

Edenton National Fish Hatchery

Phase I Striped Bass HACCP Plan

Updated 11/17/05

Step 1 – Activity Description

Activity Description	
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Activity:	Fisheries

Project Description
<p>Edenton NFH was authorized by Congress (71 Stat 264-July 7,1898) with the specific purpose of rearing warm water fish.</p> <p>The hatchery consists of approximately 63.59 acres of fee-title land. There are 36 ponds covering 25 acres of water. The hatchery has a public aquarium, and two fish holding/spawning facilities. A handicapped accessible boardwalk is in place and winds through a portion of bottomland hardwood forest terminating in a fishing pier for use by special needs persons.</p> <p>Water for production comes from a creek pump which delivers 1500 gals/min from Pembroke Creek; a deep well (600') delivers 600 gal/ min of saline water (3PPT). The holding house-spawning building receives fresh water from a well (200') at 400 gal/min.</p>

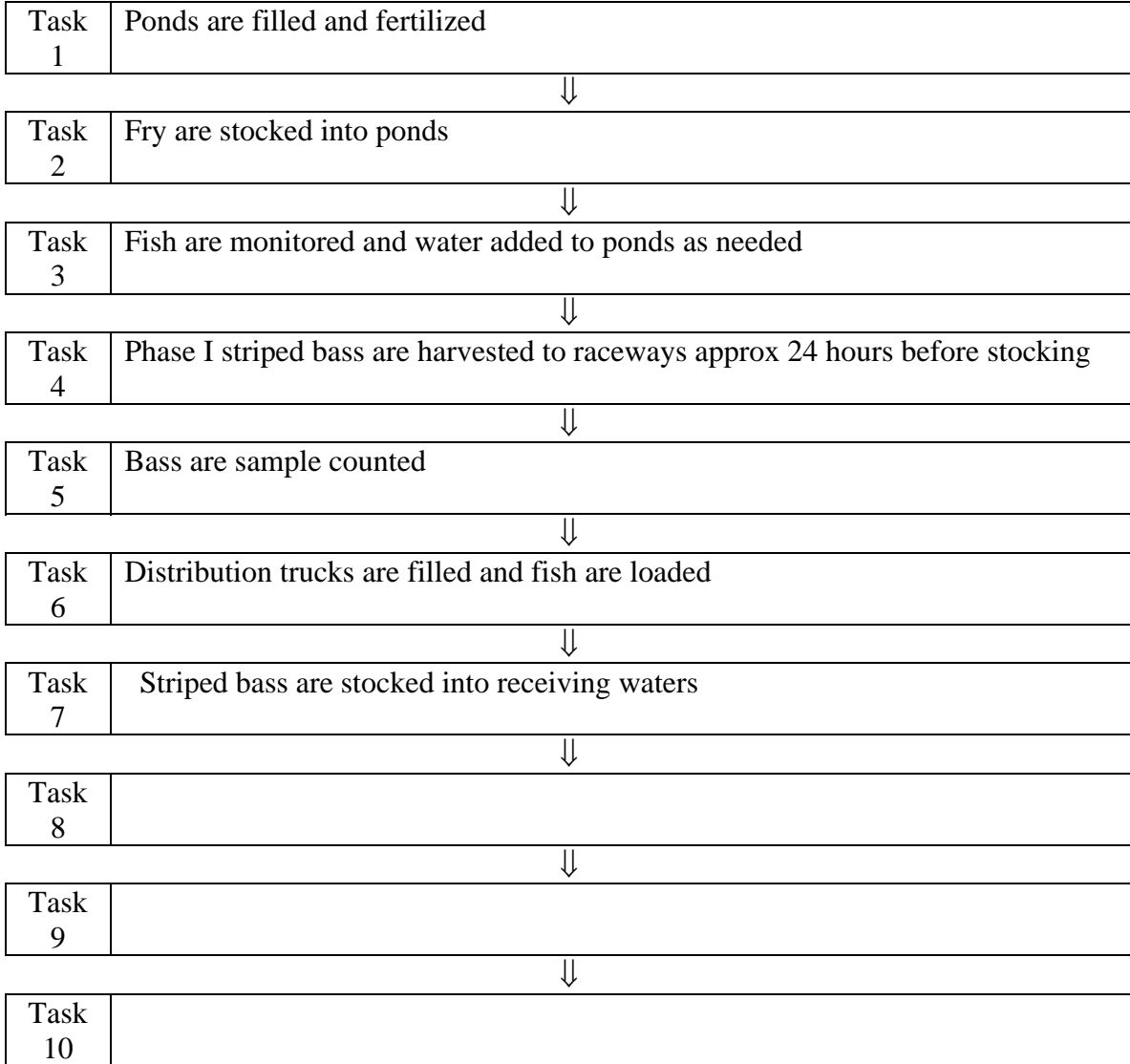
Step 2 – Identify Potential Hazards

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

Hazards: Species Which May Potentially Be Moved/Introduced
Vertebrates: Non-target fish species (various minnows, sunfishes, temperate basses, herrings, suckers, catfishes, and perches), amphibians, turtles
Invertebrates: Various pond shrimp species, crayfish, aquatic insects
Plants: Various algae and water plants
Other Biologics (e.g. disease, pathogen, parasite):
Others (e.g. construction materials, etc.):

