

**Aquatic Nuisance Species
Hazard Analysis and Critical Control Point Plan**

Makah National Fish Hatchery Lake Ozette Sockeye Egg Incubation

Activity Description	
Facility: Makah National Fish Hatchery	Site: Neah Bay, WA (Sooes River)
Project Coordinator: Dave Zajac Joy Evered	Activity: Aquaculture (Coho and Fall Chinook Salmon and Steelhead Trout), and Lake Ozette Sockeye
Site Manager: Al Jensen	
Address: P.O Box 739 or 897 Hatchery Rd Neah Bay, WA. 98357	
Phone: 360.645.2521	

Project Description
<p>Makah NFH is located on the Sooes River 3 miles above its entrance to the Pacific Ocean. The Sooes River originates in the foothills of the northwest slope of the Olympic Mountains. The river flows through timberlands owned by the Crown Pacific Timber Company until it reaches the Makah Indian Reservation boundary at about river mile (RM) 4.2. All of the lands are managed for timber harvest.</p> <p>Makah NFH was established in 1981 to restore salmon resources of the Makah Indian Reservation and nearby watersheds on the north Washington coast and the Strait of Juan de Fuca.</p> <p>Each year's proposed fish production program is communicated with the State and Tribal co-managers through the annual Future Brood Document process that includes all Washington hatcheries. The current production program includes releases of 3.2 million fall Chinook salmon, 250,000 coho salmon, and 175,000 steelhead trout into the Sooes River. The hatchery also transfers 50,000 yearling coho salmon, 100,000 fall Chinook salmon (if available after on-station production needs are met and after 300 adult Chinook are passed upstream), and 25,000 yearling steelhead trout to the Educket Creek (a tributary to Waatch River on the Makah Reservation) facility operated by the Makah Nation. Eggs for these programs are collected from adults returning to the hatchery. The overall production program, including the species and numbers produced, has remained fairly stable over the last 5 years. However, Lake Ozette Sockeye eggs are now temporarily incubated in the Iso/Quarantine unit. The Iso/Quarantine unit in-flow water is filtered through four five micron felt bags and ultra-violet light treated at 254 nanometers of peak radiation with a minimum dosage of 30,000 microwatts/second/square centimeter. The out-flow water is treated with chlorine at more than 2 ppm active ingredient.</p>

Hazards: Species Which May Potentially Be Moved/Introduced

Vertebrates:

List Species/Types: None.

Comments: No survey done.

Invertebrates:

List Species/Types: None.

Comments: No survey done.

Plants:

List Species/Types: None.

Comments: No survey done.

Other Biologics: (Pathogens)

List Species/Types: *Infectious hematopoietic necrosis (IHN).*

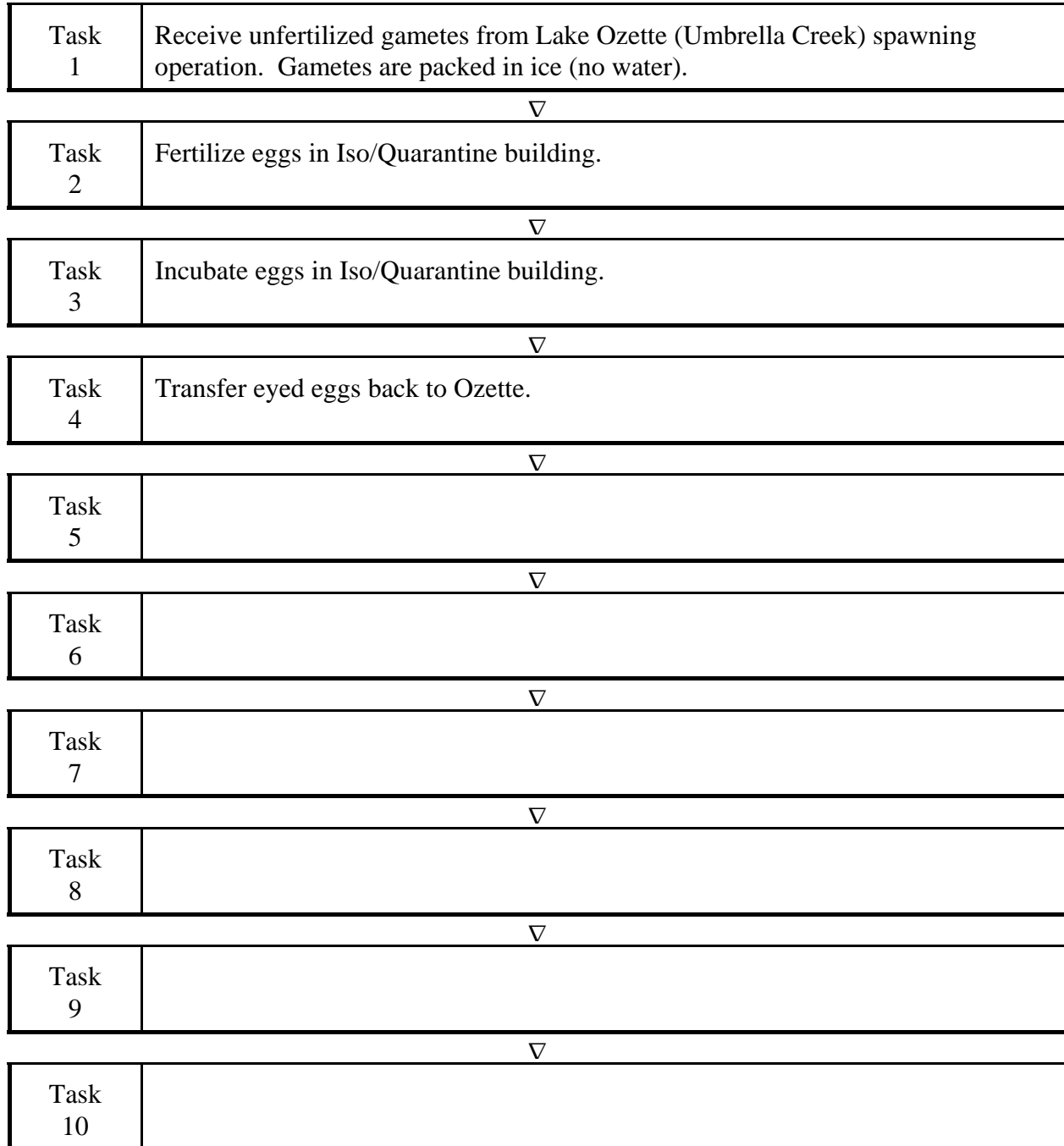
Viral Hemorrhagic Septicemia (VHS).

