

# **Arkansas Game and Fish Commission**

## **Code Book**

**The regulations in this Code Book are hereby adopted by the Arkansas State Game and Fish Commission under authority of Amendment 35 to the Constitution of the State of Arkansas. All laws, rules, regulations, or orders in conflict with the regulations in this Code Book are hereby repealed by the Arkansas State Game and Fish Commission.**

## J1.01 Approved Commercial Aquaculture Species List

The intent of this list is to delineate species that pose minimal threat to Arkansas' aquatic biota. These farm-reared species may be imported, traded (within the state), or used for commercial aquaculture purposes, once appropriate permits and health certificate requirements have been met. All imported species must comply with health certification requirements (see Codes [35.11](#), [35.12](#), and Addendum Chapter [11.00](#)).

\* Denotes non-native species

### **Class Crustacea**

#### **Family Cambaridae**

*Procambarus acutus* (White River crayfish)

*Procambarus clarkii* (Red Swamp crayfish)

### **Class Osteichthyes**

#### **Family Polyodontidae**

*Polyodon spathula* (Paddlefish)

#### **Family Lepisosteidae**

*Lepisosteus oculatus* (Spotted gar)

*Lepisosteus osseus* (Longnose gar)

*Lepisosteus platostomus* (Shortnose gar)

#### **Family Amiidae**

*Amia calva* (Bowfin)

#### **Family Anguillidae**

*Anguilla rostrata* (American eel)

#### **Family Clupeidae**

*Alosa chrysochloris* (Skipjack herring)

*Dorosoma cepedianum* (Gizzard shad)

*Dorosoma petenense* (Threadfin shad)

#### **Family Esocidae**

*Esox americanus* (Grass pickerel)

*Esox niger* (Chain pickerel)

#### **Family Cyprinidae**

- \* *Carassius auratus* (Goldfish, including ornamentals)
- \* *Ctenopharyngodon idella* (Grass carp) - USFWS-CERTIFIED TRIPLOIDS ONLY
- Cyprinella venusta* (Blacktail shiner)
- \* *Cyprinus carpio* (Common carp, including koi) - Koi must be obtained from a permitted source and spawned and reared only in the United States
- Hybognathus nuchalis* (Mississippi silvery minnow)
- Luxilus chrysocephalus* (Striped shiner)
- Lythrurus umbratilis* (Redfin shiner)
- Notemigonus crysoleucas* (Golden shiner)
- Notropis atherinoides* (Emerald shiner)
- Notropis boops* (Bigeye shiner)
- Notropis buchmanii* (Ghost shiner)
- Notropis volucellus* (Mimic shiner)
- Opsopoeodus emiliae* (Pugnose minnow)
- Pimephales notatus* (Bluntnose minnow)
- Pimephales promelas* (Fathead minnow)
- Pimephales vigilax* (Bullhead minnow)
- Semotilus atromaculatus* (Creek chub)

### **Family Catostomidae**

- Erimyzon oblongus* (Creek chubsucker)
- Erimyzon sucetta* (Lake chubsucker)
- Hypentelium nigricans* (Northern hogsucker)
- Ictiobus bubalus* (Smallmouth buffalo)
- Ictiobus cyprinellus* (Bigmouth buffalo)
- Ictiobus niger* (Black buffalo)
- Minytrema melanops* (Spotted sucker)
- Moxostoma erythrurum* (Golden redhorse)
- Catostomus commersoni* (White sucker)

### **Family Ictaluridae**

- Ictalurus furcatus* (Blue catfish)
- Ameiurus melas* (Black bullhead)
- Ameiurus natalis* (Yellow bullhead)
- Ameiurus nebulosus* (Brown bullhead)
- Ictalurus punctatus* (Channel catfish)
- Noturus gyrinus* (Tadpole madtom)
- Noturus nocturnus* (Freckled madtom)
- Pylodictis olivaris* (Flathead catfish)

### **Family Aphredoderidae**

- Aphredoderus sayanus* (Pirate perch)

