


# **Implementing an AIS Risk Assessment Policy**

**Kevin Kayle**

**ODNR Division of Wildlife**

# It's about timelines and sausage

- A  B
- Internal and External Processes
- Necessity:
  - 2014: ODW-RRP for AIS...
  - 2015, Oct: L\_131\_1295  
Rep. Hall – introduced AIS Legislation...



# Existing ODW IAIS Language

Ohio Administrative Code 1501:31-19-01

## Chapter 1501:31-19 Wild Animal Regulations

### 1501:31-19-01 Wild animal importing, exporting, selling and possession regulations.

(A) It shall be unlawful for any person at any time to possess, import or sell live individuals of the species or their hybrids designated as injurious aquatic invasive species and posted on the Ohio division of wildlife website at <http://www.wildohio.gov>.

(1) It shall be unlawful to possess any of the species listed on the Ohio division of wildlife website at <http://www.wildohio.gov> and designated as injurious aquatic invasive species, except for white perch (*Morone americana*), unless it is in one of the following forms:

- (a) Headless
- (b) Preserved in ethanol or formaldehyde.
- (c) Eviscerated (internal organs removed).

(2) The listed species may be possessed live and used only for research, by zoos, public aquariums, and public displays after obtaining written authorization from the chief.

# Existing ODW IAIS Website

- <http://ohiodnr.gov/invasive-species/aquatic-invasives/injurious-aquatic-invasive-species>
- Introduction, definition, explanation of program
- Publication (5)490 {PDF}:  
List of Ohio's Injurious Aquatic Invasive Species

# Wither the Lacey Act

- Solid framework
  - Federal guidelines: 1900, amended 2008, re-interpreted in 2016-17
  - State application
  - Amplified by Ohio Code
- Get our act together!
  - If you don't do it...  
... someone else will!!



# Add in some mis-communications

## **PETITION**

**To: SALLY JEWELL, SECRETARY, U.S. DEPARTMENT OF THE INTERIOR**

**Petition: To Amend 50 CFR §16.13 to List 43 High Risk Fish, Crayfish, and Mollusk Species as Injurious Species under the Lacey Act**

**Submitted by:** Center for Invasive Species Prevention

**Date:** September 19, 2016

## **PETITION**

The Center for Invasive Species Prevention (CISP, see [www.cisp.us](http://www.cisp.us)) is a public interest non-profit organization that strives to advance policy and non-governmental approaches to prevent the introduction and spread of invasive species. We engage stakeholders;

**NAA:** Ohio's Risk Assessment (i.e. IAIS) = CISP list,  
USFWS consideration = existing ERSS results.

# And you get chaos!

- All of this transpired within an inauspicious 48-hr time period!
- It became clear we needed to spell out how we (ODW) would deal with IAIS and Risk Assessment in Ohio.

# OK, so you need a Policy

- Features:
  - Risk Analysis/Screening for non-native candidate species (and it had to be “ours”)
  - Literature review
  - Ecological Risk Screening methodology
    - comparing climate, water temperatures, habitats, ranges, biology, other water quality parameters, and the potential to transmit diseases to aquatic resources in the State of Ohio
  - QA/QC by ODW staff biologists
  - Review by Ohio AIS Committee
  - Review and approval by ODW Chief
- Oh, and it has to be in the format as specified by ODNR



# We could do it ourselves, but

- Stakeholders
  - Importers/Exporters
  - Legislators
  - Law Enforcement
- 
- Empower all to help build it

# The framework, *kinda*

- **Header:** Subject, ORC/OAC Code reference, Purpose, Policy #, Dates...
- **Definitions**
- **The Policy**
  - **Introduction**
  - *The guts:*
    - Prioritization of Aquatic Species for Consideration of Invasion Risk
    - Conditions Necessitating the Use of the Risk Assessment Procedure
    - Risk Assessment Procedure
    - Risk Classification Process
    - Responsibilities for Conducting the Risk Assessment Procedure
- **Responsibilities (of Division personnel)**
- **Resources (Literature)**
- **Contacts**

The contributors

The process


Defining Injurious AIS

Who's risk is it, anyway?

