

## HACCP Step 1 – Activity Description

<b>Activity Description</b>	
Facility: Pvt. John Allen National Fish Hatchery	Site: Pvt. John Allen NFH
Project Coordinator: Richard Campbell	Activity: Gulf Coast Walleye Production and Distribution
Site Manager: Richard Campbell	
Address: 111 Elizabeth Street Tupelo Mississippi, 38802	
Phone: 662/842-1341	

<b>Project Description</b> i.e. Who; What; Where; When; How; Why
<p>Gulf Coast walleye production is determined at State Game or Fish annual meetings. Requests are submitted to the Fishery Program Supervisors in the Atlanta Regional Office or to the Hatchery Manager. Request are then prioritized and fulfilled as space and budget allows. Priority stockings for Gulf walleye are aimed at restoration efforts on the Tennessee Tombigbee Waterway objectives and on FWS and Tribal lands. This facility works in partnership with the Mississippi Dept. of Wildlife Fisheries and Parks and Mississippi State University in carrying out this activity. Brood walleye are maintained and spawned at this facility. All fry are released into designated culture ponds at a rate of 50k/acre at five days old. Harvest and distribution takes place in 26 to 28 days post fry stocking. Average lengths of fish at this time are 1.75 inches. Harvested fish are brought to the holding house for health inspections and enumeration. GCW fingerlings are loaded on disinfected transport units and delivered to their predetermined stocking locations.</p>

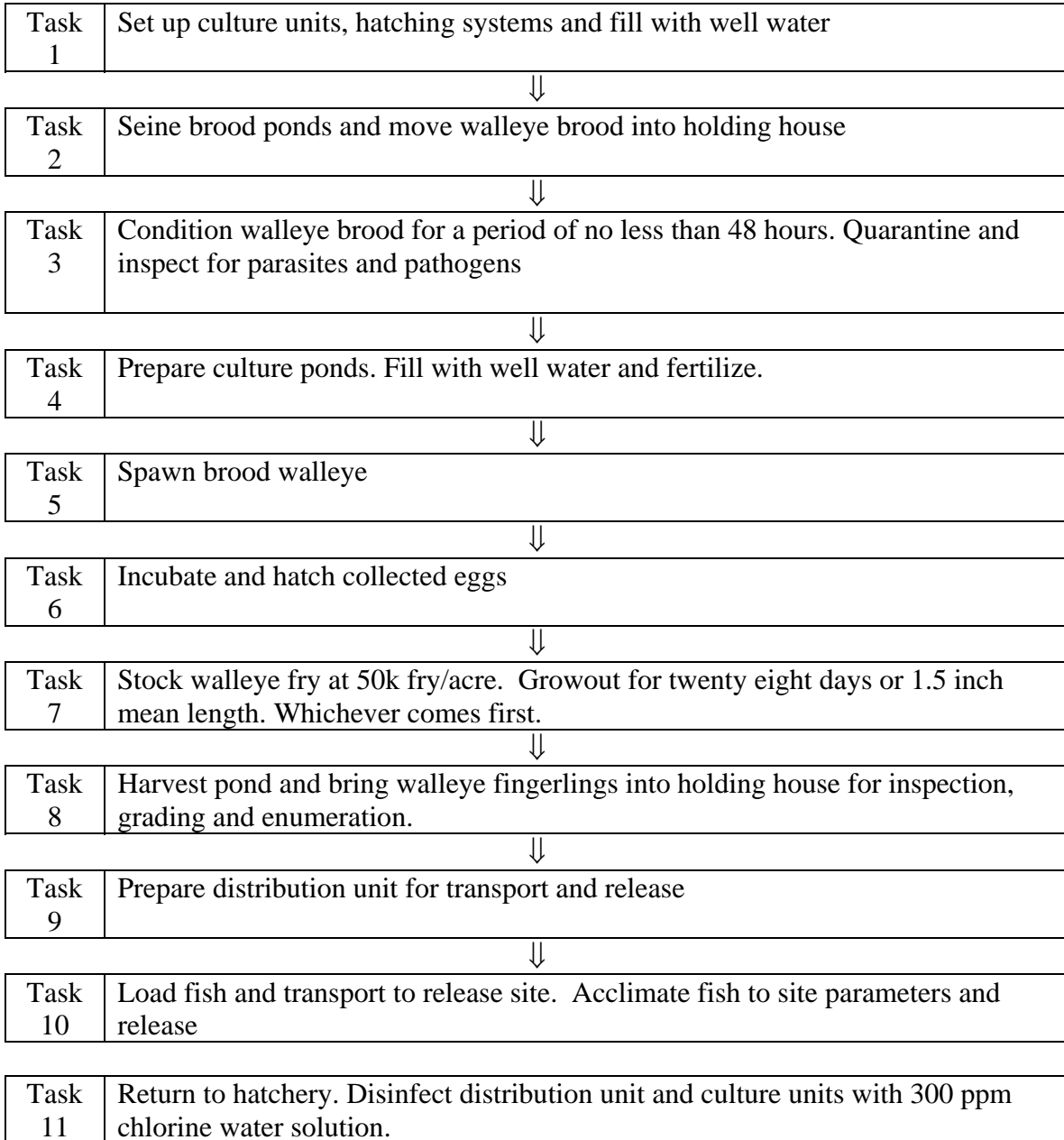
## HACCP Step 2 – Identify Potential Hazards

