

Oklahoma Striped Bass HACCP Plan

HACCP Step 1 – Activity Description

Activity Description	
Facility: Byron State Fish Hatchery	Site: Zink's Dam, Arkansas River, Tulsa, OK
Project Coordinator: Steven Spade	Activity: Collect striped bass broodstock from the Arkansas River to be used at Byron for production of Morone species.
Site Manager: Brent Gordon	
Address: Rt. 1 Box 535 Byron, OK 73722	
Phone: 580 474-2663	

Project Description i.e. Who; What; Where; When; How; Why
<p>The Fisheries Division of the ODWC will collect striped bass broodstock from April 15-May 15 below Zink's Dam on the Arkansas River. An electro-fishing boat will be used to stun fish which will be netted and placed into holding tank in boat. Adult fish will be sampled to select fish that are ready to be spawned. Selected broodstock will be injected with hormone, loaded onto a hauling truck equipped with live transport tanks. Fish are transported to Byron hatchery where fish are netted from truck and placed in prepared holding tanks for spawning purposes. Broodstock are usually collected in three trips where 65-70 adults are transported to the hatchery.</p>

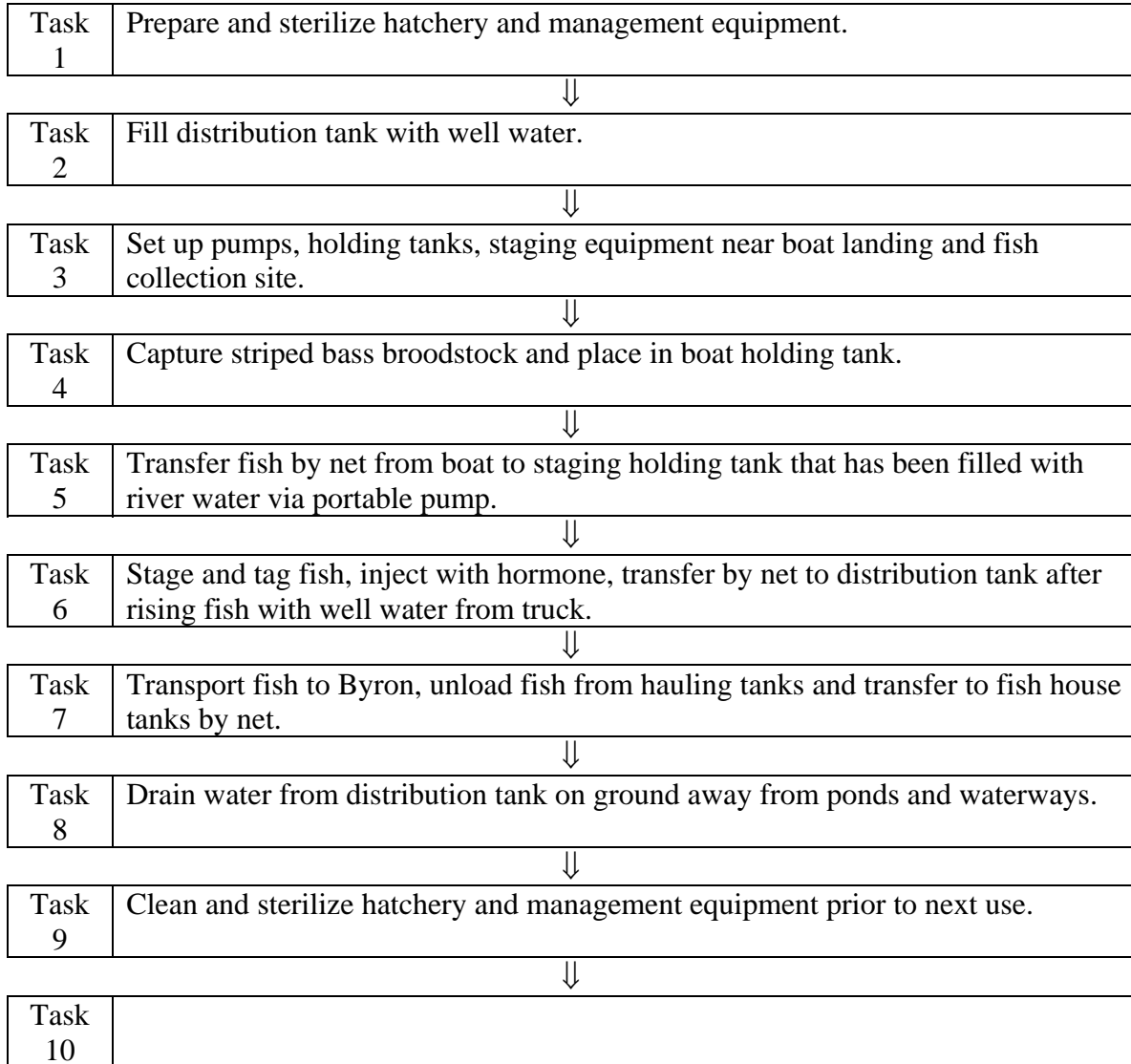
HACCP Step 2 – Identify Potential Hazards

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

Hazards: Species Which May Potentially Be Moved/Introduced
Vertebrates: White Perch, Asian Carp, Hybrid Striped Bass
Invertebrates: Zebra Mussels, Asian Clams
Plants: All Aquatic Plant Material
Other Biologics (e.g. disease, pathogen, parasite): Largemouth Bass Virus
Others (e.g. construction materials, etc.):

HACCP Step 3 – Flow Diagram

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



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 and sterilize hatchery and management equipment.	<u>Vertebrates</u>	No	No hazard		No
	<u>Invertebrates</u> Zebra Mussels	Yes	Can be within equipment.	Follow set protocol for sterilization procedures.	
	<u>Plants</u> All Aquatic Plant Material	Yes	Can be attached to equipment	Visually inspect and remove.	
	<u>Others</u> Largemouth Bass Virus	Yes		Sterilization protocol.	

