

**BEFORE THE  
NATURAL RESOURCES COMMISSION  
OF THE  
STATE OF INDIANA**

**IN THE MATTER OF:**

**AMENDMENTS TO 312 IAC 18-3-23,                    )**  
**PROHIBITED AQUATIC PLANT SPECIES            )**  
**)**  
**)**       **Administrative Cause**  
**)**       **Number 11-054E**  
**)**       **(LSA Document #12-50(F))**

**REPORT ON RULE PROCESSING, PUBLIC HEARING AND WRITTEN  
COMMENTS, RESPONSE BY DEPARTMENT OF NATURAL RESOURCES, AND  
HEARING OFFICER ANALYSES AND RECOMMENDATION**

**1.     RULE PROCESSING**

For consideration is the proposed 312 IAC 18-3-23, which designates, as pests or pathogens, certain invasive aquatic plants to prohibit the sale, distribution, and transport of these aquatic plants.

The Commission gave preliminary adoption to the rule amendments on September 20, 2011. The September 20 minutes reflect the DNR’s justification for the amendments and the Commission’s consideration of them.

Phil Marshall, Director of the Division of Entomology and Plant Pathology, introduced this item. He turned to Doug Keller, Aquatic Invasive Species Coordinator, to provide some background for the rule proposal.

Keller began, “My job is first and foremost to prevent the introduction of aquatic invasives into Indiana waters and wetlands. When harmful species become established, my job turns from prevention to managing the invasive species.” He explained that for management of “newly established species with limited distribution, typically the first consideration” is to attempt eradication. When populations become more widespread the management of the species shifts to “control mode” maintaining populations at a low level to prevent hampering ecological function or recreational uses.

Keller stated that although he works for the Division of Fish and Wildlife, the rule is being proposed through the rule-making authority for Division of Entomology and its ability to regulate plant species. He said that he along with the DNR’s Executive Office and Phil Marshall worked “for some time” to create the proposed rule.

Keller said invasive aquatic plants reduce habitat diversity which ultimately reduces ecological function, fish and wildlife diversity, impede recreation, reduce property values, hamper water utility withdrawals and can contribute to flooding. Invasive species are “extremely expensive to eradicate or control.”

Keller provided examples of the costs associated with eradicating species that have been introduced in Indiana:

- Griffy Lake–Brazilian elodea. “A two year eradication cost \$150,000 for a 109-acre lake or nearly \$1,400 an acre.”
- Lake Manitou–Hydrilla. “We’re five years into eradication that is nearing completion. This eradication has so far cost \$1.6 million for the 735-acre lake or \$2,200 an acre.”
- Meserve Lake–Parrot Feather. “A three year eradication cost approximately \$50,000 for the 18-acre lake or nearly \$2,800 an acre.”

At the same time the DNR has been eradicating species, retail stores continue to offer invasive plants for sale. “If we want to prevent new introductions, we have to prevent these species from entering the supply chain.”

Keller said he and Phil Marshall worked with a number of groups to gather consensus concerning the control of aquatic invasive species. The Indiana Aquatic Invasive Plant Working Group consisted of Indiana DNR, invasive species experts from the Illinois-Indiana Sea Grant, the University of Notre Dame, The Nature Conservancy, and ecological consulting companies and stated “most importantly, we had representation from people representing the aquatic plant industry which included the aquatic plant growers, water garden retail industry, aquarium industry, and Indiana Nursery and Landscape Association.” He said the group developed a risk assessment process for aquatic plants to inform Indiana of the plants that pose substantial risk to the State and to identify those likely to be benign. The consensus concluded the plants listed in the rule proposal are “highly invasive species” and should no longer be for sale in Indiana in order to provide protection for Indiana’s aquatic resources.

Keller provided the following as purposes and support for the proposed rule amendments:

- 1) Prohibit the sale and distribution of 28 species of known aquatic invasive plants.
- 2) Seventeen (17) species are federal noxious aquatic plants. Since they are federally regulated, they should not be in trade. Adding the species to the list will allow DNR personnel to enforce their movement and not simply rely on federal authorities.
- 3) Five species are not federally regulated, and have little or no presence in trade, and yet are highly invasive. Regulating the five species should have no bearing on trade.
- 4) Six of the species have some presence in the aquatic plant trade, but will have minimal impact to the industry because of the abundance of “suitable options” of plants to replace those that are restricted. “The industry will simply replace the known invasive species with other less harmful species that have similar visual appeal.”
- 5) Everyone on the Indiana Aquatic Invasive Plant Working Group agreed “none of the species should be allowed for sale in Indiana because they are known invasives, and many of these have exhibited invasive tendencies right here in Indiana.”
- 6) The proposed rule was also endorsed by the recently formed Indiana Invasive Species Council.
- 7) The proposed rule was presented to the Advisory Council during its August meeting and the members’ comments were incorporated into the rule “as you see it today.”

