

Robust Redhorse HACCP Plan (Hazard Analysis Critical Control Point)

1. Activity Description
2. Potential Hazards
3. Flow Diagram
4. Hard Analysis Worksheet
5. HACCP Plan Form

1) Activity Description

Facility: Warm Springs National Fish Hatchery	Site: Warm Springs National Fish Hatchery
Project Coordinator: Carlos Echevarria	Activity: Robust Redhorse culture
Site Manager: Carlos Echevarria	
Address: 5308 Spring Street Warm Springs, GA 31830	
Phone: (706) 655-3382	

Project Description

i.e. Who; What; Where; How; Why

Robust redhorse eggs are fertilized in the wild by FWS biologist and shipped to WSNFH where they are hatched out and held in a recirculation system of aquariums on site, shipped to state facility in "standard" 15 inch square Styrofoam shipping boxes with flat bottom bags. Fry are shipped to Social Circle State Hatchery-Rearing facility for eventual use in recovery plans.

2) Identify Potential Hazards

Hazards: Species which may potentially be moved/introduced
Vertebrates: None
Invertebrates: None
Plants: None
Other Biologics: None
Others: None

3) Flow Diagram

Step 1	Eggs received
Step 2	Eggs disinfected before they come into contact with water used for fish culture purposes
Step 3	Measure total volume of eggs and allocate into properly marked hatching jars within a recirculation system with 3% water exchange
Step 4	Fry hatch
Step 5	Fry shipping → Social Circle State Hatchery

4) Hazard Analysis Worksheet

(1) Harvest or Aquaculture Step	(2) Identify potential ANS hazards introduced or controlled at this step (1)	(3) Are any potential ANS hazards significant? (Yes/No)	(4) Justify your decisions for column 3	(5) What control measures can be applied to prevent the significant hazards	(6) Is this step a critical control point? (Yes/No)
(1) Eggs Received	Fish/other vert: none	No	Eggs disinfected with 100 mg/L active iodine before contact with culture water	NA	No
	Invertebrates: none	No	Eggs disinfected with 100 mg/L active iodine before contact with culture water	NA	No
	Plants: none	No	Eggs disinfected with 100 mg/L active iodine before contact with culture water	NA	No
	Other biologics: none	No	Eggs disinfected with 100 mg/L active iodine before contact with culture water	NA	No
(2) Eggs disinfected	Fish/other vert: none	No	Eggs disinfected with 100 mg/L active iodine	NA	No
	Invertebrates: none	No	Eggs disinfected with 100 mg/L active iodine	NA	No
	Plants: none	No	Eggs disinfected with 100 mg/L active iodine	NA	No
	Other biologics: none	No	Eggs disinfected with 100 mg/L active iodine before contact with culture water	NA	No
(3) Measure volume and allocate eggs into properly labeled hatching jars	Fish/other vert: none	No	All equipment disinfected with 600ppm Roccal. Eggs disinfected with 100 mg/L active iodine	NA	No
	Invertebrates: none	No	All equipment disinfected with 600ppm Roccal. Eggs disinfected with 100 mg/L active iodine	NA	No
	Plants: none	No	All equipment disinfected with 600ppm Roccal. Eggs disinfected with 100 mg/L active iodine	NA	No
	Other biologics: none	No	All equipment disinfected with 600ppm Roccal. Eggs disinfected with 100 mg/L active iodine	NA	No
(4) Fry Hatch	Fish/other vert: none	No	Recirculating system. All equipment sterilized in 600ppm Roccal	NA	No
	Invertebrates: none	No	Recirculating system. All equipment sterilized in 600ppm Roccal	NA	No
	Plants: none	No	Recirculating system. All equipment sterilized in 600ppm Roccal	NA	No
	Other biologics: none	No	Recirculating system. All equipment sterilized in 600ppm Roccal	NA	No

4) Hazard Analysis Worksheet cont'd

(5) Fry Shipping	Fish/other vert: none	No	No ANS present in culture water source	NA	No
	Invertebrates: none	No	No ANS present in culture water source	NA	No
	Plants: none	No	No ANS present in culture water source	NA	No
	Other biologics: none	No	No ANS present in culture water source	NA	No
(6) Disinfect Hatching Jar System	Fish/other vert: none	No	System disinfected with 300ppm chlorine solution for 30 minutes	NA	No
	Invertebrates: none	No	System disinfected with 300ppm chlorine solution for 30 minutes	NA	No
	Plants: none	No	System disinfected with 300ppm chlorine solution for 30 minutes	NA	No
	Other biologics: none	No	System disinfected with 300ppm chlorine solution for 30 minutes	NA	No

5) ANS-HACCP Plan Form

(1) Critical Control Point (CCP)	(2) Significant Hazard(s)	(3) Limits for each Control Measure	Monitoring				(8) Evaluation and Corrective Action(s) (if needed)	(9) Supporting Documentation (if any)
			(4) What	(5) How	(6) Frequency	(7) Who		
No significant hazardous identified. No critical control points. No HACCP Plan required.								
Facility: Warm Springs National Fish Hatchery						Activity: Robust Redhorse Culture		
Address: 5308 Spring Street Warm Springs, GA 31830								
Signature:						Date:		
HACCP Plan Was Followed								