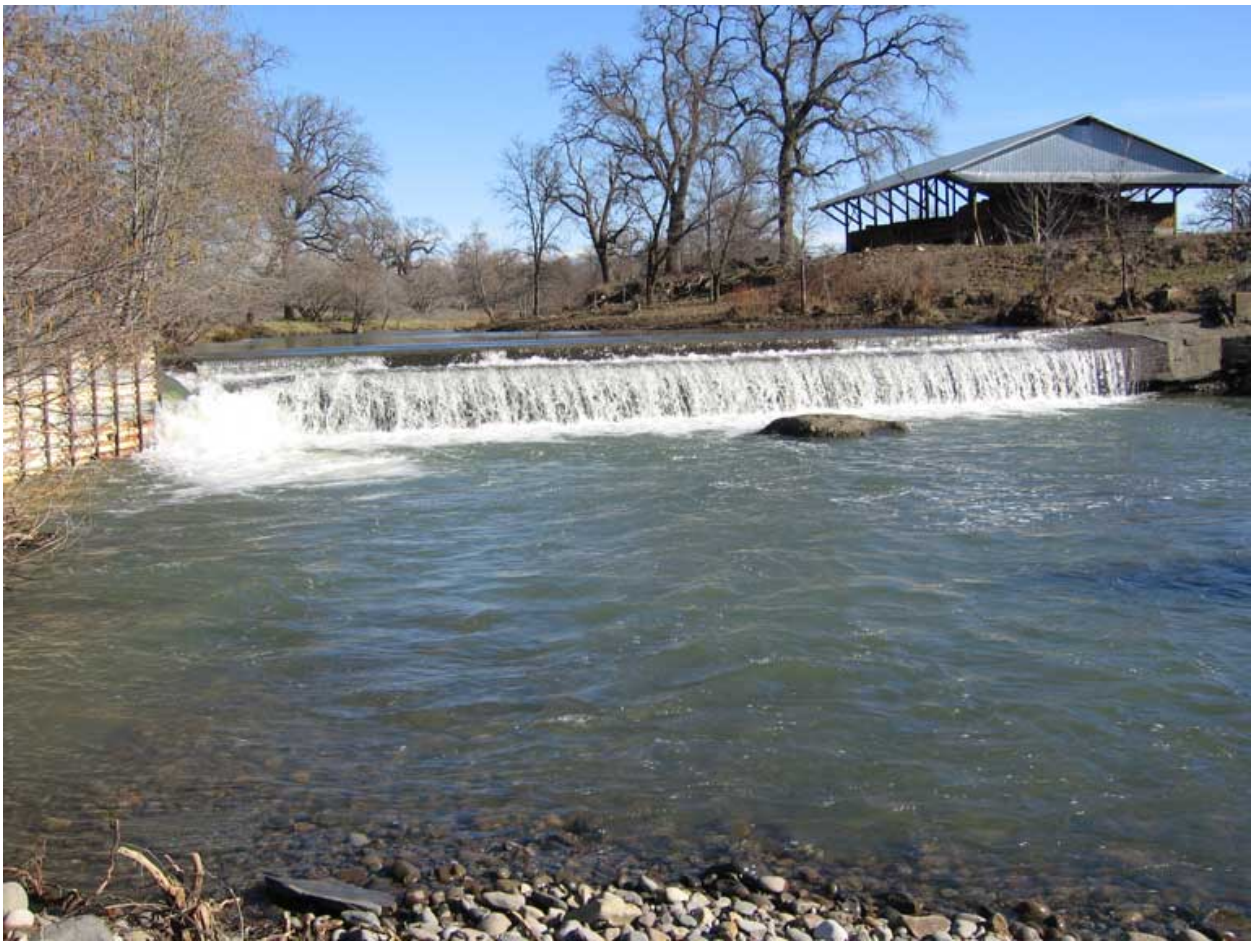
Red Bluff Fish and Wildlife Office
Anadromous Fish Restoration Program
Hazard Analysis Critical Control Point Plan

June 13, 2007



Millville Dam: Barrier to Adult Fall Chinook and Steelhead,
Cow Creek Watershed, Shasta County

HACCP Step 1 – Activity Description

Activity Description	
Facility: Red Bluff Fish & Wildlife Office	Site: Northern Sacramento River and tributaries
Project Leader: Jim Smith	Activity/Management Objective: Implement the Anadromous Fish Restoration Program
Project Manager: Tricia Parker & Brenda Olson	
Address: 10950 Tyler Road Red Bluff, CA 96080	
Phone: 530-527-3043	

