

**Pennsylvania Fish and Boat Commission's  
Protocol for Certification of Salmonids for  
the Presence of Gill Lice  
(*Salmincola edwardsii*, *Salmincola californiensis*)**

**April 12, 2019**

This protocol outlines the procedures to be followed by a certifying official when salmonid species are inspected for gill lice (*S. edwardsii* and *S. californiensis*). Certification does not require lethal sampling and certification must be completed on site by a recognized certifying official (see below).

Due to the host specificity of *S. edwardsii* and *S. californiensis*, **Brown Trout (*Salmo trutta*) are not required to be certified at this time.** All other species of salmonids allowed to be introduced into the waters of the Commonwealth shall be sampled and can be found in Table 1. If additional evidence shows that other species of salmonids are susceptible to species of *Salmincola*, this protocol will be revised.

**Table 1. Salmonid species currently approved for introduction into Pennsylvania by the PFBC.**

<b>Genus</b>	<b>Species</b>	<b>Common Name</b>
<i>Salvelinus</i>	<i>fontinalis</i>	Brook Trout
<i>Salmo</i>	<i>trutta</i>	Brown Trout
<i>Salmo</i> <i>Salvelinus</i>	<i>trutta</i> <i>fontinalis</i>	Tiger Trout
<i>Oncorhynchus</i>	<i>mykiss</i>	Rainbow Trout, Golden Rainbow Trout, Steelhead, Kamloops
	<i>kisutch</i>	Coho Salmon

The certifying official shall complete and sign the attached Certificate and provide a copy to the party requesting certification and to the PA Fish & Boat Commission (PFBC).

PA Fish and Boat Commission  
Benner Spring Research Facility  
Attn: Fish Health Unit  
1735 Shiloh Road, State College, PA 16801

The certifying official may certify shipments, individual lots or the entire facility, as defined below.

**Shipment Certification**

A shipment is a specific group of fish that have been isolated from the rest of the population at the propagation facility. All fish in the shipment will be transported as a group to a specific location on a specific date. If a shipment consists of several lots, as defined below, a lot certification will need to be conducted for each lot within the shipment.

**Lot Certification**

Individual lots shall be certified following the protocols and definitions found in *Suggested Procedures for the Detection and Identification of Certain Fish and Shellfish Pathogens* (Blue Book) developed by the American Fisheries Society-Fish Health Section (AFS-FHS) and listed below:

- A non-broodstock lot of fish is defined by AFS-FHS as a group of non-brood fish of the same species and age group that have continuously shared a common water source throughout their life history. A representative sample of all strains and rearing units containing this lot shall be included.
- A broodstock lot of fish is defined by AFS-FHS as a group of sexually mature fish of the same species that share a common water source.
- For the purpose of fish health inspections and certifications, fish are assigned to one of four groups based on either size or age (Table 2).
- Sampling shall be performed at the 5% assumed pathogen prevalence level (APPL) with a 95% confidence level (Table 3).

**Table 2.** Suggested categories for grouping fish for sample collection.

<b>Designation</b>	<b>Total Length</b>	<b>or Age</b>
Fingerlings	2 - 5 in.	< 12 months of age
Yearlings/Adults	> 5 in.	Non-brood fishes greater than 12 months of age
Broodstock	> 5 in.	Sexually mature fish greater than 12 months of age and used as broodstock

**Table 3.** Sample number based on assumed pathogen prevalence level (APPL) in the population of 5%.

<b>Lot Size (number of fish)</b>	<b>Number of Fish Required for Sample 5% APPL</b>
</=50	35
100	45
250	50
500	55
2000	60
>100,000	60

### **Facility Certification**

A facility is defined as the physical location/street address of the fish being certified. A facility inspection will consist of all lots of salmonids species listed in table 1 and located at the facility being certified.

### **Recognized Certifying Official**

- State Licensed Veterinarian. The veterinarian must be licensed in the state where the facility is located.
- American Fisheries Society-Fish Health Section (AFS-FHS) Certified Fish Pathologist or Certified Aquatic Animal Health Inspector.
- State or federal animal health official.
- Individual appointed by the state’s competent authority (PA Department of Agriculture) or by the Pennsylvania Fish and Boat Commission.

### **Certification Frequency**

- Shipment Certification is applicable for 30 days.
- Lot Certification is applicable for 90 days.
- Facility Certification is applicable for 12 months.