### **Family Cyprinodontidae**

- Fundulus notatus* (Blackstripe topminnow)
- Fundulus olivaceus* (Blackspotted topminnow)

### **Family Poeciliidae**

*Gambusia affinis* (Mosquitofish)

### **Family Atherinidae**

*Labidesthes sicculus* (Brook silverside)

### **Family Moronidae**

*Morone chrysops* (White bass)

*Morone mississippiensis* (Yellow bass)

\* *Morone saxatilis* (Striped bass)

### **Family Centrarchidae**

*Centrarchus macropterus* (Flier)

*Lepomis cyanellus* (Green sunfish)

*Lepomis gulosus* (Warmouth)

*Lepomis humilis* (Orangespotted sunfish)

*Lepomis macrochirus* (Bluegill)

*Lepomis marginatus* (Dollar sunfish)

*Lepomis megalotis* (Longear sunfish)

*Lepomis microlophus* (Redear sunfish)

*Lepomis miniatus* (Red spotted sunfish)

*Micropterus dolomieu* (Smallmouth bass)

*Micropterus punctulatus* (Spotted bass)

*Micropterus salmoides* (Largemouth bass)

*Pomoxis annularis* (White crappie)

*Pomoxis nigromaculatus* (Black crappie)

*Elassoma zonatum* (Banded pygmy sunfish)

### **Family Percidae**

*Percina caprodes* (Logperch)

*Sander canadensis* (Sauger)

*Sander vitreus* (Walleye)

### **Family Sciaenidae**

*Aplodinotus grunniens* (Freshwater drum)

### **Family Cichlidae - Species must be obtained from a permitted source and spawned and reared only in the United States**

\* *Oreochromis aureus* (Blue tilapia)

\* *Oreochromis mossambicus* (Mozambique tilapia)

\* *Oreochromis niloticus* (Nile tilapia)

### **Class Bivalvia**

#### **Family Unionidae**

*Pyganodon grandis* (Giant Floater)

### **VHS Fish Farm Health Inspection Permit:**

It shall be unlawful for any person to import, transport or otherwise receive into the state of Arkansas live fish and/or fertilized eggs from any VHSV-positive state (Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, Wisconsin, and Ontario and Quebec) without first obtaining the appropriate permit (see Code [35.01](#)) in addition to a valid Fish Farm Health Inspection Permit issued by the Arkansas Game and Fish Commission and complying with the provisions of said permit. All persons wishing to ship live fish or fish eggs into Arkansas from VHSV-positive states must first obtain the Fish Farm Health Inspection Permit and a copy of the permit must accompany all shipments into the state, even if the fish are transported by a third party. Furthermore, any person hauling live fish through Arkansas from VHS-positive states are prohibited from discharging water from fish-hauling tanks while within the state. All shipments of live fish or eggs coming into Arkansas must be accompanied by an invoice, bill of lading, and appropriate health certificates in compliance with Code [35.03](#). Additionally, the fish health inspection report must be no more than 60 days old from date of reported test results at time of application for Fish Farm Health Inspection Permit from Commission.

A Fish Farm Health Inspection Permit shall be an annual permit that is issued in 2 six-month intervals (refer to Addendum [D1.01](#)). The first interval will cover the period of January 1 - June 30, and the second interval will cover the period of July 1 - December 31. The second interval of the permit will be issued only after new semi-annual testing results are submitted to the Commission. For additional information, please refer to Addenda [D1.01](#), [I1.01](#), and Code [35.11](#).

### **Grass Carp (USFWS-Certified Triploid Only):**

All grass carp sold for stocking purposes must be USFWS-certified triploid. Permitted producers participating in the USFWS-certified triploid grass carp program may transfer certification of triploidy to other holders of valid fish farm, fish dealer, or independent hauler permits that wish to sell USFWS-certified grass carp. All persons selling USFWS-certified triploid grass carp are required to maintain records for a minimum of 3 years containing the purchaser's name, contact information, and number of fish sold. All USFWS-certified triploid grass carp must be maintained in separate tanks, hauling units, and/or culture units from uncertified grass carp.

