

HACCP Step 1 – Activity Description

Activity Description	
Facility: Pvt. John Allen National Fish Hatchery	Site: Pvt. John Allen NFH
Project Coordinator: Richard Campbell	Activity: Paddlefish Production
Site Manager: Richard Campbell	
Address: 111 Elizabeth Street Tupelo Mississippi, 38802	
Phone: 662/842-1341	

HACCP Step 2 – Identify Potential Hazards

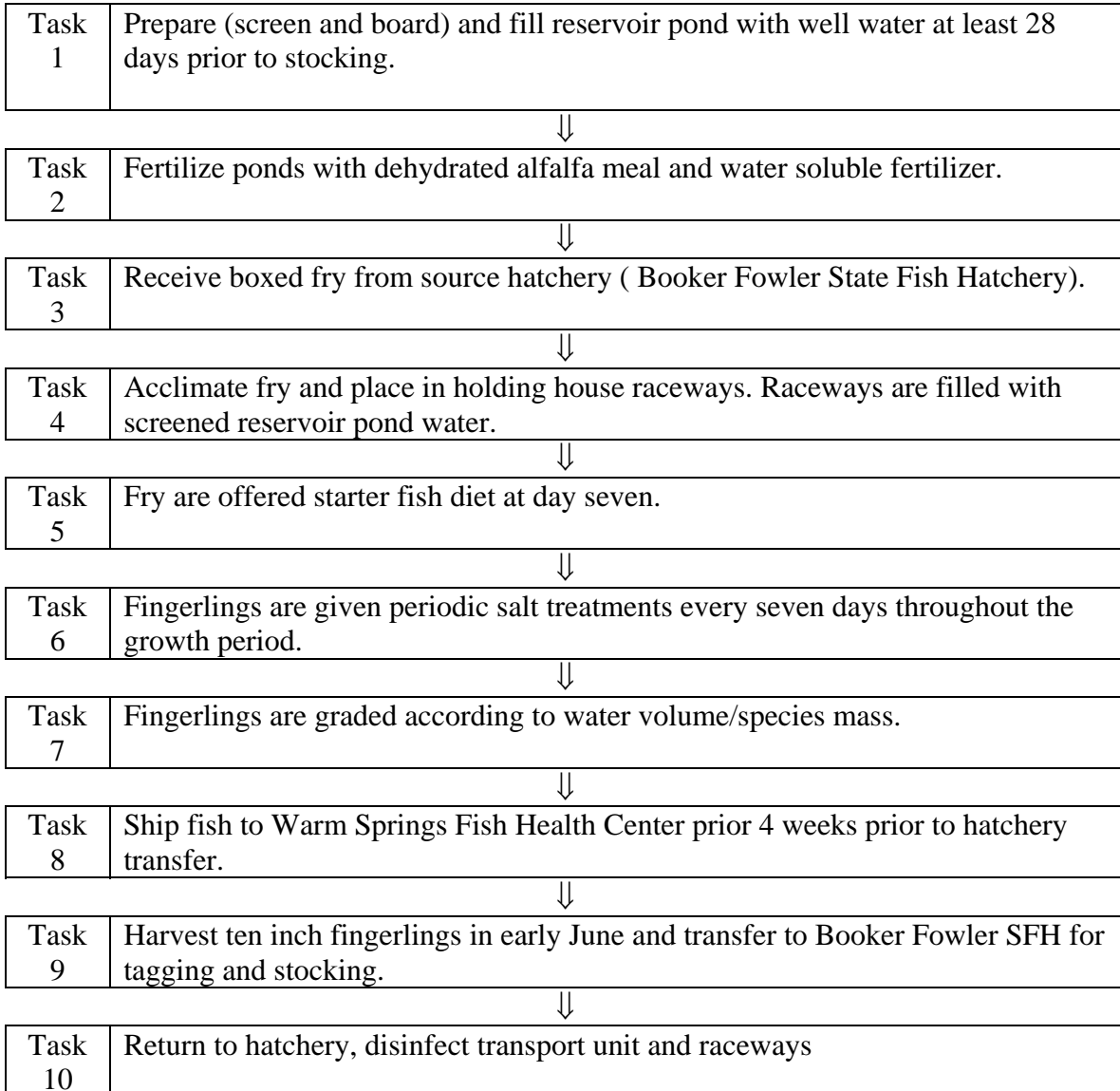
Project Description i.e. Who; What; Where; When; How; Why
<p>Paddlefish request are made annually at stocking meetings held between the USFWS and the Louisiana Department of Fish and Wildlife (LDWFP). Paddlefish restoration efforts are aimed at certain river systems within the State of Louisiana. The responsibility of producing fingerling paddlefish for this effort is a shared responsibility of the Booker Fowler State Fish Hatchery, the Pvt. John Allen NFH and the Natchitoches NFH. Paddlefish brood are collected by the LDWFP, spawned at the Booker Fowler SFH and distributed to this facility for growout. Paddlefish production at this facility is carried out in three 4,000 gallon modular raceways. The raceways are fed from a reservoir pond that is supplied water by means of a deep water ground source well. The reservoir pond is filled 28 days prior to receipt of paddlefish fry. The raceways are filled one day prior to stocking. Cultured specimen feed on a planktonic diet that is supplemented with artificial feed. Paddlefish that are grown in this manner undergo a series of grading processes that ensure uniform growth. Typical growth periods range from 140 to 150 days. Ten inch fish are then harvested from the raceways and transported back to Booker Fowler SFH for tagging and stocking. All fish go through a fish health screening prior to distribution. This screening is performed by the Warm Springs Regional Fish Health Lab.</p>

