

In-stream Survey HACCP Plan

HACCP Step 1 – Activity Description

Activity Description	
Facility: Red Bluff Fish and Wildlife Office/Anderson Field Office	Site: Battle Creek video monitoring station
Project Coordinator: Kevin Niemela	Activity: Operation of a video weir to estimate abundance of fall Chinook in Battle Creek
Site Manager: Jim Smith	
Address: 10950 Tyler Road Red Bluff, CA 96080	
Phone: 530-527-3043	

Project Description i.e. Who; What; Where; When; How; Why
<p>The Hatchery Evaluation Program from the Red Bluff Fish and Wildlife Office, in cooperation with the California Department of Fish and Game, operate a video weir to estimate abundance of fall Chinook salmon in Battle Creek. The video weir is operated from August through November. The video weir is located down a gravel road on the State Wildlife Area, just downstream of the Jelly's Ferry Road bridge, which crosses over Battle Creek near the junction with Coleman Fish Hatchery Road. The video weir is tended on a daily basis, when video tapes are changed, equipment is checked for proper operation, and the weir is cleaned of debris and salmon carcasses. The weir site is accessed on vehicle and on foot. Waders and boots are worn while tending the weir. Video tapes are returned to the office, where fish passage is enumerated.</p>

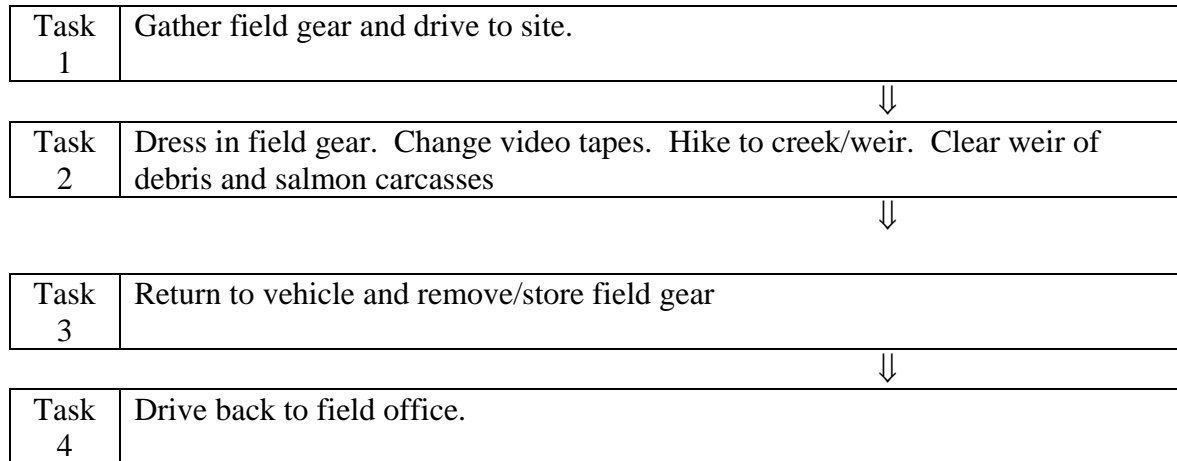
HACCP Step 2 – Identify Potential Hazards

(to be transferred to column 2 of HACCP Step 4 – Hazard Analysis Worksheet)

Hazards: Species Which May Potentially Be Moved/Introduced
Vertebrates: None.
Invertebrates: Aggressive invasive mollusks not yet identified at sites including but not limited to: New Zealand Mudsnailed (<i>Polamophyrus antipodarum</i>) and Zebra mussel (<i>Dreissena polymorpha</i>) and quagga mussels (<i>Dreissena bugensis</i>). Also, other invasive mollusks that may already be present at site including: Freshwater Asian clam (<i>Corbicula fluminea</i>).
Plants: Aggressive invasive terrestrial plant species not yet identified at sites including but not limited to: Giant Arundo (<i>Arundo donax</i>); Salt Cedar (<i>Tamarix spp.</i>); Purple loosestrife (<i>Lythrum salicaria</i>). Other invasive terrestrial plants that may be present at sites: Black locust; Broome Yellow star thistle, Tree of Heaven and Pepperweed (<i>Lepidium latifolium</i>). Aggressive invasive aquatic plant species not yet identified at sites including but not limited to: Hydrilla (<i>Hydrilla verticillata</i>); Water Hyacinth (<i>Eichhornia crassipes</i>). Other invasive aquatics that may be present at sites including invasive <i>Ludwigia</i> species and Eurasian watermillfoil (<i>Myriophyllum spicatum</i>).
Other Biologics (e.g. disease, pathogen, parasite): Fish pathogens, including IHN, columnaris, whirling disease, etc.
Others (e.g. construction materials, etc.): Motor oil and gasoline from vehicles.