Communications

Reviews and Approvals

# The Living Policy

<p style="text-align: center;">STATE OF OHIO</p>  <p style="text-align: center;">DEPARTMENT OF NATURAL RESOURCES</p>	<p><b>SUBJECT:</b> Determination of Injurious Aquatic Invasive Species in Ohio</p>	<p>PAGE <u>1</u> of <u>6</u> PAGES</p>
	<p><b>RULE/CODE REFERENCE:</b></p> <ul style="list-style-type: none"> <li>• ORC 1531.02: State ownership of and title to wild animals - prohibited activities</li> <li>• ORC 1531.04: Division of wildlife - powers and duties</li> <li>• ORC 1531.06: Chief of division - powers and duties</li> <li>• ORC 1531.08: Chief of division - powers and authority regarding wild animals</li> <li>• ORC 1533.31: Shipment of live wild animals</li> <li>• ORC 1533.632: Regulation of aquaculture - permits</li> <li>• OAC 1501:31-1-02: Definition of terms</li> <li>• OAC 1501:31-19-01: Wild animal importing, exporting, selling and possession regulations.</li> </ul>	<p>POLICY # DNR-WDL-0057</p> <p>SUPERSEDES: Not Applicable</p>
	<p><b>PURPOSE:</b> To formalize the approach the Ohio Department of Natural Resources Division of Wildlife will use to determine whether a non-native aquatic species should be classified as an IAIS</p>	<p>EFFECTIVE DATE: TBD</p>
	<p><b>APPROVER AND DATE:</b></p> <p><i>[Signature]</i> 9/18/17</p>	<p>REVISION DATE:</p>



**I. DEFINITIONS:**

TERM	DEFINITION
Aquaculture	Propagation and rearing of aquatic species in controlled environments under private control, including but not limited to, for the purpose of sale for consumption as food, as defined in ORC 1533.632(A)(1).
Aquaculture Species	Any aquatic species that may be raised through aquaculture that is either a Class A aquaculture species or a Class B aquaculture species, as defined in OAC 1501:31-1-02 and ORC 1533.362(A)(2).
Class A Aquaculture Species	An aquaculture species that can be raised in Ohio without two levels of escapement protection. Class A aquaculture species are designated in OAC 1501:31-1-02.
Class B Aquaculture Species:	An aquaculture species that can be raised in Ohio with two levels of escapement protection. Class B aquaculture species are designated in OAC 1501:31-1-02.
Escapement Prevention	A mechanism that prevents an aquatic species from transferring to the wild.
High Risk	Presence of this species is likely to harm native ecosystems or commercial, agriculture, or recreational activities dependent on these ecosystems.
Injurious	Injuring or likely to cause injury; harmful; damaging.
Injurious Aquatic	Aquatic organisms living beyond their natural historic range whose

Invasive Species	presence and reproductive potential cause, or are likely to cause, harm to native ecosystems and/or cause harmful commercial, agricultural, recreational or economic impacts.
Invasive	Tending to spread prolifically and undesirably or harmfully.
Non-Native Aquatic Species	An aquatic animal that is outside its natural historic range.
Policy	A course or principle of action adopted or proposed by a government, party, business, or individual.
Procedure	A series of actions conducted in a certain order or manner.
Prohibited Species	Species designated as Injurious Aquatic Invasive Species in Ohio and listed at <a href="http://wildlife.ohiodnr.gov">http://wildlife.ohiodnr.gov</a> under authority of OAC 1501:31-19-01 that are illegal to possess, import or sell live.
Risk	Exposure to the chance of injury or loss.
Risk Assessment Procedure	A series of actions conducted in a certain order or manner to determine the likelihood of an introduced organism to cause harm to natural resources and reduce the human use of these resources.
Species	A group of living organisms consisting of similar individuals capable of exchanging genes or interbreeding.

## II. POLICY:

### Introduction

Aquatic species that are not native to the Lake Erie or Ohio River watersheds within Ohio may establish viable populations if inadvertently or intentionally released into Ohio waters. Potential routes of entry into Ohio of Injurious Aquatic Invasive Species (IAIS) include the intentional or accidental through: the pet/ornamental trade, stocking into privately-owned waterbodies, the bait trade industry, aquaculture, live food markets, transfer through shipping, and intentional or accidental release.

Not all non-native aquatic species are damaging to native communities or humans; therefore, this policy is intended to focus on IAIS that pose a serious threat. The establishment and expansion of some IAIS may have serious negative consequences, including:

- reduction in the population(s) of native species as a result of competition for food or habitats, predation, or disease transfer;
- impact to outdoor recreation, such as fishing, hunting, hiking, wildlife viewing, and water-based activities;
- impact to industry by damaging irrigation and water systems, obstructing water intakes and discharge pipes, and out-competing native species;
- impact to human health, the spread of pathogens, or ecosystem changes which promote pathogen outbreaks.
- adverse commercial, agricultural, recreational, or economic impacts resulting from their presence in these ecosystems;