Donald Ruch asked if the invasive species *Azolla pinnata* was the only azolla species the work group wanted to “keep in check.”

Keller responded, “That’s a federal noxious aquatic plant. From my knowledge, generally the azollas are a more southern species—a warm climate species—so the other azollas probably would not survive in Indiana should they get released.”

Ruch continued, “I routinely every other year take a class up to Tri-County Fish and Wildlife Area. I found *Azolla caroliniana* up there, and the population is growing over the years.”

Keller responded that he was not familiar with the species and said, “Again, we’re continuing to run species through our risk assessment tools, but only those species that have shown to be in trade. I’m not sure if that species that you’re referring to is in trade.”

Ruch reflected, “That’s a good point. It may not be.”

Keller added, “We can’t cover every single plant that grows in water. We’re just looking for the ones that are in trade.”

Ruch explained that “*Egeria densa*” (Brazilian waterweed) is a plant used by every university in the State, and “nearly every college” in the State, in order to study membrane transport and function. “There’s not a good replacement for it unless you use something like elodea, and I’m sure you don’t want us to go out and harvest the natural elodea to replace it.”

Keller responded that Native elodea is for sale through the biological supply companies, as well as the Brazilian elodea, “so it’s my feeling it would be a suitable replacement. The DNR is very familiar with Brazilian elodea being in the classrooms “because two of our populations of Brazilian elodea that happened in Indiana were on elementary school grounds where they probably had it in their classrooms. They did not have the heart to put the plants in compost or put them in the trash so they put them out in the pond, and that’s what’s happening with a lot of these species.”

Ruch replied, “I understand the problem with it being an invasive weed, so I’m sitting on the fence with this one. But I agree with what you’re doing.”

Marshall stated, “If it’s for educational purposes, we can issue a permit to the institution, which I do, for various plants. There is a way that they can still use the material.”

Ruch responded, “Right, and there’s no problem with that except you’re eliminating the easy access to the source.”

The Chair commended Keller for his “very detailed report. We appreciated it.”

The “Notice of Intent” to adopt a proposed rule amendment was posted to the INDIANA REGISTER at 20120118-IR-312120050NIA on January 18, 2012. The notice identified Doug Keller, Aquatic Invasive Species Coordinator, as the “small business regulatory coordinator” for purposes of Indiana Code § 4-22-2-28.1.

As specified by Executive Order, proposed fiscal analyses of the rule proposal were submitted, along with a copy of the proposed rule language and a copy of the posted Notice of Intent, to the Office of Management and Budget on January 19, 2012. In a letter dated March 22, 2012, Adam M. Horst, Director, Office of Management and Budget, approved the fiscal analyses.

The Division of Hearings submitted the rule proposal to the Legislative Services Agency, along with the “Statement Concerning Rules Affecting Small Business” (also known as the “Economic Impact Statement”), on March 28, 2012. The Notice of Public Hearing was submitted to the

Legislative Services Agency on March 29, 2012. On April 11, 2012, the following were posted to the INDIANA REGISTER: the text of the proposed rule at 20120411-IR-312120050PRA; the notice of public hearing along with the justification statement (IC 4-22-2-24(d)(3)) at 20120411-IR-312120050PHA; and the Economic Impact Statement at 20120411-IR-312120050EIA.

Following receipt of an “Authorization to Proceed” from the Legislative Services Agency on March 29, 2012, the Division of Hearings caused a Notice of Public Hearing to be published by the Indianapolis Newspapers in the Indianapolis *Daily Star*, a newspaper of general circulation in Marion County Indiana, on April 6, 2012. In addition, the notice of the public hearing and a summary of the proposed rule changes were published on the Commission’s web-based electronic calendar.

