STATE OF WISCONSIN
DEPARTMENT OF ADMINISTRATION
DOA-2049 (R09/2016)

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1. Type of Estimate and Analysis

☐ Original ☒ Updated ☐ Corrected

2. Date

June 8, 2026

3. Administrative Rule Chapter, Title and Number (and Clearinghouse Number if applicable)

Ch. NR 40, Invasive Species Identification, Classification, and Control Rule

4. Subject

Revisions to ch. NR 40 related to revising species regulated under the rule and clarifying additional sections.

5. Fund Sources Affected

☒ GPR ☒ FED ☒ PRO ☐ PRS ☒ SEG ☐ SEG-S

6. Chapter 20, Stats. Appropriations Affected

11600, 16100, 16300, 30100, 34100, 36100, 37300, 25400, 28100, 13600, 14100, 14300, 16000, 16100, 18100, 40100, 42900, 44100, 46500, 67800

7. Fiscal Effect of Implementing the Rule

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

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

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

9. Estimate of Implementation and Compliance Costs to Businesses, Local Governmental Units and Individuals, per s. 227.137(3)(b)(1).

The implementation and compliance costs to businesses, local governmental units, and individuals are estimated to be highest during Year 6 and Year 4 of the rule implementation period. The additional costs attributable to the proposed rule are estimated at $517,550 in Year 6 and $128,950 in Year 4, for a combined total of $646,500 over the two most economically impactful years. Detailed annual cost estimates are provided in Table 1 (Section 14) and Appendix H of the Rule Revision Guide (RRG).

10. Would Implementation and Compliance Costs Businesses, Local Governmental Units and Individuals Be $10 Million or more Over Any 2-year Period, per s. 227.137(3)(b)(2)?

☐ Yes ☒ No

11. Policy Problem Addressed by the Rule

The policy problem addressed by proposed NR 40 revisions is the prevention, control, and mitigation of ecological, economic, and human-health harms caused by invasive species. In 2001, the Wisconsin Legislature directed the Department of Natural Resources (the department) to establish a statewide program to control invasive species and to promulgate rules to identify, classify, and control invasive species (s. 23.22, Wis. Stats.). To assist with these tasks, the Wisconsin Legislature also created the Wisconsin Invasive Species Council (the Council), which was formed in 2004. Members of this council are appointed by the Governor and represent a wide range of stakeholders and agencies involved with invasive species. The Council is obligated under s. 23.22, Wis. Stats., to make recommendations to the department on a system for classifying and categorizing invasive species. The Council worked with department staff to develop the criteria and ch. NR 40. Wisconsin's invasive species rule, ch. NR 40, first became effective in 2009.

The last revision of ch. NR 40 went into effect in 2015. Species regulated under the rule require revisions. Some species are current threats and present within the state, while others are recommended for proactive regulation due to their damaging potential but are not yet present in the state.

Recognizing that the status (presence or distribution within the state, extent of harm, etc.) of species regulated under the rule changes over time, the current review of the rule began in 2019. The department's objective is to update the rule to identify or list additional invasive species into the existing categories set out in ch. NR 40, which would make them subject to existing administrative rules and statutes.

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Other proposed revisions will facilitate compliance with ch. NR 40, clarify language, and improve organization of the rule. The proposed rule will be consistent with longstanding practices, make updates to provide better clarity, and modify the species regulated under the rule to reflect changes in climate and species distributions.

12. Summary of the Businesses, Business Sectors, Associations Representing Business, Local Governmental Units, and Individuals that may be Affected by the Proposed Rule that were Contacted for Comments.

Many organizations and individuals participated in the development of this draft rule and the economic impact analysis. Members of the Invasive Species Council (the council) were contacted via email and regular virtual or hybrid meetings. Members of the Species Assessment Groups (SAGs) were also contacted via email and virtual meetings.

In addition to the council and SAG process and in preparation of this EIA, the department reached out via email to Cooperative Invasive Species Management Areas, County Conservation Departments, County Highway Managers, a random sample of 50 municipalities, and state agencies most impacted by this rule. Additional details are provided in Question 13 below and Appendix G of the RRG.

13. Identify the Local Governmental Units that Participated in the Development of this EIA.

Department staff contacted County Highway Commissioners, County Conservation Departments, Cooperative Invasive Species Management Areas, and a random sample of 50 municipalities. These groups and individuals were primarily contacted by email.

The following local government units submitted responses to the department regarding invasive species expenditures in 2024:

Municipalities	**County Highway Commissioners**	**County Conservation Departments**	**Cooperative Invasive Species Management Areas**
City of Eagle River City of Peshtigo City of Prescott City of Waupaca Village of Wrightstown Village of Pound City of Manitowoc Village of Iola	Dodge, Door, Eau Claire, Fon du Lac, Iowa, Jackson, Manitowoc, Marquette, Outagamie, Portage, Rusk, and Waupaca counties	Dunn, Door, Crawford, Polk, Jefferson, Chippewa, Taylor, Iron, Douglas, Bayfield, and Ashland counties	Northeast Wisconsin Invasives Partnership, Central Wisconsin Invasives Partnership, Door County Invasive Species Team, Saint Croix – Red Cedar Cooperative Weed Management Area, Southeastern Wisconsin Invasive Species Coalition, Upper Chippewa Invasive Species Partnership, Northwoods Cooperative Weed Management Area

14. 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 EIA uses a modular spreadsheet architecture paired with Monte Carlo simulations to estimate costs accounting for several factors of uncertainty (e.g. number of prohibited species requiring control in a given year, size of populations, cost of effective control measures, costs of species in trade). Monte Carlo simulation costs are derived from millions of individual simulations which are then summarized and provide estimates of mean, median, and other descriptive statistics. The framework distinguishes between two primary cost domains: "Cost of Compliance (CoC)" associated with detection and required management of prohibited species, and "Organisms-In-Trade (OIT)" economic impacts, accounting for costs associated with removal of species from commerce due to being classified as prohibited or restricted or opportunities created by deregulation. Species are classified by regulatory change type. For example, unregulated species changing to prohibited or restricted, prohibited species changing to restricted, or no change between revisions. Only species whose regulatory status changes to prohibited or species that remain prohibited carry control obligations and are included in quantitative CoC modeling. The department used Artificial Intelligence (AI) tools to help gather data and refine and test complex statistical modeling tools. Further detail on the data, methodology, and AI use and best practices is included in the RRG in Section 4 of the Economic Impact Analysis Chapter and in Appendix I.

Table 1 provides a summary focused only on the estimated economic losses of the proposed rule in Years 1-7 of implementation. Further information is provided in Table 2 and the rest of this report about how these losses interact with estimated economic opportunities/gains resulting from the proposed rule. To see a full breakdown of economic opportunities, losses, and net totals

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across several years of rule implementation, please see Appendix H in the RRG.

