture Animal and Plant Health Inspection Service quarantine area declared under 7 USC section 7714 or 7715 ~~if the person is in compliance with a DATCP-USDA APHIS compliance agreement applicable to the terrestrial invertebrate or plant disease-causing microorganism.~~

SECTION 69. NR 40.05 (3) (e) 1. and 2. are created to read:
NR 40.05 (3) (e) 1. The person is in compliance with a DATCP-USDA APHIS compliance agreement applicable to the terrestrial invertebrate or plant disease-causing microorganism, or
2. The transport, possession, transfer or introduction takes place entirely within the quarantine applicable to the terrestrial invertebrate or plant disease-causing microorganism.

SECTION 70. NR 40.05 (3) (f) is amended to read:
NR 40.05 (3) (f) A person may transport or give away a restricted invasive species for the purpose of identification, education, control or disposal without a permit issued by the department under this chapter, if no viable individual specimens or propagules are allowed to escape or be introduced. This paragraph does not apply to ~~aquatic plants, algae and cyanobacteria,~~ terrestrial and aquatic vertebrates or fish species.

SECTION 71. NR 40.05 (3) (f) (Note) is created to read:
NR 40.05 (3) (f) (Note) Note: New populations of restricted aquatic plant species may be reported to the appropriate department regional aquatic invasive species coordinator. Visit the DNR website (dnr.wi.gov) keywords "reporting invasives" to view a list of waterbodies with known invasives and reporting contacts.

SECTION 72. NR 40.05 (3) (g) is repealed

SECTION 73. NR 40.05 (3) (k) is amended to read:

NR 40.05 (3) (k) If held in a safe facility, ~~rusty crayfish~~, nonviable fish species and nonnative viable fish species in the aquarium trade may be transported, possessed or transferred without a permit issued by the department under this chapter. In addition, rusty crayfish taken from the Mississippi River can be used as bait on the Mississippi River ~~may be transported, possessed or transferred without a permit when being used as bait on the Mississippi river~~ as authorized under s. NR 19.27 (4) (a) 1. a.

SECTION 74. NR 40.05 (3) (k) (Note), (3) (o) 3., (3) (p) and (p) (Note) are created to read:

NR 40.05 (3) (k) (Note) Note: Possession of dead crayfish for purposes of fishing bait on all waters, including outlying waters, is not prohibited under this chapter, but may be restricted under other rules that regulate the use of certain types of bait for fishing purposes.

(3) (o) 3. Employees or duly authorized agents of the Department in the performance of their official duties.

(3) (p) Restricted plants not also listed as prohibited under s. NR 40.04 (2) (b) and located in Wisconsin prior to the date the species is listed in NR 40.05 (2) may be transported, transferred and introduced without a permit for a period not to exceed 3 years for herbaceous plants and woody vines, or 5 years for trees and shrubs, from the effective listing date for that species.

(p) (Note) Note: Plants added to the restricted list after 2009 have the rule's effective date listed. All plants without an effective date have been restricted since 2009 and remain restricted.

SECTION 75. NR 40.06 (1) (a) (Note) is amended to read:

NR 40.06 (1) (a) (Note) Note: Applications for permits ~~for fish and aquatic invertebrates~~ may be sent to:

Attn: FH/4

~~Wisconsin Department of Natural Resources~~

~~PO Box 7921~~

~~Madison, WI 53707-7921~~

~~Note: Applications for permits for terrestrial plants may be sent to:~~

~~Attn: Forestry Invasive Species Coordinator — FR/4~~

~~Wisconsin Department of Natural Resources~~

~~PO Box 7921~~

~~Madison, WI 53707-7921~~

~~Note: Applications for permits for aquatic plants may be sent to:~~

~~Attn: Aquatic Invasive Species Coordinator~~

~~Wisconsin Department of Natural Resources~~

~~141 NW Barstow St., Room 180~~

~~Waukesha, WI 53188~~

~~Note: Applications for permits for other vertebrates may be sent to:~~

~~Attn: Wildlife Regulation Policy Specialist, WM/6~~

~~Wisconsin Department of Natural Resources~~

~~PO Box 7921~~

~~Madison, WI 53707-7921~~

~~Note: Applications for permits for terrestrial invertebrates and plant disease-causing microorganisms may be sent to:~~

~~Forest Health Protection Program Coordinator~~

~~Wisconsin Department of Natural Resources~~

~~3911 Fish Hatchery Rd.~~

~~Fitchburg, WI 53711~~

Attn: Statewide Invasive Species Coordinator, SS/7
Wisconsin Department of Natural Resources
PO Box 7921
Madison, WI 53707-7921

Note: Reports may also be sent by email to invasive.species@wisconsin.gov

SECTION 76. NR 40.07 (8) (d) (Note) is amended to read:

NR 40.07 (8) (d) (Note) Note: Detailed information about department-approved cleaning decontamination protocols may be obtained at <http://dnr.wi.gov/org/land/or/bats/> on the DNR website (dnr.wi.gov) keyword "bats".