(to be transferred to column 2 of HACCP Step 4 – Hazard Analysis Worksheet)

<b>Hazards: Species Which May Potentially Be Moved/Introduced</b>
Vertebrates: Non target fish species: mosquitofish, sunfish, largemouth bass, fathead minnows, golden shiners, green tree frog tadpoles, bullfrog tadpoles
Invertebrates: Common miscellaneous aquatic insects, red swamp crayfish, and fairy shrimp
Plants: Algae (pithophora), water primrose, chara, nitella and brushy pondweed
Other Biologics (e.g. disease, pathogen, parasite): fungus, bacteria, protozoan, parasites
Others (e.g. construction materials, etc.): None

### HACCP Step 3 – Flow Diagram

Flow Diagram Outlining Sequential Tasks to Complete Activity/Project  
Described in HACCP Step 1 – Activity Description  
(to be transferred to column 1 of the HACCP Step 4 – Hazard Analysis Worksheet)



### HACCP Step 4 - Hazard Analysis Worksheet

1 Tasks (from HACCP Step 3 - Flow Diagram)	2 Potential hazards identified in HACCP Step 2	3 Are any potential hazards probable? (yes/no)	4 Justify evaluation for column 3	5 What control measures can be applied to prevent undesirable results?	6 Is this task a critical control point? (yes/no)
<b>Task 1</b> Set up culture units, hatching batterys and fill with well water	Vertebrates	NO	Units are disinfected after each use	N/A	NO
	Invertebrates	NO	“	N/A	NO
	Plants	NO	“	N/A	NO
	Others	NO	“	N/A	NO
<b>Task 2</b> Seine brood ponds and move walleye brood into holding house	Vertebrates Fathead Minnows, golden shiners, sunfish, tadpoles	YES	Forage species exist in pond as a food source	Visually inspect and remove all undesirable species from seine	NO
	Invertebrates Crawfish	YES	Forage species exist in pond as a food source	Visually inspect and remove all undesirable species from seine	NO
	Plants Pithophora, water primrose, chara	YES	Undesirables exist in pond	Visually inspect and remove all undesirable species from seine	NO
	Others	NO		N/A	NO

<b>Task 3</b> Condition walleye brood for a period of no less than 48 hours. Quarantine and inspect for parasites and pathogens	Vertebrates	NO	Potential hazard minimized in Task 2	N/A	NO
	Invertebrates	NO	Potential hazard minimized in Task 2	N/A	NO
	Plants	NO	Potential hazard minimized in Task 2	N/A	NO
	Others Bacteria, protozoan, parasites, fungus	YES	Biologics could be present at this point	Visual inspection and prophylactic treatment	NO
<b>Task 4</b> Prepare culture ponds. Fill with well water and fertilize.	Vertebrates	NO	Non present during this phase of this process	N/A	NO
	Invertebrates	NO	“	N/A	NO
	Plants Pithophora	YES	Undesirable plant species could be present at this point	Treat if coverage meets the minimum threshold allowance	NO
	Others	No			
<b>Task 5</b> Spawn brood walleye	Vertebrates	NO	Previous steps reduced hazards	N/A	NO
	Invertebrates	NO	Previous steps reduced hazards	N/A	NO
	Plants	NO	Previous steps reduced hazards	N/A	NO