### **Health Certificates:**

See Addendum Chapter [11.00](#) for fish health requirements for all live fish and/or fertilized eggs being imported into the state of Arkansas. All required documents must be submitted to the Commission and reviewed prior to importation.

### **Hybrids:**

It is our intent that production and offer for sale of any hybrid fish species is permissible if both parent species are included on the Approved Commercial Aquaculture Species List.

### **Wild Crayfish:**

The harvest and sale of native Arkansas crayfish species that naturally colonize aquaculture ponds and are cultured incidental to production of other aquaculture species is allowed.

### **Wild Turtles:**

Aquaculture facilities possessing a valid Resident Fish Farmer Permit may deplete or relocate aquatic turtles naturally colonizing on the premises and impacting fish production, unless the turtle species is otherwise protected. The harvest and sale of native Arkansas aquatic turtle species that naturally colonize aquaculture ponds and are cultured incidental to production of other aquaculture species is allowed with an Aquatic Turtle Harvest Permit or Aquatic Turtle Farmer/Dealer Permit, unless the species is otherwise protected. See Code Chapter [34.00](#).

### **Aquarium Species:**

It is not the intent of this policy to constrain aquarium trade. Marine and tropical fish commonly distributed in the aquarium trade may be sold without special permit, as long as they are held only in closed aquarium systems (aquaria, tanks, or pools) and are not otherwise prohibited. These species cannot be released in Arkansas.

### **Aquaponics / Hydroponics:**

It is not the intent of this policy to constrain aquaponics/ hydroponic production. If live fish and/or fertilized fish eggs are being possessed, propagated, offered for sale, or conditional species are being utilized, at minimum a fish farm permit is required. Any approved species imported for aquaponics/hydroponics must comply with all requirements set forth in Code Chapter [35.00](#) and Addenda Chapters [I1.00](#), [J1.00](#), and [V1.00](#), including health certificate, invoice, and bill of lading requirements.

### **Conditional Species:**

Conditional species are species that are permitted for specific purposes provided the additional terms set forth by AGFC Fisheries Division and biosecurity measures are met. Individuals possessing or desiring to possess these species are required to apply for a Conditional Species Possession Permit in addition to the appropriate permit under Code [35.01](#). The permit application will detail the location of the facility, biosecurity measures taken to prevent the possibility of escape, and the numbers and species to be held (these numbers are best estimates of broodfish and expected production for upcoming year). Some species may be limited to specific types of permit holders based on a species evaluation. The permitted culture of any conditional aquaculture species shall be conducted in a responsible manner that minimizes the possibility of escape and adheres to any additional requirements set forth by the Commission. Permitted individuals are required to construct a barrier that prevents escape of juvenile and adult life stages. Drainpipes from holding and culture units where these species are held must be screened, with mesh sized adequately to prevent escape, at all times that water is being released. Double screening is required during water release for units with bighead carp and black carp species. The above-referenced measures and any additional measures listed on the application to eliminate the possibility of escape will be considered as part of the best management practices that the applicant agrees to implement for their facility. The Commission will maintain records of the number and location of these species in the state and will review initial applications and inspect facilities to evaluate the potential for escape.

Facilities will be randomly re-inspected once in a three-year period of time to ensure adherence to biosecurity measures. The permittee will be notified a minimum of 5 days in advance of an inspection, and an employee of the facility is requested to accompany AGFC personnel during the inspection. This permit must be renewed annually and is non-transferrable. In the event that a conditional aquatic species is released or escapes from a permitted facility, the permittee shall notify the AGFC Fisheries Division immediately. The permittee shall **not** be responsible for unforeseen occurrences such as floods, lightning, or sabotage. Holders of Conditional Species Possession Permits must verify that buyers of these species in Arkansas also have appropriate permits. Conditional species permit holders are required to submit an annual report, on a form provided by the Commission with the permit renewal request, indicating the number of each conditional species produced (farmers) or sold (dealers) in the state of Arkansas. Failure to comply with the terms of the permit may result in permit denial or revocation.