SECTION 79. EFFECTIVE DATE. This 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) (intro.), Stats

SECTION 80. BOARD ADPTION. 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)

ADMINISTRATIVE RULES

Fiscal Estimate & Economic Impact Analysis

NGOs (TNC); UW; and forestry.

As part of the information gathering and outreach process, Invasive Species Outreach Specialist Chrystal Schreck sent a letter to 600 retailers and growers and approximately 1100 licensed growers and dealers from the November 2, 2012 DATCP list of license holders updating them on the process in December, 2012. A series of informal public information sessions about the proposed changes to the rule were held from February 25 - March 15 in Madison, Milwaukee, Spooner, Rhinelander, and La Crosse to inform interested parties that the revisions were under development and to solicit informal comments on the potential impact of the rule. Approximately 41 people attended, and 52 public comments have been received during the informal discussion period.

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

Pursuant to s. 227.137 Wis. Stats., the department will be 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 Economic Impact Analysis (EIA). The notice to solicit comments will be sent to the county and town associations in the state.

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 a species is highly dependent on the impact it is having now, how wide spread it already is, how it is currently being used in trade, and the availability of species that can be substituted for the proposed species. The assumption of a significant impact is a conservative estimate that does not generally take into account the availability of substitute non-invasive species or the value of preventing the introductions of invasive species. The impact of removing newly regulated organisms from trade has a potentially high short term impact. It is anticipated that businesses will substitute alternative, non-invasive species over time. The high estimate also reflects the diversity of species under assessment, as well as the fact that a number of these species may be used by various sectors of society. During the species assessment process, the economic costs and benefits were discussed for each species considered for inclusion in the rule revisions. Certain species may have larger potential economic impacts than others and will be highlighted in the discussion that follows.

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

Updating the regulated list of invasive species under NR 40 to include species that if removed from trade, or subject to reasonable precautions to prevent their spread can be contained, slowed, or prevented from establishing in Wisconsin reduces the ecological and economic harm caused by these invasive species in the future. Listing species under the invasive species rule encourages action across jurisdictions and can focus control and containment efforts, improving their effectiveness. Invasive species are species that are non-native to Wisconsin and cause or have the potential to cause economic or environmental harm or harm to human health. By regulating these species that have both been identified as both causing or potentially causing harm and that have the potential to be controlled through regulation the intent is to create the largest possible benefit to both the economy and the Department's mission to protect and manage the resources of the state. These rule revisions provide valuable economic benefits by reducing future control and management costs for regulated invasive species.

The alternative considered in the detailed Economic Impact Analysis report is not listing additional invasive species for regulation. Past efforts to quantify where the economic impact from controlling invasive species falls have identified that individual landowners generally bear the highest cost to mitigate the damage these species cause while the economic benefits of continued use of a species are limited to a much smaller contingent. The distributed impact of not listing species that are invasive species is likely to be greater.

14. Long Range Implications of Implementing the Rule

The long range economic impacts include control costs, costs to comply with both the list of regulated species and with the required reasonable precautions, and increased enforcement burdens. The control costs for prohibited species where control is required when

ADMINISTRATIVE RULES Fiscal Estimate & Economic Impact Analysis

feasible will increase somewhat with the increased number of species listed as some of these species are likely to be introduced to Wisconsin and spread. However, it is anticipated that with a changing climate, continually increasing trade and exchange of materials, and the dispersal from populations already established, that the cost to control invasive species in Wisconsin will increase independent of the proposed regulation, and that regulation will reduce the number of these species being introduced.

The increased number of regulated species will reduce or eliminate those particular species in trade without restricting commerce overall since substitution of non-regulated species is likely. The long range implications for businesses are generally low as the initial cost to remove a species from sale and develop sources and propagation methods for substitute species will occur over a 1-7 year period and not reoccur. Costs to comply with reasonable precautions will be ongoing and are likely to decrease with time as new methods and tools increase the efficiency of these actions. The required reasonable precautions will continue to have benefits by reducing the likelihood that multiple species will spread through known pathways such as mowing equipment, forestry activities, boating, and nursery sales. The benefits of preventing the spread of invasive species will continue as long as the requirement to employ reasonable precautions remains in place.

The increased enforcement burden will require that both Department of Natural Resources and Department of Agriculture, Trade and Consumer Protection staff will spend more time reviewing and learning the listed species and working with regulated parties. It is anticipated that these increased costs will be absorbed by the existing staff and programs.

15. Compare With Approaches Being Used by Federal Government

There are no known proposed federal regulations that would provide the ability for the state to act when newly establishing invasive species are discovered. Existing regulations address a narrow subset of noxious weeds under the Federal Noxious Weed Act (7 U.S.C. 2801 et seq; 88 Stat, 2148) or animals under the Lacey Act (18 U.S.C. 42-43, 16 U.S.C. 3371-3378), primarily species that are already too widespread for a more cost-effective prevention approach.

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

Illinois: The Department of Agriculture maintains a statutory list under Illinois Noxious Weed Law of about 9 species (<http://www.agr.state.il.us/Laws/Regs/8iac220.pdf>) and the Illinois Department of Natural Resources links to a more comprehensive list of 102 invasive species and a shorter list of plants, animals, insects and diseases (<http://www.invasive.org/illinois/SpeciesofConcern.html>).