Project Description i.e. Who; What; Where; When; How; Why
Utilize inflatable watercraft and/or wading gear to navigate stream reaches for reconnaissance investigations and touring for fish habitat restoration project planning, without spreading non-target organisms. Who: AFRP staff biologists and associated project partners. What: Field touring, planning, and monitoring of restoration sites. Where: All California Central Valley streams under purview of the CVPIA When: Variable. How: Take equipment to site, unload, use, reload, return to office. In rare instances, multiple site may be visited in the same day. Why: To observe river and fish habitat conditions and investigate and monitor restoration sites

HACCP Step 2 – Identify Potential Hazards

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

Hazards: Species or Contaminants Which May Potentially Be Moved/Introduced
Vertebrates: Bullfrogs (*Rana catesbeiana*), All exotic and invasive fish species
Invertebrates: New Zealand Mudsnail (*Potamopyrgus antipodarum*), Zebra Mussel (*Dreissena polymorpha*), Asian Clam (*Corbicula fluminea*), Siberian Prawn (*Exopaleomon modestus*), Bubble Snail (*Haminoea japonica*), Jellyfish (any sp.), Crawdads (any sp.), Mitten Crabs (*Eriocheir sinensis*), Green Crabs (*Carcinus maenas*)
Plants: Purple Loosestrife (*Lythrum salicaria*), Broadleaved pepperweed (*Lepidium latifolium*), Brazilian Waterweed (*Egeria densa*), Water Hyacinth (*Eichhornia crassipes*), Watermilfoil (*Myriophyllum aquaticum*), Giant Arundo (*Arundo donax*) ,Yellow Flag Iris (*Iris pseudacorus*), Scarlet Wisteria (*Sesbania punicea*), Hydrilla (*Hydrilla verticillata*), Canadian Waterweed (*Elodea Canadensis*), Ludwigia (*Ludwigia grandiflora*)
Other Biologics (e.g. genetics, disease, pathogen, parasite, or non-pathogens): *Whirling disease.*
Others (non-biological contaminants e.g. pesticide residue, oil products, etc. or harborage via packing or construction materials, etc.): *Small amounts of pesticide residue, oil, and human waste*

HACCP Step 3 – Flow Diagram

Flow Diagram Outlining Sequential Tasks to Complete Activity/Project
Described in HACCP Step 1 – Activity Description
(to be transferred to column 1 of the HACCP Step 4 – Hazard Analysis Worksheet)

Task 1	Unload stored equipment; load truck and drive to site. Drop shuttle vehicle at take out site.
⇓	
Task 2	Once at site, unload equipment, assemble/inflate watercraft, put waders on and prepare for survey
⇓	
Task 3	Launch watercraft into stream and float down stream occasionally stopping at bank sites while conducting survey. Also foot surveys.
⇓	
Task 4	At the end of the survey, disassemble/deflate watercraft, remove waders, and load into trucks and drive back to the original launch site to pick up first vehicle. In rare instances, additional sites may be visited, in which case Tasks 1,2,3 would be repeated until the end of the day.
⇓	
Task 5	Drive back to office, remove and store equipment.

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 significant? (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)
Task 1 Unload stored equipment; load truck and drive to site. Drop shuttle vehicle at take out site.	Vertebrates Fish Bullfrogs	Yes	Fish and bullfrogs could survive storage in the garage/lockers for short periods.	Check gear for possible hitchhiking plants prior to going out in the field. Clean gear.	Yes
	Invertebrates Exotic non-target invertebrates (See step 2)	Yes	Invertebrate species present could survive storage in the garage/lockers for short periods.		
	Plants Exotic non-target plant species (See step 2)	Yes	Plant species present could survive dry storage in the garage/lockers.		
	Others Biologics Whirling Disease	No	These are prevalent throughout the system		
	Others Oil spills, pesticide contaminants human waste	No	Amounts of oil or pesticides are too small to be concerned with		

HACCP Step 4 - Hazard Analysis Worksheet (continued)

1 Tasks (from HACCP Step 3 - Flow Diagram)	**2** Potential hazards identified in HACCP Step 2	**3** Are any potential hazards significant ? (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)
Task 2 Once at site, unload equipment, assemble/inflate watercraft, put waders on and prepare for survey	Vertebrates Fish Bullfrogs	No	Checked gear prior to driving to site.		No
	Invertebrates Exotic non-target invertebrates (See step 2)	No	Checked gear prior to driving to site.		
	Plants Exotic non-target plant species (See step 2)	No	Checked gear prior to driving to site.		
	Others Biologics Whirling Disease	No	These are prevalent throughout the system		
	Others Oil spills, pesticide contaminants human waste	No	Amounts of oil or pesticides are too small to be concerned with		

HACCP Step 4 - Hazard Analysis Worksheet (continued)

