



Wes Moore, Governor
Aruna Miller, Lt. Governor
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Maryland Department of Natural Resources Fish Suppliers Terms and Conditions

Fish Health Inspection Requirements

Any supplier seeking approval to stock fish in Maryland waters must undergo an annual fish health inspection. For questions concerning the requirements, including what testing is required and who may conduct a fish health inspection, please contact the Maryland Department of Natural Resources Cooperative Oxford Laboratory Director, Barbara Johnston, at Barbara.johnston2@maryland.gov or (443) 510-2353.

A fish health inspection is defined as an on-site, statistically based representative sampling of **all fish lots from a facility** for certifiable pathogens. Fish health inspection testing shall be conducted according to methods detailed in the most recent editions of the *Fish Health Section Blue Book: Suggested Procedures for the Detection and Identification of Certain Finfish and Shellfish Pathogens* (U.S. Fish & Wildlife Service & American Fisheries Society-Fish Health Section) or the *Manual of Diagnostic Tests for Aquatic Animals* (OIE – World Organization of Animal Health).

An inspection report is required, and shall include: species examined, lot descriptions, number of fish per lot, where the lots originated and whether they were received as eggs or fish, the pathogens tested for and the number of fish sampled for each pathogen, the results of previous inspections if available, water supplies on the facility, name, address and phone number of the fish health inspector, signature and date of the fish health inspector or responsible party. Fish health inspection reports shall list inspector qualifications and laboratory methods used for pathogen detection. See attached example form.

Facilities that use OIE inspection protocols (150 fish/farm), and also culture both salmonid species and warm-water species, shall test a minimum of 150 warm-water fish and 150 salmonids for the pathogens of concern. Facilities that use Blue Book inspection protocols are typically required to test 60 fish from each lot on the facility. Whirling disease testing is required for only 60 fish of the most susceptible species on each specific water source. The detection of certain pathogens will not necessarily disqualify the supplier from importing fish into Maryland. The DNR Aquatic Animal Health Program Manager will evaluate discrete test results in consultation with the supplier.

Fish Inspection Pathogen Inspection Requirements are species-dependent and shall include

Species of the Salmonidae (e.g. trout, salmon, char) Family:

- Viral Hemorrhagic Septicemia (VHS)
- Infectious Salmon Anemia (ISA)
- Infectious Pancreatic Necrosis (IPN)
- Infectious Hematopoietic Necrosis (IHN)

- Whirling Disease (*Myxobolus cerebralis*)
- Bacterial Kidney Disease (*Renibacterium salmoninarium*)
- Furunculosis (*Aeromonas salmonicida*)
- Enteric Redmouth (*Yersina ruckeri*)

Species of the Cyprinidae (e.g., minnows), Catostomidae (e.g., suckers), and Osmeridae (e.g., smelt):

- Spring Viremia of Carp (SVC)
- Viral Hemorrhagic Septicemia (VHS)
- Infectious Pancreatic Necrosis (IPN)
- Infectious Hematopoietic Necrosis (IHN)
- Koi Herpesvirus (KHV)
- Enteric Redmouth (*Yersina ruckeri*)
- Furunculosis (*Aeromonas salmonicida*)
- Asian Tapeworm (*Bothriocephalus acheilognathi*)

Species and hybrids of the Centrarchidae (e.g., black bass), Moronidae (e.g., striped basses), Percidae (e.g., walleye, yellow perch), and Esocidae (e.g., pikes):

- Spring Viremia of Carp (SVC)
- Viral Hemorrhagic Septicemia (VHS)
- Infectious Pancreatic Necrosis (IPN)
- Infectious Haematopoietic Necrosis (IHN)
- Largemouth Bass Virus (LMBV)
- Furunculosis (*Aeromonas salmonicida*)
- Enteric Redmouth (*Yersina ruckeri*)
- Asian Tapeworm (*Bothrioscephalu acheilognathi*)

Species of the Ictalurid (Catfish) family:

