

**COMPETES Act Section 71102 Analysis and Recommendations**  
**National Aquaculture Association<sup>1</sup>**  
**March 21, 2022**

Nonnative species comprise 98 percent of animal and plant agricultural production in the United States valued at \$388 billion as 2017 farmgate sales (USDA 2019). Nonnative animals and plants are highly prized by the public for their nutritional, aesthetic or social values as farmed seafood, landscape plants or pets. Notably, a recent analysis estimates the “overall costs of invasive species in the United States across spatiotemporal, taxonomic, and socioeconomic scales” to be \$21.08 billion annually from 2010 to 2020 (Fantle-Lepczyk et al. 2022).

Several analyses have been completed to examine the trade in live animals. There is agreement that approximately 3 billion live animals were legally imported during any ten-year period (Jenkins 2007; Smith et al. 2009; Rhyne et al. 2012; Eskew et al. 2020). The most recent import trade analysis by Eskew et al. (2020) noted 12,924 unique species names within 63 taxonomic Classes reported for more than 2 million shipments consisting of more than 3.2 billion live organisms for the period 2000-2014. The great majority of these nonnative animals and plants provide significant economic benefits while not causing significant harm (Pimental 2007).

The NAA strongly supports the recommendation offered by the father and son authors, Van Driesche and Van Driesche (2000):

“Addressing the impacts of nonnative species in a meaningful fashion requires a measure of discrimination, for portraying all alien species as damaging is counterproductive. The most useful kind of defense for ecosystems threatened by invasive species is careful analysis of the very real threats posed by the damaging minority (page 106).”

The provisions of Section 71102 do not embrace this very thoughtful and constructive approach to assessing, managing and mitigating potential effects to humans, the biotic and abiotic environment and the socio-economics of the United States.

The following analysis and suggestions are intended to strengthen the national approach to native and nonnative species through existing policy and regulation to improve national biosecurity as recommended by Fantle-Lepczyk et al. (2022).

### **Regulating Interstate Trade**

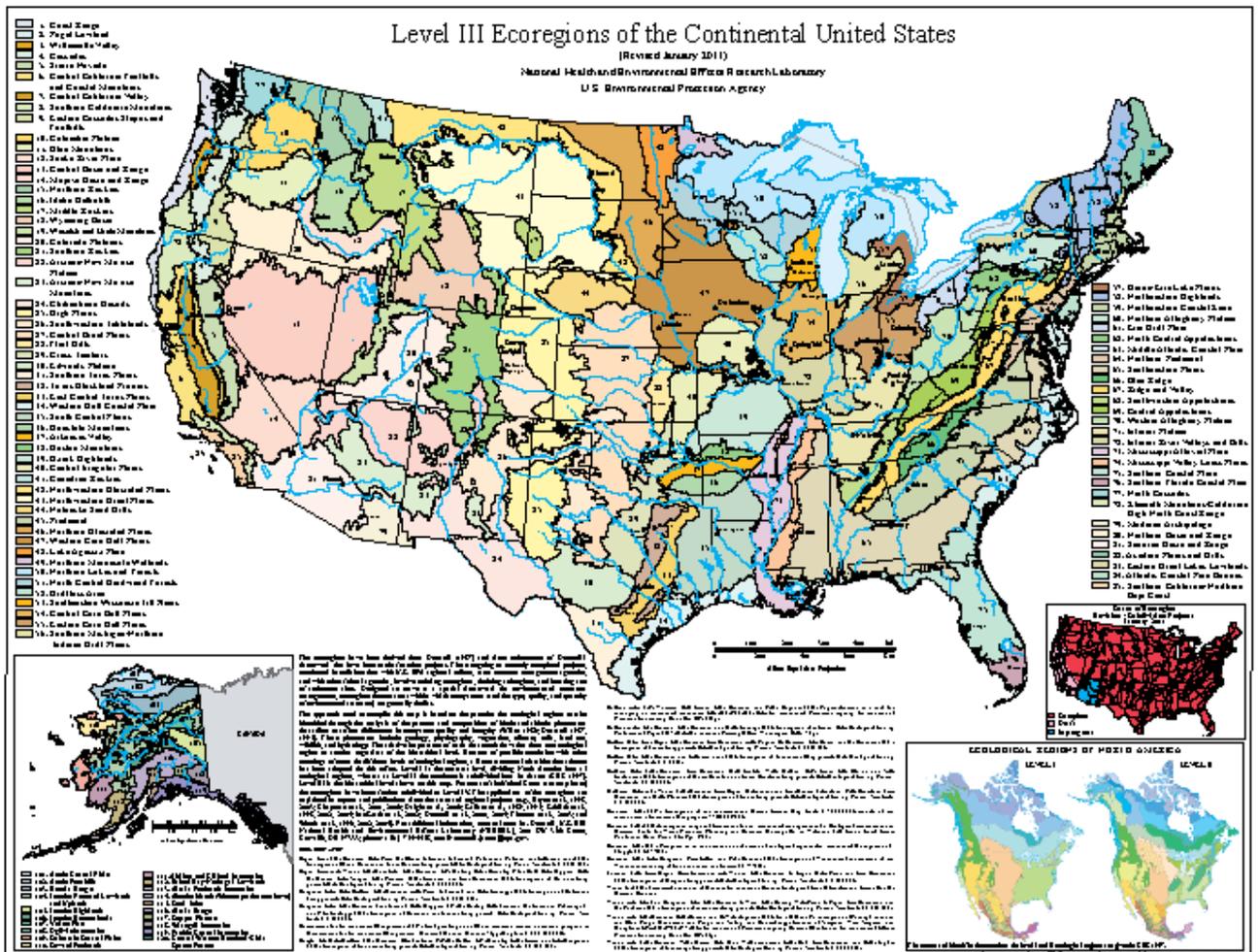
We oppose the Section 71102 provision establishing authority for the Secretary of the Interior (Secretary) to prohibit the interstate movement of Injurious Wildlife within the continental