Iowa: Regulates several species of aquatic invasive plants - 6, aquatic invasive invertebrates, and invasive fish - 7. (<http://www.iowadnr.gov/idnr/Fishing/AboutFishinginIowa/FightingInvasiveSpecies/AquaticInvasiveInvertebrates.aspx>)

Michigan: Regulates a number of invasive aquatic plants - 18, fish - 12 plus all snakeheads, and other animals - 11 through Act 451 and requires prevention actions especially for aquatic invasive species ([http://www.legislature.mi.gov/\(S\(brw3y4554cagkv4554a24a45\)\)/documents/mcl/pdf/mcl-451-1994-iii-2-1-wildlife-conservation-413.pdf](http://www.legislature.mi.gov/(S(brw3y4554cagkv4554a24a45))/documents/mcl/pdf/mcl-451-1994-iii-2-1-wildlife-conservation-413.pdf))

Minnesota: Regulates both aquatic and terrestrial invasive species in a process similar to Wisconsin with prohibited, restricted, and non-regulated categories as well as prevention requirements including regulating the transport of water. The species regulated as prohibited include aquatic plants - 14 plus all federally listed species except *Ipomoea aquatica*, fish - 14, aquatic invertebrates - 5, mammals - 4. The species regulated as restricted include aquatic plants - 6, birds - 3, fish - 5, and aquatic invertebrates - 3. In addition all crayfish are regulated.

17. Contact Name

Dreux Watermolen, Section Chief, Science Information Services
Section

18. Contact Phone Number

(608) 266-8931

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

Wisconsin Invasive Species Council, Wisconsin Nursery Industry member survey of the economic impact of potentially invasive species in Wisconsin, 5 informal public meetings to discuss recommended changes to the rule, Department Invasive Species Team staff, WDNR's Economist, and planned: collect public comments 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:
-

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

For small businesses growing woody plants, a number of years have been invested into the infrastructure to grow particular species. To minimize economic impact of listing new species that are invasive in Wisconsin a phase out period of 5 years for trees and shrubs, and 3 years for all other plants once listed as Restricted would both reduce the economic impact and provide a defined period for achieving compliance without using permits for commercial activities. The compliance period would begin once the rule is in effect. Prohibited species would be immediately subject to regulation. Through staff work with pet stores and other small businesses that had not previously been regulated by the DNR we learned that personal communication, clear and concise guides to regulated species, and education were important. Ensuring personal contact and taking an "education first" approach is consistent with DNR's policy of stepped enforcement and will be maintained for all taxa groups regulated under the invasive species rule.

5. Describe the Rule's Enforcement Provisions

Enforcement and administration for the invasive species rule and permits are already in place. Some changes due to the increased number of species requiring review and training for identification are anticipated but cost are expected to be absorbed within existing DNR budgets and by DATCP staff who enforce provisions of the rule at licensed nurseries. Staff from both agencies have met and developed guidelines to continue a partnership of joint and cooperative enforcement. Management costs may rise with the addition of new species to the list but as the options for cost-sharing for control have not been funded in the past, it is unlikely that there will be any discernible operational impact. The policy of stepped enforcement is compatible with the changes proposed to the rule as "education first" is the priority for compliance.

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

- Yes No
-

DOA 2049. PRELIMINARY Detailed Economic Impact Analysis Report for board order SS-04-12, pertaining to the Wisconsin Invasive Species Rule (Chapter NR 40, Wis. Adm. Code)

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

Pursuant to s. 227.137 Wis. Stats., the Department is required to solicit comments on the economic impact of the proposed rule changes, and if requested to coordinate with local governments in the preparation of the Economic Impact Analysis (EIA). Comments will be collected and incorporated into this document during the 60 day solicitation for information and advice on the economic impact of the proposed rule revisions.

To determine implementation and compliance costs expected to be incurred, DNR Invasive Species Team staff and Wisconsin Invasive Species Council members compiled a list of individuals and organizations who might be economically impacted by the proposed rule revisions or were affected by invasive species. Types of positive and negative effects from both regulating and not regulating 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 dependent on its commercial uses, distribution, response to control tools currently available, level of impact, management needs, etc.

Examples of relative impacts of currently proposed species:

- Diffuse knapweed (*Centaurea diffusa*) – Prohibited. This and other species in the knapweed genus *Centaurea* are weeds of pastures and invasive in prairies. These species do provide nectar to bees and have been identified by bee keepers as a nectar source. As there are multiple other species that bloom during the general flowering period from July to September that could provide nectar, this species is not grown for the ornamental plant market, and is not widely distributed in Wisconsin.
- Japanese barberry (*Berberis thunbergii*) – Restricted with exemptions. This species has been distributed and sold as an ornamental plant for many years. Cultivars are currently patented, developed, and marketed. Over the past few decades this species has been observed developing dense thickets in the understory of forested areas where it is naturalizing. This creates barriers to movement as the shrubs are extremely spiny. The small fleshy red fruits are readily spread by birds and the widely dispersed records of naturalization indicate that this species is likely to spread in all parts of Wisconsin. The Wisconsin Nursery Association survey indicated that respondents valued sales of this species at approximately \$650,000 per year. The short term impact is likely to be high as switching to other non-invasive alternatives will take time and resources to develop and the long term impacts are likely to remain high as naturalized populations will require ongoing management to prevent the loss of access to woodlands, native wildflower diversity in woodland understory habitat, and encourage continuing recruitment of forest trees.