HACCP Step 3 – Flow Diagram

Flow Diagram Outlining Sequential Tasks to Complete Activity/Project
Described in HACCP Step 1 – Activity Description



HACCP Step 4 - 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)
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Task 1 Load gear into vehicle. Drive to site.	<u>Vertebrates</u> None	No	Small vertebrates from previous sampling could survive on vehicle and gear	Maintain a clean vehicle and gear. Visually inspect sampling gear and vehicle. If vertebrates, debris or mud are found, remove and dispose of properly before entering project site.	No
	<u>Invertebrates</u> See Step 2: Invertebrates	Yes	Due to their ability to survive and small size, invertebrates could remain on gear and in vehicle from previous sampling effort.	Maintain a clean vehicle and gear. Visually inspect sampling gear and vehicle. If invertebrates, debris or mud are found, remove and dispose of properly before entering project site.	Yes
	<u>Plants</u> See Step 2: Plants	Yes	Plants could remain and survive on gear and in vehicle from previous sampling effort.	Maintain a clean vehicle and gear. Visually inspect sampling gear and vehicle. If plants, debris or mud are found, remove and dispose of properly before entering project site.	Yes
	<u>Others</u> See Step 2: Others and other Biologics	Yes	Pathogenic organisms could remain and survive on the gear and in the vehicle from previous sampling effort. Oil and other fluids	Similar pathogens are already present throughout the entire system.	Yes

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Task 2 Dress in field gear. Change video tapes. Hike to creek/weir. Clear weir of debris and salmon carcasses.	<u>Vertebrates</u> None	No	Difficult to visually detect all invertebrates in previous inspection and some may have survived in gear.	Remove and properly dispose of any vertebrates, debris and mud observed on gear. Visual inspection and removal while hiking to site (brushing, picking from gear) and upon return to vehicle.	No
	<u>Invertebrates</u> See Step 2: Invertebrates	Yes	Difficult to visually detect all invertebrates during previous inspection and may have survived in gear.	Remove and properly dispose of any invertebrates, debris and mud observed on gear. Visual inspection and removal while hiking to site (brushing, picking from gear) and upon return to vehicle.	No
	<u>Plants</u> See Step 2: Plants	Yes	Difficult to visually detect all plants during previous inspection and some may have survived in gear. New terrestrial plants and/or seeds may be picked up by vehicle en route.	Remove and properly dispose of any plants, debris and mud observed on gear. Visual inspection and removal while hiking to site (brushing, picking from gear) and upon return to vehicle.	No
	<u>Others</u> See Step 2: Others and other Biologics	Yes	Any species are present throughout the watershed. Oil and other fluids	Similar pathogens are already present throughout the entire system.	No

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Task 3 Return to vehicle and remove/store field gear.	<u>Vertebrates</u> None	No	May have picked up vertebrates on gear or vehicle while conducting field work.	Check and clean gear. Remove and properly dispose of any vertebrates, debris and mud observed on gear. Visual inspection and removal (brushing, picking from gear) upon return to vehicle.	No
	<u>Invertebrates</u> See Step 2: Invertebrates	Yes	May have picked up invertebrates on gear or vehicle while conducting field work.	Check and clean gear. Remove and properly dispose of any invertebrates, debris and mud observed on gear. Visual inspection and removal (brushing, picking from gear) upon return to vehicle.	Yes
	<u>Plants</u> See Step 2: Plants	Yes	May have picked up plants on gear or vehicle while conducting field work.	Check and clean gear. Remove and properly dispose of any plants, debris and mud observed on gear. Visual inspection and removal (brushing, picking from gear) upon return to vehicle.	Yes
	<u>Others</u> See Step 2: Others and other Biologics	Yes	Any species are present throughout the watershed. Oil and other fluids	Similar pathogens are already present throughout the entire system.	No