---

<sup>1</sup> The [National Aquaculture Association](#) is a U.S. producer-based, non-profit trade association founded in 1991 that supports the establishment of governmental programs that further the common interest of our membership, both as individual producers and as members of the aquaculture community. For over 31 years NAA has been the united voice of the domestic aquaculture sector committed to the continued growth of our industry, working with state and federal governments to create a business climate conducive to our success, and fostering cost-effective environmental stewardship and sustainability.

United States. This provision does not provide the Secretary any flexibility to allow interstate trade of species in regions of the country where they pose little to no risk (e.g., a tropical species that may pose a risk in Florida will not pose similar risk in Georgia, Minnesota or Rhode Island) or for farms to ship fertile eggs, fry or fingerlings to states that allow culture.

The United States is composed of 85 distinct ecoregions. Ecoregions denote areas of similarity in the mosaic of biotic, abiotic, terrestrial, and aquatic ecosystem components, with humans considered as part of the biota. These ecoregions have been used to develop regional biological criteria and water quality standards, set management goals for nonpoint source pollution, assess land cover trends, report on ecosystem carbon sequestration, and frame wildlife conservation research, among other applications. These biological, environmental, geophysical and chemical differences mean injurious species regulations are most effective at the state or tribal levels and all states and tribes possess this authority. As a practical outcome, the policy and regulatory measures to manage native and non-native animals are very different for Albuquerque New Mexico (Ecoregion 22 Arizona/New Mexico Plateau) versus Dover Delaware (Ecoregion 63 Middle Atlantic Coastal Plain). Please click [here](#) to access a clear image of an ecoregion map created and maintained by the U.S. Environmental Protection Agency.



For example, the rainbow trout, native to Washington, Oregon, California, Idaho and parts of Montana and Nevada, is farmed in at least 45 continental states, most of which are outside of its native range. The fish is legally stocked under state or tribal regulations as a gamefish for recreational fishing across the United States except where it may not survive. The rainbow trout is included as a member of the 100 world's worst invasive species along with the largemouth bass, American bullfrog, red-eared slider turtle, and brown trout.<sup>2</sup> All of these species are legally transported across state lines in the United States for a variety of commercial and noncommercial reasons. They would not be approved for interstate trade under the provisions of Section 71102 and as determined by current Secretarial risk assessment.

Very few nonnative species pose continent wide risk. States have been, and are now, better positioned to regulate species that pose a risk within their borders to locales that may be conducive for species colonization and potential damage. The Lacey Act supports federal, state and tribal wildlife management laws and will continue to provide this invaluable enforcement tool (Hill et al. 2018). Each tribe and state natural resource protection and department of agriculture has the authority to prohibit or restrict native or nonnative species. Because of state prohibitions and restrictions, the Lacey Act already achieves the goal of regulating interstate trade while also supporting the flexibility by the states and tribes to discern where native or nonnative species pose ecological or economic risks.