	Others	NO	Previous steps reduced hazards	N/A	NO
<b>Task 6</b> Incubate and hatch collected eggs	Vertebrates	NO	No verts present at this level	N/A	NO
	Invertebrates	NO	None present	N/A	NO
	Plants	NO	None present	N/A	NO
	Others Bacteria and fungus	YES	Bacteria and fungus could be present on the eggs	Visually inspect and treat if necessary	NO
<b>Task 7</b> Stock walleye fry at 50k fry/acre. Growout for twenty eight days or 1.5 inch mean length. Whichever comes first.	Vertebrates	NO	Potential hazards will be controlled at the next level	N/A	NO
	Invertebrates	NO	Potential hazards will be controlled at the next level	N/A	NO
	Plants	NO	Potential hazards will be controlled at the next level	N/A	NO
	Others	NO	Potential hazards will be controlled at the next level	N/A	NO
<b>Task 8</b> Harvest pond and bring walleye fingerlings into holding house for	Vertebrates Fathead minnows, shiners, sunfish, tadpoles	YES	Possible introduction by birds	Visually inspect and remove undesirables in pond and at holding house	YES

inspection, grading and enumeration.	Invertebrates crawfish	YES	Undesirable species present at this level	Visually inspect and remove undesirables in pond and at holding house	YES
	Plants Chara, pithophora	YES	Nuisance vegetation could be collected during harvest	Visually inspect and remove undesirables in pond and at holding house	YES
	Others Bacteria and fungus	YES	Bacteria and fungus could be present upon harvest	Visually inspect and treat if necessary	YES
<b>Task 9</b> Prepare distribution unit for transport and release	Vertebrates	NO	Potential hazards will controlled at previous level	N/A	NO
	Invertebrates	NO	Potential hazards controlled at previous level	N/A	NO
	Plants	NO	Potential hazards controlled at previous level	N/A	NO
	Others Bacteria, protozoan	NO	Potential hazards controlled at previous level	N/A	NO
<b>Task 10</b> Load fish and transport to release site. Acclimate fish to site parameters and	Vertebrates	NO	Potential hazards controlled at previous level	N/A	NO
	Invertebrates	NO	Potential hazards controlled at previous level	N/A	NO

release	Plants	NO	Potential hazards controlled at previous level	N/A	NO
	Others	NO	Potential hazards controlled at previous level	N/A	NO
<b>Task 11</b> Return to hatchery. Disinfect distribution unit and culture units	Vertebrates Sunfish , mosquito fish,	YES	Possible introduction of ANS during acclimation process	Disinfect with 300ppm chlorine water solution for a minimum of 30 minutes	YES
	Invertebrates Snails, zebra mussels, various insect species	YES	Possible introduction of ANS during acclimation process	Disinfect with 300ppm chlorine water solution for a minimum of 30 minutes	YES
	Plants Water primrose, hydrilla, chara, nitella	YES	Potential hazard of transport on trailer axles	Visually inspect trailer and tank, remove all vegetation	YES
	Others Bacteria, protozoans,	YES	Potential hazard of introduction through tempering water	Disinfect with 300ppm chlorine water solution for a minimum of 30 minutes	YES

**HACCP Step 5 – HACCP Plan Form**

<b>HACCP Plan Form</b>								
(all CCP's or "yes's" from column 6 of HACCP Step 4 – Hazard Analysis Worksheet)								
Critical Control Point (CCP)	Significant Hazard(s)	Limits for each Control Measure	Monitoring				Evaluation & Corrective Action(s) (if needed)	Supporting Documentation (if any)
			What	How	Frequency	Who		
<b>Task 8</b> Harvest pond and bring walleye fingerlings into holding house for inspection, grading and enumeration	Non target fish species, invertebrates, plants and possibly external parasites	High flows in holding tanks push most nuisance species to the screen where they can be removed. External parasites are controlled with salt and copper sulfate treatments	Fish are hand sorted, chemical treatment applied as necessary	Manual inspection	During harvest, during grading and spot check for consistency during truck loading	Hatchery personnel	All species at this facility undergo Warm Water Fish Health Inspections performed by the Warm Springs Fish Health Lab before stocking.	
<b>Task 11</b> Return to hatchery. Disinfect distribution unit and culture units	Certain external parasites and bacteria could reside in damp areas of transport unit. Undesirable plant species could exist on tanks and trailer	Visual inspection and removal for undesirable plants/vegetation. Standard decontamination of 300 ppm chlorine water mixture for other undesirables	Manual removal of vegetation. 300ppm application of chlorine water.	Visual inspection and precautionary disinfection	Routine as needed	Biological Technician and Maintenance Worker		
<b>Facility:</b> Pvt. John Allen National Fish Hatchery					<b>Activity:</b> Gulf Coast Walleye Restoration			

<b>Address:</b> 111 Elizabeth Street, Tupelo MS 38802	
<b>Signature:</b>  <b>HACCP Plan was followed.</b>	<b>Date:</b>