This detailed EIA report was developed with economic impacts known to the Department, gathered by the Wisconsin Invasive Species Council, and offered by members of the public during the informal public information sessions held in February and March 2013 and will include the economic-related comments received during the EIA public comment period. The report is organized by the types of small businesses, organizations, units of government, etc. that could be affected. The proposed language changes to clarify and organize NR 40 are not included in this analysis because there is no impact.

Effects of listing/delisting invasive species will be highly variable among different types of businesses and user groups. There are 51 species proposed for listing as Prohibited, 32 for listing as Restricted, 3 for downlisting from Prohibited to Restricted, 2 for delisting, 2 plants for split-listing between Prohibited and Restricted and 1 split-listed plant for downlisting to Restricted statewide.

Agricultural community including farms, livestock, forage, pasture, and beekeeping

<u>Proposed action</u>	<u>Types of positive effects from the action</u>	<u>Types of negative effects from the action</u>	<u>Methods for assessing the effects</u>	<u>Relative Impact and Complexity Factors</u>
REGULATE	Several species that are agricultural weeds will be subject to reasonable precautions and may not be spread to fields and pastures.	One species that is currently used in forage mixes and hay mixes, crown vetch (<i>Coronilla varia</i>) would not be available and substitute species would need to be identified.	Determine long term trends in the abundance and distribution of species included in regulation. Survey for regulated species in trade.	Low. The impact of the species recommended for listing can be mitigated by using substitute species.
DO NOT REGULATE	Agricultural producers retain greater flexibility in their choice of species available for planting.	Weedy and invasive species would continue to be used and spread to adjacent areas. Some of these alter nutrient cycling or create monocultures that reduce structural and bio-diversity of invaded sites.	Determine long term trends in the abundance and distribution of these species.	High. The large volume of seed introduced and area used for forage, hay, and biofuels create extremely high propagule pressure. Shifting species use to less invasive alternatives is unlikely without regulation.

Species with specific impacts

* A number of species were assessed by the Wisconsin Invasive Species Council's species assessment groups (SAG) and determined to be invasive, but are not being proposed to be regulated due to the high economic value, difficulty in limiting their spread and their current widespread abundance. Among these are reed canary grass (except ornamental variegated varieties and cultivars) and sweet clover.

* Terrestrial plants (all). The impact will be mixed. Species are valued by some groups including bee keepers and livestock producers are considered weedy by other managing for different land uses. Plants introduced for use as biofuel were discussed: the diversity of feedstocks under development and flexibility in fuel sources by powerplants make reliance on any one species unnecessary. Overall, the shift from invasive plants to non-invasive alternatives will reduce control costs and harm caused by the spread of the regulated species. Alternatively, intensive and widespread use has established many species discussed during the assessment process like bird's foot trefoil and sweet clovers widely across the state reducing the feasibility of control. Generally, few species identified as important turf, forage or biofuel crops were recommended by SAG as the participants were largely representing economic interests in maintaining use of the proposed species.

* Crown vetch (*Coronilla varia*) - proposed Restricted, is grown by several Wisconsin farmers and sold for erosion control and nitrogen fixation. Growers wanting to continue harvesting and selling seed would be required to obtain permits to continue propagation for out of state sale. Outreach should decrease in state use and spread.

Aquaculture, fish distributors, pet stores, aquarium hobbyists, and the pond trade

<u>Proposed action</u>	<u>Types of positive effects from the action</u>	<u>Types of negative effects from the action</u>	<u>Methods for assessing the effects</u>	<u>Relative Impact and Complexity Factors</u>
REGULATE	The use of best management practices will reduce the spread of many unintentional introductions. Limiting the introduction of mollusk species reduces the likelihood of parasitic disease by decreasing intermediate hosts.	Five invertebrates and two popular floating aquatic plants would not be available legally to the public. Businesses would incur increased costs from time and materials needed to decontaminate equipment.	Measure expenditures to develop and use best management practices. Assess time to inspect and remove hitchhiking organisms and develop alternatives to listed species.	Medium. There are few species available to substitute for floating pond plants and regulation may encourage internet and illegal import.
DO NOT REGULATE	No new preventative actions will be required by pond and aquarium stores and individuals to inspect and remove hitchhiking organisms.	There would be a continuing relatively high risk of introduction from ponds and aquariums to Wisconsin waters with unpredictable results and few mitigation options.	Measure expenditures to control unwanted organisms in aquariums and ponds. Measure expenditures required for newly established invasive species in Wisconsin waters.	Medium. There is a high risk of introduction but unknown probability of harm to Wisconsin waters from the species assessed.

