

Wyoming Game and Fish Department  
Fish Division

FISH IMPORTATION RISK ASSESSMENT

**Fish Culture Site:** Charlie Craig Fish Hatchery (CCFH), Arkansas Game and Fish Commission



**Primary Rearing Site Information**

**Location:** previously Centerton Hatchery, Charlie Craig Fish Hatchery is located in Northwest Arkansas, directly ½ mile south of Centerton in Benton County. CCFH is approximately 31 miles northwest of Fayetteville, Arkansas and approximately 120 miles southwest of Springfield, Missouri.

**Map Coordinates:** Range 31W, Township 19N, Section 5

**Drainage:** hatchery water source starts immediate drainage emptying into Little Osage Creek that flows into the Illinois River. Illinois River flows southwest into Tenkiller Ferry Reservoir, Oklahoma that empties into the Arkansas River.

**Water Supply:** The CCFH water source is an artesian spring generating approximately 250 gallons per minute

**Fish Species Typically Reared:** Fish in **bold** indicate potential species for importation:

<b>Channel Catfish</b>	Walleye	Green Sunfish
<b>Black Crappie</b>	Largemouth Bass	Striped Bass
White Crappie	Bluegill Sunfish	Paddlefish
Walleye	Redear Sunfish	

## **Rearing Facilities**

**Cool/Warmwater Hatchery Building:** this building is used to incubate, hatch, and begin rearing of cool and warmwater fish species. The water supply originates from an artesian spring and the effluent drains into Little Osage Creek.

**Fish Building:** this building is used primarily for holding warm and coolwater fish species and the water source is from the spring.

**Fish Production Ponds:** the hatchery is composed of 20 earthen ponds ranging in size from 1/3 to 11 acres in size. The water source is a spring and effluent drains into Little Osage Creek.

## **Propagation of Fish for Importation**

**Channel Catfish:** reared in fish production ponds (APPENDIX A).

- Spawning Site – channel catfish are allowed to wild spawn (in spawning cans) in hatchery ponds.
- Spawning Period – June 1 to June 30.
- Incubation – CCFH Hatchery Building. Egg masses are moved to incubation baskets.
- Incubation Period – typically 5-7 days.
- Hatching – fry are hatched in the Hatching Building and stocked in ponds in “fry boxes” for initial feeding and predation control.
- Pond Preparation – rearing ponds are filled approximately 1 month prior to stocking.
- Thinning of Ponds – approximately 1 to 2 months after initial stocking fish are distributed into other ponds to decrease stocking rates. Fish are reared for 5 to 6 months before harvest.
- Pond Harvest – ponds are partially drained; fish are seined, loaded into hauling truck via a boom loader and transported to the fish building holding tanks for clean up prior to final loading.

**Black Crappie:** reared in fish production ponds (APPENDIX B).

- Spawning and Rearing – black crappie are allowed to wild spawn in hatchery ponds (April to early May). Adult fish (10 pairs/acre) are stocked into fertilized ponds.

Natural spawn, hatch and rearing occur in same pond environment until progeny reach desired size for harvest.

- Pond Preparation – rearing ponds are filled approximately 1 month prior to stocking, and fertilized with 20 lbs liquid fertilizer per acre.
- Pond Harvest – ponds are partially drained; fish are seined, loaded into hauling trucks with buckets and transported to the fish building holding tanks for clean up prior to final loading.

## **Drainage Information**

**Fish in Drainage:** Species in **bold** indicate species not found in Wyoming. Species represent main drainage, water supply isolated and hatchery under control environment above main drainage.

Chestnut Lamprey	Gizzard Shad	Central Stoneroller
Grass Carp	Common Carp	<b>Bigeye Chub</b>
<b>Gravel Chub</b>	<b>Redspot Chub</b>	Golden Shiner
<b>Bigeye Shiner</b>	<b>Stiped Shiner</b>	<b>Ozark Minnow</b>
<b>Cardinal Shiner</b>	<b>Roseface Shiner</b>	<b>Redfin Shiner</b>
Southern Redbelly Dace	<b>Bluntnose Minnow</b>	White Sucker
<b>Northern Hogsucker</b>	<b>Spotted Sucker</b>	<b>Black Redhorse</b>
<b>Golden Redhorse</b>	Black Bullhead	Brown Bullhead
Channel Catfish	<b>Slender Madtom</b>	Flathead Catfish
<b>Northern Studfish</b>	<b>Blackspotted Topminnow</b>	Mosquitofish
<b>Brook Silverside</b>	Green Sunfish	Bluegill Sunfish
<b>Longear Sunfish</b>	Redear Sunfish	Smallmouth Bass
Largemouth Bass	<b>Spotted Bass</b>	White Crappie
Black Crappie	<b>Greenside Darter</b>	<b>Fantail Darter</b>
<b>Least Darter</b>	<b>Stippled Darter</b>	Orangethroat Darter
<b>Speckled Darter</b>	<b>Banded Darter</b>	<b>Logperch</b>
<b>Banded Sculpin</b>		

### **Amphibians in Drainage:**

<b>Species Identified in Drainage</b>	<b>Drainage in Species Probable Range</b>
American Bullfrog	Eastern Spadefoot
Northern Leopard frog	Plains Spadefoot
Spring Peeper	Cope's Gray Treefrog
Green Treefrog	
Northern Cricket Frog	
American Toad	

**Known Aquatic Nuisance Species in Drainage:** None identified.

## **Aquatic Nuisance Species (ANS)/Non-Target Species (NTS) Identification and Interaction**

**Aquatic Nuisance Species (ANS) Plants** – none have been identified at hatchery.

**Non-Target Species (NTS) Plants:** filamentous algae are the only vegetation found in fish production ponds. This organism is not of concern during pond harvest and can be removed easily.

**Non- Target Species (NTS) Fish:** Although infrequent, NTS may be present in kettles during pond harvest.

- Production sites
  - ✓ Egg and fry rearing: no exposure to NTS in artesian spring water supply.
  - ✓ Ponds: possible NTS exposure when fish are in ponds due to transport by birds. Although extremely rare, mosquito fish have been found in production ponds. NTS are removed from seines, fish basket, and hauling tanks whenever possible.
- Harvesting ponds
  - ✓ Identification and removal of mosquito fish during harvesting process (seining and loading).
- Fish building holding tanks
  - ✓ If needed, removal of any NTS fish can be accomplished at this stage. They can be removed during unloading, holding, and loading phase of this operation.

**Non- Target Species (NTS) Amphibians:** Amphibian larval forms may be present in pond and seine during pond harvest.

- Production sites
  - ✓ Egg and fry rearing: no exposure to NTS amphibians in artesian spring water supply.
  - ✓ Ponds: possible NTS amphibian introduction from spawning directly in pond. Tadpoles are removed from seines, fish basket, and hauling tanks whenever possible.
- Harvesting ponds
  - ✓ Identification and removal of tadpoles during harvesting process (seining and loading).
- Fish building holding tanks
  - ✓ If needed, removal of any amphibians can be accomplished at this stage. They can be removed during unloading, holding, and loading phase of this operation.

**Non - Target Species (NTS) Invertebrates:** invertebrates are rare in pond production and, if present, are not commonly transported with the fish to the fish building for final processing. No concern of NTS invertebrate exposure.

**Specific Pathogens of Concern and/or Other Health Concerns:** Annual fish health assessments are conducted on channel catfish production and few abnormalities have been observed. The hatchery has experienced mild outbreaks of Enteric Septicemia of Catfish (ESC), columnaris, and winter fungal infection. These pathogens are ubiquitous and occur in waters throughout Arkansas.