

Arizona Game and Fish Department Fish Health Requirements for Importation and Stocking of Fish or Fish Eggs of Restricted Aquatic Live Wildlife Species into the State of Arizona

Purpose: The Fish Health Requirements for the importation and stocking of restricted aquatic live wildlife species into Arizona were developed by the Arizona Game and Fish Department to prevent the introduction of fish pathogens into Arizona's fish populations. These requirements are per the state laws and licenses referenced below and will continue to change as more fish species are cultured and/or as new pathogens emerge.

Fish Health Requirements per the Following State Laws and/or Licenses:

Per R12- 4-409H, Additional Stipulations for Importation, Exportation, and/or Stocking of Restricted Aquatic Live Wildlife regarding Disease, Parasite, Pathogen, and Invasive Species.

The additional stipulations are applied to the following special licenses, R12-4-410, R12-4-411, R12-4-417, R12-4-418, R12-4-420, and R12-4-424, for any importation, exportation, and/or stocking of restricted aquatic live wildlife.

Fish Health Requirements: Inspection Guidelines

Frequency of Inspections

Fish Health Inspections must have been conducted a minimum of three times over the last three years with inspections being no less than six months apart, and be free of certified pathogens/diseases specified below. The most current sampling must be performed within 12 months of the date of importation by a certified American Fisheries Society (AFS) Fish Pathologist, Fish Health Inspector, or United States Department of Agriculture accredited veterinarian unless otherwise stipulated. Laboratory testing must be completed at a commercial, university, or government laboratory with approved experience in fish health diagnostic methods using approved laboratory methods described in the latest edition of the "Procedures for the Detection and Identification of Certain Finfish and Shellfish Pathogens"¹ published by the AFS Fish Health Section known as the Fish Health Blue Book or methods listed in the most current version of the Office of International Epizootics Manual of Diagnostic Tests for Aquatic Animals². A fish health inspection must follow the guidelines below for Inspection. Though facility inspections are preferred, a lot inspection may be conducted provided the lot tested is the lot being moved or imported.

¹ AFS-FHS (American Fisheries Society-Fish Health Section). 2020. FHS blue book: suggested procedures for the detection and identification of certain finfish and shellfish pathogens, 2020 edition. Accessible at: <https://units.fisheries.org/fhs/fish-health-section-blue-book-2020/>

² World Organization for Animal Health 2020. Aquatic manual of acceptable diagnostic methods, Accessible at <https://www.woah.org/en/what-we-do/standards/codes-and-manuals/>

Facility and Lot Inspection

Facility Inspection: An on-site statistically based sampling of all fish on a facility for the certifiable pathogens listed below. All lots of fish on a licensed fish farm or facility must have been tested, and have been certified free of the pathogens/diseases specified below. Sampling for the required pathogens will be performed at the 95% confidence level of detecting a disease/pathogen prevalence of 5% in the population. For *Myxobolus cerebralis* (Whirling Disease), only one lot of the most susceptible species from each water source at the facility needs to be tested. It is essential that the lot chosen has had sufficient exposure to create a detectable infection and must be a highly susceptible species (at least 180 days). All sampling and testing of fish tissues must follow the guidelines described in the “Procedures for the Detection and Identification of Certain Finfish and Shellfish Pathogens” published by the AFS Fish Health Section known as the Fish Health Blue Book or methods listed in the most current version of the Office of International Epizootics Manual of Diagnostic Tests for Aquatic Animals.

Lot Inspection: The collection and examination of a statistically valid number of the appropriate samples from a specific lot of a susceptible species for any pathogen listed below. Moribund fish will be included when present. If a lot tests positive for listed pathogens retesting is allowed following the guidelines in “Frequency of inspections”. Unless otherwise stated in the policies and/or regulations of the jurisdictions involved, sampling for the required pathogens will be performed at the 95% confidence level of detecting a disease/pathogen prevalence of 5% in the population. ***For importation purposes this must be the lot designated for importation.*** All sampling and testing of fish tissues must follow the guidelines described in the “Procedures for the Detection and Identification of Certain Finfish and Shellfish Pathogens” published by the AFS Section known as the Fish Health Blue Book or methods listed in the most current version of the OIE Manual of Diagnostic Tests for Aquatic Animals.