Table 1: Economic Losses due to NR40 Rule Revision

Year of Rule Implementation	Losses due to Organisms-In-Trade (all sectors)	Losses due to Cost of Compliance	Total Estimated Losses	Economic Impact (difference between total losses and base year)
Year 0 (Current Rule, Base Year)	$0	-$60,000	-$60,000	$0
Year 1	-$19,470	-$66,000	-$85,470	-$25,470
Year 2	-$0	-$66,000	-$66,000	-$6,000
Year 3	-$0	-$66,000	-$66,000	-$6,000
Year 4	-$82,950	-$66,000	-$148,950	-$128,950
Year 5	-$0	-$66,000	-$66,000	-$6,000
Year 6	-$511,550	-$66,000	-$577,550	-$517,550
Year 7	-$0	-$66,000	-$66,000	-$6,000

Table 2 provides a summary of the estimated net economic impacts (economic gains/opportunities + economic losses; in nominal dollars) of the proposed rule over the most economically impactful implementation periods. The highest impacts are projected to occur in Years 4 and 6, consistent with the phased structure of the rule. For brevity, only the estimates for Years 4 and 6 are presented. In Years 4 and 6 the three-year and five-year phase-out periods for newly regulated restricted plants end, and losses due to foregone trade of these plants are realized. Any economic gains or opportunities associated with the proposed rule would become available immediately upon implementation would remain available across all years of implementation. Cost of compliance due to required management of prohibited species is expected to remain stable across all years of rule implementation. To see a breakdown of economic opportunities, losses, and net total across several years of rule implementation, please see Appendix H in the RRG.

Table 2: Economic Impacts due to NR40 Rule Revision

	Current Rule	Proposed Rule		Economic Impact	
	Base Year (a)	Year 4 (b)	Year 6 (c)	Year 4 (d=b-a)	Year 6 (e=c-a)
Organisms-In-Trade					
Culinary Trade Sector	$0	+$5,560	+$5,900	+$5,560	+$5,900
Pet Trade Sector	$0	+$307,100	+$307,100	+$307,100	+$307,100
Plant Trade Sector	$0	-$80,330	-$509,270	-$80,330	-$509,270
Organisms-in-Trade Total	$0	+$232,330	-$196,270	+$232,330	-$196,270
Cost of Compliance					
Categorized By Sector (independent of landownership)					
Aquatic Sector	-$17,142	-$18,857	-$18,857	-$1,715	-$1,715
Terrestrial Sector	-$42,857	-$47,142	-$47,142	-$4,285	-$4,285
Categorized By Landownership (independent of sector) *					
Private Land	-$49,200	-$54,120	-$54,120	-$4,920	-$4,920
Local Governments	-$4,038	-$4,442	-$4,442	-$404	-$404
Other	-$6,762	-$7,438	-$7,438	-$676	-$676

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Cost of Compliance Total	-$60,000	-$66,000	-$66,000	-$6,000	-$6,000
Combined Totals of Organisms-In-Trade and Cost of Compliance					
Total	-$60,000	+$166,330	-$262,270	+$106,330	-$322,270

* Not all landownership types included

The RRG, specifically sections 5.2A-G, provide further detail on how the changes in economic impact due to the proposed rule may affect specific businesses, business sectors, public utilities, and local governmental units. The following sections briefly describe the assumptions, data sources, methods, economic gains/opportunities, and economic losses/costs incurred due to the proposed rule.

1. Trade Sector (Organisms-in-Trade)

The proposed rule revises the regulatory classification of certain species and, in some cases, removes regulated species from legal trade. The Organisms-In-Trade Monte Carlo (OIT MC) model is used to estimate the economic effects associated with changes in the regulatory classification of species currently available for sale. The OIT calculations are only conducted for species that are proposed to be newly classified as prohibited, restricted, or deregulated. Species that are already classified as prohibited or restricted, but do not become deregulated, have already incurred economic losses due to removal from trade during the previous revision of NR 40 (current rule), which became effective in 2015. The detailed results related to trade-sector impacts are described in Section 5.2C of the EIA Chapter in the RRG.

For each species included in the analysis, the model estimates either an economic loss or an economic opportunity. Economic losses are likely to occur for new species to become regulated under NR 40 (proposed rule), while economic opportunities are likely to occur for species that become deregulated. Economic loss represents foregone legal sales resulting from regulation when a species is newly classified as restricted or prohibited. In contrast, an economic opportunity arises when deregulation enables new legal sales. Species-level results are aggregated to estimate statewide totals for Economic Losses, Economic Opportunities, and Net Economic Value across all species in trade.

The OIT MC model considers all trade-related species included in the analysis. All growers, vendors, and shippers are assumed to comply fully with the rule and to cease sales of regulated species following the applicable phase-out period (phase-out periods are for restricted plants only, see s. NR 40.05 (3) (p)). Once the phase-out period for restricted plant species concludes, regulated species are assumed to be unavailable for legal sale. When a species is removed from trade, the model does not account for potential substitute or replacement species that may enter the market. In cases where the market does not identify a suitable replacement, the economic impact associated with the listed species may be interpreted as a more permanent loss. The analysis does not attempt to predict replacement behavior, future price changes, or changes in availability for any species, nor does it speculate on whether trade may shift to informal or illegal markets.

The OIT MC model is structured around three core components that define the accounting framework for retail trade impacts. For each species, the estimated annual economic effect is calculated as the product of (A) cost per unit, (B) volume of sales per vendor, and (C) the number of vendors operating in Wisconsin. The model estimates the portion of market value expected to be gained or lost as a result of a change in regulatory status. Formally, the species-level economic effect is calculated as: Economic effect for the species = (Cost per unit) × (Units sold per vendor) × (Number of vendors). There is variance in these three attributes and through the Monte Carlo simulations, a weighted estimate of the economic effect for each species is derived. For further detail on methodology, please see Section 4 of the EIA Chapter in the RRG.

The Organisms-in-Trade section of Table 2 summarizes the estimated economic impacts due to OIT across two years of rule implementation. The current rule costs are estimated to be $0 because any species regulated under the current rule have been unlawful to trade for at least six years. The estimated economic impacts of the proposed rule are provided for the first year following the end of the three-year and five-year phase-out periods for restricted plants (Years 4 and 6). Under the rule, businesses have three to five years to stop selling newly regulated restricted plants (see s. NR 40.05 (3) (p)) depending on the species type. The trades affected by the rule revision include the culinary trade, pet trade, and plant trade, for which the estimated costs are discussed below.

Culinary trade

Some species are bought, sold, or distributed through the food (culinary) market and can cause harm if introduced. For the culinary industry, it is notable that an exemption is being proposed to allow the import of non-viable plant material of Water spinach (*Ipomoea aquatica*) for the purposes of consumption, provided a USDA permit is acquired. The department is proposing to remove Absinth wormwood (*Artemisia absinthium*) from regulation under this chapter, which may result in an economic opportunity. The additions of two horn water chestnut (*Trapa bispinosa*), Mugwort (*Artemisia vulgaris*), Castor aralia (*Kalopanax septemlobus*), Escargot snail (*Helix pomatia*), and Red hailstone (*Thladiantha dubia*) can also impact the culinary industry.

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Table 3 summarizes the economic opportunities and losses directly applicable to the culinary trade. All economic losses for the culinary trade will be incurred in Year 1 ($4,060) and Year 4 (end of three-year phase-out period; $340) of rule implementation. The total loss to this industry is projected to be $4,400.

All economic opportunities for the culinary industry will become available immediately once the proposed rule becomes effective (Year 1). The total economic opportunity for this industry is $5,900. These opportunities will remain available across all years of implementation.

Although most losses for this industry occur in Year 1, Table 2 reports the economic impact in Years 4 & 6 because these years have the highest economic impact overall (across all sectors). For the culinary trade, all losses will have already occurred by Year 6, but an estimated loss of $340 will occur in Year 4 due to the end of the three-year phase-out period for newly regulated restricted plants.