Species with specific impacts

* Genetically Modified (GM) fish are divided into two categories, for non-viable GM fish in the aquarium trade there would be no change to business with new regulation or not regulating as all non-viable fish would remain legal to possess and transfer. Viable GM fish in the aquaculture trade could be allowed under permit requiring some additional time and assessment of the risks posed by these species.

* Down-listing mosquitofish from Prohibited to Restricted under the rule would allow businesses importing fish to continue to use best management practices to remove these species from bait and other fish import shipments or the new opportunity to apply for a permit to possess these species under limited circumstances. This would address business concerns about being found in violation of NR 40 but could include additional reporting requirements.

* Aquatic invertebrates may be sold or are more likely unintended hitchhikers on other pond and aquarium materials. Some are difficult to remove and widespread in aquaculture requiring significant time and effort to remove.

* Aquatic plants especially water lettuce and water hyacinth are sold by approximately 2/3 of Wisconsin shops that sell aquatic plants. Few options are available to substitute for these floating plants. Overwintering and spread have been observed at several locations and control has been ongoing.

Department of Transportation, County, and Town Highway Managers

<u>Proposed action</u>	<u>Types of positive effects from the action</u>	<u>Types of negative effects from the action</u>	<u>Methods for assessing the effects</u>	<u>Relative Impact and Complexity Factors</u>
REGULATE	More opportunities to develop partnerships to manage significant weeds. Over the long term, fewer persistent weeds to manage in rights-of-way and to spread into adjacent lands.	Time needed to evaluate current mowing and management guidance to accommodate additional species. Additional training required for operators and contractors.	Assess effectiveness of current resources invested in rights-of-way maintenance and annual expenditures at the state and local level for management. Listed prohibited species may incur additional costs.	Low. Best management practices and invasive species in rights-of-way have already been incorporated into training and management considerations.
DO NOT REGULATE	No need to alter mowing instructions or update best management practices for additional species.	Rights-of-way will continue to be the primary corridors for the spread of weeds and roadside managers, private landowners, and public land management agencies will incur increasing costs to manage these species.	Assess effectiveness of current resources invested in rights-of-way maintenance and annual expenditures at the state and local level for management. Mowing timing and other actions already exist as costs.	Low. Best management practices and invasive species in rights-of-way have already been incorporated into training and management considerations.

Species with specific impacts

* A number of species were assessed by SAG and were determined to be invasive, but are not being proposed to be regulated due to the high economic value, difficulty in limiting their spread and their current widespread abundance. Among these are reed canary grass (except ornamental variegated varieties and cultivars) and sweet clover.

* Bird's foot trefoil, a widespread weed that has already largely been removed from DOT recommended seed mixes, is not being proposed for listing.

* Red and white clover are currently used for seed mixes and were determined by SAG as "not invasive" and are not being proposed to be regulated under this rule, allowing for their continued use.

* Regulated invasive plants (all) are likely to benefit from increased light and disturbance more than native species and will likely be weedier along roadsides than in forests and prairies. By restricting the transport and introduction of additional species, long-term burdens for managing rights-of-way should be reduced. For prohibited plant species specifically, roadside managers would be required to control these plants where they are found under their jurisdiction. These are uncommon species and few would be likely to be found on roadsides.

Department of Agriculture, Trade and Consumer Protection

<u>Proposed action</u>	<u>Types of positive effects from the action</u>	<u>Types of negative effects from the action</u>	<u>Methods for assessing the effects</u>	<u>Relative Impact and Complexity Factors</u>
REGULATE	Increased opportunities for prevention success stories and protection of agricultural resources from weeds and pests.	Increased staff time required for training and inspection of licensed nurseries for additional listed species.	Determine staff time and work planning changes required to accommodate additional species, time spent processing additional violations discovered.	Low. Existing Memorandum of Understanding and cooperation with the nursery inspectors has already been established. Training would require additional time.
DO NOT REGULATE	Avoid increases to time spent conducting nursery inspections at licensed nurseries.	Additional harm anticipated to stakeholder groups with continued introduction and spread of weeds and pests.	Determine time spent inspecting regulated species, already a part of work planning.	Low. No change anticipated to current work load.

Species with specific impacts

* Garden yellow loosestrife, moneywort, queen of the meadow, and garden heliotrope - proposed Restricted, may appear in the cut flower trade. Nursery inspectors who contact these businesses may be asked additional questions about these regulated species.

* Japanese barberry and burning bush cultivars - proposed Restricted, are ubiquitous in local stock maintained by both nursery growers and dealers. Proposed exemptions for varieties will be complicated to enforce as consistent labeling is currently lacking.

* Mountain pine beetle is proposed Prohibited. Local regulation of this complex would complement state quarantines placed to slow the spread of this beetle and associated disease causing organisms.

