

# HACCP Trout

## HACCP Step 1 – Activity Description

<b>Activity Description</b>	
Facility:       Chattahoochee Forest National Fish Hatchery	Site: Chattahoochee Forest National Fish Hatchery
Project Coordinator:   Rick Nehrling	Activity: Coldwater Fish Production and Distribution - Chattahocohee Forest NFH
Site Manager:       Deborah Burger, Hatchery Mgr.	
Address:	
Phone:         706 838 4723	

<b>Project Description</b> i.e. Who; What; Where; When; How; Why
<p>Administered by the U.S. Fish &amp; Wildlife Service, the 44.8 acre National Fish Hatchery is located in the Chattahoochee National Forest in Georgia. Mill Creek and Rock Creek, tributaries of the Toccoa River, supply water to the facility. The original facility was constructed by the Civilian Conservation Corps in 1939. Seasonal water flows vary from approximately 1900 gpm to 6000 gpm. Water temperatures range from 33 degrees to 75 degrees Fahrenheit. CFNFH receives disease free, genetically distinct, eyed trout eggs from state and federal hatcheries participating in the National Broodstock Program. Fish derived from these eggs are used primarily to mitigate for the impacts of U.S. Army Corps of Engineers and Tennessee Valley Authority dams in Georgia and South Carolina. Fingerling fish are also provided to the Eastern Band of Cherokee Indians Tribal Hatchery to enhance recreational fishing on Tribal lands. Approximately 85% of the fish distributed annually are hauled by Service trucks and Service personnel and 15% are hauled by Georgia Dept. of Natural Resource trucks. Current distribution commitments are around one million trout annually. Current program include rainbow, brown and brook trout.</p>

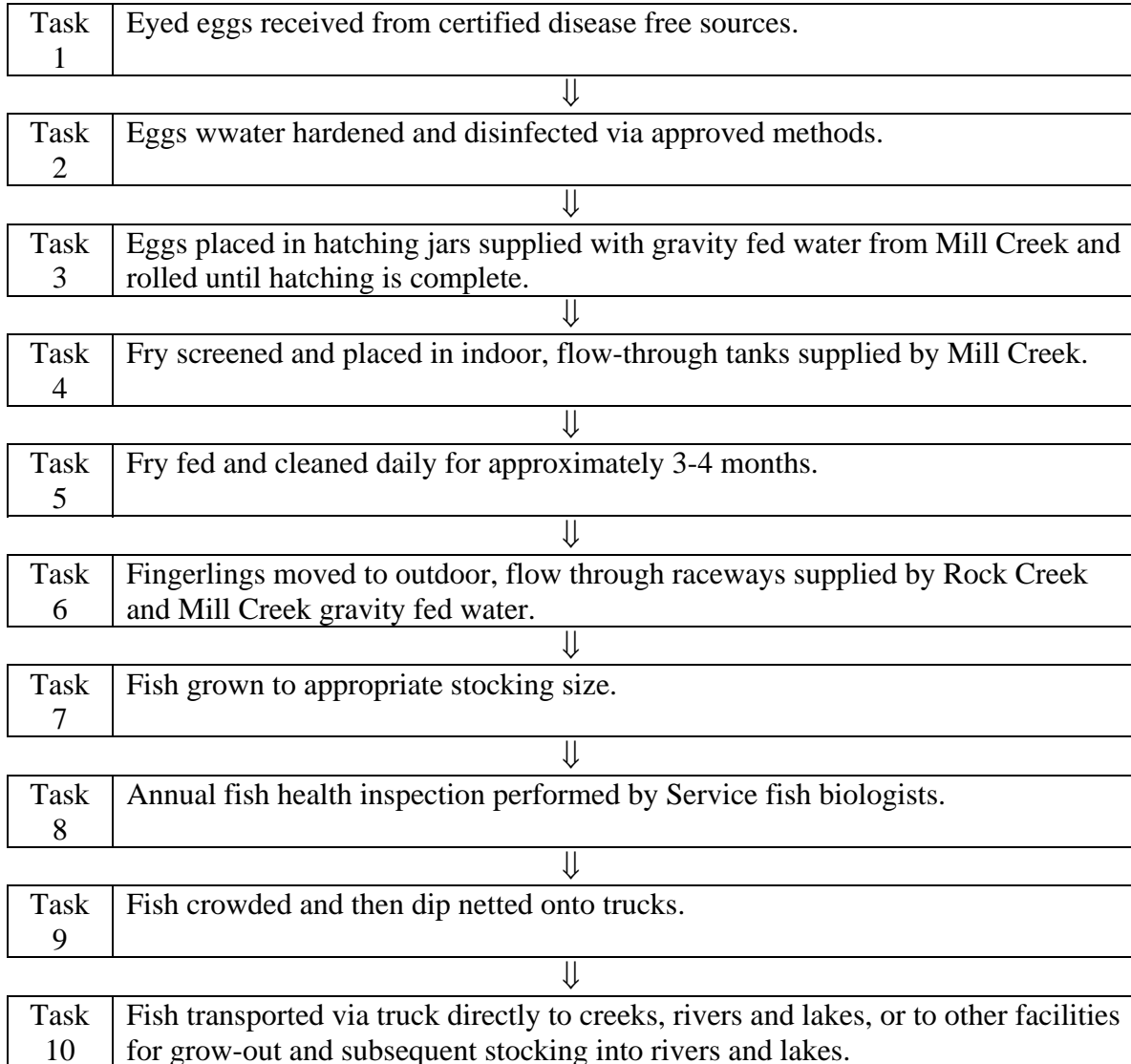
## HACCP Step 2 – Identify Potential Hazards

