

Bonytail HACCP Plan

(Hazard Analysis and Critical Control Point)

Bonytail Subadult Production

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

1. Product Description

Firm Name:	Mora National Fish Hatchery & Technology Center
Firm Address:	PO Box 689 Mora, New Mexico 87732
Species of fish:	Bonytail
Cultured, wild harvested, or both:	Cultured
Harvest method:	
Method of distribution and storage:	Held in fiberglass tanks or glass aquaria hauled by truck to Dexter FTC or Willow Beach NFH.
Intended use and consumer:	Stocking into Colorado River or held at Dexter FTC as Broodfish

2. Flow Diagram

Step 1	Eggs received from certified disease free sources or juveniles to adults received from same
Step 2	Eggs stocked into incubation or glass aquaria fed with well water
Step 3	Hatched eggs (sac fry) placed into grow-out containers
Step 4	Juveniles or adults treated for Asian Tapeworm
Step 5	Fish grown to appropriate sizes for stocking
Step 6	Fish crowded and then dip netted onto trucks or are loaded onto trucks using a Fish Pump
Step 7	Fish are transported via truck to rivers, lakes or alternate holding holding facilities
Step 8	Fish are dip netted from trucks or water and fish are drained from the truck into lakes, rivers or alternate facilities

3. Potential Hazards

List aquatic species here that are found in hatchery water supply or local waters that could potentially hitchhike to receiving waters and cause ecological harm. These are called *Aquatic Nuisance Species (ANS)*.

- a. **ANS Fish:** Examples: Eurasian ruffe, round goby. Asian carps, non-native amphibians, etc.
None
- b. **ANS Invertebrates:** Examples: zebra mussels, Asian clams, spiny water fleas, rusty crayfish, etc.
Asian Tapeworm, Local Snails.
- c. **ANS Plants:** Examples: Eurasian watermilfoil, hydrilla, giant salvinia, water chestnut, etc.
None

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 preventive measures can be applied to prevent the significant hazards?	(6) Is this step a critical control point? (Yes/No)
1) Eggs juveniles or adults received	Fish	No	ANS not present		
	Invertebrate: Asian tapeworm	Yes	Possible transfer with juveniles or adults	Hazard controlled at later step	
	Plant	No	ANS not present		No
2) Eggs stocked into incubators or glass aquaria	Fish	No	ANS not present		
	Invertebrate: Asian tapeworm	No	Possible, but unlikely transfer with eggs	Hazard controlled at later step	
	Plant	No			
3) Sac fry placed in grow-out containers	Fish	No	ANS not present		
	Invertebrate: Asian tapeworm	Yes	Possible, but unlikely transfer with sac fry	Hazard controlled at later step	No
	Plant	No			
4) Juveniles or adult treated for Asian tapeworm	Fish	No	ANS not present		
	Invertebrate	Yes	Possible presence in juveniles & adults	Treat for tapeworm with praziquantel appropriate dose	Yes
	Plant	No	ANS not present		
5) Fish grown to appropriate size for stocking	Fish	No	ANS not present		
	Invertebrate	No	ANS not present		
	Plant	No	ANS not present		
6) Fish crowded and then dip netted onto trucks	Fish	No	ANS not present		
	Invertebrate: Local snails	Yes	Snail could be present	Remove snails, sweep raceways, dry nets	Yes
	Plant	No	ANS not present		
7) Fish transported to rivers, lakes or other facilities	Fish	No	ANS not present		
	Invertebrate	No	ANS not present		
	Plant	No	ANS not present		
8) Fish dip netted from truck or drained from truck into lakes, rivers, or alternate facilities	Fish	No	ANS not present		
	Invertebrate	No	ANS not present		
	Plant	No	ANS not present		

5. ANS - HACCP Plan Form

(1) Critical Control Point (CCP)	(2) Significant Hazard(s)	(3) Control Measures	Monitoring				(8) Corrective Actions(s)	(9) Records	(10) Verification
			(4) What	(5) How	(6) Frequency	(7) Who			
Eggs, juveniles or adults received from Broodstock facility	Asian tapeworm	Juveniles and adults are treated to kill Asian tapeworm with praziquantel	Chemical treatment	Standard protocol	once	Manager or Assistant Manager	Check random sample for Asian tapeworm, if present, retreat	Record receipt of BTC lots and treatment records	Records and autopsy
Snails present in the water could be loaded with fish	Snails could be moved to exotic habitat	tanks are inspected prior to crowding fish. If snails are present, sweep raceways/tanks to remove snails.	Time and presence of snails	Visual inspection	Each time fish are hauled	Manager or Assistant Manager	If snails are found sweep raceways/tanks and reinspect prior to loading fish.	Record loading of fish and time of inspection	Records review

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Signature:		Intended Use and Consumer: Stocking into Colorado River or held at Dexter as Broodfish
Date:		