Table 3: Economic Impact to Culinary Trade Sector due to NR 40 Rule Revision

Species	**NR40 Regulation Consequence**	**Median cost per unit**	**Median units sold per vendor**	**Median number of vendors**	**Approximate Economic Impact ($) from Monte Carlo Simulations**
Artemisia absinthium (Absinth wormwood)	Economic Opportunity (Year 1, ongoing)	$10.00	20	15	$3,700
Ipomoea aquatica (Water spinach)	Economic Opportunity (Year 1, ongoing)	$5.00	75	5	$2,200
Economic Opportunity Total					$5,900
Trapa bispinosa (Two horn water chestnut)	Economic Loss (Year 1)	$5.00	10	1	-$90
Artemisia vulgaris (Mugwort)	Economic Loss (Year 4)	$8.50	15	3	-$340
Kalopanax septemlobus (Castor aralia)	Economic Loss (Year 1)	$20.00	5	1	-$600
Helix pomatia (Escargot snail)	Economic Loss (Year 1)	$87.50	5	2	-$940
Thladiantha dubia (Red hailstone)	Economic Loss (Year 1)	$15.00	15	10	-$2,430
Economic Loss Year 1 Total					-$4,060
Economic Loss Year 4 Total					-$340
Economic Loss Total					-$4,400
NET TOTAL FOR YEAR 1 (Opportunity + Loss)					**$1,840**
NET TOTAL FOR YEAR 4 (Opportunity + Loss)					**$5,560**

Pet trade

The changes in species classifications for aquatic invertebrates, terrestrial invertebrates, and terrestrial vertebrates can impact the pet trade. In addition to new species being added to the rule, several species are proposed to be changed from prohibited to restricted, which could alleviate the cost of management of these species.

Table 4 summarizes the economic opportunities and losses directly applicable to the pet trade. All economic losses for the pet trade will be incurred in Year 1 ($3,220) of rule implementation.

All economic opportunities for the pet trade industry will also become available immediately once the proposed rule becomes effective (Year 1). The total economic opportunities for this industry are $307,100. These opportunities will remain available across all years of implementation.

Table 2 reports the economic impact in Years 4 & 6 because these years have the highest economic impact overall (across all sectors). For the pet trade, all losses will have already occurred (i.e. losses will be $0 in Years 4 & 6) but the economic opportunities will remain ongoing ($307,100).

Table 4: Economic Impact to Pet Trade Sector due to NR40 Rule Revision

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Species	NR40 Regulation Consequence	Median cost per unit	Median units sold per vendor	Median number of vendors	Approximate Economic Impact from Monte Carlo Simulations
Myiopsitta monachus (Monk or Quaker parakeet)	Economic Opportunity (Year 1, ongoing)	$475.00	10	60	$307,100
Economic Opportunity Total					$307,100
Sinanodonta woodiana (Chinese pond mussel)	Economic Loss (Year 1)	$8.05	5	1	-$50
Cepeae nemoralis (Grove snail)	Economic Loss (Year 1)	$18.00	5	1	-$110
Tarebia granifera (Quilted Melania snail)	Economic Loss (Year 1)	$2.50	50	5	-$870
Parus major (Great tit)	Economic Loss (Year 1)	$175.00	5	1	-$1,010
Carduelis carduelis (European goldfinch)	Economic Loss (Year 1)	$200.00	5	1	-$1,180
Economic Loss Total					-$3,220
NET TOTAL FOR YEAR 1 (Opportunity + Loss)					**$303,880**

Plant Trade

Many species of plants are proposed to be added, removed, or amended under the rule. Those shown in Table 5 display the plants known to be in trade. To view a full list of proposed changes to plants under the rule see the Summary of Proposed Changes chapter of the RRG.

Table 5 summarizes the economic opportunities and losses directly applicable to the plant trade. Economic losses for the plant trade will be incurred in Year 1 ($12,190), Year 4 (end of three-year phase-out period; $82,610), and Year 6 (end of five-year phase-out period; $511,550) of rule implementation. The total economic loss for the plant trade industry is projected to be $606,350.

All economic opportunities for the plant trade industry will become available immediately once the proposed rule becomes effective (Year 1). The total economic opportunities for this industry are $2,280. These opportunities will remain available across all years of implementation.

Although some losses for this industry occur in Year 1 ($12,190), Table 2 reports the economic impact in Years 4 & 6 because these years have the highest economic impact overall (across all sectors). In Years 4 and 6, the three-year and five-year phase-out periods for newly regulated restricted plants will end and losses associated with those species will be realized. The estimated net totals (economic opportunities + economic losses) for the plant trade are losses of $80,330 in Year 4 and $509,270 in Year 6.

Table 5: Economic Impact to Plant Trade Sector due to NR40 Rule Revision

Species	NR40 Regulation Consequence	Median cost per unit	Median units sold per vendor	Median number of vendors	Approximate Economic Impact from Monte Carlo Simulations
Epipactis helleborine (Helleborine orchid)	Economic Opportunity (Year 1, ongoing)	$12.99	10	5	$700
Robinia hispida (Bristly locust)	Economic Opportunity (Year 1, ongoing)	$6.66	10	5	$600
Solidago sempervirens (Seaside goldenrod)	Economic Opportunity (Year 1, ongoing)	$5.50	15	5	$450
Impatiens balfourii (Balfour's touch-me-not)	Economic Opportunity (Year 1, ongoing)	$5.00	10	5	$280
Celastrus loeseneri (Asian bittersweet)	Economic Opportunity (Year 1, ongoing)	$22.00	10	1	$250
Economic Opportunity Total					$2,280
Packera glabella (Butterweed)	Economic Loss (Year 1)	$6.00	10	1	-$70