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

<b>Hazards: Species Which May Potentially Be Moved/Introduced</b>
<b>Vertebrates:</b>
<b>Invertebrates:</b> Zebra mussel, New Zealand mud snail
<b>Plants:</b>
<b>Other Biologics (e.g. disease, pathogen, parasite):</b> Fish pathogens commonly found in the Toccoa River watershed (i.e., Infectious Pancreatic Necrosis, Enteric Redmouth Disease)
<b>Others (e.g. construction materials, etc.):</b>

### 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  Eyed eggs received from certified disease free sources.	<u>Vertebrates</u>	No			No
	<u>Invertebrates</u>	No			
	<u>Plants</u>	No			
	<u>Others</u> Fish pathogens commonly found in the Toccoa River watershed (i.e., Infectious Pancreatic Necrosis, Enteric Redmouth Disease)	Yes	Could not survive the chemical treatment regimes.	Control measures not practical until Task 2.	

Task 2  Eggs wwater hardened and disinfected via approved methods.	<u>Vertebrates</u>	No			Yes
	<u>Invertebrates</u>	No			
	<u>Plants</u>	No			
	<u>Others</u> Fish pathogens commonly found in the Toccoa River watershed (i.e., Infectious Pancreatic Necrosis, Enteric Redmouth Disease)	Yes	Could not survive the chemical treatment regimes.	Disinfecting eggs and proper disposal of shiipping containers reduces the risk of fish pathogens.	



### HACCP Step 4 - Hazard Analysis Worksheet

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<b>Task 3</b>  Eggs placed in hatching jars supplied with gravity fed water from Mill Creek and rolled until hatching is complete.	<u>Vertebrates</u>	No			No
	<u>Invertebrates</u>	No	Could not survive the chemical treatment regimes.		
	<u>Plants</u>	No			
	<u>Others</u>	No			

<b>Task 4</b>  Fry screened and placed in indoor, flow-through tanks supplied by Mill Creek.	<u>Vertebrates</u>	No			No
	<u>Invertebrates</u>	No	ANS entering the hatchery from the water supply source are present in the immediate drainage.		
	<u>Plants</u>	No			
	<u>Others</u>	No			

### HACCP Step 4 - Hazard Analysis Worksheet

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<b>Task 5</b>  Fry fed and cleaned daily for approximately 3-4 months.	<u>Vertebrates</u>	No			No
	<u>Invertebrates</u>	No	ANS entering the hatchery from the water supply source are present in the immediate drainage.		
	<u>Plants</u>	No			
	<u>Others</u>	No			

<b>Task 6</b>  Fingerlings moved to outdoor, flow through raceways supplied by Rock Creek and Mill Creek gravity fed water.	<u>Vertebrates</u>	No			No
	<u>Invertebrates</u>	No	ANS entering the hatchery from the water supply source are present in the immediate drainage.		
	<u>Plants</u>	No			
	<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 7  Fish grown to appropriate stocking size.	<u>Vertebrates</u>	No			No
	<u>Invertebrates</u>	No	ANS entering the hatchery from the water supply source are present in the immediate drainage.		
	<u>Plants</u>	No			
	<u>Others</u>	No			
Task 8  Annual fish health inspection performed by Service fish biologists.	<u>Vertebrates</u>	No			Yes
	<u>Invertebrates</u>	No			
	<u>Plants</u>	No			
	<u>Others</u> Fish pathogens commonly found in the Toccoa River watershed (i.e., Infectious Pancreatic Necrosis, Enteric Redmouth Disease)	Yes	Pathogens of concern can be introduced into the wild if the fish are not properly inspected.	If pathogens of concern are detected that are not present at the various stocking sites and pose a risk to wild fish, the cultured fish will not be released.	