It is the responsibility of the Ohio Department of Natural Resources (ODNR) Division of Wildlife to protect Ohio's natural resources from the risks posed by IAIS. The ODNR Division of Wildlife has established this policy entitled *Determination of Injurious Aquatic Invasive Species in Ohio* in order to eliminate or minimize the potential for introductions of high risk IAIS into the State of

Ohio. This policy is intended to formalize an approach to determine whether a non-native aquatic species should be classified as an "IAIS" in Ohio. Under OAC 1501:31-19-01(A) it is unlawful for any person at any time to possess, import, or sell live individuals of species or their hybrids designated as IAIS. The current list of species classified as IAIS is maintained on the Division of Wildlife's website at: <http://wildlife.ohiodnr.gov/> on the Injurious Aquatic Invasive Species web page.

#### Prioritization of Aquatic Species for Consideration of Invasion Risk

There are thousands of aquatic organisms in live trade in the United States, and most are not native to Ohio. Not every organism has the potential to establish viable populations or cause ecological damage to aquatic habitats or native communities in Ohio. It is not prudent to evaluate all non-native species currently in trade; therefore, the Division of Wildlife must prioritize species for consideration. The Chief of the Division of Wildlife will prioritize species for consideration of risk assessment using the following criteria:

- evidence of extensive use or handling in Ohio;
- expected extensive use or handling in Ohio;
- potential for release into waters of the State of Ohio;
- collection of a non-native invasive species found in public waters of the State of Ohio that has not been previously captured or recorded.

#### Conditions Necessitating the Use of the Risk Assessment Procedure

The ODNR Division of Wildlife will use a risk analysis procedure to evaluate the risk of invasion under the following circumstances:

- an Ohio aquaculture permit application has been submitted to the ODNR Division of Wildlife to propagate and rear a non-native aquatic species not listed as a Class A or Class B Aquaculture Species as defined by OAC 1501:31-1-02;
- a petition has been received by the ODNR Division of Wildlife from the aquaculture industry or the Ohio Aquaculture Association for a non-native aquatic species to be considered as a Class A or Class B Aquaculture Species as defined by OAC 1501:31-1-02;
- evidence is found of use or handling, or potential use and handling, of a non-native aquatic species that promotes inadvertent release of a potential IAIS in waters of the State of Ohio;
- collection of a non-native invasive aquatic species by state or federal agencies, scientific collectors, or the general public in waters of the State of Ohio.

#### Risk Assessment Procedure

The ODNR Division of Wildlife will evaluate non-native aquatic species as necessary to determine whether they should be classified as an IAIS. ODNR Division of Wildlife trained personnel completing the evaluation procedure will include fisheries administrators, managers, biologists, hatchery superintendents, and law enforcement personnel. The Division of Wildlife may classify a species as an IAIS if it is identified through any of the following:

- (Tier 1) Listed as an injurious or prohibited species under the United States Fish and Wildlife Service (USFWS) Lacey Act (18 USC 42-43; 16 USC 3371-3378).
- (Tier 2) Categorized as "High Risk" for Ohio by ODNR Division of Wildlife personnel using ecological risk screening methodologies including, but not limited to:

- the USFWS Standard Operating Procedures for the Rapid Screening of Species' Risk of Establishment and Impact in the United States (*ERSS*) (USFWS 2016);
  - the Fish Invasiveness Screening Kit (*FISK*) (Lawson et al. 2013, Copp 2013, CEFAS 2014);
  - FishBase (Froese and Pauly 2016) and/or other peer-reviewed sources of information and research on the candidate species in its native range and regarding its non-native invasion history;
  - Determination as an IAIS by another U.S. state or Canadian province with similar climatic, water temperature, and habitat conditions to water areas in Ohio.
- (Tier 3) Determined to have an overall invasion risk that is categorized as "High Risk" for Ohio by an ODNR Division of Wildlife approved, designated contractor using an established risk assessment process that may include methods detailed above in Tier 2, as well as other acceptable evaluations of range, climatic, water temperature, biological, habitat conditions, potential disease transmissions, and determination of certainty of the information.

#### Risk Classification Process

The ODNR Division of Wildlife will use the risk analysis and screening methodologies described above to determine the overall invasion risk for any species prioritized by the Chief of the ODNR Division of Wildlife for consideration. The ODNR Division of Wildlife assessment procedure considers species ecology, history of invasiveness, climate match, habitat, water temperatures, animal and human health attributes, and certainty of assessment information. The classification process will also consider potential social and economic benefits and impairments to Ohio resources. The risk analysis evaluation process includes Quality Assurance/Quality Control protocol reviews by ODNR Division of Wildlife personnel.