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Task 4 Drive back to field office and put gear away.	<u>Vertebrates</u> None	No	Difficult to visually detect all vertebrates in previous inspection and some may have survived in gear. May have picked up vertebrates vehicle while driving from field site.	Visual inspection and removal of vertebrates, debris and mud at completion of survey (brushing, picking from gear). Visual inspection and cleaning of vehicle, if necessary, before returning to office.	Yes
	<u>Invertebrates</u> See Step 2: Invertebrates	Yes	Difficult to visually detect all invertebrates in previous inspection and some may have survived in gear. May have picked up invertebrates on vehicle while driving from field site.	Visual inspection and removal of invertebrates, debris and mud at completion of survey (brushing, picking from gear). Visual inspection and cleaning of vehicle, if necessary, before returning to office.	Yes
	<u>Plants</u> See Step 2: Plants	Yes	Difficult to visually detect all plants in previous inspection and some may have survived in gear. May have picked up plants/seeds on vehicle while driving from the field site.	Visual inspection and removal of plants, debris and mud while conducting survey (brushing, picking from gear). Visual inspection and cleaning of vehicle, if necessary, before returning to office.	Yes
	<u>Others</u> See Step 2: Others and other Biologics	No	May have picked up pathogenic organisms while conducting field work. Oil and other fluids	Visual inspection and removal of plants, debris and mud while conducting survey (brushing, picking from gear) and at office.	No

HACCP Step 5 – HACCP Plan Form

HACCP Plan Form								
Critical Control Point (CCP)	Significant Hazard(s)	Limits for each Control Measure	Monitoring				Evaluation & Corrective Action(s) (if needed)	Supporting Documentation (if any)
			What	How	Frequency	Who		
Task 1 Load gear into vehicle. Drive to site.	Invertebrates or plants may have been left on sampling gear from previous survey.	Sampling gear and vehicle are free from visible debris, mud and organisms.	All sampling gear and vehicle.	Visually inspect gear and vehicle. Remove debris, mud and organisms by brushing, picking, rinsing, and then dispose of properly. If gear is to be used in another location, consider freezing, disinfecting, or desiccating to reduce the potential to spread invasive organisms.	Before leaving field station to go to sample sites.	Field sampling crew.	Determine that controls are in place and working.	NA
Task 2 Dress in field gear. Change video tapes. Hike to creek/weir. Clear weir of debris and salmon carcasses. Return to vehicle	Invertebrates or plant “hitchhikers” may be transported to next site/back to field office.	Sampling gear is free from visible debris, mud and organisms.	All sampling gear.	Visually inspect gear and remove debris, mud and organisms by brushing, picking, rinsing.	Before leaving field site (creek) and before entering vehicle to travel to the next site/back to office.	Field sampling crew.	Determine that controls are in place and working.	NA
Task 3 Drive back to field office and put gear away.	Invertebrates or plants may stow away on sampling gear or vehicle.	Sampling gear and vehicle are free from visible debris, mud and organisms.	All sampling gear and vehicle.	Visually inspect gear and vehicle. Remove debris, mud and organisms by brushing, picking, rinsing, and then dispose of properly. If gear is to be used in another location, consider freezing, disinfecting, or desiccating to reduce the potential to spread invasive organisms.	Before leaving sample site to return to office.	Field sampling crew.	Determine that controls are in place and working.	NA
Facility:			Red Bluff Fish and Wildlife Office/Anderson Field Office					
Address:			10950 Tyler Road Red Bluff, CA 96059			Activity: Operation of a video weir in Battle Creek		
Signature:		Date:						
HACCP Plan was followed.								