Green Industry (Landscaping, Nursery dealers and growers, wholesale, florists)

<u>Proposed action</u>	<u>Types of positive effects from the action</u>	<u>Types of negative effects from the action</u>	<u>Methods for assessing the effects</u>	<u>Relative Impact and Complexity Factors</u>
REGULATE	Removal of weedy or invasive species from trade improves public trust that this industry is “green” and that plants purchased will not be invasive. Educating customers about phasing out invasive plants may increase sales of non-invasive alternatives when invasive species in the landscape are removed.	Existing stock will be subject to a phase-out over 3 years for herbaceous plants and 5 years for woody plants for restricted species and immediately for prohibited species incurring short term costs. May lose business from members of the public trying to acquire a specific species.	Measure sales volume before and after transition to non-invasive alternative species.	Medium. Prohibited species would be required to be removed from sale immediately. Restricted species would be required to be phased out of production over 3 or 5 years.
DO NOT REGULATE	No change to current practices required, short term savings from not shifting to non-invasive alternatives.	No change required to stock offered for sale in Wisconsin. A patchwork of county and local weed control efforts may create an inconsistent regulatory burden.	Measure sales volume of species assessed but not regulated to determine the impact of perceived invasiveness on demand.	Low. Currently regulated species have been largely removed from both production and sale.

Species with specific impacts

* Garden yellow loosestrife, moneywort, queen of the meadow, and garden heliotrope - proposed Restricted, may appear in the cut flower trade, annual baskets, or be used as medicinal herbs. Nursery inspectors who contact these businesses may be asked additional questions about these regulated species.

* Japanese barberry and burning bush cultivars - proposed Restricted, are ubiquitous in local stock maintained by both nursery growers and dealers. Proposed exemptions for varieties will be complicated to enforce as consistent labeling is currently lacking.

* Yellow iris, aquatic forget-me-not, ribbon grass, garden yellow loosestrife, and moneywort - proposed Restricted, are occasionally requested by those planting along shorelines and in and around ponds. These species are resistant to wildlife damage, crowd out native plants, other weedy plants, and provide flowers making them desirable to customers.

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

<u>Proposed action</u>	<u>Types of positive effects from the action</u>	<u>Types of negative effects from the action</u>	<u>Methods for assessing the effects</u>	<u>Relative Impact and Complexity Factors</u>
REGULATE	Reduced introductions spreading into managed federal lands. Increased opportunity for partnering on control of invasive species.	Increased costs to use best management practices, time spent training staff on newly listed species.	Measure land management expenditures and staff time. Number of grants and partnering opportunities.	Low. Federal agencies typically require best management practices for all managers and contractors already.
DO NOT REGULATE	Greater flexibility in implementing best management practices as fewer species would trigger action.	Likely spread of additional invasive species into managed lands. Less opportunity to partner on regional control projects.	Measure land management expenditures and staff time.	Low. Flexibility in managing invasive species that are impacting specific resources on federal lands are generally at the discretion of the managers.

Species with specific impacts

* Mosquito fern (*Azolla pinnata*) - proposed Prohibited, and several other species are currently listed as Federal Noxious Weeds. By dual listing these species in Wisconsin education and control efforts will be improved through greater consistence and the ability to create partnerships.

* Plants, woody. Many of the woody plants that are invasive in forests if listed would provide local weed management groups with additional incentive to apply for federal funds to manage established populations in or near forest lands.

* Plant pests and diseases. Local regulation of these species would benefit local federal land management goals and potentially decrease the spread of these species regionally meeting the goals of federal quarantine agencies.

Forest Industry

<u>Proposed action</u>	<u>Types of positive effects from the action</u>	<u>Types of negative effects from the action</u>	<u>Methods for assessing the effects</u>	<u>Relative Impact and Complexity Factors</u>
REGULATE	Forest resources would be offered a higher level of protection from pests and diseases.	More precautionary practices would be required adding time and cost to harvest and transport operations.	Determine project expenditures to use best management practices to reduce the spread of regulated species. Long term access to forest resources that are pest-free.	Low. Most general best management practices are already used in forest lands.
DO NOT REGULATE	Fewer precautions and best management practices to consider when conducting harvest and transport operations.	Increased risk that emerging pests and diseases would establish.	Determine availability to forest resources that are pest-free.	Low. Most general best management practices are already used in forest lands. Additional effort may be required for newly establishing species over time.

Species with specific impacts

* Plants, woody. Many of the woody plants that are invasive in forests if listed would provide local weed management groups with additional incentive to apply for federal funds to manage established populations in or near forest lands. Regulating cultivars would reduce the spread of invasive plants into forest areas and reduce future management costs for new woody weeds such as barberry and euonymus on top of the existing management burden for common and glossy buckthorn and several honeysuckle species that are also horticultural introductions and are currently regulated.

* Mountain pine beetle and associated fungi, *Grosmannia clavigera* and *Ophiostoma montium* are proposed Prohibited. Preventing spread of this beetle and its associated fungi would require heat treatment of infested wood before shipment to an un-infested area. This is an expensive treatment relative to the value of the pine logs or chips themselves. Most of the wood used in Wisconsin mills comes from Wisconsin so the loss of access to infrequently used western state sources for pine wood is exceeded by the value of protecting fully utilized Wisconsin pine stands. Local regulation of this complex would complement state quarantines placed to slow the spread of this beetle and associated disease causing organisms.