Step 3 – Flow Diagram

Flow Diagram Outlining Sequential Tasks to Complete Activity/Project
Described in HACCP Step 1 – Activity Description



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 Ponds are filled and fertilized	<u>Vertebrates</u> Non-target fish species	Yes	Ponds are filled with water from Pembroke creek	Place fine mesh 'sock' over discharge pipe to filter out fish that are drawn in from Pembroke creek.	Yes
	<u>Invertebrates</u>	No	Species are already in ponds, even when dry		
	<u>Plants</u>	No	Species are already in ponds, even when dry		
	<u>Others</u>	No			

Task 2 Fry are stocked into ponds	<u>Vertebrates</u>	No	None are present with the fry		No
	<u>Invertebrates</u>	No	None are present with the fry		
	<u>Plants</u>	No	None are present with the fry		
	<u>Others</u>	No			

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 3 Fish are monitored and water added to ponds as needed	<u>Vertebrates</u> Non-target fish species	Yes	Fish may be drawn in from Pembroke creek	Retain fine mesh 'sock' over discharge pipe	Yes
	<u>Invertebrates</u>	No	Already in ponds		
	<u>Plants</u>	No	Already in ponds		
	<u>Others</u>	No			

Task 4 Phase I striped bass are harvested to raceways approx 24 hours before stocking	<u>Vertebrates</u> Non-target fish species, Amphibians, Turtles	Yes	Fish may be netted out of ponds along with striped bass.	Hand pick out non target species seen during harvest and in the harvest truck	No
	<u>Invertebrates</u> Various pond shrimp species, Aquatic insects	Yes	Animals may be netted out of ponds along with striped bass.	Hand pick out non target species seen during harvest and in the harvest truck	
	<u>Plants</u> Various algae and water plants	Yes	Plants/fragments may be netted out of ponds along with striped bass.	Hand pick out non target species seen during harvest and in the harvest truck	
	<u>Others</u>	No			

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 5 Bass are sample counted	<u>Vertebrates</u>	Yes	Vertebrates missed in task 4 could still be in tanks	Hand pick non-target species, and give a salt treatment to STB	No
	<u>Invertebrates</u>	Yes	Invertebrates missed in task 4 could still be in tanks	Hand pick non-target species, and give a salt treatment to STB	
	<u>Plants</u>	Yes	Plants/fragments missed in task 4 could still be in tanks	Hand pick non-target species, and give a salt treatment to STB	
	<u>Others</u>	No			

Task 6 Distribution trucks are filled and bass are loaded	<u>Vertebrates</u>	No	Vertebrates missed in task 5 could still be in tanks	Hand pick non-target species, and load fish in salt bath	No
	<u>Invertebrates</u>	No	Invertebrates missed in task 5 could still be in tanks	Hand pick non-target species, and load fish in salt bath	
	<u>Plants</u>	No	Plants/fragments missed in task 5 could still be in tanks	Hand pick non-target species, and load fish in salt bath	
	<u>Others</u>	No			

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 7 Striped bass are stocked into receiving waters	<u>Vertebrates</u>	No	Crop should have already been cleared of any potential problems		No
	<u>Invertebrates</u>	No	Crop should have already been cleared of any potential problems		
	<u>Plants</u>	No	Crop should have already been cleared of any potential problems		
	<u>Others</u>	No			

Task 8	<u>Vertebrates</u>				
	<u>Invertebrates</u>				
	<u>Plants</u>				
	<u>Others</u>				

Step 5 – HACCP Plan Form

HACCP Plan Form								
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		
Task 1	Non-target fish species	Zero tolerance	Condition of the pond sock	Checked visually	Daily	All staff	Turn off water, empty sock, clean or replace if needed.	
Task 3	Non-target fish species	Zero tolerance	Condition of the pond sock	Checked visually	Daily	All staff	Turn off water, empty sock, clean or replace if needed.	
Tasks 4, 5, and 6	Vertebrates, invertebrates, plants	Zero tolerance	Presence of ANS with harvested STB	Checked visually	During harvest, sample counts, and loading	All staff	Remove ANS by hand, and give salt treatment after sample counts and loading	
Facility: Edenton National Fish Hatchery						Activity: Fisheries		
Address: 1102 W. Queen St Edenton, NC 27932 (252) 482-4118								
Signature: S. C. Jackson, Project Leader						Date:		