Others:

List Species/Types: None.

Comments:

Flow Diagram



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)
Receive unfertilized gametes	Vertebrates None	No		n/a	No
	Invertebrates None	No		n/a	No
	Plants None	No		n/a	No
	Others Fish Pathogens	Yes	Potential pathogen carriers	Disinfect equipment or do not receive	Yes
Fertilize the eggs	Vertebrates None	No		n/a	No
	Invertebrates None	No		n/a	No
	Plants None	No		n/a	No
	Others Fish Pathogens	Yes	Potential pathogen carriers	Disinfect eggs or do not receive	Yes
Incubate the eggs	Vertebrates None	No		n/a	No
	Invertebrates None	No		n/a	No
	Plants None	No		n/a	No

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)
	Others Fish Pathogens	Yes	Potential pathogen carriers	Disinfect effluent water from facility and incoming equipment and gear from Ozette crew	Yes
Transfer eyed eggs back to Ozette	Vertebrates None.	No		n/a	No
	Invertebrates None.	No		n/a	No
	Plants None.	No		n/a	No
	Others Fish Pathogens	Yes	Potential pathogen carriers	Disinfect water supply to the facility and incoming equipment and gear from Ozette crew	Yes

HACCP Plan Form

HACCP Plan Form								
			Monitoring					
Critical Control Point (CCP)	Significant Hazard(s)	Limits for each Control Measure	What	How	Frequency	Who	Evaluation & Corrective Action(s) (if needed)	Supporting Documentation (if any)
Receive unfertilized gametes	Pathogen or Disease Transfer	Use 200 ppm chlorine and 100 ppm iodophor solutions for disinfection--10 minute contact time	Transport vehicle and associated gear	Apply to all surfaces and hoses via spray or bath	For each transfer.	Ozette crew	Visual observation by hatchery crew and log book entry	Log Book
Fertilize the eggs	Pathogen or Disease Transfer	Use 75 ppm iodophor for one hour	Fertilized eggs	Bath	All eggs	Ozette crew	Visual observation by hatchery crew and log book entry	Log Book
Incubate the eggs	Pathogen or Disease Transfer	Use 200 ppm chlorine and 100 ppm iodophor solutions for disinfection--10 minute contact time	Transport vehicle and associated gear	Apply to all surfaces via spray or bath	Every work crew visit	Ozette crew	Visual observation by hatchery crew and log book entry	Log Book
			Effluent water	Treat effluent with chlorine	Continuous effluent water treatment	Makah crew		

HACCP Plan Form

			Monitoring					
Critical Control Point (CCP)	Significant Hazard(s)	Limits for each Control Measure	What	How	Frequency	Who	Evaluation & Corrective Action(s) (if needed)	Supporting Documentation (if any)
Transfer eyed eggs back to Ozette	Pathogen or Disease Transfer	Use 200 ppm chlorine and 100 ppm iodophor for gear--10 minute contact time. 75 ppm iodophor for ten minutes for eggs.	Transport vehicle and associated gear	Apply to all surfaces via spray or bath. Egg bath	For each transfer All eggs	Ozette crew	Visual observation by hatchery crew and log book entry	Log Book
		Filter and ultraviolet	Water supply	Filter and UV for water supply	Continuous water supply treatment.	Makah crew		
Facility: Makah National Fish Hatchery					Activity: Aquaculture (Ozette Sockeye)			
Address: P.O. Box 739 or 897 Hatchery Road Neah Bay, WA 98357								
Signature:					Date:			
HACCP Plan was followed. Plan will be modified to reflect future ANS risks as they become apparent and are identified.								