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Schoenoplectiella mucronata (Bog bulrush)	Economic Loss (Year 1)	$6.00	10	1	-$70
Oenanthe aquatica (Fine-leaf water dropwort)	Economic Loss (Year 1)	$8.00	10	1	-$80
Trapa bispinosa (Two horn water chestnut)	Economic Loss (Year 1)	$5.00	10	1	-$80
Ludwigia peploides (Floating primrose-willow)	Economic Loss (Year 1)	$7.28	10	1	-$100
Artemisia vulgaris (Mugwort)	Economic Loss (Year 4)	$8.50	15	3	-$340
Carex pendula (Pendulous sedge)	Economic Loss (Year 1)	$4.00	15	7	-$440
Kalopanax septemlobus (Castor aralia)	Economic Loss (Year 1)	$20.00	5	1	-$600
Galium verum (Yellow bedstraw)	Economic Loss (Year 4)	$7.75	20	7	-$1,130
Ligustrum obtusifolium (Border privet)	Economic Loss (Year 6)	$21.00	15	5	-$1,460
Epilobium parviflorum (Small flowered hairy willowherb)	Economic Loss (Year 1)	$9.00	50	5	-$2,290
Thladiantha dubia (Red hailstone)	Economic Loss (Year 1)	$15.00	15	10	-$2,430
Molinia caerula (ssp. Arundinaceae) (Purple moor grass)	Economic Loss (Year 4)	$12.00	20	10	-$2,530
Typha minima (Dwarf cattail)	Economic Loss (Year 1)	$8.95	25	10	-$2,890
Lupinus polyphyllus (Bigleaf lupine)	Economic Loss (Year 1)	$10.00	25	10	-$3,140
Euonymus europaeus (Spindle tree)	Economic Loss (Year 6)	$16.00	20	10	-$4,610
Lamium galeobdolon (Yellow archangel)	Economic Loss (Year 4)	$29.00	20	10	-$5,330
Berberis thunbergii (Japanese barberry) due to cultivars	Economic Loss (Year 6)	$50.00	10	10	-$6,920
Miscanthus sacchariflorus (Silver banner grass)	Economic Loss (Year 4)	$15.00	30	15	-$7,210
Ligustrum vulgare (Common European privet)	Economic Loss (Year 6)	$68.00	10	10	-$9,250
Gypsophila paniculata (Baby's breath)	Economic Loss (Year 4)	$16.00	50	10	-$9,520
Inula helenium (Elecampane)	Economic Loss (Year 4)	$25.92	25	15	-$10,880
Phellodendron amurense (Amur cork tree) due to cultivars	Economic Loss (Year 6)	$35.00	20	5	-$12,900
Rhamnus frangula (Glossy buckthorn) due to cultivars	Economic Loss (Year 6)	$77.50	20	10	-$15,280
Lonicera xylosteum (Dwarf honeysuckle)	Economic Loss (Year 6)	$26.00	25	25	-$19,390
Sorbaria sorbifolia (False spiraea)	Economic Loss (Year 6)	$39.00	25	30	-$36,450
Miscanthus sinensis (Chinese silver grass)	Economic Loss (Year 4)	$25.00	75	20	-$45,670
Pyrus calleryana (Callery pear)	Economic Loss (Year 6)	$150.00	25	10	-$54,350

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Acer platanoides (Norway maple)	Economic Loss (Year 6)	$100.00	50	50	-$350,940
Economic Loss Year 1 Total					-$12,190
Economic Loss Year 4 Total					-$82,610
Economic Loss Year 6 Total					-$511,550
Economic Loss Total					-$606,350
NET TOTAL FOR YEAR 6 (Opportunities + Losses)					**-$509,270**
NET TOTAL FOR YEAR 4 (Opportunities + Losses)					**-$80,330**
NET TOTAL FOR YEAR 1 (Opportunities + Losses)					**-$9,910**

2. Cost of Compliance

The estimated changes in compliance costs from managing prohibited species are probabilistic and informed by long-term invasive species reporting patterns. Accordingly, the analysis relies on more than 20 years of detection data to estimate statewide costs and likely future scenarios. The CoC analysis reflects a sequence of interconnected uncertainties, including the number of unique prohibited species detected per year, the number of populations per species, the acreage affected, and the unit cost of applicable control methods. For modeling purposes, it is assumed that when a prohibited species is detected, the Department of Natural Resources exercises its enforcement authority to ensure complete eradication within the year of detection, using effective control methods and applying uniform enforcement across all prohibited species. The CoC analysis does not impose obligations beyond existing restrictions on transport, transfer, or introduction, does not evaluate differences in ecological risk or management priority among species, and excludes species that remain classified as restricted or unregulated.

Species are randomly selected in the model based solely on the number of unique prohibited species detected in the environment. To support policy comparison and alternatives analysis, compliance cost simulations are conducted in parallel for the current and proposed NR 40 species lists. For each scenario, the model simulates annual outcomes for a fixed number of prohibited species detections per year (N = 1–15), producing paired distributions of compliance costs that allow direct comparison using summary statistics. Within each simulation year, the number of detected species is fixed, and species are sampled without replacement, with each species having an equal probability of selection. Annual compliance costs are calculated and aggregated across species, and the simulation is repeated one million times for each value of N under both regulatory scenarios to generate robust cost distributions.

The Monte Carlo analysis indicates that the most likely annual detection outcome is seven unique prohibited species (N = 7), with an estimated probability of 0.227, making it a central reference point for evaluating compliance costs. Under this typical scenario, estimated annual compliance costs are modest, with mean and median values of approximately $60,000 and $17,000, respectively, under the current prohibited-species structure, and $66,000 and $18,000 under the proposed structure. Overall, the mean difference in the cost of compliance between the current effective rule and the proposed rule is approximately $6,000, with a median difference of about $1,000. This is the statewide additional compliance costs due to management of prohibited species.

The Cost of Compliance section of Table 2 summarizes the economic impact due to required management of prohibited species (CoC) in the fourth and sixth year of rule implementation. Although Table 2 reports costs in Years 4 and 6, CoC is expected to be incurred immediately after rule implementation and is expected to occur across all years of rule implementation. This presumption is based on trends in over 20 years of reporting data. These estimates are generated through the Monte Carlo simulation processes and are not absolute. Variations in which invasive species are detected, number of populations, acreages, and control approaches will result in different possible outcomes. For each CoC section within the table, there is potential overlap between settings such as terrestrial sectors overlapping with private land.

The CoC section of Table 2 is broken into two subcategories: “Sector” and “Landownership”. Aquatic and Terrestrial Sector costs are meant to reflect potential statewide costs to any type of landowner that may own aquatic or terrestrial habitats. The table uses seven prohibited species detections as the most probable event, with approximately 30% of species detections being aquatic and 70% being terrestrial (EDDMapS). Even though encountering an aquatic invasive species is less likely than encountering a terrestrial species based on the total number of reports, the CoC for Aquatics is higher due to management methodologies. The Aquatic and Terrestrial Sector information provided indicates an estimated cost of managing two random aquatic prohibited species and five terrestrial species in any given year. For example, the current rule CoC for the Aquatic Sector is $17,142. This cost is 30% of the overall estimated current rule CoC of $60,000.

The CoC based on landownership subcategory is incomplete, as there is little useable data to estimate CoC based on

landownership and environmental setting co-occurrences. Staff were able to find that approximately 82% of land in Wisconsin is privately owned and local governments own 6.73% (Board of Commissioner of Public Lands, 2024). The "Other" landownership category denotes any type of land that is not privately owned or owned by a local government unit. The costs provided for these types of landowners are based on management of seven random prohibited species detections. For example, the Current Rule CoC for Private Landowners = $60,000 × 0.82 = $49,200.

Table 6 provides the disaggregated cost by sectors and reports percentage contributions to total CoC for the current and proposed rule based on specific habitat types or species groups. Results indicate that aquatic species account for the largest share of mean compliance costs under both the current and proposed NR 40 structures, representing approximately 30.5% and 28.0%, respectively. Forestry impacts contribute the next largest share, followed by non-forested and agronomic settings, wetlands, and then terrestrial invertebrates, terrestrial vertebrates, and fish and wildlife diseases. Changes in percentage contributions are largely driven by regulatory reclassification, with notable decreases for terrestrial invertebrates and plant disease-causing organisms due to proposed deregulation and increases for fish and wildlife diseases reflecting the addition of newly regulated species.

