

# Catfish HACCP Plan

(Hazard Analysis and Critical Control Point)

## Channel and Blue Catfish Subadult Production

Updated 8/25/00

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### 1. Product Description

<b>Firm Name:</b>	Uvalde National Fish Hatchery
<b>Firm Address:</b>	PO Box 708 Uvalde, TX 78802
<b>Species of fish:</b>	Channel and Blue catfish
<b>Cultured, wild harvested, or both:</b>	Cultured
<b>Harvest method:</b>	Seine and pond drawdown
<b>Method of distribution and storage:</b>	Pond reared, held temporarily in raceways, distributed by truck
<b>Intended use and consumer:</b>	Public and Tribal Waters for fishing

## 2. Flow Diagram

<b>Step 1</b>	Ponds are filled in May/June
<b>Step 2</b>	Catfish fry are stocked in ponds
<b>Step 3</b>	Catfish are monitored and fed regularly
<b>Step 4</b>	Ponds are treated to control algae and vegetation growth
<b>Step 5</b>	Water is added to ponds to offset leakage and evaporation
<b>Step 6</b>	Catfish are harvested to raceways approx 48 hours before shipping
<b>Step 7</b>	Catfish are held in raceways
<b>Step 8</b>	Distribution truck(s) is/are filled and catfish are loaded
<b>Step 9</b>	Catfish are (sometimes) transferred to smaller distribution units
<b>Step 10</b>	Catfish are stocked into receiving waters

## 3. Potential Hazards

List aquatic species here that are found in hatchery water supply or local waters that could potentially hitchhike to receiving waters and cause ecological harm. These are called *Aquatic Nuisance Species (ANS)*.

- a. **ANS Fish:** Includes bluegill, green sunfish, crappie, gizzard shad, largemouth bass, goldfish, koi, gambusia, fathead minnow.
- b. **ANS Other Vertebrates:** Includes toad, leopard, and bullfrog tadpoles, red eared turtles, etc.
- c. **ANS Invertebrates:** Includes Asian clams, zebra mussels, crayfish, snails, predatory aquatic insects etc.
- d. **ANS Plants:** Includes water star thistle, hydrilla, water hyacinth, etc.

## 4. Hazard Analysis Worksheet

(1) Harvest or Aquaculture Step	(2) Identify potential ANS hazards introduced or controlled at this step (1)	(3) Are any potential ANS hazards significant? (Yes/No)	(4) Justify your decisions for column 3.	(5) What preventive measures can be applied to prevent the significant hazards?	(6) Is this step a critical control point? (Yes/No)
1) Pond is filled using well water.	Fish	No	650+ foot well depth	n/a	No
	Other Vertebrates	No	A	n/a	No
	Invertebrate	No	A	n/a	No
	Plant	Yes	Plant seed may already be in pond bottom	Application of pre- emergent herbicide prior to filling	No
2) Catfish fry are stocked in ponds	Fish	No	Fry are hatched in nursery,	n/a	No
	Other Vertebrates	No	an ANS free environment	n/a	No
	Invertebrate	No	A	n/a	No
	Plant	No	A	n/a	No
3) Catfish are monitored and fed regularly	Fish	No	Pelleted diet,	n/a	No
	Other Vertebrates	No	no forage	n/a	No
	Invertebrate	No	species are used	n/a	No
	Plant	No	A	n/a	No
4) Ponds are treated to control algae and vegetation growth	Fish	No	Treatments do not	n/a	No
	Other Vertebrates	No	involve possible	n/a	No
	Invertebrate	No	introduction of ANS	n/a	No
	Plant	No	A	n/a	No
5) Water is added to ponds to offset leakage and evaporation	Fish	Yes	Fish ANS species may only be introduced via flooding which results in wild fish entering ponds over flooded levees or through backed up drain lines.	Installation of check-valves on drain lines could halt fish introduction when back flow.	No
	Other Vertebrates	No	650+ foot well depth	n/a	No
	Invertebrate	No	A	n/a	No
	Plant	No	A	n/a	No
6) Catfish are harvested to raceways	Fish	Yes	ANS could be present	Use proper mesh size net to	Yes
	Other Vertebrates	Yes	in ponds	grade out smaller ANS.	Yes
	Invertebrate	Yes	A	Visually pick out larger ANS.	Yes
	Plant	Yes	A	A	Yes
7) Catfish are held in raceways approx 48 hours	Fish	Yes	ANS could have gotten by step six	Hand pick to remove	Yes
	Other Vertebrates	Yes	A	High Flow in raceways moves non-mobile ANS to screens for easy removal. Salt treatment to alleviate fish stress can kill many invertebrates and tadpoles.	Yes
	Invertebrate	Yes	A	A	Yes
	Plant	Yes	A	A	Yes
8) Distribution truck(s) are filled and catfish are loaded	Fish	No	Well water is used	Hand pick ANS when seen	No
	Other Vertebrates	No	A	A	No
	Invertebrate	No	A	A	No
				A	A