The results of the risk analysis and overall assessment report will be distributed to members of the Ohio Aquatic Invasive Species committee (which includes stakeholder representation) for review and comment prior to final determination of risk by the Chief of the ODNR Division of Wildlife.

Using this procedure, there are three potential risk outcomes for the species evaluated:

- *High Risk* for Ohio is determined if scientifically-credible evidence of adverse impacts has been documented elsewhere with similar climate, habitat, water temperatures and biological characteristics and if significant social and/or economic impacts would occur. The species would be added to the Ohio IAIS list making it unlawful for any person to possess, import or sell live individuals of that species or its' hybrids;
- *Low Risk* for Ohio is determined if no evidence of invasiveness is documented elsewhere, the risk determining factors are not similar, and low or minimal social and/or economic impacts or potential benefits may occur. A species classified as low risk in Ohio would be legal to possess, import, or sell live individuals of the species or its' hybrids;
- *Uncertain Risk* for Ohio is determined if information is insufficient to adequately determine risk, and additional information is required before a decision can be made. Possession, importation, or sale of live individuals of the species or its' hybrids would not



be permitted until sufficient information is acquired for a determination of either low or high risk in the State of Ohio.

#### Responsibility for Conducting the Risk Assessment Procedure

The Chief of the Division of Wildlife will determine the entity responsible for conducting the risk assessment. The responsibility may be assigned to:

- ODNR Division of Wildlife personnel or their designated, approved contractor with knowledge of IAIS and experience in evaluating the risk of invasiveness;
- the entity requesting to possess, import or sell live individuals of a species or its' hybrids, providing they use an individual or organization approved by ODNR Division of Wildlife with knowledge of IAIS and experience in evaluating the risk of invasiveness. A risk assessment report would need to be generated for and approved by the Chief of the ODNR Division of Wildlife;
- USFWS personnel with IAIS knowledge and experience to evaluate risk of invasiveness.

#### III. RESPONSIBILITIES:

POSITION OR OFFICE	RESPONSIBILITIES
ODNR Division/Office Supervisors and Managers	<p>A. Maintains Division specific policies, procedures, directives and Executive Orders, and ensures their periodic review and update, as necessary.</p> <p>B. Monitor workforce, ensure compliance, and report violations to Human Resources.</p> <p>C. Proactively communicate questions, concerns and issues to the appropriate contact listed below.</p> <p>D. Ensure employees have access to and successfully complete any necessary ELM training in a timely fashion.</p>
Employee	<p>A. Read and comply with policy.</p> <p>B. Proactively communicate questions, concerns and issues to the appropriate contact listed below.</p> <p>C. Complete all associated policy training in a timely fashion.</p>

#### IV. RESOURCES:

Centre for Environment, Fisheries and Aquaculture Science (CEFAS). 2014. FISK - Fish Invasiveness Screening Kit (v2.03 calibrated). Available online at: <http://cefas.defra.gov.uk/our-science/ecosystems-and-biodiversity/non-native-species/decision-support-tools.aspx>.

Copp, G. H. 2013. The Fish Invasiveness Screening Kit (FISK) for non-native freshwater fishes- a summary of current applications. Risk Analysis 33: 1394-1396.

Froese, R. and D. Pauly. 2016. FishBase. Available online at: <http://www.FishBase.org>.

Lawson, L.L. Jr., J.E. Hill, L. Vilizzi, S. Hardin and G.H. Copp. 2013. Revisions of the Fish Invasiveness Screening Kit (FISK) for its application in warmer climatic zones, with particular reference to peninsular Florida. Risk Analysis 33: 1414-1431.

U.S. Fish and Wildlife Service. 2016. Standard Operating Procedures for the Rapid Screening of Species' Risk of Establishment and Impact in the United States. Available online at: [https://www.fws.gov/injuriouswildlife/injurious\\_prevention.html](https://www.fws.gov/injuriouswildlife/injurious_prevention.html).

U.S. Fish and Wildlife Service. Lacey Act (18 USC 42-43; 16 USC 3371-3378) at <https://www.fws.gov/le/pdffiles/lacey.pdf> and <https://www.fws.gov/injuriouswildlife/>

**V. CONTACTS:**

SUBJECT	OFFICE	TELEPHONE	EMAIL/URL
Policy Issues	Office of Human Resources/Labor Relations	(614) 265-6981	<a href="mailto:Policy.Coordinator@dnr.state.oh.us">Policy.Coordinator@dnr.state.oh.us</a>