Table 6: Annual Compliance Cost for Prohibited Species Under Current and Proposed Rule By Environmental Setting

	Current rule		Proposed rule	
Group	**Percent of cost contribution across Monte Carlo Simulations**	**Simulated mean cost contribution in a typical year (N=7)**	**Percent of cost contribution across Monte Carlo Simulations**	**Simulated mean cost contribution in a typical year (N=7)**
Aquatic Sector				
Fish & Wildlife Disease Impacts	0.91%	$546	4.92%	$3,247
Aquatic Impacts	30.54%	$18,324	27.98%	$18,467
Fish Impacts	10.46%	$6,276	8.23%	$5,432
Wetland Impacts	8.72%	$5,232	9.77%	$6,448
Aquatic Total	**50.63%**	**$30,378**	**50.9%**	**$33,594**
Terrestrial Sector				
Non-forested & Agronomic Impacts	11.48%	$6,888	16.53%	$10,910
Forestry Impacts	27.40%	$16,440	27.77%	$18,328
Terrestrial Invertebrates & Plant Disease Causing Organisms Impacts	6.67%	$4,002	0.79%	$521
Terrestrial Vertebrate Impacts	3.82%	$2,292	4.01%	$2,647
Terrestrial Total	**49.37%**	**$29,622**	**49.1%**	**$32,406**
Combined Terrestrial and Aquatic Total	**100%**	**$60,000**	**100%**	**$66,000**

For the Aquatic Sector, the largest impact category is "Aquatic Impacts" which is primarily consists of aquatic plants and invertebrates. Under the current rule, these species account for 30.54% of the total $60,000 CoC. Under the proposed rule, "Aquatic Impacts" account for 27.98% of the total $66,000 CoC.

For the Terrestrial Sector, the largest impact category is "Forestry Impacts" which is primarily consists of terrestrial plant species. Under the current rule, these species account for 27.40% of the total $60,000 CoC. Under the proposed rule, the "Forestry Impacts" account for 27.77% of the total $66,000 CoC.

These percentages illustrate how the values reported in Table 6 were derived and how each impact category contributes to the overall CoC under both the current and proposed rules. Changes in the relative contributions across categories reflect changes in species classifications, including species being added, removed, or reclassified under the proposed rule.

Private landowners

The rule will impact private landowners by making it unlawful to trade regulated species or by requiring management action on prohibited species. In cases where a prohibited species is found on private land, it is the department's policy to make multiple attempts to discuss the issue with the landowner and provide information on the issue at hand, such as how to identify the species, how to manage it, and what tools are available to them for assistance. If after multiple attempts to discuss the matter and reach a solution compliance is still not achieved, the department may refer the issue to law enforcement.

The total economic impact, categorized by landownership (independent of sector), indicates that the mean difference in the cost of compliance between the current effective rule and the proposed rule is approximately $6,000, with a median difference of about $1,000. This is the estimated change in compliance costs statewide due to management of prohibited species. Table 2, under the Cost of Compliance section, includes the annual estimated costs to private landowners statewide. The annual costs for private landowners may increase by $4,920 statewide after the proposed rule implementation. Private landowners are also expected to benefit from fewer invasive species arriving and causing damage or other problems in their communities.

3. Local Governments

Municipalities
The department reached out to a random sample of 50 municipalities across the state to gather current estimated expenses related to the management of invasive species within their boundaries. A total of eight responded. Details on the information provided on current expenses can be found in Section 5.2E of the EIA Chapter in the RRG.

Table 2, under the Cost of Compliance section, includes the annual estimated costs to local governments (county and municipal) statewide. It is estimated annual costs for local governments may increase by $404 statewide after the proposed rule goes into effect. Local governments are also expected to benefit from fewer invasive species arriving and causing damage or other problems in their communities.

County

County Highway Departments

The department attempted to reach County Highway Commissioners in all 72 counties to inquire on the cost of invasive species management, if this information is known. Eleven of the attempted contacts did not go through. Of the 61 contacts reached, 12 responded. Overall, the department was able to gather data from approximately 17% of counties regarding invasive species as a component of highway maintenance expenses. Details on the information provided on current expenses can be found in Section 5.2E of the EIA Chapter in the RRG.

County Highway Departments are not likely to incur additional costs to comply with the rule revision as they typically do not specifically target NR 40 prohibited species unless the department informs the land managers of the presence of these species within their properties or jurisdictional management areas (e.g. road rights of way) and prohibited species detections are expected to remain stable over time. Currently, there is no method to disaggregate the costs of the right of way management specific to prohibited species from the other vegetative management or roadside management.

County Conservation Departments and Cooperative Invasive Species Management Areas

Cooperative Invasive Species Management Areas (CISMAs) are regional non-profit organizations that focus on invasive species issues. They cover anywhere from one to eight counties and focus their efforts on educating their communities and providing resources for landowners. County Conservation Departments function similarly to CISMAs in some respects, and often partner with CISMAs to conduct outreach, monitoring, or invasive species management activities. In some cases, these two types of organizations are so intertwined that it is not possible to separate them.

Currently there are 13 active CISMAs in Wisconsin, which cover a total of 54 counties. Eight of the active CISMAs and a total of nine County Conservation Departments provided information for this analysis. Some of these counties are not covered by an active CISMA while others

are. Details on the information provided on current expenses can be found in Section 5.2E of the EIA Chapter in the RRG.

Table 2, under the Cost of Compliance section, includes the annual estimated costs to local governments (county and municipal) statewide. It is estimated annual costs for local governments may increase by $404 statewide after the proposed rule goes into effect. Local governments are also expected to benefit from fewer invasive species arriving and causing damage or other problems in their communities

4. Fiscal Impacts and Impact on the State Economy

The department does not anticipate that this rule will impact the state's economy adversely. Additional costs to the DNR and other state agencies in terms of staff time would be absorbed in the agency's current budget. Additional details on this can be found in Section 5.2E in the EIA Chapter of the RRG.

The department administers several grant programs that are relevant to the management of invasive species, which are utilized by private landowners, local governments, and other partner groups. Details on these grant programs can be found in Section 5.2E of the EIA Chapter in the RRG.

5. Utility Ratepayers

Utility ratepayers are not expected to see an increase in costs due to the proposed rule. This is because invasive species (prohibited and restricted) are already a part of routine maintenance and can impact utility companies by reducing accessibility to sites, increasing maintenance costs, and causing damage to infrastructure. By recognizing these challenges and preventing the introduction and spread of invasive species, ch. NR 40 reduces the costs these industries incur.

Citation

Board of Commissioner of Public Lands (2024). *Land ownership in Wisconsin*.
https://bcpl.wisconsin.gov/Shared%20Documents/Land/Public%20Land%20Owership%20Type%20in%20Wisconsin.pdf

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

Invasive species impact everyone in the state and do so in many ways. Some are poisonous to humans and/or livestock, many degrade natural habitat and reduce biodiversity, others reduce crop yields or impact forest regeneration, still others cause damage to infrastructure or make sites inaccessible. These are a few of the general ways in which invasive species can cause damage.

Here are just a few examples:

- The commercial harvest of lake whitefish from Lake Michigan has dropped nearly 90% since 1999 (Kaeding - Wisconsin Public Radio, 2025). Invasive mussels, such as zebra mussels, are thought to be significant drivers of this decline.
- According to Pimentel et al. (2000), the total estimated annual cost of nonnative weeds to the agricultural economy nationwide is approximately $26.4 billion (roughly $49.4 billion today, Federal Reserve Bank of Minneapolis). This number only accounts for nonnative plants and does not include other taxa groups such as insects or vertebrates.
- According to the Wisconsin Council on Forestry (2024) the loss in timber due to emerald ash borer alone is estimated at $400 million.
- Plants, such as the invasive knotweeds (*Fallopia japonica, F. sachalinensis,* and *F. x bohemica*), have extensive underground root systems that are capable of breaking through asphalt or concrete, compromising infrastructure and buildings. According to a 2021 report by the United States Department of Transportation – Federal Highway Administration, invasive species are generally costing state Departments of Transportation millions of dollars annually.

