

Aquatic Nuisance Species Hazard Analysis and Critical Control Point Plan

ANS HACCP B Summer Steelhead Trout cultured at the Hagerman National Fish Hatchery

1. **Product Description**
2. **Flow Diagram**
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4. **Hazard Analysis Worksheet**
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10. Product Description

Firm Name:	Hagerman National Fish Hatchery
Firm Address:	3059-D National Fish Hatchery Road Hagerman, Idaho 83332
Species of fish:	Summer Steelhead trout (<i>Oncorhynchus mykiss</i>)
Cultured, wild harvested, or both:	Cultured
Harvest method:	Loaded on to fish transport tankers.
Method of distribution and storage:	Tankers haul and release fish at sites on the Salmon River, American River, Newsome Creek, and Little Salmon River.
Intended use and consumer:	Contribution to adult steelhead sport and tribal fishery, and tribal supplementation programs. Tribes include Shoshone-Bannock, and Nez Perce.

20. Flow Diagram

Step 1	Receive Eggs from IDF&G Hatcheries. (Sawtooth FH provides Pahsimeroi and Sawtooth A-run stocks, Clearwater FH provides Clearwater B-run stock.)
β	
Step 2	Eggs disinfected, loaded into incubator jars, and incubated. Eggs are kept separate by stock
β	
Step 3	Jars are emptied into corresponding tanks in Hatchery Buildings One and Two.
β	
Step 4	Fish are reared in Hatchery Buildings to approximately 200 fish per pound, or until flow and density indices dictate.
β	
Step 5	Clearwater and Pahsimeroi stocks are transferred by tank to outside raceways on the middle deck (late July). Sawtooth stocks are transferred by tank to raceways on the upper deck (early August). (Fish are split at roughly 2 hatchery tanks per one outside raceway).
β	
Step 6	Fish may be vaccinated (August).
β	
Step 7	Pahsimeroi and Clearwater stocks are split to raceways on the lower deck (mid/late September). Sawtooth fish are split to raceways on middle and upper decks during adipose fin marking (late September/early October).
β	
Step 8	A portion of the Sawtooth stock may be CWT (late October).
β	
Step 9	A small number of each stock being reared will receive PIT tags (March).
β	
Step 10	Fish are loaded onto transport tankers, hauled to release sites, and released. (April and May).

3. Potential Hazards

- a. ANS (non target) Fish and Other Vertebrates: Sculpin spp.,
- b. **ANS Invertebrates:** New Zealand mudsnails (*Potamopyrgus antipodarum*)
- c. **ANS Plants:** None
- d. **Diseases:**
 - 1) furunculosis (*Aeromonas salmonicida*)
 - 2) bacterial coldwater disease (*Cytophaga psychrophila*)
 - 3) enteric redmouth disease (*Yersinia ruckeri*)
 - 4) bacterial kidney disease (*Renibacterium salmoninarum*)
 - 5) intranuclear microsporidean (*Nucleospora salmonis*)

The Hagerman National Fish Hatchery will confer with fish health professionals responsible for the waters intended for stocking prior to fish distribution if there are significant signs of disease.

4. Hazard Analysis Worksheet

(1) Harvest or Aquaculture Step (from flow diagram)	(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)
Receive eggs from IDFG hatcheries	Fish	No	well water	n/a	n/a
	Invertebrates	No	well water	n/a	n/a
	Plants	No	well water	n/a	n/a
	Diseases (IHN)	Yes	could be carried with eggs	Females and source tested for virus. Eggs not shipped if from an IHN positive female.	Yes
Eggs disinfected and loaded into incubator jars.	Fish	No	none present	n/a	n/a
	Invertebrates	No	none present	n/a	n/a
	Plants	No	none present	n/a	n/a
	Diseases (bacteria, fungus)	Yes	could be carried with eggs	100 ppm iodophor for ten minutes	Yes
Incubation jars emptied into tanks	Fish	No	none present	n/a	No
	Invertebrates	No	none present	n/a	No
	Plants	No	none present	n/a	No
	Diseases	No	none present	n/a	No
Fish are reared in Hatchery buildings 1 and 2	Fish (sculpins, other spp.)	Yes	may be in spring water	controlled at subsequent step	No
	Invertebrates	Yes	In spring water	monitored for here, but controlled at subsequent step	No
	Plants (watercress, others)	Yes	may be in spring water	controlled at subsequent step	No
	Diseases (various bacteria)	Yes	may be in spring water	medicated feed, increased flows, and lowered densities	Yes
Fish are transferred from Hatchery buildings 1 and 2 to outside raceways	Fish	Yes	may be in spring water	visual inspection and removal	Yes
	Invertebrates	Yes	In spring water	monitored for here, but controlled at subsequent step	No
	Plants	Yes	may be in spring water	visual inspection and removal	Yes