The species covered by these permits include:

### **Family Palaemonidae**

*\*Macrobrachium rosenbergii* (Malaysian prawn) – certified disease-free (certification must be posted onsite). This species must meet the same disease certification requirements as members of Family Penaeidae.

### **Family Penaeidae**

*\*Litopenaeus vannamei* (Pacific White Shrimp) – specific pathogen-free (certification must be posted onsite)

Requirements for culture of marine shrimp species *Litopenaeus vannamei* in Arkansas:

- A. All culture must be in an indoor closed recirculating system- with **NO** discharge. This will provide biosecurity protection against pathogens, predators, and undesirable species from entering or exiting the facility.
  1. Floor drains - If needed, each floor drain must have an appropriately-sized mesh/screen to prevent escape by any sized cultured organism. Triple screening is recommended. Discharge from floor drains must enter into the containment tank that can be chlorinated and dechlorinated prior to release into an approved municipal sewer system whose effluent is treated within the system.
  2. Catastrophic failure - In the event of a catastrophic failure the floor drain containment tank must be large enough to accommodate the water volume of at least 1.5 times the volume of the largest individual tank in use within the operation to prevent any escape. The containment tank must be chlorinated and dechlorinated prior to discharge. Any possible escape must be reported immediately to the AGFC Fisheries Division.
- B. All solids are to be placed in sealed containers and are for permitted landfill disposal only.
- C. Water sources must be municipal or well water source. No connection to above-ground freshwater source will be permitted.

- D. All live shrimp must be placed in ice water prior to leaving the facility, or processed prior to leaving the facility.
- E. Facilities permitted for the culture of *L. vannamei* culture will not be approved for simultaneous culture of any other crustacean species.
- F. All post-larval shrimp, nauplii, or brood imported into Arkansas must be obtained from a **Domestic** US Marine Shrimp Farming Program Specific Pathogen Free (SPF) or Specific Pathogen Resistant (SPR) certified disease free culture facility (No wild caught shrimp permitted: brood, post-larvae, or nauplii). All shrimp imported must be from a SPF or SPR certified facility with at least two consecutive years of disease free certification for all crustacean pathogens listed with the US Marine Shrimp Farming Program and OIE. All testing must be conducted by approved shrimp disease testing facilities. For facilities propagating *L. vannamei* routine disease testing must be conducted. Copies of disease certification must be submitted to AGFC and posted on-site.

USMSFP List of Pathogens & Diseases for SPF Penaeid Shrimp

<u>Pathogen Type</u>	<u>Pathogen</u>	<u>Pathogen Group</u>	<u>Category</u>
<b><u>VIRUS</u></b>	*TSV	dicistrovirus	C-1
	*WSSV	nimavirus (n.f.)	C-1
	*YHV/GAV/LOV	ronivirus (n.f.)	C-1, 2
	**IHHNV	parvovirus	C-2
	**BP	occluded baculovirus	C-2
	**MBV	occluded baculovirus	C-2
	**BMN	unclassified nonoccluded BV	C-2
	HPV	parvovirus	C-1, 2
	IMN	totivirus	C-1, 2
	<b><u>PROCARYOTE</u></b>	NHP	alpha proteobacteria
<b><u>PROTOZOA</u></b>	Microsporidians	microsporidia	C-2
	Haplosporidians	haplosporidia	C-2
	Gregarines	apicomplexia	C-3

<sup>A</sup> C-1 pathogens defined as excludable pathogens that can potentially cause catastrophic losses in one or more American penaeid species; C-2 pathogens cause economically significant disease and are excluded from breeding centers, hatcheries, and some types of farms.