Alternatives include reducing regulation on invasive species by restructuring the rule, but this would potentially allow harmful species to enter Wisconsin and become established. The same is true if the rule was to be repealed entirely. The rule focuses on reducing the introduction and spread of these species by humans as much as possible. If this regulation were not in place, Wisconsin's lands, waters, industries, and individuals would stand unprotected against these species.

Citations

Kaeding, D., Wisconsin Public Radio (2025). *Decline of whitefish in Lake Michigan sparks fears that the fish might disappear.*
https://www.wpr.org/news/decline-whitefish-lake-michigan-fears-fish-might-

disappear#:~:text=In%20Wisconsin%2C%20the%20commercial%20harvest,decline%20of%20nearly%2090%20percent

Pimentel, D., Lach, L., Zuniga, R., and Morrison, D. (2000). *Environmental and Economic Costs of Nonindigenous Species in the United States.* https://www.rexano.org/Federal_Canada/PimentelEtal00CostExotics.pdf

United States Department of Transportation – Federal Highway Administration (2021). *Invasive Species Impacts on Transportation Infrastructure.* https://www.environment.fhwa.dot.gov/env_topics/documents/Invasive_Species_Impacts_on_Transportation_Infrastructure_November_2021.pdf

Wisconsin Council on Forestry (2024). *Forest Health Needs in Wisconsin.* https://councilonforestry.wi.gov/Documents/Forest%20Health%20Needs%20in%20Wisconsin%2C%20Council%20on%20Forestry%2011-19-24.pdf

16. Long Range Implications of Implementing the Rule

The long-range implications of this rule will be the protection of Wisconsin's lands, waters, human health, and businesses. The rule prevents the introduction and spread of harmful invasive species.

17. Compare With Approaches Being Used by Federal Government

NR 40 differs from federal laws, in that NR 40 is a singular comprehensive rule. Federal laws are fragmented across various agencies. This is complicated further with federal laws having multiple interacting statutes, which often are focused on specific areas which are divided based on taxonomic groups or the context where the invasive species is encountered such as through trade or in specific environments (e.g. Coastal Zone Management Act). Federal laws do not have a singular, all encompassing, invasive species rule. This can make compliance with federal laws more complicated for citizens and larger projects requiring federal interagency cooperation. The following federal laws have parallels to Wisconsin's NR 40, these are the Lacey Act and subsection on Injurious Wildlife Provisions (18 U.S.C. §42), Plant Protection Act and Federal Noxious Weeds (7 U.S.C. §7701 et seq.) and Executive Orders 13112 and 13751.

Lacey Act – Injurious Wildlife Provision

The Lacey Act is a comprehensive federal law that bans the trafficking of fish, wildlife, or plants that are illegally taken, possessed, transported, or sold. The Lacey Act is administered by the U.S. Fish & Wildlife Service (FWS). Not all aspects of this law are directly comparable to Wisconsin's NR 40 with the notable exception of the Lacey Act's Injurious Wildlife Provision (IWP). Other aspects of the Lacey Act include the prohibition of plants and plant products such as timber and paper which have been collected or harvested in violation of international laws. The plant provisions under this section of the Lacey Act are used to halt the sale of illegally trafficked wood products.

The Lacey Act's IWP is defined under 18 U.S.C § 42. This legislation is similar to NR 40, in that a species list is identified, current, and designated as "injurious species" under 50 C.F.R. §16. The scope of the Lacey Act IWP differs from NR 40 in that it only applies to animal species, while NR 40 applies to multiple taxonomic groups including animals, plants, fungi, and others. The Lacey Act IWP and NR 40 are similar in that listed species cannot be transported into the jurisdiction area, and any such transportation will require authorization. The transport clauses in both laws help to prevent the spread and establishment of listed species caused by direct human activities.

The Lacey Act IWP also identifies listed species that are "injurious to human beings, to the interests of agriculture, horticulture, forestry, or to wildlife or the wildlife resources of the United States, it hereby prohibited". This statement is similar to, but not as extensive or explicit as, the criteria identified within NR 40.03 (2) (a). The criteria in NR 40 expand beyond wildlife to consider potential harm to native species, biodiversity, natural scenic beauty, and natural ecosystem structure, function or sustainability, harm to the long-term genetic integrity of native species; economics are expanded to include impacts to broader recreation, commercial, industrial and other uses; impacts to human health are expanded to consider vulnerable and sensitive individuals.

For regulations by species, the Lacey Act IWP uses a "whitelist" system, whereby the law bans the importation of all species except those species found on an approved list. This differs from a "blacklist" system whereby the law identifies and bans species by name. When the Lacy Act IWP was amended in 1949, the injurious species list provision was modified into a blacklist system. This listing system was criticized, as a blacklisted species would require comprehensive assessments and review before being included within the Lacey Act IWP. This reduced the abilities of agencies to respond to early detection species that are discovered in the landscape (Johnson et al. 2017). Current language within NR 40 uses a blacklist system at the taxonomic level which includes regulations on all other nonnative fish and nonnative crayfish with listed exceptions (NR 40.04 (2) (c) (12)), regulation at the taxonomic family level such as snakehead fish in the

Family Channidae (NR 40.04 (2) (c) (1)) and specifically named species which are listed throughout the rule. Despite the Lacey Act IWP and NR 40 having lists of regulated species, the Lacey Act IWP does not require control or eradication of these species. This difference makes the Lacey Act less comprehensive when preventing the spread of already established species.

Civil penalties under the Lacey Act IWP and ch. NR 40 are similar, although higher civil penalties exist within the Lacey Act, but these are reserved for plant or plant products, and not directly related to the trafficking of invasive species. Criminal penalties under the Lacey Act IWP are similar to the NR 40 whereby violators can be sentenced to prison. However, the Lacey Act has more severe possible penalties. Additionally, corporations can face penalties under the Lacey Act but not under NR 40.

Plant Protection Act (PPA) & Noxious Weed Control and Eradication Act Amendment

The regulation of invasive plants, invasive plant pests, and plant diseases are regulated by federal law under the Plant Protection Act of 2000 (PPA) (7 U.S.C. §7701 et seq.) with its Noxious Weed Control and Eradication Act of 2004 (7 U.S.C. §§7781-7786) amendment. This law is administered by the US Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS). The PPA is a consolidation of several federal plant quarantine authorities. This law applies to foreign and interstate commerce related to the regulation of movement of listed plants, plant products, plant pests, and noxious weeds. Movement of listed species requires prior approvals through permits like NR 40. The PPA also authorizes APHIS to conduct inspections of foreign plant imports; impose quarantines on any affected region, state, or location infested with the listed species; and cooperate with any state agencies towards these goals including control (Johnson et al. 2017).

This law has a Federal Noxious Weeds List (FNWL), which is maintained by USDA APHIS (7 C.F.R. §360.200). This FNWL is similar in structure to NR 40's list of regulated species and uses elements of a blacklist system whereby specifically named genera or species are prohibited with some exceptions.

