

Position Statement on Non-native Aquatic Species

Pennsylvania Fish and Boat Commission Bureau of Fisheries

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An evolution has occurred in the field of fisheries management with respect to the utilization of non-native species and what would become known as aquatic invasive species (AIS). Starting in the mid-19th century, non-native fish species desired for sport, and in some cases for food, were stocked by resource agencies or angler groups in the United States. During this timeframe, many waters in the Commonwealth of Pennsylvania (Commonwealth) and elsewhere were impaired and the primary management goal was to replenish fish stocks. This resulted in the historic introduction and establishment of many non-native fishes in North America. For example, Common Carp *Cyprinus carpio* and Brown Trout *Salmo trutta*, fishes native to Eurasia, were well-established in the Commonwealth prior to the 20th century. Additionally, fish species that are native to western Pennsylvania in the Ohio River and/or Lake Erie basins such as Smallmouth Bass *Micropterus dolomieu*, Largemouth Bass *Micropterus nigricans*, Walleye *Sander vitreus*, Bluegill *Lepomis macrochirus*, Channel Catfish *Ictalurus punctatus*, Muskellunge *Esox masquinongy*, and Northern Pike *Esox lucius* were historically stocked into the waters of the eastern and central part of Pennsylvania during this timeframe. In the many decades since, these species have continued to be desirable sportfish in the Potomac, Susquehanna, and Delaware river basins, with many fisheries supported by natural reproduction and/or supplemented by stocking.

The Pennsylvania Fish and Boat Commission (PFBC) is the jurisdictional agency over fish, aquatic invertebrates, aquatic organisms, reptiles, and amphibians in Pennsylvania and its mission is to protect, conserve, and enhance the Commonwealth's aquatic resources and provide fishing and boating opportunities. The PFBC also has regulatory authority over most AIS in the Commonwealth. AIS are typically defined as non-native aquatic organisms that could establish reproducing populations and cause ecological harm, economic harm, and/or harm to human health when introduced outside of their native range.

Part of the PFBC's mission is to manage AIS to protect the natural resources and fisheries of the Commonwealth. The PFBC manages AIS by working with partners on education, outreach, monitoring, early detection surveys, rapid response, coordination, and enforcing regulations related to AIS and the introduction or transport of aquatic organisms in the Commonwealth. Like many other aquatic resource agencies nationwide, the PFBC focuses AIS management efforts on more recently introduced non-native species that are not well-established statewide. Some examples of these include the Northern Snakehead *Channa argus*, Zebra Mussel *Dreissena polymorpha*, Round Goby *Neogobius melanostomus*, Rusty Crayfish *Faxonius rusticus*, New Zealand Mudsnail *Potamopyrgus antipodarum*, and Hydrilla *Hydrilla verticillata*, which are widely considered AIS. Additionally, species native to some watersheds in Pennsylvania but introduced outside of their native range since the mid-20th century are considered AIS where they do not naturally occur in Pennsylvania. One such example is the Flathead Catfish *Pylodictis olivaris*, which is native to western Pennsylvania (Ohio River basin) but was introduced into the Susquehanna and Delaware rivers in recent decades and is considered an AIS due to the ecological threats posed in these systems. Another is the Blue

Catfish *Ictalurus furcatus*, which is native to parts of the Ohio River basin in western Pennsylvania where the PFBC is working to restore populations that disappeared in the past due to pollution but is considered a major threat to the Susquehanna and Delaware rivers where it is an AIS.

In addition to managing AIS, the PFBC also enforces regulations within [Title 58 of the Pennsylvania Code Chapter 71a](#) related to the importation, possession, transportation, propagation and/or introduction of fish and other aquatic organisms in the Commonwealth's waters. A list of prohibited AIS can be found in Subchapter D. Another key element of these regulations is the list of [Species by Watershed Approved for Open System \(Flow Through\) Propagation and Introductions](#) which is reviewed and updated annually by the PFBC. This list states, by watershed, which species of fish and other aquatic organisms may be legally introduced into Commonwealth waters by stocking, sale as live bait, or production in open propagation systems. In addition, persons or organizations intending to stock aquatic organisms in Commonwealth waters are required to submit a [Notice of Stocking](#) to the PFBC. These and other regulations within Title 58 of the Pennsylvania Code Chapter 71a are important means to prevent the introduction and spread of AIS in Commonwealth waters.

It can be difficult to reconcile the difference between AIS and non-native sportfish species within fisheries management today. Historic stocking of non-native fishes likely caused ecological impacts in some cases, due to the management prioritization of enhancing fish stocks and angling opportunities. Because of their historic introductions, current widespread abundance, and status as supporting important sport fisheries, the PFBC considers these non-native species to be "naturalized" rather than AIS. These naturalized fishes are considered to be non-native species which have fully integrated into Pennsylvania's aquatic communities and have been historically and contemporarily managed as sportfish resources. In most cases, these naturalized species would also be impossible to eliminate for the ecological benefit of native species.

Presently, the PFBC is no longer introducing new non-native fish species outside of their native range. In most instances, non-native species stocked as part of ongoing management activities currently exhibit little to no natural reproduction, exist in watersheds containing naturalized populations, or are stocked in waters that have been altered by human activity and no longer support the historic stream fish community. In these instances, monitoring is undertaken to understand population dynamics. The PFBC will continue to manage and consider more recent or contemporary introductions of non-native fishes and other aquatic species as AIS. Additionally, the PFBC will manage for the benefit of native species in instances where practical. This overall management approach for AIS and naturalized species is largely typical of what is done by other aquatic natural resource agencies in North America.