\*Listed by Office of International Epizootics as a “Notifiable Disease” as of May 1999

\*\*Listed by Office of International Epizootics with “Other Significant Diseases” as of May 1999



## OIE Crustacean diseases

- Acute hepatopancreatic necrosis disease
  - Crayfish plague (*Aphanomyces astaci*)
  - Yellowhead virus
  - Infectious hypodermal and haematopoietic necrosis
  - Infectious myonecrosis
  - Necrotising hepatopancreatitis
  - Taura syndrome
  - White spot disease
  - White tail disease
- A. Propagation of species. Propagation of the species will be permitted with the requirement that an Aquaculturist develop and implement a health management plan that includes conducting, at a minimum, annual routine disease inspection through an approved shrimp disease testing laboratory. The Aquaculturist will be responsible for submitting copies of disease inspection reports to Arkansas Game and Fish Commission and having current disease inspection certificate(s) posted on-site. Additionally, the Aquaculturist must notify the AGFC Fisheries Division and the State of Arkansas Veterinarian immediately in the event that an above-listed pathogen is detected.
- B. Discharge from facility. Should a facility need to be drained in an emergency situation, the Arkansas Department of Environmental Quality will provide additional information on discharge limits, site location, and any permits required regarding Environmental Protection Agency guidelines.
- C. The facility must develop a biosecurity plan, hazard analysis critical control point (HACCP) plan, and a catastrophic failure management plan to be kept on file, by the facility and by AGFC, as part of Best Management Practices.

## Family Salmonidae

- \* *Oncorhynchus clarki* (Cutthroat trout)
- \* *Oncorhynchus mykiss* (Rainbow trout)
- \* *Salmo trutta* (Brown trout)
- \* *Salvelinus fontinalis* (Brook trout)

Specific requirements regarding importation or stocking salmonid species are located in Code Chapter [27.00](#) and Addendum Chapter [V1.00](#). Health certificates are required for all salmonid species. All sellers of these species are responsible for verifying that buyers have obtained appropriate permits prior to importation and/or stocking.

## Family Cyprinidae

*Hypophthalmichthys nobilis* (Bighead carp) – Resident Fish Farm Permit holders that hold a valid conditional species permit for this species by January 31, 2021 may continue to obtain an annual conditional species permit for this species for the duration of which they are the owner of the fish farm and continue to meet the terms of the permit. Permits are non-transferrable. Stocking in Arkansas is restricted to only approved fish farms

and research/educational facilities meeting the terms and requirements for conditional species. Species may be transported by the permittee or an independent hauler with appropriate permits, if required. This regulation does not prohibit the movement of bighead carp to a legally licensed facility in another state.

\* Diploid *Mylopharyngodon piceus* (Black carp) - Stocking in Arkansas is restricted to only approved fish farms and research/educational facilities meeting the terms and requirements for conditional species. Species may be transported by the permittee or an independent hauler with appropriate permits, if required. This regulation does not prohibit the movement of diploid black carp to a legally licensed facility in another state.

\* *Mylopharyngodon piceus* (Black carp) - Triploids - Stocking in Arkansas is restricted to only approved fish farms and research/educational facilities meeting the terms and requirements for conditional species. Species may be transported by the permittee or an independent hauler with appropriate permits, if required. This regulation does not prohibit the movement of triploid black carp to a legally licensed facility in another state.

\* *Ctenopharyngodon idella* (Grass carp) - Diploids - Stocking in Arkansas is restricted to only approved fish farms and research/educational facilities meeting the terms and requirements for conditional species. Species may be transported by the permittee or an independent hauler with appropriate permits, if required. This regulation does not prohibit the movement of diploid grass carp to a legally licensed facility in another state.

**\*\*\*NOTE\*\*\* The species listed below are listed as injurious species by the USFWS**

*Hypophthalmichthys nobilis* (Bighead carp)

*Hypophthalmichthys molitrix* (Silver carp)

*Mylopharyngodon piceus* (Black carp)

The injurious wildlife listing means that under the Lacey Act it is illegal to import into the United States live silver, bighead, or black carp, including viable eggs or hybrids of the species, except by permit for zoological, education, medical, or scientific purposes.