### 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  Fish crowded and then dip netted onto trucks.	<u>Vertebrates</u>	No			Yes
	<u>Invertebrates</u> Zebra mussel, New Zealand mud snail	Yes	Pathogens of concern can be introduced into the wild if the fish are not properly inspected.	Place a mesh bag over the truck fill pipe. Clean mesh bag and disinfect with 200 mg/L chlorine on a regular basis.	
	<u>Plants</u>	No			
	<u>Others</u> Fish pathogens commonly found in the Toccoa River watershed (i.e., Infectious Pancreatic Necrosis, Enteric Redmouth Disease)	Yes	Pathogens of concern can be introduced into the wild if the fish are not properly inspected.	Disinfect suspect distribution vehicles with 200 mg/L chlorine or 600 mg/L quarternary ammonium prior to entering the fish production area.	
Task 10  Fish transported via truck directly to creeks, rivers and lakes, or to other facilities for grow-	<u>Vertebrates</u>	No			Yes
	<u>Invertebrates</u> Zebra mussel, New Zealand mud snail	Yes	ANS could be brought into the hatchery on contaminated surfaces.	Avoid contact between truck and water at stocking site. Disinfect suspect trucks/equipment after distribution trip.	

out and subsequent stocking into rivers and lakes.	<u>Plants</u>	No			
	<u>Others</u> Fish pathogens commonly found in the Toccoa River watershed (i.e., Infectious Pancreatic Necrosis, Enteric Redmouth Disease)	Yes	ANS could be brought into the hatchery on contaminated surfaces.	Avoid contact between truck and water at stocking site. Disinfect suspect trucks/equipment after distribution trip.	

### HACCP Step 5 – HACCP Plan Form

<b>HACCP Plan Form</b>								
<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>		
Task 2	Fish pathogens commonly found in the Toccoa River watershed (i.e., Infectious Pancreatic Necrosis, Enteric Redmouth Disease)	Unintentional spread of pathogens into the hatchery and into the wild or other culture facilities.	Disinfection protocol.	Monitor disinfection process.	When eggs are received.	Hatchery personnel taking part in egg water hardening and disinfection.	Hatchery site supervisor responsible for following protocol.	MSDS Data Sheets
Task 8	Fish pathogens commonly found in the Toccoa River watershed (i.e., Infectious Pancreatic Necrosis, Enteric Redmouth Disease)	Unintentional spread of pathogens into the hatchery and into the wild or other culture facilities.	Presence of pathogens of concern.	Visual and microscopic inspection.	During the annual inspection.	Service disease biologists.	Warm Springs Fish Health Center.	Fish Health Inspection Report
Task 9	Zebra mussel, New Zealand mud snail, Fish pathogens commonly found in the Toccoa River watershed (i.e., Infectious Pancreatic Necrosis, Enteric Redmouth Disease)	Adequate contact between ANS and disinfection required for effectiveness. Assure that all equipment is in good condition.	Disinfection protocol and condition of equipment.	Visual inspection and monitor disinfection process.	Prior to filling distribution truck.	Hatchery personnel taking part in distribution.	Hatchery supervisor responsible for following protocol.	Records in daily log book.

Task 10	Zebra mussel, New Zealand mud snail, Fish pathogens commonly found in the Toccoa River watershed (i.e., Infectious Pancreatic Necrosis, Enteric Redmouth Disease)	Adequate contact between ANS and disinfection required for effectiveness. Assure that all equipment is in good condition.	Disinfection protocol and condition of equipment.	Visual inspection and monitor disinfection process.	Returning distribution truck.	Hatchery personnel taking part in distribution.	Hatchery supervisor responsible for following protocol.	Records in daily log book.
<b>Facility:</b> Chattahoochee Forest National Fish Hatchery						<b>Activity:</b> Coldwater Fish Production and Distribution - Chattahoochee Forest NFH		
<b>Address:</b>								
<b>Signature:</b>						<b>Date:</b>		
<b>HACCP Plan was followed.</b>								