If fish are brokered from other facilities, proof of inspection/certification **MUST** be included for all facilities where subject fish were held or come into contact with possible pathogen vectors.

Fish cannot be imported or exported from a facility undergoing any type of epizootic disease or parasite event whether or not the disease or causative agents are listed below.

All Species of fish

Infectious Pancreatic Necrosis Virus (IPNV)
Egtved Virus, Viral Hemorrhagic Septicemia Virus (VHSV)
Infectious Hematopoietic Necrosis virus of Salmonids (IHNV)

Cold water species (i.e. trout, grayling, char) must also be certified for:

Whirling Disease - *Myxobolus cerebralis*
Bacterial Kidney Disease – *Renibacterium salmoninarum*
Furunculosis – *Aeromonas salmonicida*
Ceratomyxosis of Salmonids – *Ceratomyxa shasta*
Enteric Redmouth ERM - *Yersinia ruckeri*
Oncorhynchus masou virus- OMV
Gyrodactylus salaris

Salmonid alphavirus
Piscirickettsia salmonis
Tetracapsula bryosalmonae
Lactococcus petauri/garvieae

Warm water species must also be certified for:

All Susceptible Species- *Bothriocephalus acheilognathi*- Asian tapeworm
All Susceptible Species- *Lactococcus petauri/garvieae*
Carp - Spring Viremia of carp – SVC *Rhabdovirus carpio*
Carp - Koi Herpes virus - (KHV) - *Koi Herpesvirus*
Largemouth and smallmouth bass - Largemouth Bass Virus
LMBV Iridoviridae family - *Iridovirus*, *Chloriridovirus*, *Ranavirus* and *Lymphocystis Virus*
Channel Catfish - Channel Catfish Virus – CCVD Herpesvirus family
Channel Catfish - Enteric Septicemia of catfish- *Edwardsiella ictaluri*
Channel Catfish - *Edwardsiella tarda*
Tilapia - *Edwardsiella tarda*
Tilapia - *Streptococcus iniae*
Tilapia - *Aeromonas salmonicida*
Tilapia - *Yersinia ruckeri*
Tilapia - *Francisella* sp.
Tilapia - *Aphanomyces invadans*
Tilapia - *Gyrodactylus niloticus*
Tilapia - Tilapia Lake Virus - (TiLV)
Barramundi - Viral Nervous Necrosis (VNN)

Invasive Species Stipulations

The licensed fish farm or other facility where source fish were raised or reared must provide a written assurance that the following invasive species are not present in the facility prior to importation, exportation, and/or stockings. Assurances must be provided on an annual basis and documented within 12 months of the date of importation, exportation, and/or stockings. Exemptions may be provided given the facility provides an acceptable Hazard Analysis of Critical Control Points plan, developed and adhered to ensure non-target organisms are not imported into Arizona, exported from Arizona or stocked in Arizona along with the target species.

All importation, exportation, and/or stockings of restricted aquatic wildlife must have been raised or reared in a facility free of the following invasive species:

1. Eurasian Watermilfoil (*Myriophyllum spicatum*)
2. Quagga and Zebra Mussel (*Dreissena bugensis*, *Dreissena polymorpha*)
3. New Zealand mudsnail (*Potamopyrgus antipodarum*)
4. Silver carp (*Hypophthalmichthys molitrix*)
5. Hydrilla (*Hydrilla verticillata*)
6. Bighead Carp (*Hypophthalmichthys nobilis*)

7. Rusty crayfish (*Orconectes rusticus*)
8. Golden algae (*Prymnesium parvum*)
9. Didymo (*Didymosphenia geminata*)
10. Grass Carp* (*Ctenopharyngodon idella*)
11. Water Hyacinth (*Eichhornia crassipes*)
12. Applesnails and mystery snails (*Pomacea spp.*)
13. Golden mussel (*Lymnoperma fortunei*)
14. Giant floater mussel (*Pyangondon grandis*)
15. Spiny waterflea (*Bythotrephes longimanus*)
16. Fishhook waterflea (*Cercopagis pengoi*)
17. Giant salvinia (*Salvinia molesta*)
18. Red Claw Crayfish (*Cherax quadricarinatus*)

* Triploid Grass Carp are acceptable but must come with a certificate of triploidy

All fish deliveries must be free of all non-target organisms including other non-authorized fish species, crayfish, plants, snails, mussels, aquatic plants, etc.