Habitat (e.g. uplands, wetlands, waters)

<u>Proposed action</u>	<u>Types of positive effects from the action</u>	<u>Types of negative effects from the action</u>	<u>Methods for assessing the effects</u>	<u>Relative Impact and Complexity Factors</u>
REGULATE	Reduces risk of loss of native species due to exclusion, disease, or predation from regulated invasive species so subsequently reduce adding species to the endangered/threatened species list.	Public opinion that the number of invasive species will always increase reduces motivation to take preventative actions.	Measure acreage of land and waters that do not require additional management effort for newly establishing invasive species. Reduced number of reports of new invasive species locations.	Moderate. Regulating invasive species under the proposed rule addresses intentional movement and well regulated pathways only. Effects on ecosystems are difficult to predict and altered services are not easily measured.
DO NOT REGULATE	No change from present. Public and private land managers are likely to recognize species that are acting invasive and take action with or without regulation.	Continued, increased risk from invasive species due to continuing introductions.	Measure acreage of land and waters altered/degraded. Assess invaded sites to determine if there are reduced ecosystem services.	Moderate. The number of invasive species would likely be greater but the effects on ecosystems are difficult to predict and altered services are not easily measured.

Species with specific impacts

* Giant reed (*Arundo donax*) - proposed Prohibited, has colonized and transformed sandy river banks across the southern US and could dramatically alter structure, water flow, and habitat if it were able to establish further north.

* Floating water hyacinth (*Eichhornia crassipes*) - proposed Prohibited, has no Wisconsin ecological equivalent and if it does establish over large areas, at least seasonally, would dramatically alter open water habitats to solid vegetative cover.

* Burning bush (*Euonymus alatus*) cultivars - proposed Restricted, and several other woody species alter the structure of woodlands and may change the litter cover and cycling rate converting woodlands to shrublands or shift to a canopy of weedy black locust with little spring forb diversity. Altered canopy structure (trees, shrubs, and forbs) can affect habitat quality and the animal (e.g. birds) that depend on specific structural attributes. Shifts in species composition can also impact the availability and seasonality of food resources for wildlife.

* Crown vetch (*Coronilla varia*) - proposed Restricted, if established widely alters the nitrogen cycle and excludes other species shifting diverse prairie systems to an assemblage of weedy species.

* Wavy leaf basket grass (*Oplismenus hirtellus ssp. undulatifolius*) - proposed Prohibited, creates continuous grass cover in woodland areas excluding species that depend on leaf litter and reducing native forb cover.

Land management and conservation groups (NGOs)

<u>Proposed action</u>	<u>Types of positive effects from the action</u>	<u>Types of negative effects from the action</u>	<u>Methods for assessing the effects</u>	<u>Relative Impact and Complexity Factors</u>
REGULATE	Increase in grant opportunities with ability to reference that regulated invasive species are being proposed for management. Improved partnership opportunities.	Increased costs and time associated with addressing newly listed prohibited species, time required to train staff on identification of newly listed species.	Assess project expenditures to use best management practices to reduce the spread of regulated species.	Low. Most general best management practices are already used in conservation management.
DO NOT REGULATE	Land managers would not be required to implement additional best management practices to avoid spreading additional listed species, best management practices would continue for currently regulated species.	Increased risk that emerging pests and diseases would establish on lands set aside for conservation.	Assess project expenditures to use best management practices to reduce the spread of regulated species. Determine long term costs associated with increased introductions.	Low-Moderate. Most general best management practices are already used in conservation management. Education efforts encourage local residents to avoid spreading pests and introducing invasive species but these would not be backed by regulation.

Species with specific impacts

* Burning bush (*Euonymus alatus*) cultivars - proposed Restricted with cultivar exemptions, and several other ornamental woody species available in the nursery trade are still popular in developed urban landscapes. Without backing from administrative rules, efforts to control the spread of these weeds in conservation areas will continue to be hindered by the continued introduction and spread of these species from urban plantings.

Private landowners

<u>Proposed action</u>	<u>Types of positive effects from the action</u>	<u>Types of negative effects from the action</u>	<u>Methods for assessing the effects</u>	<u>Relative Impact and Complexity Factors</u>
REGULATE	Fewer weeds and plant pests introduced from urban plantings and unintentional spread by neighboring right of way, forestry operations, and other land management actions due to use of best management practices.	Potential for increased management costs if prohibited species are present. Time required learning how to integrate and care for alternative plants for planting instead of more familiar invasive species.	Determine land management expenditures and staff time. Count grants and incentives awarded to manage regulated invasive species.	Moderate. Prohibited species are only required to be controlled “as feasible” and control is suggested but not required for restricted species. Additional steps may be required to exclude regulated species from being transported (hay, other products).
DO NOT REGULATE	Additional choices in purchasing plants for planting and in moving wood products that may also contain pests.	Increased cost due to continued introductions of invasive plants, plant pests, and other invasive species to property and subsequent loss of property value.	Determine land management expenditures and staff time. Count grants and incentives awarded to manage regulated invasive species.	Low. Most currently regulated species are either widespread or generally subject to management. Best management practices already defined to avoid transport of invasive species.