### **Fish Transfers**

A location with a Gill Lice Facility Certificate may receive trout with a Gill Lice Certificate from another location without further testing and retain their Gill Lice Facility Certification if:

- The receiving location has a current Gill Lice Facility Certificate and
- The fish received have a current Gill Lice Certificate and
- The shipping location provides a copy of the Gill Lice Certificate to the receiving location and
- The receiving location maintains the shipper's Gill Lice Certificate for seven (7) years

Any location with a Gill Lice Facility Certificate will lose that certification if they receive Salmonid species (except Brown Trout) that do not have a Gill Lice Certificate.

### **Identification of Gill Lice**

Presence of gill lice is determined following the protocols in *Suggested Procedures for the Detection and Identification of Certain Fish and Shellfish Pathogens* (Blue Book) developed by the American Fisheries Society-Fish Health Section (AFS-FHS) Section 1, Chapter 3.2.13 Gill Maggot Disease (Genus *Salmincola*).

- Presumptive identification of gill lice is done visually, without using a microscope. The Certifying official shall inspect gill lamellae, opercula, oral cavity and base of fins. A fish is considered positive based on visual identification of gill lice. If confirmatory identification of gill lice is necessary, it can be done by using published taxonomic keys or published Polymerase Chain Reaction (PCR) protocols.

**Link to *Suggested Procedures for the Detection and Identification of Certain Fish and Shellfish Pathogens* (Blue Book) developed by the American Fisheries Society-Fish Health Section (AFS-FHS)**  
<http://www.afs-fhs.org/bluebook/bluebook-index.php>

Questions regarding this protocol may be directed to the PFBC's Fish Health Unit at (814) 353-2223.

# Pennsylvania Fish and Boat Commission Gill Lice (Genus *Salmincola*) Certificate

For artificial propagators and dealers providing salmonid species for activities requiring a Gill Lice Certificate.

**Certification is for: Shipment ( ) Lot ( ) Facility ( )**

Shipment and Lot Certificates are only for non-Brown Trout salmonids indicated on this form; other salmonids may be located on the premise that were not inspected by the certifying official. Facility Certification indicates that all lots of non-Brown Trout salmonids on the premise were inspected.

Name of Facility \_\_\_\_\_ Propagator/Dealer Owner \_\_\_\_\_ State/County \_\_\_\_\_/\_\_\_\_\_

Aquaculture Propagator/Dealer License Number \_\_\_\_\_ Address Propagator/Dealer \_\_\_\_\_

Date of Certification \_\_\_\_\_ (Shipment, Lot, and Facility Certificates expire 30 days, 90 days, and 12 months, respectively, after the date of certification.)

## Shipment/Lots Inspected

(If needed additional lots or shipments can be indicated on page 2)

Lot Identifier	Species	Age (Months)	~Size (inches)	Number of Fish	Location of Fish in Facility	Salmincola sp. Observed Yes/No	For shipment certification, address of destination and expected date of Shipment

## Certifying Official Verification

(If certifying official is a Veterinarian, they must be licensed in the state where the facility is located.)

Certifying official is a: ( ) AFS-FHS Certified Fish Health Inspector/Fish Pathologist ( ) State Licensed Veterinarian  
 ( ) State/Federal Animal Health Official ( ) Individual appointed by the state's competent authority (PDA or PFBC)

**I certify that I have randomly sampled the fish following the protocols required by the PA Fish and Boat Commission.**

Printed name \_\_\_\_\_ Veterinary ID Number (if applicable) \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

Phone Number ( \_\_\_\_\_ ) Email: \_\_\_\_\_

All non-Brown Trout Salmonids were inspected for gill lice (*Salmincola*) by visual examination. Based on the lifecycle of the female copepod, microscopic infestations will not be detected. Non-Brown Trout Salmonids were not examined for any other signs of infectious or communicable diseases.

# Pennsylvania Fish and Boat Commission Gill Lice (Genus *Salmincola*) Certificate

For artificial propagators and dealers providing salmonid species for activities requiring a Gill Lice Certificate.

Name of Facility \_\_\_\_\_

Date of Certification \_\_\_\_\_ (Shipment, Lot, and Facility Certificates expire 30 days, 90 days, and 12 months, respectively, after the date of certification.)

## Additional Lots Inspected (if needed)

Lot Identifier	Species	Age (Months)	~Size (inches)	Number of Fish	Location of Fish in Facility	<i>Salmincola</i> sp. Observed Yes/No	For shipment certification, address of destination and expected date of Shipment

All non-Brown Trout Salmonids were inspected for gill lice (*Salmincola*) by visual examination. Based on the lifecycle of the female copepod, microscopic infestations will not be detected. Non-Brown Trout Salmonids were not examined for any other signs of infectious or communicable diseases.

**Additional Comments and Information:**

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