(1) Harvest or Aquaculture Step	(2) Identify potential ANS hazards introduced or controlled at this step (1)	(3) Are any potential ANS hazards significant? (Yes/No)	(4) Justify your decisions for column 3.	(5) What preventive measures can be applied to prevent the significant hazards?	(6) Is this step a critical control point? (Yes/No)
	Plant	No			No
9) Catfish are (sometimes) transferred to smaller distribution units	Fish	Yes	ANS may be in water used	Screen incoming water	Yes
	Other Vertebrates	Yes	A	or use well water	Yes
	Invertebrate	Yes	A	A	Yes
	Plant	Yes	A	A	Yes
10) Catfish are stocked into receiving waters	Fish	No	Catfish have passed through	n/a	No
	Other Vertebrates	No	several screenings for ANS	n/a	No
	Invertebrate	No	and have endured a stressful	n/a	No
	Plant	No	transportation trip. Any further sort would jeopardize survival of the catfish	n/a	No
	Fish				
	Other Vertebrates				
	Invertebrate				
	Plant				
	Fish				
	Other Vertebrates				
	Invertebrate				
	Plant				

## 5. HACCP Plan Form

(1) Critical Control Point (CCP)	(2) Significant Hazard(s)	(3) Control Measures	Monitoring				(8) Corrective Actions(s)	(9) Records	(10) Verification
			(4) What	(5) How	(6) Frequency	(7) Who			
6) Catfish are harvested to raceways	Fish, invertebrates, amphibians, mollusks, plants	Use largest mesh size net that is practical. Remove any ANS seen during harvest	Ensure that nets allow escape of small ANS, and hand-pick larger ANS	Equipment preparation and visual alertness during harvest	Before and during harvest	Hatchery employee	Sort with larger net is existing one is inadequate	Records of ANS to be kept in Pond Log book.	Hatchery Manager to review records and ensure that measures are taken
7) Catfish are held in raceways approx 48 hours	Fish, invertebrates, amphibians, mollusks, plants	Hold fish in high flow raceway. Siphon and net out tadpoles, plant fragments, crayfish. Conduct a visual sort.	Ensure that non-target species are removed from raceway prior to loading.	Visual inspection	When fish first placed in raceway, while creatures are disoriented. Again after 24 hours when flow has pushed non-mobiles to screen.	Hatchery employee	Hold longer, repeat process. Grade fish if necessary and will not induce too much stress.	Pond Log and trip record.	Hatchery Manager to review records and ensure that measures are taken
9) Catfish are (sometimes) transferred to smaller distribution units	Any and all possible ANS, depending on water source for other trucks	Screen incoming water or use well water. Do NOT use water known to have Zebra mussels.	Fine mesh screen on intakes for trucks.	Fit screens over the intake hose.	When filling trucks	Federal, State, or Tribal employee operating smaller unit. Service employee to verify	Dump water and re-fill if necessary.	Trip record.	Hatchery Manager to review records and ensure that measures are taken

Firm Name:	Uvalde National Fish Hatchery	Species of Fish:	Channel and Blue Catfish
Firm Address:	PO Box 708 Uvalde, TX 78802	Method of Storage and Distribution:	Ponds, outdoor raceways, and distribution truck
Signature:		Intended Use and Consumer:	Sport fishing by public and tribes
Date:			