The Statement Concerning Rules Affecting Small Businesses (the “EIS”), as required under IC 4-22-2.1-5, and posed to the INDIANA REGISTER, in pertinent part, follows:

**Estimated Number of Small Businesses Subject to this Rule:**

There are approximately 380 licensed nursery growers registered in the state. It is estimated that 12 of these nurseries produce aquatic plants and only a portion of these would produce any of the species being considered for regulation. There are nearly 4,000 retailers in the state that sell plants including retail landscape, aquarium stores, and other retail outlets. Of these retail outlets, it is estimated that one-third sell aquatic plants and an estimated 200 of these may actually sell species proposed for regulation. Marinas and businesses that specialize in watercraft repair, removal, and storage are subject to this rule since they must inspect the equipment to be certain there are no regulated plants present. It is estimated that 400 small businesses in Indiana specialize in these types of services and would be impacted by the rule.

**Estimated Average Annual Reporting, Record Keeping, and Other Administrative Costs Small Businesses Will Incur for Compliance:**

There is no reporting, record keeping or administrative costs imposed on small businesses as a result of this rule.

**Estimated Total Annual Economic Impact on Small Businesses to Comply:**

It is expected that the economic impact to production nurseries, wholesalers, and retailers will be in disposal of existing stock. After a business is in compliance, there would be no annual economic impact. Businesses that produce or sell regulated species will need to eliminate all existing inventories of the regulated species. Currently only seven of the 28 species proposed in this rule have a presence in trade. A typical inventory for the estimated 200 retail outlets that may offer these plants for sale would range from 10 to 50 plants of each of the seven species.

Economic loss in inventory for these businesses is expected to be minimal. The species proposed for regulation are relatively inexpensive plants that range in price from \$3 to \$7 per plant. If a business has to eliminate an inventory of 100 plants of any of the species, at an average of \$5 per plant, total retail cost for these plants would average approximately \$500 per retail outlet. It would be unusual that a business would have all seven species with this level of inventory, however; so the economic impact per business could be much lower. Other than the possible destruction of regulated species inventory, there should be no other economic loss to these businesses.

Through education outreach provided by the IDNR, businesses who sell aquatic plants will learn about the rule prior to final adoption. This will give these businesses time to adjust their inventory and not order

in a supply of the species as rule promulgation nears. If this is the case, they would have little inventory to eliminate. The winter is generally when retail outlets order plants that they will sell during the growing season. As the rule progresses and prior to retailers placing their orders the Department will notify retail outlets that species may be prohibited in the future.

The annual economic impact for marinas and boat repair, removal, and storage businesses will be minimal. Inspection and hand removal of all plant material takes very little time. For a 30-foot recreational boat, it is expected that the visual inspection and hand removal of all plant material from the boat and trailer may take 15 minutes. At \$10 per hour, inspection and removal would cost \$2.50. An average business may remove 30 boats a month during the five-month boating season costing the business a total of \$75 in labor per month. No special equipment is necessary to clean plant material from aquatic equipment.

**Justification Statement of Requirement or Cost:**

Seventeen of the 28 species that are proposed in this rule are currently regulated by the federal government as "federal noxious weeds". These species should not be in trade because federal rules restrict their movement. Federal noxious species are regulated by the federal authorities for interstate movement only. These authorities are not able to regulate intrastate movement, if a noxious weed already exists in Indiana or is able to enter the state without the knowledge of the federal regulatory body these authorities would not have the ability to regulate these species. These species are included in this rule to allow for enforcement by Indiana authorities rather than relying on federal enforcement. Having a companion rule by the state that mirrors federal regulations allows the federal authorities to try to keep a species from entering the state while the intent of the proposed rule is to prevent movement within the state. A risk assessment tool was developed by a group of aquatic invasive species experts and members representing the aquatic plant trade. Results from the risk assessment were used to select the species that should no longer be allowed in trade in Indiana. These species are known to become invasive when released and can alter existing ecosystems.

Some of the species proposed for regulation have been in trade for many decades. Originally, most were used in aquariums. Eventually, it was discovered that a common source of infestation is through improper disposal of aquarium stock into a body of water. Another source of infestation is due to the recent popularity of water gardens, which has resulted in the plants being used in outdoor environments where they can occasionally escape. When an invasive species escapes into a lake or pond, they displace native aquatic plants, cause fish population imbalances, and reduce recreational opportunities. A reduction in recreation causes a loss to a lakes local area economy and the surrounding natural resources. There are numerous other aquatic plants currently in trade that can be used to replace the species proposed for regulation. Wholesale and retail outlets will simply replace the invasive species that are proposed for regulation with a noninvasive species that will have similar customer appeal. There are many plants with similar characteristics to the species proposed for regulation that can be substituted that do not pose a threat to the environment. Other than the possible destruction of regulated species inventory, there should be no other economic loss to businesses.