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

Hazards: Species Which May Potentially Be Moved/Introduced
Vertebrates: Non target fish species: Fathead minnows, mosquitofish
Invertebrates: Common miscellaneous aquatic insects
Plants: Algae (pithophora)
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 reservoir pond with well water at least 28 days prior to stocking.	Vertebrates	NO	No aquatic species found in ground source well water	NO	NO
	Invertebrates	NO	“	NO	NO
	Plants	NO	“	NO	NO
	Others	NO	“	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	NO	NO
	Invertebrates	NO	“	NO	NO
	Plants	NO	“	NO	NO
	Others	NO	“	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 (Booker Fowler State Fish Hatchery).	Vertebrates	NO	All received lots are inspected by hatchery of origin	N/A	NO
	Invertebrates	NO	“	“	“
	Plants	NO	“	“	“
	Others	NO	“	“	“

Task 4 Acclimate fry and place in holding house raceways. Raceways are filled with screened reservoir pond water.	Vertebrates	YES	The filling of the raceway presents the possible threat of allowing non target species entry into this system	Primary screened intakes prevent entry of non target vertebrates	YES
	Invertebrates	YES	“	Secondary screened intakes prevent the entry of nuisance invertebrates	YES
	Plants	NO	No nuisance weeds or algae occur in the reservoir pond	N/A	NO

	Others Trichodina	YES	Possibility exists for entry of small free swimmers	Inspection and periodic prophylactic treatments ward off any sever outbreaks	YES
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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 starter fish diet at day seven.	Vertebrates	NO	Feeds are guaranteed 100% pure		NO
	Invertebrates	NO	“		“
	Plants	NO	“		“
	Others	NO	“		“

Task 6 Fingerlings are given periodic salt treatments every seven days throughout the	Vertebrates	NO			NO
	Invertebrates	NO			
	Plants	NO	“	“	“

growth period.	Others				“
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Task 7 Fingerlings are graded according to water volume/species mass.	Vertebrates	NO	N/A	N/A	NO
	Invertebrates	“	“	“	“
	Plants	“	“	“	“
	Others	“	“	“	“

Task 8 Ship fish to Warm Springs Fish Health Center 4 weeks prior to hatchery transfer.	Vertebrates	NO	N/A	NO	NO
	Invertebrates	“	“	“	“
	Plants	“	“	“	“
	Others	“	“	“	“

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Task 9 Harvest ten inch fingerlings in early June and transfer to Booker Fowler SFH for tagging and stocking.	Vertebrates Undesirable fish species	YES	Undesirable species could have been introduced to the raceway by birds	Non target species are sorted out at the pond during loading	YES
	Invertebrates Crawfish, frogs	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 if warranted	“

Task 10 Return to hatchery, disinfect transport unit and raceways	Vertebrates	NO	Fish are transferred to an isolation unit	N/A	NO
	Invertebrates	NO	Fish are transferred to an isolation unit	N/A	NO
	Plants	NO	Fish are transferred to an isolation unit	N/A	NO
	Others Bacteria, parasites	YES	Possibility transfer of pathogens on dip nets	N/A	YES

HACCP Step 5 – HACCP Plan Form

HACCP Plan Form								
(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		
<p>Task 4 Acclimate fry and place in holding house raceways. Raceways are filled with screened reservoir pond water.</p>	<p>Non target fish species, invertebrates, plants and possibly external parasites present during filling</p>	<p>Screened intakes control entry of both ANS vertebrates and invertebrates. Periodic inspections and prophylactic treatments control external parasites.</p>	<p>Fish are hand sorted, chemical treatment applied as necessary</p>	<p>Visual inspection</p>	<p>During harvest, during grading and spot check for consistency during truck loading</p>	<p>Hatchery personnel</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>Task 9 Harvest ten inch fingerlings in early June and transfer to Booker Fowler SFH for tagging and stocking.</p>	<p>Non target fish species, vegetation and possible external parasites</p>	<p>Fish are sorted from non target species</p>	<p>Fish are hand sorted and visually inspected</p>	<p>Manual and visual inspection</p>	<p>Periodic during growout, during warm water health inspections and prior to loading for distribution</p>	<p>Hatchery personnel and fish health inspectors</p>		
<p>Task 10 Return to hatchery, disinfect</p>	<p>Bacteria, protozoans</p>	<p>Administer 300ppm chlorine solution upon</p>	<p>Transport unit disinfection</p>	<p>Chlorine treatment protocol</p>	<p>Immediately following distribution</p>	<p>All hatchery personnel</p>	<p>No further action needed</p>	

transport unit and raceways		return to hatchery	process					
Facility: Pvt. John Allen National Fish Hatchery					Activity: Paddlefish production			
Address: 111 Elizabeth Street, Tupelo MS 38802								
Signature:					Date:			
HACCP Plan was followed.								