Currently, the Lacey Act makes no provision for accidental violations of federal or state statutes. As an example, the accidental inclusion of a species, e.g., a tadpole, prohibited in a receiving state in a shipment of fish from a state where tadpoles are not regulated constitutes a Lacey Act felony violation. This legal risk should be eliminated.

For these reasons, we believe the proposed amendment creates punitive, unjustified prohibitions and criminal risks that may be opposed by the public for the lack of basis in science and risk which may erode a bedrock concept to U.S. regulation: Consent of the governed.

### **Recommendations:**

We recommend the Lacey Act be amended to improve the capability and capacity for the Secretary to assess the risk to the continental United States as a whole or any particular biogeographic region to inform their identification and listing of Injurious Wildlife and then share the analyses with the states, tribes, territories and possessions. The Congress or the Secretary must:

- Adopt the unbiased, science-based risk analysis process described in *Science and Decisions: Advancing Risk Assessment* published by the National Research Council.
- Employ for the purposes of species risk analysis individuals knowledgeable with the species being assessed.
- Publicly post and maintain in real-time tribal, state, and federal nonnative species regulations on a web site so that the public (domestic owners and producers and foreign

---

<sup>2</sup> Invasive Species Specialist Group, 100 of the World's Worst Invasive Alien Species: [http://iucngisd.org/gisd/100\\_worst.php](http://iucngisd.org/gisd/100_worst.php).

visitors and importers) could be informed as to these current and everchanging regulations.

- Provide funding to the states, tribes, territories and possessions to improve their risk analysis capabilities and capacities to refine their restrictions or prohibitions.
- Amend the Lacey Act so that accidental violations are classified as minor misdemeanors.

### **Emergency Injurious Wildlife Listings**

We oppose Section 71102 because the Secretary possesses and exercises the authority to impose an emergency regulation to list species as Injurious Wildlife. In 1991, the Secretary listed 201 salamander species in an expedited process.

In addition, Congress has added species to the Injurious Wildlife list through legislation (e.g., mongoose, fruit bats, English sparrow, and starling in 1900; zebra mussel in 1990; brown tree snake in 1991; bighead carp in 2010; and quagga mussel in 2018). In 1960, Congress removed the English sparrow and European starling.

Current law provides for an emergency regulation followed by rulemaking to finalize a rule that includes the opportunity for public comment. We oppose Section 71102 which empowers the Secretary to list a species under emergency rule for a three-year period *without due process* involving advance notice, opportunity to comment, public hearings, etc.

#### **Recommendations:**

The Lacey Act could be improved by:

- Requiring the FWS to identify and include in their risk analysis methodology state restrictions and prohibitions as significant actions that mitigate or prevent species introduction and establishment risk.
- Authorizing the Secretary to recognize induced species sterility (e.g., triploid chromosome number for diploid species) as a means to mitigate or prevent establishment risk.
- Specifying a time frame for agency Injurious Wildlife listing decision making.
- Require the Secretary to request and consider during any Injurious Species listing process public comment *including* the economic impact of a listing.
- Reversing the Secretary's categorical exclusion from National Environmental Policy Act when listing Injurious Wildlife.

### **An Approved List of Nonnative Species**

We oppose Section 71102 which creates the authority for the Secretary to generate, with public comment, an approved list of species for importation commonly termed "White Lists." Implementing a White List is unusual amongst nations with Australia being an exception. White Lists are also unusual for the federal government as a regulatory body and signatory or participant to international agreements and organizations predicated on prohibiting or restricting species trade for at-risk animals (i.e., Endangered Species Act, Convention on International Trade in Endangered Species of Wild Fauna and Flora), noxious plants (i.e., International Plant

Protection Convention), pathogens that may infect US agricultural animals (U.S. Department of Agriculture, World Organization for Animal Health) and imported animals and animal products capable of causing human disease (Center for Disease Control and Prevention).

### **A Global Species Assessment is an Impossibility**

COMPETES Act, Section 71102(d), Presumptive Prohibition on Importation, requires the Secretary to assess within one year all nonnative “wild mammals, wild birds, fish (including mollusks and crustacea), amphibians, or reptiles, or the offspring or eggs” to determine which species can be imported or traded between the states. We estimate, using readily found and credible sources, the Secretary will have to assess approximately 204,614 species:

- 6,400 mammals minus the 490 mammal species within the United States.
- 10,700 birds minus the 1,512 bird species within the United States.
- 36,128 fish minus 3,000 species within the United States.
- 85,000 molluscs minus 6,000 species within the United States.
- 67,000 crustaceans minus 9,000 species within the United States.
- 8,428 amphibians minus 300 species within the United States.
- 11,690 reptiles minus 440 species within the United States.