When outbreaks of plant pests occur, the PPA grants APHIS the ability to impose quarantines on affected regions and allow state agencies to eradicate or contain new invasions. The Noxious Weed Control and Eradication Act of 2004 (NWCEA) amendment provides authority to the USDA to conduct control on invasive plants on public and private lands. This is similar to NR 40's authority to control public and private lands; should control be required on private lands the department can seek an inspection warrant through circuit courts (s. NR 40.04 (4) (a)). Further, the NWCEA allows the USDA to enter into cooperative agreements with the weed management entities to allow for response and eradication activities. NR 40 has a similar function whereby the department may enter into agreements with regional Cooperative Invasive Species Management Areas (CISMAs) through its ability to impart its authority to designees (s. NR 40.04 (4) (a)).
PPA has funding mechanisms that allow for the agency to fund emergency actions to control specific plant pests. This is similar to NR 40's language stating that the department will seek funding to assist in the control of prohibited species (s. NR 40.04 (4) (b)).

Violations of the PPA have similar consequences to penalties under NR 40 but overall can be much higher for extreme cases. However, for criminal penalties under the PPA related to permit infractions may result in one year of imprisonment. There is no analog for this in NR 40.

Executive Orders 13112 and 13751

In addition to the existing laws that have parallels to NR 40, presidential executive orders (EO) have influenced federal invasive species policies through interagency coordination and the development of a national strategy. EO 13112 was issued by President Clinton in 1999 for the establishment of a National Invasive Species Council (NISC). NISC provides high-level interdepartmental coordination of federal invasive species actions and collaborates with other groups to address invasive species at a national level (Johnson et al. 2017). Under EO 13112, each federal agency whose actions may result in the introduction and spread of invasive species is required, to the extent practicable to: prevent invasive species introductions; monitor and rapidly respond to new invasions; control and eradicate established invasives where feasible; not authorize or fund any activities that knowingly facilitate the spread of invasive unless there are no alternatives; and coordinate research and outreach on invasive species issues. NR 40 parallels EO 13112 by proactive regulation to prevent the introduction of new invasive species; the department through its programs conducts monitoring and uses its enforcement authority to control newly establishing pioneer populations that have yet to become prevalent throughout the state; use best management practices to inform decision making to prevent the spread of invasives through programs that require a departmental permit; and conduct education and outreach activities by offering printed, digital, and interpretive programs.

This initial EO was later expanded and amended by the later EO 13751, titled "Safeguarding the Nation from the Impacts of Invasive Species" by President Obama in 2016. The EO expanded the participating federal agencies of NISC to include the new Department of Homeland Security and the Office of Science and Technology Policy. This EO provides clarification of NISC's operation and expands the considerations of human and environmental health, which parallels the criteria within NR 40. It also considers climate change, technological innovation, and other federal invasive species priorities and federal administrative activities. Although NISC does not directly impact state laws and policies, its purpose is comparable to the Wisconsin Invasive Species Council, which is a state-level advisory body established in 2004.

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

Illinois

Illinois utilizes multiple statutes and administrative rules to regulate invasive species. The three most notable are the Exotic Weed Act (525 ILCS 10/), Noxious Weed Law (505 ILCS 100/), and the Injurious Species Rule (17 Ill. Adm. Code Part 805). These various regulations work in concert to achieve many of the same goals as Wisconsin's ch. NR 40, which uses a more centralized approach to prevent the introduction and spread of invasive species. The definition of "invasive species" as used in ch. NR 40 seems to incorporate the varying definitions used the Illinois regulations.

Illinois' Exotic Weed Act is administered by the Illinois Department of Natural Resources and focuses on plants primarily impacting native ecosystems. It does not require control measures but prohibits buying, selling, distributing, or planting listed invasive plants (or their seeds/parts) without a permit. The restricted category of ch. NR 40 functions in a similar way by regulating the transport, transfer, and introduction, but not requiring control.

The Noxious Weed Law is administered by the Illinois Department of Agriculture. This law focuses on plants that are injurious to public health, livestock, land, or other property. Control is required for these species. This is similar to the function of the prohibited category in ch. NR 40, where control is required.

The Injurious Species Rule focuses more on animals that harm native ecosystems, although some plants are included too. These species are not allowed to be possessed, propagated, bought, sold, or bartered unless a permit is obtained from the Illinois Department of Natural Resources. Wisconsin's ch. NR 40 is similar in that it includes many different taxa groups, including plants and animals, and regulates the transport, transfer, and introduction for all. For prohibited species, possession is also regulated, and management is required.

Additionally, the Illinois Boat Registration and Safety Act (625 ILCS 45/5-23) implements preventative measures for aquatic invasive species similar to those found in ch. NR 40.

Iowa

Iowa's invasive species regulations are broken into multiple statutes and administrative rules. Most notably, the Noxious Weeds Law (Chapter 317, Iowa Code and Admin. Code Chapter 58), Crop Pests and Horticultural Diseases Law (Chapter 177A, Iowa Code and Admin. Code Chapter 46), and aquatic invasive species provisions (Iowa Code §456A.37 and Admin. Code Chapter 90).

The Noxious Weeds Law (Chapter 317, Iowa Code and Admin. Code Chapter 58) is administered by the Iowa Department of Agriculture and Land Stewardship and focuses on terrestrial plants that threaten agriculture or land. This regulation delegates authority to each county to order the destruction of weeds classified as noxious by the state. This is somewhat similar to Wisconsin's Noxious Weeds Law (State Statute ch. 66.0407), where local municipalities may declare particular species as "noxious" and require management within the municipal boundary. In Iowa, there are Class A and Class B noxious weeds. Class A noxious weeds. These categories dictate the extent to which management is required. Class A noxious weeds are eradication candidates, while Class B noxious weeds require control measures that prevent blooming or maturity. In addition to the noxious weed, there is an additional classification of Prohibited Plants. It is illegal to import, sell, or distribute any part of these plants in Iowa. Some species are listed both as a noxious and prohibited plant. These types of species are incorporated into Wisconsin's ch. NR 40 and includes similar regulations and requirements for management.

The Crop Pests and Horticultural Diseases Law (Chapter 177A, Iowa Code and Admin. Code Chapter 46) is also administered by the Iowa Department of Agriculture and Land Stewardship, but focuses on harmful plant pests and diseases. This regulation authorizes the State Entomologist to establish quarantines to regulate movement of these species within the state. In Wisconsin, the Department of Agriculture, Trade, and Consumer Protection plays a similar role by establishing quarantines under ch. ATCP 21. Ch. NR 40 occasionally intersects with quarantined species under ATCP 21. Originally, this overlap was intended to prevent further introduction and spread via additional regulations on importation into the state.

Iowa has separate provisions for aquatic invasive species under Iowa Code §456A.37 and Admin. Code Chapter 90. §456A.37 establishes preventative measures to minimize spread of aquatic invasive species between bodies of water. Similar provisions are included in ch. NR 40.07. Iowa's ch. 90 regulates the possession, introduction, import, purchase, selling, bartering, propagation, or transport of aquatic invasive species, and serves a similar role as ch. NR 40 by addressing pathways of introduction.

Michigan

Michigan's Natural Resources and Environmental Protection Act (Part 413 of Act 451) establishes a list of prohibited and restricted species. The names of these categories are the same as in ch. NR 40 (prohibited and restricted), but in Michigan the terms have slightly different meanings. In Michigan, it is unlawful to possess, introduce, import, sell or offer a regulated invasive species for sale as a live organism (with few exceptions).

