

## 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 Striped Bass Production Phase I and Phase II
Site Manager: Richard Campbell	
Address: 111 Elizabeth Street Tupelo Mississippi, 38802	
Phone: 662/842-1341	

**Project Description**  
i.e. Who; What; Where; When; How; Why

Striped bass production requests are made by the Gulf Coast Striped Bass Technical Committee at the annual Morone Workshop meeting. All production from this facility occurs from fry received from Welaka NFH, Marion SFH and Blackwater SFH. Received fry could come entirely from one site or a combination of any of the three spawning stations. This facility annually receives a total of 1 to 1.5 million fry from these stations. Fry transfer is accomplished by boxing fish at 80 to 100 thousand fry per box. Upon arrival the fry are allowed to acclimate to our water in twenty gallon holding tanks located inside our holding house. Ponds are filled no less than 21 days prior to stocking with clear well water from one of three deep water wells. Water temps from these wells are a constant 63 degrees f, with a ph of 7.7 and a hardness of 110. Ponds are fertilized to develop a substantial plankton bloom and supplemented throughout the 28 day growout (Phase I fish). Phase I ponds are harvested when fish reach an average of 1.75 inches and moved to the holding house. Once in the holding house the fish are sample counted and weighed to determine production numbers. Fish are either shipped to their predetermined stocking sites or feed trained and returned to prepared ponds for phase II production. Phase II fish are harvested in mid November, health screened and stocked in predetermined areas.

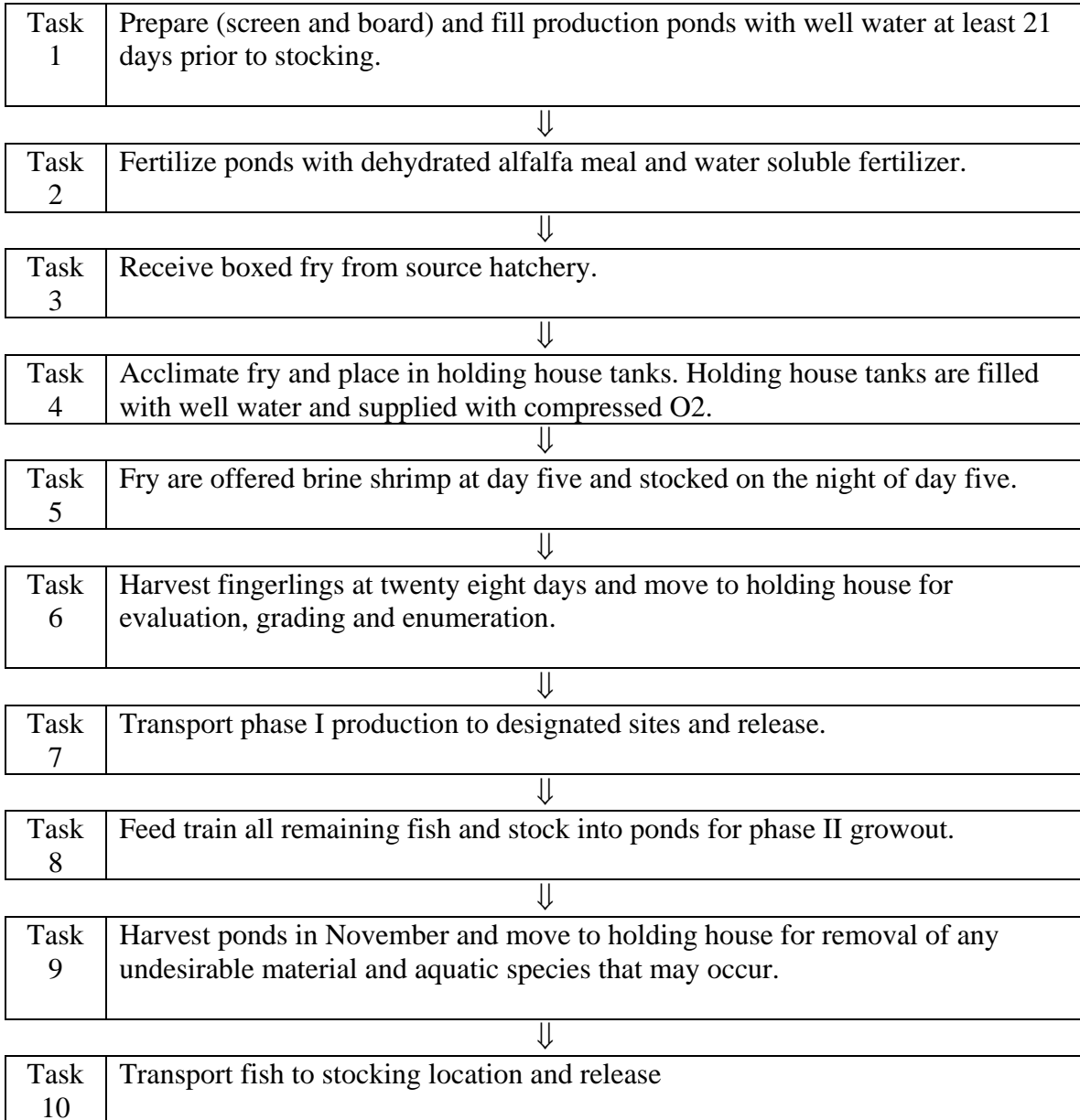
## HACCP Step 2 – Identify Potential Hazards