Eliminating invasive species from infested lakes and ponds can be difficult and expensive. A project to eliminate Brazilian elodea from 109-acre Griffy Lake in Bloomington cost nearly \$150,000 over two years. It may cost approximately \$60,000 to eradicate parrot feather from an 18-acre public lake in Indiana. A project to eradicate hydrilla from Lake Manitou, a 735-acre natural lake, will likely cost in excess of \$2 million when the project is complete. The small cost or inconvenience to take an invasive plant species out of trade pales in comparison to the cost to eradicate a species once the species escapes into the environment.

**Regulatory Flexibility Analysis of Alternative Methods:**

One alternative to lessen the impact of the destruction of a business's inventory of the proposed species to be regulated is to propose a phase in period where businesses could sell their remaining inventory but not continue to replenish their supplies. This in reality is what is expected to happen over the coming months as this rule becomes effective. Unfortunately, as businesses continue to sell the regulated species to deplete their inventory, there is the risk that these plants will be released in waters throughout the state.

Another alternative to this regulation is that businesses could warn consumers as to the invasiveness of the species listed in the proposed rule. If businesses effectively express warnings to the consumers and have a less invasive plant as an alternative to be used in place of the listed species, a certain amount of protection could be achieved. If managers or owners of these businesses do not understand or are not concerned about

the level of potential invasiveness of these listed species, if they do not effectively warn consumers of its invasive characteristics, or if they do not provide alternative plants to substitute for the listed species, this option will not be suitable to stop the spread of invasive plants. It is unlikely that a strategy such as this would have the desired outcome of preventing further introduction of these invasive species into Indiana waters.

Convincing a customer to not purchase something in supply is not typically considered a good business practice so it is unlikely that this is a viable option, especially if the invasive material is cheaper or easier for the business to source. To ensure effective measures are met it would be best to teach the store not to purchase the material at all and then ask them to pass the word on to customers to stay away from invasive species or dispose of material in a manner that will not allow these species to spread.

A copy of the economic impact analysis on small business was submitted to the Indiana Economic Development Commission (the “IEDC”) on March 30, 2012. On May 9, 2012, the IEDC reported favorably to the Commission by letter. Later on the same day, the Commission’s Division of Hearings, by email, responded to the IEDC. The response stated in part: “Since you have commented favorably upon the agency’s fiscal analysis, and have suggested no alternatives, it will recommended that the Natural Resources Commission move forward with consideration for final adoption.” The IEDC’s comments were posted to the Commission’s Website on May 9, 2012 at <http://www.in.gov/nrc/2348.htm>, and were also made available at the public hearing.

**2. PUBLIC HEARING AND WRITTEN COMMENTS**

The public hearing was convened as scheduled on May 17, 2012. In attendance from the Division of Fish and Wildlife were Doug Keller, Aquatic Habitat Coordinator, and Eric Fischer, Program Director, and Megan Abraham, Fumigation and Compliance Inspector with the Division of Entomology and Plant Pathology. No member of the public was in attendance.

Written comments were received though the Commission’s online comment form accessible at <http://www.in.gov/nrc/2377.htm>. The comment period closed end of day May 24, 2012.

Comments were submitted as follows:

<p><b>Commenter Name</b> Wayne A. Langman  <b>Commenter County</b> 84  <b>Commenter State</b> IN  <b>Commenter City</b> Terre Haute  <b>Commenter Organization</b>  <b>Commenter Email</b> _  <b>Comment</b> I whole heartedly support this rule and urge the DNR to take aggressive action in controlling some of these species. Research has shown that the Narrow Leaf Cattail is not a food source for muskrats and our population of muskrats is in serious decline.  <b>Time stamp</b> 04/03/2012 09:10:01 AM</p>
<p><b>Commenter Name</b> Daniel J. Shaver  <b>Commenter County</b> 3  <b>Commenter State</b> IN  <b>Commenter City</b> Columbus  <b>Commenter Organization</b>  <b>Commenter Email</b> _  <b>Comment</b> I agree with the rule on prohibiting the sale of aquatic nuisance plant species in Indiana. The rule should allow for flexibility for adding new</p>