### **Prohibited Species:**

It is unlawful to import for commercial aquaculture any specimen or hybrid from species commonly known as:

- Alewife *Alosa pseudoharengus*
- Blueback herring *Alosa aestivalis*
- Eurasian ruffe *Gymnocephalus cernua*
- Mexican banded tetra *Astyanax aeneus*
- Orfe *Leuciscus idus*
- Piranha Family *Serrasalminidae*

- Roach fish *Rutilus rutilus*
- Round Goby *Neogobius melanostomus*
- Rudd *Scardinius erthrophthalmus*
- Snakehead *Family Channidae*
- Stickleback fish *Family Gasteroseidae*
- Walking catfish *Clarias batrachus*
- White Perch *Morone americana*
  
- Chinese mitten crab *Ericher sinensis*
- Marbled crayfish *Procambarus virginalis*
- Everglades crayfish *Procambarus alleni*
- Redclaw crayfish *Family Cherax*
- Rusty crayfish *Orconectes rusticus*
- Smooth Marron *Cherax cainii*
- Yabby *Cherax destructor*
  
- Big-Ear radix *Radix auricularia*
- Channeled apple snail *Pomacea canaliculata*
- Chinese mystery snail *Cipangopaludina chinensis*
- Ghost Ramshorn snail *Biomphalaria havanensis*
- New Zealand mud snail *Potamopyrgus antipodarum*
- Quagga mussel *Dreissena bugensis*
- Quilted melania *Tarebia granifera*
- Red-rim melania *Melanoides tuberculata*
- Zebra mussel *Dreissena polymorpha*

### **Permits to Culture Unlisted Species:**

Requests to import, possess, propagate, and culture species not listed in this policy will be scientifically evaluated on a case-by-case basis. The burden of proof will rest with the applicant to provide justification as to the need to import and culture the species, justify why currently approved species listed in this policy will not fill the need, and provide information that the requested species will have no significant ecological impact on native species or the resources of the state. The permitted culture of any unlisted aquaculture species shall be conducted in a responsible manner that excludes the possibility of escape from holding and culture units and adheres to the terms set forth in the permit issued by AGFC. Permitted individuals are required to construct a barrier that prevents escape of juvenile and adult species from culture facilities, and meets all biosecurity, containment, and health certification requirements set forth by the AGFC Fisheries Division scientific review of the requested species. In the event that unlisted aquatic organisms are released or escape from a permitted facility, the permittee shall notify the AGFC Fisheries Division immediately. Additional screening for aquatic animal health pathogens may be required for unlisted species due to country of origin, water source, or specific pathogens of concern and will be considered on a case by case basis.

### **Permit Processing Procedures:**

#### **Permit Renewal:**

Conditional Species Possession Permits and Unlisted Aquaculture Species Permits will be issued on an annual basis to correspond with expiration dates of Fish Farmer, Fish Dealer, and Independent Hauler Permits. The Arkansas Game and Fish Commission is responsible for providing renewal notices to permit holders

six weeks in advance of permit expiration date. Existing permits will remain in effect past listed expiration date if a renewal application is submitted by January 31st of the renewal year and processing is pending with AGFC.

**Permit Review:**

Conditional Species Possession Permits and Unlisted Aquaculture Species Permits are granted at the approval of the AGFC Chief of Fisheries. The AGFC may solicit input as needed in the scientific review of individual species and applications.

**Modification of Lists:**

Any individual may petition the AGFC Chief of Fisheries to add or remove species on the *Approved Commercial Aquaculture Species List* or the *Conditional Aquaculture Species List*. The petition must provide thorough documentation of why a species should or should not be included on a list. Petitions should address the biological threat of the species, including native range, habitats utilized, movement patterns, spawning requirements, reproductive rate, food habits, pathogens of concern, and temperature and water-quality limitations.

Documentation of any introductions or escapes outside the species' native range must be included and evaluate the potential impacts to native species through predation, competition, disease transmission, and displacement. Petitions must include copies of all pertinent reference material.

Petitions to add or remove species on the *Approved Commercial Aquaculture Species List* or the *Conditional Aquaculture Species List* will be responded to by the AGFC Chief of Fisheries after thorough scientific review of the species and a consultation with an advisory board representing appropriate AGFC staff.