The NAA estimates that there are 1,000 to 1,100 aquatic animal species farmed in the United States (including territories and possessions) and the United Nations-Food and Agriculture Organization estimated 466 individual aquatic species, 7 interspecific hybrids of finfish, 92 species groups at genus level, 32 species groups at family level, and 25 species groups (fish, shellfish, reptiles, and crustaceans) that were farmed globally for food, stocking to enhance at-risk fisheries, and commercial and recreational fishing (FAO 2020).<sup>3</sup>

Currently, a White List of 204,614 species is simply not feasible given the current challenge of efficiently and rapidly inspecting the millions of live animals in trade representing ~13,000 species and the Secretary’s responsibility to enforce federal and international species regulations at ports of entry related to:

- Endangered Species Act:
  - 84 mammals
  - 106 birds
  - 140 fish
  - 174 molluscs
  - 30 crustaceans
  - 38 amphibians
  - 56 reptiles

---

<sup>3</sup> FAO (2020) also reported on the ever-growing diversity of species being cultured to feed people; noting about 200–300 more species, including some hybrids, are known to have been farmed in addition to the above-mentioned 466 species and 7 hybrids.

- Lacey Act:
  - 96 mammals
  - 4 birds
  - 431 fish
  - 2 molluscs
  - 6 crustaceans
  - 236 amphibians
  - 10 reptiles
  
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):
  - 894 mammals
  - 1,461 birds
  - 154 fish
  - 2,281 molluscs and crustaceans
  - 201 amphibians
  - 954 reptiles

### **Minimal Quantities for Many Animals in Trade May Not Exist**

As provided within Section 71102, if “minimal quantities” information is not available, then those species for which numbers of individuals imported is not known, they could not be added to a White List.

The Secretary does not capture the quantities of individual ornamental fish or individual birds within certain families of birds imported into the United States to determine whether “minimal quantities” were in trade prior to Section 71102 being implemented. Quantity information is collected for CITES listed species; however, the Secretary possesses no quantity data for animals traded between the states.

### **Animals Not on a White List will be Banned**

We anticipate with the implementation of a White List, then by Secretarial action or public litigation, those species not included on a White List will be added *de facto* to the Injurious Wildlife list and banned for interstate transport as provided in Section 71102.

**Many of the farmed aquatic animals in the United States would not be included on a White List.** Over the last 10 years, the Secretary been classifying native and nonnative aquatic animal and plants as being high or uncertain risk to the United States. For native species, the assessment estimates human, environment or economic impacts outside of their native U.S. range. Please see [Ecological Risk Screening Summaries | U.S. Fish & Wildlife Service \(fws.gov\)](https://www.fws.gov/ecological-risk-screening-summaries).

As examples, currently US farmed and/or stocked species for recreational fishing that would not be White Listed include: African cichlids, American eel, American bullfrog, barramundi, blue catfish, bream, koi, largemouth bass, grass carp, muskie, oscars, redear sunfish, red swamp

crawfish, smallmouth bass, tilapia, tropical aquarium fish (e.g., barbs, danios, loaches, gouramis, guppies, mollies, oscars, plecos, tetras), yellow perch, walleye, white perch and white river crawfish. We can also expect that gamefish commonly stocked by the States, Tribes and public outside their U.S. native range would not be White Listed such as the brook trout, brown trout, crappies, hybrid striped bass, rainbow trout and striped bass.

Under current regulation an animal species and its hybrids are included as Injurious Wildlife and sterility is not a condition that would exempt an animal. The channel-blue catfish hybrid makes up 60% of US farmed catfish production or triploid grass carp stocked in 39 states to manage nuisance aquatic plants would not be included on a White List.

A White List would forestall the opportunity for U.S. farms to: 1) produce these species for food or ornamental uses or to produce eggs, fry, fingerlings or seed to stock domestic or foreign farms and 2) innovate by testing animals with increased fillet yields, attractive color or morphology, faster growth, weight gain or sexual maturity, or greater market acceptance.