<p>plant threats that emerge over time. This rule would be even better if is extended to non-native invasive terrestrial plants.  <b>Time stamp</b> 04/04/2012 06:28:05 AM</p>
<p><b>Commenter Name</b> Peggy Lindenlaub  <b>Commenter County</b> 7  <b>Commenter State</b> IN  <b>Commenter City</b> Nashville  <b>Commenter Organization</b> Brown County Native Woodlands Project  <b>Commenter Email</b> <a href="#">_</a>  <b>Comment</b> I support the effort to prevent aquatic invasive plants from being sold in Indiana.  <b>Time stamp</b> 04/09/2012 08:02:24 AM</p>
<p><b>Commenter Name</b> Ellen Jacquart  <b>Commenter County</b> 49  <b>Commenter State</b> IN  <b>Commenter City</b> Indianapolis  <b>Commenter Organization</b> The Nature Conservancy  <b>Commenter Email</b> <a href="#">_</a>  <b>Comment</b> The Nature Conservancy supports the changes proposed for 312 IAC 18-3-23 to designate as pests or pathogens certain invasive aquatic plants, and to prohibit the sale, distribution, and transport of these invasive aquatic plants. The DNR is to be commended for taking this step to reduce the likelihood of new aquatic plant infestations in Indiana. Infestations by aquatic invasive plants can devastate lakes and rivers, displacing the native plants and animals found in these waters, disrupting the fisheries, and spoiling the recreational use of these water bodies. Control of aquatic invasive plants is incredibly costly and generally requires many repeated treatments for effectiveness. It is simply common sense to keep these costly invaders from getting into Indiana waters. The DNR is also to be commended for the thoughtful, science-based approach they took to determining which species posed an unacceptable risk to Indiana waters. The Nature Conservancy was part of the working group that helped do the risk assessments for these species, as were members of the aquatic garden plant industry. The meetings gave all members an opportunity to discuss concerns and have them addressed. It was a very inclusive process, and resulted in sound recommendations. We recommend these rules be changed as proposed.  <b>Time stamp</b> 05/02/2012 02:12:20 PM</p>
<p><b>Commenter Name</b> Angela Sturdevant  <b>Commenter County</b> 49  <b>Commenter State</b> IN  <b>Commenter City</b> Indianapolis  <b>Commenter Organization</b> <a href="#">_</a>  <b>Commenter Email</b> <a href="#">_</a>  <b>Comment</b> This proposed rule is an important step in protecting Indiana's lakes and rivers from the negative effects of aquatic invasive species. I strongly urge the Commission to adopt it!  <b>Time stamp</b> 05/03/2012 07:31:30 AM</p>
<p><b>Commenter Name</b> Robert Woodling  <b>Commenter County</b> 53  <b>Commenter State</b> IN  <b>Commenter City</b> Unionville  <b>Commenter Organization</b> <a href="#">_</a>  <b>Commenter Email</b> <a href="#">_</a>  <b>Comment</b> Indiana needs this rule! I fully support the efforts to contain all invasive species.  <b>Time stamp</b> 05/03/2012 08:41:21 AM</p>
<p><b>Commenter Name</b> Heather Harwood  <b>Commenter County</b> 43  <b>Commenter State</b> IN  <b>Commenter City</b> Syracuse  <b>Commenter Organization</b> Wawasee Area Conservancy Foundation  <b>Commenter Email</b> <a href="#">_</a>  <b>Comment</b> WACF supports this rule. It would go far in saving more invasive plant trouble and chemical treatment in the future.            Thanks.            Heather Harwood  <b>Time stamp</b> 05/03/2012 09:08:54 AM</p>
<p><b>Commenter Name</b> Stuart Orr  <b>Commenter County</b> 75  <b>Commenter State</b> IN  <b>Commenter City</b> North Judson  <b>Commenter Organization</b> <a href="#">_</a>  <b>Commenter Email</b> <a href="#">_</a>  <b>Comment</b> I support the ban on the species listed in this legislation. These species have proven themselves to cause harm to the public good, and cost state, local, and private entities large sums of money to control. Given the predilection people have for dumping pond and aquaria specimens into natural systems, or planting exotics on waterfront property, why run the risk. There are numerous, aesthetically pleasing native, and non-invasive exotic species that can easily be substituted.  <b>Time stamp</b> 05/03/2012 11:18:45 AM</p>
<p><b>Commenter Name</b> John Miller  <b>Commenter County</b> 58  <b>Commenter State</b> IN  <b>Commenter City</b> Rising Sun  <b>Commenter Organization</b> Oak Heritage Conservancy  <b>Commenter Email</b> <a href="#">_</a>  <b>Comment</b> I am very glad to see this rule proposed and I hope adopted. We have too many invasive plants in our waterways now. We need no more.  <b>Time stamp</b> 05/03/2012 07:41:02 PM</p>