Species with specific impacts

* Plants (all) and plant pests regulated species are less likely to be introduced via intentional movement. By restricting the transport and introduction of additional species, long term burdens for managing property should be reduced.

Small businesses

<u>Proposed action</u>	<u>Types of positive effects from the action</u>	<u>Types of negative effects from the action</u>	<u>Methods for assessing the effects</u>	<u>Relative Impact and Complexity Factors</u>
REGULATE	Partnering and collaboration opportunities to control invasive species. Seen as being proactive by customers.	Increased cost due to additional species triggering best management practices, decreased options for purchase of plants for planting and species for aquarium trade.	Determine project expenditures to use best management practices to reduce the spread of regulated species. Count number of enforcement actions.	Low. Few small businesses (other than groups specifically mentioned in this report) are required to change practices due to newly listed invasive species.
DO NOT REGULATE	Greater flexibility in species sold and in fewer species would require best management practice during operations.	Reduced consumer confidence that species being sold are not invasive, potential to spread infested materials with hitchhiking invasive species.	Determine project expenditures to use best management practices to reduce the spread of regulated species.	Low. There would not be any change to currently required practices or species sales.

Species with specific impacts

* Plant pests and diseases. Local regulation of these species would benefit land management goals over the longer term but would increase operation costs to comply with best management practices. With the increased establishment of these species the increased costs to remove infested plants (especially trees) will increasingly fall to local businesses and land owners. Lost trees and vegetation cover reduce land values.

Tourism

<u>Proposed action</u>	<u>Types of positive effects from the action</u>	<u>Types of negative effects from the action</u>	<u>Methods for assessing the effects</u>	<u>Relative Impact and Complexity Factors</u>
REGULATE	Educational opportunities to encourage a sense of ownership through conservation of visitor destination sites.	Exposure to increased inspection and potential confiscation of infested materials.	Assess number of tour/visitors reporting invasive species as a reason to alter travel plans.	Low. Most restrictions already address pathways (firewood for example) so additional regulated species will not change required practices.
DO NOT REGULATE	Fewer restrictions on the movement of invasive species and materials that may be infested.	Potential for loss of favored destination sites due to continued introductions of invasive plants, plant pests, and other invasive species.	Assess number of tour/visitors reporting invasive species as a reason to alter travel plans.	Low. Most restrictions already address pathways (firewood for example) so additional regulated species will not change required practices.

Species with specific impacts

* Aquatic plants especially water lettuce and water hyacinth have the ability to completely cover open water making boating, swimming, and fishing difficult or impossible in these waters.

* Japanese barberry (*Berberis thunbergii*) is proposed Restricted with cultivar exemptions. This species has been distributed and sold an ornamental plant for many years. Cultivars are currently patented, developed, and marketed. Over the past few decades this species has been observed developing dense thickets in the understory of forested areas where it is naturalizing. This creates barriers to movement including recreational use as the shrubs are extremely spiny. The short term impact is likely to be high as switching to other non-invasive alternatives will take time and resources to develop and the long term impacts are likely to remain high as naturalized populations will require ongoing management to prevent the loss of access to woodlands, native wildflower diversity in woodland understory habitat, and encourage continuing recruitment of forest trees.

Utility companies and the Public Service Commission

<u>Proposed action</u>	<u>Types of positive effects from the action</u>	<u>Types of negative effects from the action</u>	<u>Methods for assessing the effects</u>	<u>Relative Impact and Complexity Factors</u>
REGULATE	More opportunities to develop partnerships to manage significant weeds. Over the long term, fewer persistent weeds to manage in right-of-ways.	Time needed to evaluate current vegetation and pest management guidance to accommodate additional species. Additional training required for operators and contractors.	Measure effectiveness of current resources invested in rights-of-way maintenance and annual expenditures at the state and local level for management. Listed prohibited species may incur additional costs.	Low. Best management practices and invasive species in rights-of-way have already been incorporated into training and management considerations for contractors.
DO NOT REGULATE	No increase in costs and project management time required to implement best management practices for additional species.	More weeds likely over the long term in rights-of-way incur additional costs to maintain access corridors.	Measure effectiveness of current resources invested in rights-of-way maintenance and annual expenditures at the state and local level for management. Listed prohibited species may incur additional costs.	Low. Best management practices and invasive species in rights-of-way have already been incorporated into training and management considerations for contractors.

Species with specific impacts

* Regulated invasive plant species are likely to benefit from increased light and disturbance more than native species and will likely be weedier along utility access corridors than forests and prairies. By restricting the transport and introduction of additional species, long term burdens for managing rights-of-way should be reduced. Weedy native plants such as ragweed will still require management.

* Woody plants proposed for regulation including black locust and Siberian elm may incur additional costs to the maintenance of right-of-ways. These weedy trees grow quickly and can pose a hazard to utility lines. Depending on the surrounding land use, additional transport and disposal costs may be incurred as these species establish and spread.