Task 2 Fill distribution tank with well water.	<u>Vertebrates</u>	No	No hazard		No
	<u>Invertebrates</u>	No	No hazard		
	<u>Plants</u>	No	No hazard		
	<u>Others</u>	No			

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)
Task 3 Set up pumps, holding tanks, staging equipment near boat landing and fish collection site.	<u>Vertebrates</u>	No	No hazard		No
	<u>Invertebrates</u>	No	No hazard		
	<u>Plants</u>	No	No hazard		
	<u>Others</u>	No			
Task 4 Capture striped bass broodstock and place in boat holding tank.	<u>Vertebrates</u> White Perch, Asian Carp, Hybrid Striped Bass	Yes	Captured fish can be misidentified.	Id and remove hazards.	No
	<u>Invertebrates</u> Zebra Mussels, Asian Clams	Yes	Can be in water in net.	Drain water from net prior to placing fish in holding tank.	
	<u>Plants</u> All Aquatic Plant Material	Yes	Can be dipped with fish.	Remove seen plant material.	
	<u>Others</u>	No			

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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 5 Transfer fish by net from boat to staging holding tank that has been filled with river water via portable pump.	<u>Vertebrates</u> White Perch, Asian Carp, Hybrid Striped Bass	Yes	Captured fish can be misidentified.	ID fish and remove unwanted fish.	No
	<u>Invertebrates</u> Zebra Mussels, Asian Clams	Yes	Can be in water in net.	Drain water from net prior to transferring fish.	
	<u>Plants</u> All Aquatic Plant Material	Yes	Can be dipped with fish.	Visually inspect and remove.	
	<u>Others</u> Largemouth Bass Virus	Yes		Remove all bass.	

Task 6 Stage and tag fish, inject with hormone, transfer by net to distribution tank after rising fish with well water from truck.	<u>Vertebrates</u> White Perch, Asian Carp, Hybrid Striped Bass	Yes	Captured fish can be misidentified.	Visually ID and remove unwanted fish.	Yes
	<u>Invertebrates</u> Zebra Mussels, Asian Clams	Yes	Can be in water in net.	Drain water from nets before transferring fish.	
	<u>Plants</u> All Aquatic Plant Material	Yes	Can be dipped with fish.	Inspect and remove.	
	<u>Others</u> Largemouth Bass Virus	Yes		Drain water from nets	

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)
Task 7 Transport to Byron, unload fish from hauling tanks and transfer to fish house tanks by net.	<u>Vertebrates</u>	No	Hazard has been removed.		Yes
	<u>Invertebrates</u> Zebra Mussels, Asian Clams	Yes	Can be in water in tank or net.	Drain water from net prior to transferring fish.	
	<u>Plants</u> All Aquatic Plant Material	Yes	Can be dipped with fish.	Inspect and remove.	
	<u>Others</u> Largemouth Bass Virus	Yes		Drain water from net.	
Task 8 Drain water from distribution tank on ground away from ponds and waterways.	<u>Vertebrates</u>	No	Hazard has been removed.		Yes
	<u>Invertebrates</u> Zebra Mussels, Asian Clams	Yes	Can be in water in tank.	Drain water away from ponds and waterway.	
	<u>Plants</u>	No	Hazard has been removed..		
	<u>Others</u> Largemouth Bass Virus	Yes		same	

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)
Task 9 Clean and sterilize hatchery and management equipment prior to next use.	<u>Vertebrates</u>	No	Hazard has been removed.		No
	<u>Invertebrates</u>	No	Can be in water in equipment.		
	<u>Plants</u>	No	Hazard has been removed..		
	<u>Others</u>	No			
Task 10	<u>Vertebrates</u>				
	<u>Invertebrates</u>				
	<u>Plants</u>				
	<u>Others</u>				

HACCP 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 6	White Perch, Asian Carp, Hybrid Striped Bass, Zebra Mussels, Asian Clams, All Aquatic Plant Material, Largemouth Bass Virus	Zero Tolerance	Fish and water	Visually inspect with eye and microscope.	Once during task and sample hatchery bass biannually for LMBV	Staff	Follow established protocol.	
Task 7	Zebra Mussels, Asian Clams, All Aquatic Plant Material, Largemouth Bass Virus	Zero Tolerance	Fish and water	Visually inspect with eye and microscope.	Once during task and sample hatchery bass biannually for LMBV	Staff	Follow established protocol.	
Task 8	Zebra Mussels, Asian Clams, Largemouth Bass Virus	Zero Tolerance	Fish and water	Visually inspect with eye and microscope.	Once during task and sample hatchery bass biannually for LMBV	Staff	Follow established protocol.	
Facility: Byron State Fish Hatchery						Activity: Collect striped bass broodstock from the Arkansas River to be used at Byron for production of Morone species.		
Address: Rt. 1 Box 535 Byron, OK 73722								
Signature:						Date:		
HACCP Plan was followed.								