<p><b>Commenter Name</b> Willam Forsyth Minter  <b>Commenter County</b> 57  <b>Commenter State</b> IN  <b>Commenter City</b> Wolf Lake  <b>Commenter Organization</b> Merry Lea ELC of Goshen College  <b>Commenter Email</b> _  <b>Comment</b> As a land manager of a 1200 ac biological field station that includes 3 significant lakes, I am support of this proposed rule, and support IDNR's efforts to beginning to be proactive in addressing this threat to our natural ecosystems.  <b>Time stamp</b> 05/03/2012 09:40:55 PM</p>
<p><b>Commenter Name</b> Benjamin David Paul Mannies  <b>Commenter County</b> 49  <b>Commenter State</b> IN  <b>Commenter City</b> Indianapolis  <b>Commenter Organization</b>  <b>Commenter Email</b> _  <b>Comment</b> I believe this addition to the Indiana code is vital for the preservation of our natural heritage. I have witnessed many of these exotic and invasive species for sale, unfortunately sometimes they are advertised as other species.   Two species that I most certainly think should be added to the list, however, are Phragmites australis (common reed) and Phalaris arundinacea (reed canary grass).  <b>Time stamp</b> 05/04/2012 05:58:20 PM</p>
<p><b>Commenter Name</b> Donald G. Musselman  <b>Commenter County</b> 52  <b>Commenter State</b> IN  <b>Commenter City</b> Denver  <b>Commenter Organization</b>  <b>Commenter Email</b> _  <b>Comment</b> I support 312 IAC 18-3-23 regarding prohibition of invasive aquatic species. I didn't see Purple Loosestrife on the list--it should be.  <b>Time stamp</b> 05/07/2012 06:17:38 AM</p>
<p><b>Commenter Name</b> Tom Carr  <b>Commenter County</b> 81  <b>Commenter State</b> IN  <b>Commenter City</b> Liberty  <b>Commenter Organization</b>  <b>Commenter Email</b> _  <b>Comment</b> This is a good rule. Stopping the spread of invasive aquatic plants before they get started saves money, time and the whole aquatic environment.  <b>Time stamp</b> 05/10/2012 11:08:12 AM</p>
<p><b>Commenter Name</b> harold lewis huston  <b>Commenter County</b> 43  <b>Commenter State</b> IN  <b>Commenter City</b> Warsaw  <b>Commenter Organization</b> Indiana Lakes Management Society  <b>Commenter Email</b> _  <b>Comment</b> Attention: I am HIGHLY IN FAVOR OF THIS PROPOSAL. My wife and I live on Little Barbee Lake; part of the Barbee Chain of seven lakes. We are very concerned with the water quality on our lake chain. We are in the 5th year of spraying for exotic plants. However, the cut back in LARE funding will cause us to fall behind in trying to control these exotics. Also, our lakes are hosting Bass and Muskie tournaments each year which attracts fisherman and women from Michigan, Illinois and Ohio. These increases our chances of water craft bringing in exotic plants to our lakes. Again I vote Yes to help control these exotic and dangerous plants to our water ecosystem. Sincerely, Lew and Shirley Huston, 101 EMS B61 Lane Warsaw 46582 home phone 574-834-2233 Have a good day  <b>Time stamp</b> 05/12/2012 04:22:45 AM</p>

Steve Yaninek, Chairman of the Indiana Invasive Species Council, and representing the Dean of Agriculture, Purdue University, submitted the following letter:



DEPARTMENT OF ENTOMOLOGY

May 14, 2012

Division of Hearings  
Natural Resources Commission  
Indiana Government Center North  
100 North Senate, Room N501  
Indianapolis, IN 46204

Re: Comments on Aquatic Nuisance Plant Species Proposed Rule (LSA #12-50)

On behalf of the Indiana Invasive Species Council (IISC) I would like to submit comments in regards to the proposed rule that would regulate a number of invasive aquatic plant species as pests or pathogens.

Prior to preliminary adoption of the rule IISC endorsed the development of this rule and supported DNR in moving this rule to the Natural Resources Commission for its consideration. IISC feels that the scientifically based screening and risk assessment tools utilized to determine the invasiveness of aquatic plants will prevent new introductions and therefore protect our natural resources. Although some of those who sell aquatic plants will claim that they will endure an economic loss as a result of the rule, the fact is that they will simply replace regulated species with non-invasive species that have similar growth characteristics and therefore they will have no economic impact.

