

Largemouth Bass HACCP Plan

(Hazard Analysis and Critical Control Point)

Florida Strain Largemouth Fingerling Production

Updated 8/29/00

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1. Product Description

Firm Name:	Uvalde National Fish Hatchery
Firm Address:	PO Box 708 Uvalde, TX 78802
Species of fish:	Florida strain Largemouth Bass
Cultured, wild harvested, or both:	Cultured
Harvest method:	Seine and pond drawdown
Method of distribution and storage:	Pond reared, held temporarily in raceways, distributed by truck
Intended use and consumer:	Public Waters for fishing

2. Flow Diagram

Step 1	Ponds are filled in April
Step 2	Bass fry are stocked in ponds
Step 3	Bass are monitored and ponds fertilized for plankton growth regularly
Step 4	Water is added to ponds to offset leakage and evaporation
Step 5	Bass are harvested to raceways approx 24 hours before shipping
Step 6	Bass are held in raceways
Step 7	Distribution truck(s) is/are filled and Bass are loaded
Step 8	Bass 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	"	n/a	No
	Invertebrate	No	"	n/a	No
	Plant	Yes	Plant seed may already be in pond bottom	Application of pre-emergent herbicide prior to filling	No
2) Bass 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	"	n/a	No
	Plant	No	"	n/a	No
3) Bass are monitored and pond fertilized regularly	Fish	No	No ANS can be	n/a	No
	Other Vertebrates	No	introduced by	n/a	No
	Invertebrate	No	these steps	n/a	No
	Plant	No	"	n/a	No
4) 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	"	n/a	No
	Plant	No	"	n/a	No
5) Bass 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	"	Visually pick out larger ANS.	Yes
	Plant	Yes	"	"	Yes
6) Bass are held in raceways approx 24 hours	Fish	Yes	ANS could have gotten by step five	Hand pick to remove	Yes
	Other Vertebrates	Yes	"	High Flow in raceways moves non-mobile ANS to screens for easy removal. Salt treatment to alleviate fish stress can eliminate invertebrates and tadpoles.	Yes
	Invertebrate	Yes	"	"	Yes
	Plant	Yes	"	"	Yes
7) Distribution truck(s) are filled and Bass are loaded	Fish	No	Well water is used	Hand pick ANS	No
	Other Vertebrates	No	"	"	No
	Invertebrate	No	"	"	No
	Plant	No	"	"	No
8) Bass are stocked into receiving waters	Fish	No	Bass have passed through	n/a	No
	Other Vertebrates	No	several screenings for ANS	n/a	No

(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)
	Invertebrate	No	and have endured a stressful	n/a	No
	Plant	No	transportation trip. Any further sort would jeopardize survival of the Bass	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			
5) Bass are harvested to raceways	Fish, invertebrates, amphibians, mollusks, plants	When bass put into raceways, grade them through a seine	Seine allows bass into raceway, while larger ANS are held in net	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
6) Bass are held in raceways approx 24 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 8 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

Firm Name:	Uvalde National Fish Hatchery	Species of Fish:	Florida strain Largemouth Bass
Firm Address:	PO Box 708 Uvalde, TX 78802	Method of Storage and Distribution:	Ponds, indoor and outdoor raceways, and distribution truck
Signature:		Intended Use and Consumer:	Sport fishing by public
Date:			