- Channel Catfish Virus (CCV)
- Viral Hemorrhagic Septicemia (VHS)
- Infectious Pancreatic Necrosis (IPN)
- Infectious Hematopoietic Necrosis (IHN)
- Enteric Septicemia of Catfish (ESC or *Edwardsiella ictaluri*)
- Furunculosis (*Aeromonas salmonicida*)
- Enteric Redmouth (*Yersina ruckeri*)

Species of the Cichlidae (Tilapia) family:

- Tilapia Lake Virus
- Tilapia Iridovirus Infections
- Spring Viremia of Carp (SVC)
- Viral Hemorrhagic Septicemia (VHS)
- Infectious Pancreatic Necrosis (IPN)
- Infectious Haematopoietic Necrosis (IHN)
- Furunculosis (*Aeromonas salmonicida*)
- Enteric Redmouth (*Yersina ruckeri*)
- *Streptococcus iniae*
- *Streptococcus agalactia*

Some species may require consultation with the Maryland Department of Natural Resources for any additional specific pathogens of concern for that species. Additionally, any other cytopathic effects (CPE) in viral testing shall be reported. The qualified inspector, as defined below, shall determine whether testing for additional pathogens is appropriate. Testing shall include the most susceptible fish on the facility in the sampled lot. Testing shall include a representative sample of all lots, species, and life stages housed at the facility. The sample shall include any moribund fish or fish showing signs of disease, if available. You shall notify the inspector if you have treated the fish with any therapeutics, including antibiotics, within the past 30 days of the sample collection. The inspector shall note any treatments in the fish health inspection report. Any chemicals applied to fish shall adhere to label usage and U.S. Food & Drug Administration regulations and protocols.

The fish health inspection will terminate one year from the effective date of inspection certificate, or upon discovery of a prohibited or regulated disease, provided that no new fish or eggs from an uncertified source are added to the population. You shall notify the Maryland Department of Natural Resources if any fish are added to the population after the facility inspection report is issued. These additional fish are required to demonstrate suitable fish health inspection reporting.

Inspector Qualifications

No owner or employee with direct supervisory authority over a facility may serve as an inspector for their fish culture facility. Inspector qualifications and contact information shall be listed on the inspection report. Individuals who collect samples for a fish health inspection must be one of the following:

- An accredited and licensed veterinarian: a veterinarian holding a current veterinary license who has also fulfilled the accreditation requirements of the United States Department of Agriculture Animal and Plant Health Inspection Service (USDA/APHIS).
- A certified aquatic animal health inspector or fish pathologist: an individual certified by the American Fisheries Society/Fish Health Section (AFS/FHS) as an Aquatic Animal Health Inspector or Fish Pathologist.
- A person recognized by the Maryland Department of Natural Resources with responsibility and training for fish health inspections in the state from which the fish originate.

Acceptable Detection Methods of Pathogens

- Protocols for presumptive and confirmatory diagnosis are listed in the Fish Health Section Blue Book: Suggested Procedures for the Detection and Identification of Certain Finfish and Shellfish Pathogens.
- Protocols listed in the 2019 OIE Manual of Diagnostic Tests for Aquatic Animals for each of the OIE-listed fish diseases under “Section 2.3., Diseases of Fish”.

Lot Definitions

Lot (Baitfish): is a pooled collection of a single species that is held in a self-contained holding structure. A new lot is formed every time uncertified fish are added to an existing lot. When fish from distinct lots are combined, they form a newly distinct lot. Adding fish from an inspected/certified source will not result in the creation of a new lot.

Lot (Broodstock): a group of sexually mature fish on a facility of the same species that share a common water source at the facility.

Lot (Wild Fish): is a pooled collection of a single species that is obtained from a discrete spawning population collected from a river system, lake, stream, pond or ditch. Various age groups can be combined to form a single lot.

Exception

In broodstock lots where ovarian fluid is available, sampling for viral pathogens should be conducted at the 95% confidence level of detecting a 2% APPL. If kidney/spleen and ovarian fluid samples are going to be used, they must be obtained from different individuals.

Lot (Non-Broodstock): is a group of non-broodstock fish on a facility of the same species and age group that have continuously shared a common water source at the facility throughout their life history.