Invasive aquatic plants once they become established can create recreational difficulties, reduce property values, contribute to drainage and flooding problems, cause water quality problems, and are extremely expensive to control or eradicate. Removing these species from trade is an important step in preventing new introductions. IISC fully supports this rule and we are hopeful that the Natural Resources Commission will formally adopt this rule.

IISC also supports expanding the list of prohibited terrestrial species using a similar risk-based assessment of terrestrial plants. Thank you for considering all of our comments.

Yours sincerely,

A handwritten signature in cursive script, appearing to read "S. Yaninek".

Steve Yaninek  
Representing the Dean of Agriculture  
Chairman, Indiana Invasive Species Council  
Professor and Head

### 3. RESPONSE BY THE DEPARTMENT OF NATURAL RESOURCES

The comments received are overwhelmingly in support of the proposed rule amendments. Doug Keller reviewed the comments and offered responses to several on behalf of the DNR:

Daniel J. Shaver supports the proposed rule amendments and commented that the amendments “*should allow for flexibility for adding new plant threats that emerge over time.*” Shaver commented, however, that the rule “*would be even better if is extended to non-native invasive terrestrial plants*”. The Department responded that the “risk assessment tool used to evaluate aquatic plant species would not adequately characterize the invasiveness of terrestrial species. Other efforts will have to be made to evaluate terrestrial species.”

Benjamin Mannies also supports the rule proposal and commented that the amendments are “*vital for the preservation of our natural heritage. I have witnessed many of these exotic and invasive species for sale, unfortunately sometimes they are advertised as other species.*” Mannies recommended that *Phragmites australis* (common reed) and *Phalaris arundinacea* (reed canary grass) should be added to the list. The Department responded as follows:

The group who developed the risk assessment tool made a conscious decision to limit the species being considered to only those that are "obligate wetland plants" meaning plants that must have standing water or wetland habitats to survive. Common reed and reed canary grass are very invasive species in wetland environments however they also invade drier upland habitats as well. Neither of these species are obligate wetland plants and therefore did not meet the criteria the group established. Both are FACW species on our region of the nation meaning they usually occurs in wetlands (estimated probability 67%-99%), but occasionally found in non-wetlands. The "Wetland Indicator Status" as identified by USDA were utilized for all species.

Donald Musselman suggested that purple loosestrife be added to the proposed rule. The Department responded that *Lythrum* species (commonly known as purple loosestrife), along with *Rosa multiflora*, are currently regulated under 312 IAC 18-3-13.

### 4. HEARING OFFICER ANALYSES, AND RECOMMENDATION REGARDING FINAL ADOPTION

The purpose of this new rule is to assist in the protection Indiana’s aquatic resources from the establishment of aquatic invasive plants that are currently sold in commercial trade. As reflected

in the Commission's September 2011 minutes, the Department's efforts to eradicate or control infestations of invasive aquatic plants have proven costly. Currently, only seven of the 28 invasive aquatic species listed in 312 IAC 18-3-23(a) have a presence in trade. According to the Division of Entomology and Plant Pathology, there is a variety of aquatic plants with similar characteristics to the species proposed for regulation that can be substituted and that do not pose a threat to the environment.

The aquatic plant industry, academia, and a various ecological groups participated in development of the proposed rule. The Indiana Aquatic Invasive Plant Working Group, which is populated by the DNR, Illinois-Indiana Sea Grant, the University of Notre Dame, The Nature Conservancy, ecological consulting companies, and the aquatic plant industry (aquatic plant growers, water garden retail industry, aquarium industry, and Indiana Nursery and Landscape Association), developed the risk assessment process for aquatic plants used to formulate the invasive aquatic species list at 312 IAC 18-3-23(a). An article regarding the proposed rule amendments was also published in the in the May/June 2012 issue of the *Indiana Nursery & Landscape News*, a publication of the Indiana Nursery & Landscape Association (Vol. 72, Issue 3).

The rule amendments were the product of a workgroup that developed a strategy directed exclusively to obligate wetland plants. Citizen comments seemingly underline a need to address a broader spectrum of invasive species. The Department or the Commission may find wisdom in supporting a similar process to target other than obligate wetland plants. The narrow spectrum of this rule initiative does not diminish its worthiness.

The hearing officers recommend the proposed rule be given final adoption as posted to the Indiana REGISTER and attached as Exhibit "A".