	Diseases	Yes	may be in spring water	medicated feed, and/ or increased flows, and/or lowered densities, equipment disinfection	Yes
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(1) Harvest or Aquaculture Step (from flow diagram)	(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)
Fish may be vaccinated*	Fish (sculpin, other spp.)	Yes	may be in spring water	visual inspection and removal	Yes
	Invertebrates (crayfish, snails)	Yes	In spring water	monitored for here, but controlled at subsequent step	No
	Plants (watercress, others)	Yes	may be in spring water	visual inspection and removal	Yes
	Diseases	No	n/a	controlled at previous step	No
Fish are split to lower deck by hand, and to middle and upper decks during ad marking.	Fish (sculpin, other spp.)	Yes	may be in spring water	visual inspection and removal	Yes
	Invertebrates (crayfish, snails)	Yes	In spring water	monitored for here, but controlled at subsequent step	No
	Plants (watercress, others)	Yes	may be in spring water	visual inspection and removal	Yes
	Diseases	No	n/a	controlled at previous step	No
Fish may be CWT*	Fish (sculpin, other spp.)	Yes	may be in spring water	controlled at subsequent step	No
	Invertebrates (crayfish, snails)	Yes	In spring water	monitored for here, but controlled at subsequent step	No
	Plants (watercress, others)	Yes	may be in spring water	controlled at subsequent step	No
	Diseases	No	n/a	controlled at previous step	No
A representative number of fish from each stock are PIT tagged.	Fish (sculpin, other spp.)	Yes	may be in spring water	controlled at subsequent step	No
	Invertebrates (crayfish, snails)	Yes	In spring water	monitored for here, but controlled at subsequent step	No
	Plants (watercress, others)	Yes	may be in spring water	controlled at subsequent step	No
	Diseases	No	n/a	controlled at previous step	No
Fish are loaded	Fish (sculpin, other spp.)	Yes	may be in spring water	visual inspection and removal	Yes

on to transport tankers, hauled to release sites and released.	spp.)		spring water	and removal	
	Invertebrates (crayfish, snails)	Yes	In spring water	visual inspection and removal	Yes
	Plants (watercress, others)	Yes	may be in spring water	visual inspection and removal	Yes
	Diseases	Yes	may be in spring water	controlled at previous step	No
Firm Name:	Hagerman National Fish Hatchery		Species of Fish:	Summer Steelhead trout (<i>Oncorhynchus mykiss</i>)	
Firm Address:	3059-D National Fish Hatchery Road Hagerman, Idaho 83332		Cultured, Wild, Harvested, or both: Cultured		
Signature:			Intended Use and Consumer: Contribution to adult steelhead sport and tribal fishery and tribal supplementation programs.		
Date:					

5. HACCP Plan Form

(1) Critical Control Point (CCP)	(2) Significant Hazard(s)	(3) Limits for each Control Measure	Monitoring				(8) Corrective Action(s)	(9) Records	(10) Verification
			(4) What	(5) How	(6) Frequency	(7) Who			
Receive eggs from IDFG hatcheries	Disease transfer	Females are 100% sampled for virus and randomly checked for BKD.	Fish Health Inspection Report from shipping hatchery, with virus status documented	Visual check of paperwork	Each cooler	Biologist and/or fish culturists	Will not accept eggs.	Records of egg status kept in BroodYear file.	Records check
Eggs disinfected and loaded into incubator jars	Disease transfer	Eggs are held in 100 ppm iodophor for ten minutes	Time the eggs are in the iodophor	Clock	Each cooler	Biologist and/or fish culturists	Hold for required time	Record duration of disinfection for each cooler in yellow record book.	Records check
Fish are reared in Hatchery buildings	Disease epizootics	0.1% mortality per tank per day for 5 days	Tank cleaning records (mort sheets)	Visual check	Daily	Biologist and/or fish culturists	Treat with prescribed medication	Record mortality with daily tank cleanings. File with annual cleaning file.	Review of tank cleaning records to verify return to normal mortality levels
Fish are transferred from Hatchery buildings to outside raceways	Transfer of non-target fish species, and plant species to outside raceways	Non-targets will be removed before transfer	Presence of non-targets	Visual check of nets and transfer vessel	Each time fish are handled	Biologist and/or fish culturists	Remove by hand, all non-target species	Record removal of any non-targets in yellow data book.	Records check
Fish may be vaccinated	Non-target fish species, and plant species in raceways	Non-targets will be removed	Presence of non-targets	Visual check of nets and vaccination vessel	Each time fish are handled	Biologist and/or fish culturists	Remove by hand all non-target species	Record removal of any non-targets in yellow data book.	Records check

(1) Critical Control Point (CCP)	(2) Significant Hazard(s)	(3) Limits for each Control Measure	Monitoring				(8) Corrective Action(s)	(9) Records	(10) Verification
			(4) What	(5) How	(6) Frequency	(7) Who			
Fish are split to lower deck by hand, and to middle and upper decks during ad marking.	Non-target fish species, and plant species, in raceways	Non-targets will be removed before transfer to additional raceways.	Presence of non-targets	Visual check of nets and transfer vessel	Each time fish are handled	Biologist and/or fish culturists	Remove by hand all non-target species	Record removal of any non-targets in yellow data book..	Records check
Fish are loaded on to transport tankers, hauled, and released	Non-target fish species., plant species, and or invertebrates may be sent to release sites.	Non-targets will be removed or be prevented from being loaded on trucks before the trucks depart hatchery.	Presence of non-targets	Visual check of transport trucks and fish pump water. Visual check of fish stomach contents.	Each time trucks leave the hatchery transporting fish or water.	Biologist and/or fish culturists	Screening of truck water supply, hold fish off feed 48 hours prior to transport. Raceway floors and walls swept clean 24 to 48 hours prior to transport. Utilize large mesh screens on dewatering tower of fish pump.	Record monitoring results, and confirmation of corrective actions taken on distribution form and file with BroodYear records.	Records check
Firm Name:	Hagerman National Fish Hatchery				Species of Fish:	Summer Steelhead trout (Oncorhynchus mykiss)			
Firm Address:	3059-D National Fish Hatchery Road Hagmeran, Idaho 83332				Method of Storage and Distribution:	Cultured in tanks and raceways. Distributed by semi-truck and transport tankers.			
Signature:					Intended Use and Consumer:	Contribution to adult steelhead sport and tribal fishery and tribal			

Date:

supplementation programs.