In summary, a national White List approach for the United States is not feasible for these reasons:

- Does not allow species possession and interstate movement in parts of the country where they would pose no risk to the natural or human environments.
- May be opposed as a non-trade barrier by other countries.
- Animal identification challenges posed by frequently revised species taxonomy and common names are problematical for the many names that may be applied to any one species.
- Animal identification challenges posed by:
  - species morphology (color, shape, or size) can be influenced by the farm environment during grow-out or through animal breeding and selection to attract buyer interest.
  - early life stage (egg, fry, fingerling, juvenile) similarities. Species within a taxonomic family may have dozens to hundreds of similarly appearing early life stages.
- Processing incoming shipments and providing the animal care required during the species identification process may not be physically possible at the Secretarial designated ports of entry (Anchorage, Atlanta, Baltimore, Boston, Chicago, Dallas/Ft. Worth, Honolulu, Houston, Los Angeles, Louisville, Memphis, Miami, New Orleans, New York, Newark, Portland, San Francisco and Seattle) or special ports (Agana, Alcan, Fairbanks, Juneau, and San Juan) and 30 plus Canadian and Mexican border posts.
- The responsibility placed upon the Secretary to rapidly distinguish, for animal health and welfare reasons, the 785 Injurious Wildlife species, 628 Endangered Species Act listed species, 5,945 CITES listed species and the 204,614 species potentially required by Section 71102 is beyond the ability of experienced taxonomists.
- May direct agency resources away from interdicting illegal trade to focus on adequately monitoring legal trade in species on the White List at designated and special ports of entry.

## References

- Eskew, E.A et al. 2020. United States wildlife and wildlife product imports from 2000–2014. *Scientific Data* 7:22 <https://doi.org/10.1038/s41597-020-0354-5>.
- Executive Order 13751. 2016. Safeguarding the Nation from the Impacts of Invasive Species. (<https://www.federalregister.gov/documents/2016/12/08/2016-29519/safeguarding-the-nation-from-the-impacts-of-invasive-species>).
- FAO (Food and Agricultural Organization). 2020. The State of World Fisheries and Aquaculture 2020. Sustainability in action. Rome. <https://doi.org/10.4060/ca9229en>
- Fantle-Lepczyk, J.E. et al. 2022. Economic costs of biological invasions in the United States. *Science of The Total Environment* 806 (Part 3). <https://doi.org/10.1016/j.scitotenv.2021.151318>.
- Hill, J.E., Q.M. Tuckett and C.A. Watson. 2018. Court ruling creates the opportunity to improve management of nonnative fish and wildlife in the United States. *Fisheries*. 43(5):225-230. ([Court Ruling Creates Opportunity to Improve Management of Nonnative Fish and Wildlife in the United States - Hill - 2018 - Fisheries - Online Library.](#))
- Jenkins, P. 2007. *Broken Screens: The Regulation of Live Animal Imports into the United States*. Defenders of Wildlife. Washington, DC.
- National Research Council. 2009. *Science and Decisions: Advancing Risk Assessment*. The National Academies Press, Washington, DC. (<https://www.nap.edu/catalog/12209/science-and-decisions-advancing-risk-assessment>).
- Pimental, D. 2007. Environmental and economic costs of vertebrate species invasion into the United States in G. W. Witmer, W. C. Pitt, and K. A. Fagerstone (eds) *Managing Vertebrate Invasive Species: Proceedings of an International Symposium* (USDA/APHIS/WS, National Wildlife Research Center, Fort Collins, CO).
- Rhyne, A.L. et al. 2012. Revealing the appetite of the marine aquarium fish trade: the volume and biodiversity of fish imported into the United States. *PLoS ONE* (7(5): e35808).
- Smith, et al. 2009. Reducing the risks of the wildlife trade. *Science*, 324:594-595.
- USDA (U.S. Department of Agriculture). 2019. 2017 Census of Agriculture: United States. National Agricultural Statistics Service. ([https://www.nass.usda.gov/Publications/AgCensus/2017/Full\\_Report/Volume\\_1\\_Chapter\\_1\\_US/usv1.pdf](https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Volume_1_Chapter_1_US/usv1.pdf)).
- Van Driesche, J. and R. Van Driesche. 2000. *Nature Out of Place: Biological Invasions in the Global Age*. Island Press, Washington, DC.
- The National Aquaculture Association extends our appreciation to the following individuals for their invaluable review and comment to inform and improve the NAA's analysis:
- Phil Goss, President, United States Association of Reptile Keepers; Marshall Meyers, N. Marshall Meyers, PLLC., and Art Parola, Aquarium Hobbyist.