Dated: June 1, 2012

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Jennifer M. Kane  
Hearing Officer

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Stephen L. Lucas  
Hearing Officer

**EXHIBIT “A”****TITLE 312 NATURAL RESOURCES COMMISSION****Final Rule**

LSA Document #12-50(F)

**DIGEST**

Adds 312 IAC 18-3-23 to designate, as pests or pathogens, certain invasive aquatic plants to prohibit the sale, distribution, and transport of these invasive aquatic plants. Effective 30 days after filing with the Publisher.

**312 IAC 18-3-23**

SECTION 1. 312 IAC 18-3-23 IS ADDED TO READ AS FOLLOWS:

**312 IAC 18-3-23 Prohibited invasive aquatic plants**

**Authority:** IC 14-10-2-4; IC 14-24-3

**Affected:** IC 14-24

**Sec. 23. (a) The following are prohibited invasive aquatic plants and are declared pests or pathogens regulated under this section:**

- (1) *Azolla pinnata* (mosquito fern).
- (2) *Butomus umbellatus* (flowering rush).
- (3) *Caulerpa taxifolia* (caulerpa or Mediterranean killer algae).
- (4) *Egeria densa* (Brazilian elodea, Brazilian waterweed, Anacharis, or Egeria).
- (5) *Eichhornia azurea* (anchored water hyacinth).
- (6) *Hydrilla verticillata* (Hydrilla or water thyme).
- (7) *Hydrocharis morsus-ranae* (European frogbit or common frogbit).
- (8) *Hygrophilia polysperma* (miramar weed, Indiana swampweed, or hygro).
- (9) *Ipomoea aquatica* (Chinese waterspinach or swamp morning-glory).
- (10) *Iris pseudacorus* (yellow flag iris or tall yellow iris).
- (11) *Lagarosiphon major* (oxygen weed or African elodea).
- (12) *Limnophila sessiliflora* (Asian marshweed or ambulia).
- (13) *Monochoria hastata* (monochoria, arrowleaf, or false pickerelweed).
- (14) *Monochoria vaginalis* (heartshape or false pickerelweed).
- (15) *Myriophyllum aquaticum* (parrot feather or parrot feather watermilfoil).
- (16) *Myriophyllum spicatum* (Eurasian watermilfoil).
- (17) *Najas minor* (brittle naiad or brittle water nymph).
- (18) *Nymphoides peltata* (yellow floating heart).
- (19) *Ottelia alismoides* (duck lettuce).
- (20) *Potamogeton crispus* (curlyleaf pondweed).
- (21) *Sagittaria sagittifolia* (arrowhead).
- (22) *Salvinia auriculata* (giant salvinia).
- (23) *Salvinia biloba* (giant salvinia).
- (24) *Salvinia herzogii* (giant salvinia).
- (25) *Salvinia molesta* (giant salvinia).
- (26) *Sparganium erectum* (exotic bur-reed).

- (27) Trapa natans (water chestnut).**
- (28) Typha angustifolia (narrow-leaf cattail).**

**(b) This section applies to any part or life stage of the species identified in subsection (a).**

**(c) Except as provided in subsection (d), a person must not do the following with respect to any species identified in subsection (a):**

- (1) Sell, offer for sale, gift, barter, exchange, or distribute a species.**
- (2) Transport a species on or within any:**
  - (A) boat;**
  - (B) trailer;**
  - (C) motor vehicle;**
  - (D) bait bucket;**
  - (E) fishing gear;**
  - (F) creel;**
  - (G) tackle;**
  - (H) tackle box; or**
  - (I) other means.**

**(d) Exempted from this section are the following:**

- (1) A person who possesses a species identified in subsection (a) under a permit issued by the state entomologist.**
- (2) A person engaged in a project approved by the state entomologist for the destruction of a species.**

**(e) The division may regulate an area infested by a species identified in subsection (a) to prevent its movement.**

**(f) A person who discovers a species identified in subsection (a) may do the following:**

- (1) Report the discovery to a department fisheries biologist or to the following address:**
  - Department of Natural Resources**
  - Division of Fish and Wildlife**
  - Aquatic Invasive Species Coordinator**
  - 402 West Washington Street, Room W273**
  - Indianapolis, IN 46204**
- (2) Include in the report provided under subdivision (1):**
  - (A) The location of the discovery, including the name of the county and the waterway.**
  - (B) The date of the discovery.**
  - (C) Contact information for the person making the report, including telephone number and address.**

*(Natural Resources Commission; 312 IAC 18-3-23)*