1 Tasks (from HACCP Step 3 - Flow Diagram)	**2** Potential hazards identified in HACCP Step 2	**3** Are any potential hazards significant ? (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)
Task 3 Launch watercraft into stream and float down stream occasionally stopping at bank sites while conducting survey. Also foot surveys.	Vertebrates Fish Bullfrogs	No	Gear and equipment has been checked for hitchhikers in task #1 or #4.		No
	Invertebrates Exotic non-target invertebrates (See step 2)	No	Gear and equipment has been checked for hitchhikers in task #1 or #4.		
	Plants Exotic non-target plant species (See step 2)	No	Gear and equipment has been checked for hitchhikers in task #1 or #4.		
	Others Biologics Whirling Disease	No	These are prevalent throughout the system		
	Others Oil spills, pesticide contaminants human waste	No	Amounts of oil or pesticides are too small to be concerned with		

HACCP Step 4 - Hazard Analysis Worksheet (continued)

1 Tasks (from HACCP Step 3 - Flow Diagram)	2 Potential hazards identified in HACCP Step 2	3 Are any potential hazards significant ? (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)
Task 4 At the end of the survey, disassemble/deflate watercraft, remove waders, and load into trucks and drive back to the original launch site to pick up first vehicle Any unusual organisms encountered at any site should be brought back for proper identification.	Vertebrates Fish Bullfrogs	No	Fish and bullfrogs can hitchhike on sample gear and equipment removed in Task 5.	In the rare instance where more than one site is visited in one day, we would increase our vigilance and clean, wipe, and inspect gear for all non-targets before visiting the next site. As a guideline, we would avoid visiting more than one site in a day.	No
	Invertebrates Exotic non-target invertebrates (See step 2)	No	Invertebrates can hitchhike on sample gear and equipment removed in Task 5.		
	Plants Exotic non-target plant species (See step 2)	No	Plants can hitchhike on sample gear and equipment removed in Task 5.		
	Others Biologics Whirling Disease	No	These are prevalent throughout the system		
	Others Oil spills, pesticide contaminants human waste	No	Amounts of oil or pesticides are too small to be concerned with		

HACCP Step 4 - Hazard Analysis Worksheet (continued)

1 Tasks (from HACCP Step 3 - Flow Diagram)	2 Potential hazards identified in HACCP Step 2	3 Are any potential hazards significant ? (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)
Task 5 Drive back to office, remove and store equipment.	Vertebrates Fish Bullfrogs	Yes	Fish and bullfrogs can hitchhike on sample gear and equipment from site to site	Visually inspect and clean equipment. Allow equipment to dry for time period sufficient to kill all non-targets.	Yes
	Invertebrates Exotic non-target invertebrates (See step 2)	Yes	Invertebrates can hitchhike on sample gear and equipment from site to site		
	Plants Exotic non-target plant species (See step 2)	Yes	Plants can hitchhike on sample gear and equipment from site to site		
	Others Biologics Whirling Disease	No	These are prevalent throughout the system		
	Others Oil spills, pesticide contaminants human waste	No	Amounts of oil or pesticides are too small to be concerned with		

HACCP Step 5 – HACCP Plan Form

HACCP Plan Form (all CCP's or "yes's" from column 6 of HACCP Step 4 – Hazard Analysis Worksheet)		
(1) Critical Control Point:		**Task 1: Unload stored equipment; load truck and drive to site. Drop shuttle vehicle at take out site.**
Significant Hazard(s):		Invertebrates, vertebrates and plants (see Step 2)
Limits for Each Control Measure:		Drying time may not kill all organisms. Ensure all equipment is free of visible plants and/or animals
Monitoring	What:	Any equipment used
	How:	Visually inspect all gear and remove any non-targets
	Frequency:	Before each investigation
	Who:	AFRP staff biologists and associated project partners
Evaluation & Corrective Action(s) (if needed):		Reinspect and remove any visible plants and/or animals. Dry equipment for longer periods of time.
Supporting Documents (if any):		N/A
>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<		
(2) Critical Control Point:		**Task 5: Drive back to the office, remove and store equipment.**
Significant Hazard(s):		Invertebrates, vertebrates and plants (see Step 2)
Limits for Each Control Measure:		Equipment free of visible plants and animals.
Monitoring	What:	Any equipment used
	How:	Visually inspect all gear
	Frequency:	When returning to the office
	Who:	AFRP staff biologists and associated project partners
Evaluation & Corrective Action(s) (if needed):		Remove any visible plants and/or animals. Dry equipment for longer periods of time.
Supporting Documents (if any):		N/A
>><<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<		

Facility: RBFWO	**Activity/Management Objective:** **Implement the Anadromous Fish Restoration Program in the Northern Sacramento River and tributary streams.**
Address: 10950 Tyler Road, Red Bluff, CA 96080	
Signature: **HACCP Plan was followed.**	**Date:**