(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: Largemouth bass, bream, catfish, mosquitofish
Invertebrates: Common miscellaneous aquatic insects, red swamp crayfish, fairy shrimp
Plants: Algae (pithophora), water primrose, chara, nitella and brushy pondweed
Other Biologics (e.g. disease, pathogen, parasite): Common parasites found on warmwater species: Trichodina, Costia,
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)
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Task 1 Prepare (screen and board) and fill production ponds with well water at least 21 days prior to stocking.	Vertebrates	NO	No aquatic species found in ground source well water	No measures necessary	NO
	Invertebrates	NO	“	“	NO
	Plants	NO	“	“	NO
	Others	NO	“	“	NO

Task 2 Fertilize ponds with dehydrated alfalfa meal and water soluble fertilizer.	Vertebrates	NO	Both inorganic and organic fertilizers are cleaned when packaged	None	NO
	Invertebrates	NO	“	“	NO
	Plants	NO	“	“	NO
	Others	NO	“	“	NO

**Hazard Analysis Worksheet (continued)**

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)
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Task 3 Receive boxed fry from source hatchery.	Vertebrates	NO	All received lots are inspected by hatchery of origin	None needed	NO
	Invertebrates	NO	“	“	NO
	Plants	NO	“	“	NO
	Others	NO	“	“	NO

Task 4 Acclimate fry and place in holding house tanks. Holding house tanks are filled with well water and supplied with compressed O2.	Vertebrates	NO	Hazard elimination outlined in previous steps	None needed	NO
	Invertebrates	NO	“	“	NO
	Plants	NO	“	“	NO
	Others	NO	“	“	NO

*For additional pa* **Hazard Analysis Worksheet (continued)**

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)
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Task 5 Fry are offered brine shrimp at day five and stocked on the night of day five.	Vertebrates	NO	Canned naupili are guaranteed 100% pure	None needed	NO
	Invertebrates	NO	“	“	NO
	Plants	NO	“	“	NO
	Others	NO	“	“	NO

Task 6 Harvest fingerlings at twenty eight days and move to holding house for evaluation, grading and enumeration.	Vertebrates Other fish species	YES	Undesirable fish species could have been introduced by birds	Desired species are sorted for non target species control in the holding house	YES
	Invertebrates fairy shrimp and insects	YES	Undesirable species could be present and collected during harvest	Hand sort in holding house for removal of undesirable species	“
	Plants Pithophora, Chara, water primrose	YES	“	“	“
	Others Trichodina, costia, fungus and other possible pathogens	YES	Common parasites may or may not be present at this point	Fish are given a 1% nacl treatment if necessary	“

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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)
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Task 7 Transport phase I production to designated sites and release.	Vertebrates	NO	Cleared at Task 6	Ground source well water used in filling transport tanks	NO
	Invertebrates	“	“	“	“
	Plants	“	“	“	“
	Others	“	“	“	“

Task 8 Feed train all remaining fish and stock into ponds for phase II growout.	Vertebrates	NO	Cleared at Task 6	Tempering from well water to pond water takes place at stocking site	NO
	Invertebrates	“	“	“	“
	Plants	“	“	“	“
	Others	“	“	“	“

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Task 9 Harvest ponds in November and move to holding house for removal of any undesirable material and aquatic species that may occur.	Vertebrates Undesirable fish species	YES	Undesirable species could have been introduced to the pond by birds	Non target species are sorted out at the pond and inside the holding house prior to transport	YES
	Invertebrates Crawfish,	YES	Undesirables present during this time of year	“	“
	Plants Pithophora, Chara	YES	“	“	“
	Others Trichodina, Costia	YES	Possibility of external parasites exist on all cultured species	Fish are inspected and treated with a 1 % nacl treatment in the holding house	“

Task 10 Transport fish to stocking location and release	Vertebrates	NO	Target species are cleared at Task 9	Random sample check during loading	NO
	Invertebrates	NO	“	“	“
	Plants	NO	“	“	“
	Others	NO	“	“	“

**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)								
<b>Critical Control Point (CCP)</b>	<b>Significant Hazard(s)</b>	<b>Limits for each Control Measure</b>	<b>Monitoring</b>				<b>Evaluation &amp; Corrective Action(s) (if needed)</b>	<b>Supporting Documentation (if any)</b>
			<b>What</b>	<b>How</b>	<b>Frequency</b>	<b>Who</b>		
<p><b>Task 6</b> Harvest fingerlings at twenty eight days and move to holding house for evaluation, grading and enumeration.</p> <p><b>Task 9</b> Harvest ponds in November and move to holding house for removal of any undesirable material and aquatic species that may occur.</p>	<p>Non target fish species, invertebrates, plants and possibly external parasites</p> <p align="center">“</p>	<p>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</p> <p align="center">“</p>	<p>Fish are hand sorted, chemical treatment applied as necessary</p> <p align="center">“</p>	<p>Manual inspection</p> <p align="center">“</p>	<p>During harvest, during grading and spot check for consistency during truck loading</p> <p align="center">“</p>	<p>Hatchery personnel</p> <p align="center">“</p>	<p>All species at this facility undergo Warm Water Fish Health Inspections performed by the Warm Springs Fish Health Lab before stocking.</p> <p align="center">“</p>	
<b>Facility:</b> Pvt. John Allen National Fish Hatchery					<b>Activity:</b> Gulf Coast Striped Bass Restoration			
<b>Address:</b> 111 Elizabeth Street, Tupelo MS 38802								

<b>Signature:</b>  <b>HACCP Plan was followed.</b>	<b>Date:</b>