Aquatic Nuisance Species
Hazard Analysis and Critical Control Point Plan

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

1. **Product Description**
2. **Flow Diagram**
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4. **Hazard Analysis Worksheet**
5. **HACCP Plan Form**

1. 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 (*Oncorhynchus mykiss*)
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. Including the Yankee Fork and East Fork braches.
Intended use and consumer:	Contribution to adult steelhead sport and tribal fishery, and tribal supplementation programs. Tribal partner is the Shoshone-Bannock.

1. Flow Diagram

Step 1	Receive Eggs from Sawtooth Fish Hatchery.

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Step 2	Eggs disinfected, loaded into incubator jars, and incubated. Eggs are kept separate by stock.

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Step 3	Jars are emptied into corresponding tanks in Hatchery Buildings One and Two.

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Step 4	Fish may be vaccinated at 400 fish per pound.

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Step 5	Fish are reared in Hatchery Buildings to approximately 100 fish per pound, or until flow and density indices dictate.

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Step 6	Unmarked Yankee Fork fish are transferred by tank to outside raceways on the top deck (August). Sawtooth stocks are transferred by tank to MATS trailers for marking and/or CWT insertion. Fish are directly ponded into raceways from MATS trailers on all three decks (August). East Fork Hatchery fish are transferred by tank to MATS trailers for CWT insertion and are then ponded into raceways on the middle (August) and bottom deck (August/September).

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Step 7	A portion of each stock being reared will receive PIT tags (November).

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Step 8	Fish are loaded onto transport tankers, hauled to release sites, and released. (April and May).

1. Potential Hazards

a. ANS Fish and Other Vertebrates: None

b. ANS Invertebrates: New Zealand mudsnails (NZMS), *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.

1. 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
	Intertebrates	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	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	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 may be vaccinated	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	No
	Diseases (various bacteria)	Yes	may be in spring water	medicated feed, and/ or increased flows, and/or lowered densities, equipment disinfection	Yes

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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	No
	Diseases (various)	Yes	may be in spring water	medicated feed, and/ or increased flows, and/or lowered densities, equipment disinfection	Yes
Fish are split to all three decks during adipose fin clip marking.	Fish	Yes	may be in spring water	visual inspection and removal, but controlled at subsequent step	No
	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, but controlled at subsequent step	No
	Diseases	No	n/a	controlled at previous step	No
Fish may be CWT*	Fish	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	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	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	Yes	may be in spring water	controlled at subsequent step	No
	Diseases	No	n/a	controlled at previous step	No

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Fish are loaded on to transport tankers, hauled to release sites and released.	Fish	Yes	may be in spring water	visual inspection and removal and use fish free water from spring 13	Yes
	Invertebrates	Yes	In spring water	Visual inspection and removal. Use NZMS free water from spring 13. Hold fish off feed 48 hours prior to transport. Pond scrub raceway floors prior to distribution. Raceway floors swept clean 24 to 48 hours prior to transport. Utilize large mesh screens on dewatering tower of fish pump.	Yes
	Plants	Yes	may be in spring water	visual inspection and removal	Yes
	Diseases	Yes	may be transferred with fish	Pre release fish health exam, < 0.10% mortality pre tank for 5 days	Yes

Firm Name: Hagerman National Fish Hatchery	**Species of Fish:** Summer Steelhead trout (*Oncorhynchus mykiss*)
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:	

1. # HACCP Plan Form

(1) Critical Control Point (CCP)	(2) Significant Hazard(s)	(3) Limits for each Control Measure	Monitoring				(8) Corrective Action(s)	(9) Verification	(10) Records
			(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 check	Records of egg status kept in BroodYear file.
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	Records check	Record duration of disinfection for each cooler in yellow record book.
Fish are reared in Hatchery buildings	Disease epizootics	0.1% mortality per tank per day for 5 days	Tank cleaning records (mortality sheets)	Visual check	Daily	Biologist and/or fish culturists	Treat with prescribed medication	Review of tank cleaning records to verify return to normal mortality levels	Record mortality with daily tank cleanings. File with annual cleaning file.
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-target species	Visual check of nets and transfer vessel	Each time fish are handled	Biologist and/or fish culturists	Remove by hand, all non-target species	Records check	Record removal of any non-targets in yellow data book.

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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. Disease epizootics.	All non-targets will be removed or be prevented from being loaded on trucks before the trucks depart hatchery. Fish mortality rate will be at or below 0.1% per rearing unit per day for 5 days.	Presence of non-target species. Mortality records.	Visual check of transport trucks and fish pump water. Visual check of representative sample of fish stomach contents. Check of mortality sheets	Visual check of transport water each time trucks leave the hatchery transporting fish or water. Inspection of stomach contents during fish health exams and pre-release sampling. Daily check of mortality sheet.	Biologist and/or fish culturists	Screening of truck water supply, hold fish off feed until ANS is not present. Raceway floors and walls swept clean 24 to 48 hours prior to transport. Hold until mortality < 0.10% /day/5 days.	Records check	Record monitoring results, and confirmation of corrective actions taken on distribution form and file with BroodYear records. Mortality sheets.

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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 supplementation programs.
Date:	