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The regulation of "possession" in Michigan is distinct from regulation of "possession" in Wisconsin. "Possession" in Michigan does not include the following instances: (a) the organism is present on land or in waters owned by a person unless the person has knowingly introduced that live organism on that land or in those waters, (b) the organism was obtained from the environment and the person only possesses the organism at the specific location at which it was obtained from the environment, and (c) if the possession is for the purpose of promptly destroying the organism. In Wisconsin, there are some exemptions for possession of prohibited species, but this does not include exemption (a) above.

Prohibited species in Michigan are those that are not yet widely distributed in the state, and for which management techniques are likely not available. Under ch. NR 40, the Wisconsin Department of Natural resources may require management action on prohibited species, and the availability of control measures is a key consideration when assessing species for regulation. Restricted species in Michigan refer to species that are already established in the state, and for which management techniques are available. The difference between prohibited and restricted in Michigan versus Wisconsin is that Michigan's regulatory categories are more closely tied with the availability or nonavailability of control measures, along with distribution in the state.

Similar to ch. NR 40, Michigan's Natural Resources and Environmental Protection Act (Part 413 of Act 451) also establishes preventatives measures, such as regulations on requirements for preventing the spread of aquatic invasive species.

Separate laws cover harvesting, possessing, or selling regulated or unregulated species. Michigan's laws on foraging are cited as having authority over some invasives that are edible. Additionally, Section 41329 of Act 451, P.A. 1994, requires anyone selling live, nonnative aquatic organisms to register with the Michigan Department of Natural Resources. No similar requirement for registration is included in ch. NR 40.

Minnesota

Minnesota's invasive species laws are also divided between multiple laws and agencies. The Minnesota Department of Natural Resources has regulatory authority over aquatic plants and animals, and terrestrial vertebrates through Minnesota Statute ch. 84D and Administrative Rule ch. 6216. The Minnesota Department of Agriculture has regulatory authority over terrestrial plants (noxious weeds) and plant pests through Minnesota Statutes, sections 18.75 to 18.91.

These laws in Minnesota are similar to ch. NR 40 in that they categorize invasive species into different categories with varying levels of regulation. There are also preventative measures to prevent the movement of aquatic invasive species, similar to ch. NR 40. The delegation of regulation of plant pests and diseases to the Minnesota Department of Agriculture is also similar to the approach in Wisconsin, where the Department of Agriculture, Trade, and Consumer Protection establishes quarantines to manage intrastate movement of these same types of species via ATCP 21. Chapter NR 40 also regulates plant pests and diseases, and in some instances, there is overlap between chs. ATCP 21 and NR 40.

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

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)

In Wisconsin State Statute 227.114, 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" . Based on this definition (number of employees) and using data from US Census Bureau (2022), 14.6% (27,552) of businesses are estimated to be small businesses (Table 7).

Assuming 14.6% of the total economic impact due to regulation of Organisms-in-Trade is borne collectively by small businesses, this would equal additional costs of $18,826.70 in Year 4 and $75,562.30 in Year 6. The department was not able to collect the data on acreage or percent of landownership held by small businesses.

Table 7: Number of small businesses estimated to be affected by NR40 rule revision based on number of employees

Firm Type	Number of Firms with Fewer than 25 Employees
Agriculture, Forestry, Fishing and Hunting	980
Utilities	55
Wholesale trade	7,116
Retail trade	19,401
TOTAL	**27,552**
Percent of Total Firms (N=188,177)	**14.6%**

Data Source: United States Census Bureau (2022). *2022 SUSB Annual Data Tables by Establishment Industry*

The specific number of pet trade firms, plant nursery firms, landscaping firms, other businesses that would be more directly impacted by the rule were not available. The total number of small businesses affected by rule can be different if based on the gross annual sales threshold (less than $5,000,000). Further detail on these data is provided in Appendix D of the RRG.

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

The department used data from the US Census Bureau to determine the number of potentially affected small businesses.
United States Census Bureau (2022). *2022 SUSB Annual Data Tables by Establishment Industry.*
https://www.census.gov/data/tables/2022/econ/susb/2022-susb-annual.html

Prohibited species reporting patterns were informed by data from the Early Detection and Distribution Mapping System (EDDMapS) was used for historical reports of prohibited species. EDDMapS is an online invasive species database which is supplemented by information from citizen scientists, herbarium and museum records, iNaturalist (another invasive species database), and the WDNR Surface Water Integrated Monitoring System via its connection with the United States Geological Service Nonindigenous Aquatic Species database.

The range in values reflects the general trend that fewer detected populations are more common than many detected populations within a single reporting year.

For organisms in trade, cost per unit values were determined by using OpenAI's agentic web-search function. Each value was individually confirmed by reviewing collected references on the vendor's sites. This allowed the department to acquire information on typical sale prices and volumes in Wisconsin for many species on a short timeframe. These data were reviewed by the department's Organisms in Trade Coordinator prior to use in analyses.

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

Although there are no provisions meant to ease the burden on small businesses specifically, the rule allows phase-out periods established in 40.05 (3) (p) for restricted plants. This temporary exemption allows industry to continue to sell stock that was present in Wisconsin prior to the effective date of the rule for three to five years, depending on the species type. This allows industry the ability to "phase out" their existing stock, avoiding a significant abrupt loss in sales, and allows them time to find suitable alternatives.

5. Describe the Rule's Enforcement Provisions

Enforcement Authority:

The department exercises its NR40 authority by seeking compliance through a stepped enforcement process. NR40 violations are typically addressed by using the lowest level appropriate to the circumstances. The department focuses on education first, seeking voluntary compliance. However, the department can advance to higher levels of enforcement to formal notices, citations, and prosecutions based on the severity of the infraction. When infractions occur, the department may respond through the following means identified in Wis. Stat. §23.22(9)(a): 1. Issue a citation pursuant to s. 23.50 to 23.99; 2. Refer the matter to the department of justice for enforcement under par. (b); 3. Revoke a permit issued under the rules promulgated under sub. (2) (b) 6., after notice and opportunity for hearing.

Enforcement Penalties:

If penalties need to be applied to NR40 infractions, Wisconsin law (Wis. Stat. §23.22) provides guidance. Penalties can range from fines and civil forfeiture to possible imprisonment. Potential penalties are as follows (Wis. Stat. §23.22(8)):

(8) Penalties.

(a) Except as provided in pars. (b) and (c), any person who violates a rule promulgated under sub. (2) (b) 6., or any permit issued under those rules, shall forfeit not more than $200.

(b) Any person who intentionally violates any rule promulgated under sub. (2) (b) 6. or any permit issued under those rules shall be fined not less than $1,000 nor more than $5,000, or shall be imprisoned for not less than 6 months nor more than 9 months or both.

(c) A person who violates a rule promulgated under sub. (2) (b) 6. or any permit issued under those rules and who, within 5 years before

the arrest of the current conviction, was previously convicted of a violation of a rule promulgated under sub. (2) (b) 6. or any permit issued under those rules shall be fined not less than $700 nor more than $2,000 or shall be imprisoned for not less than 6 months nor more than 9 months or both.
(d) The court may order a person who is convicted under par. (a), (b), or (c) to abate any nuisance caused by the violation, restore any natural resource damaged by the violation, or take other appropriate action to eliminate or minimize any environmental damage caused by the violation.

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

☐Yes ☒No

The Agency did not prepare a cost benefit analysis.