

HACCP Step 1 – Activity Description

Activity Description	
Facility: U.S. FWS - Montana Fish & Wildlife Service MAO	Site: U.S. FWS - Montana Fish & Wildlife Service MAO
Project Coordinator: Ron Skates	Activity: Fishery survey data collection using backpack electroshocking gear e.g. Stream Restoration, Fire Management, Aquatic Survey/Monitoring, Refuge Farming, Fish Production, T & E Recovery/Listing Survey
Site Manager: Ron Skates	
Address: 4052 Bridger Canyon Road Bozeman, MT 59715	
Phone: 406-585-9010	

Project Description i.e. Who; What; Where; When; How; Why
<p>Sampling Selected stream reaches are delimited and sampled during spring and/or fall according to the fish species of interest. At times, block nets are utilized to prevent escapement from sampling areas. Sampling consists of walking (wearing waders) in an upstream direction using a battery powered backpack electroshocking unit to stun fish that are netted by another person, also walking in the stream. Captured fish are then placed in a plastic bucket or mesh-bag held by a third person either walking behind in the stream or along the stream bank.</p> <p>Holding Captured fish are held in metal tubs or plastic buckets on the stream bank or in flow-through cages or mesh-bags placed within the stream. Fish are then identified to species, sexed if possible, measured to total length, weighed on a portable scale, given a fin clip or receive a tag; before being released back into the water. On occasion, fish that are kept for scientific purposes are placed in plastic bags or a bucket in the field and transported to a freezer.</p> <p>After fish processing has been completed, equipment is packed up and crew either walks to the next sampling section on the stream or returns to the vehicle. Crew then drives to the next stream to sample or drives back to the office where equipment is inspected, cleaned, and returned to the storage area. When crew is in the field for several days, equipment remains in the vehicle overnight until the next work day, where another stream is sampled.</p>

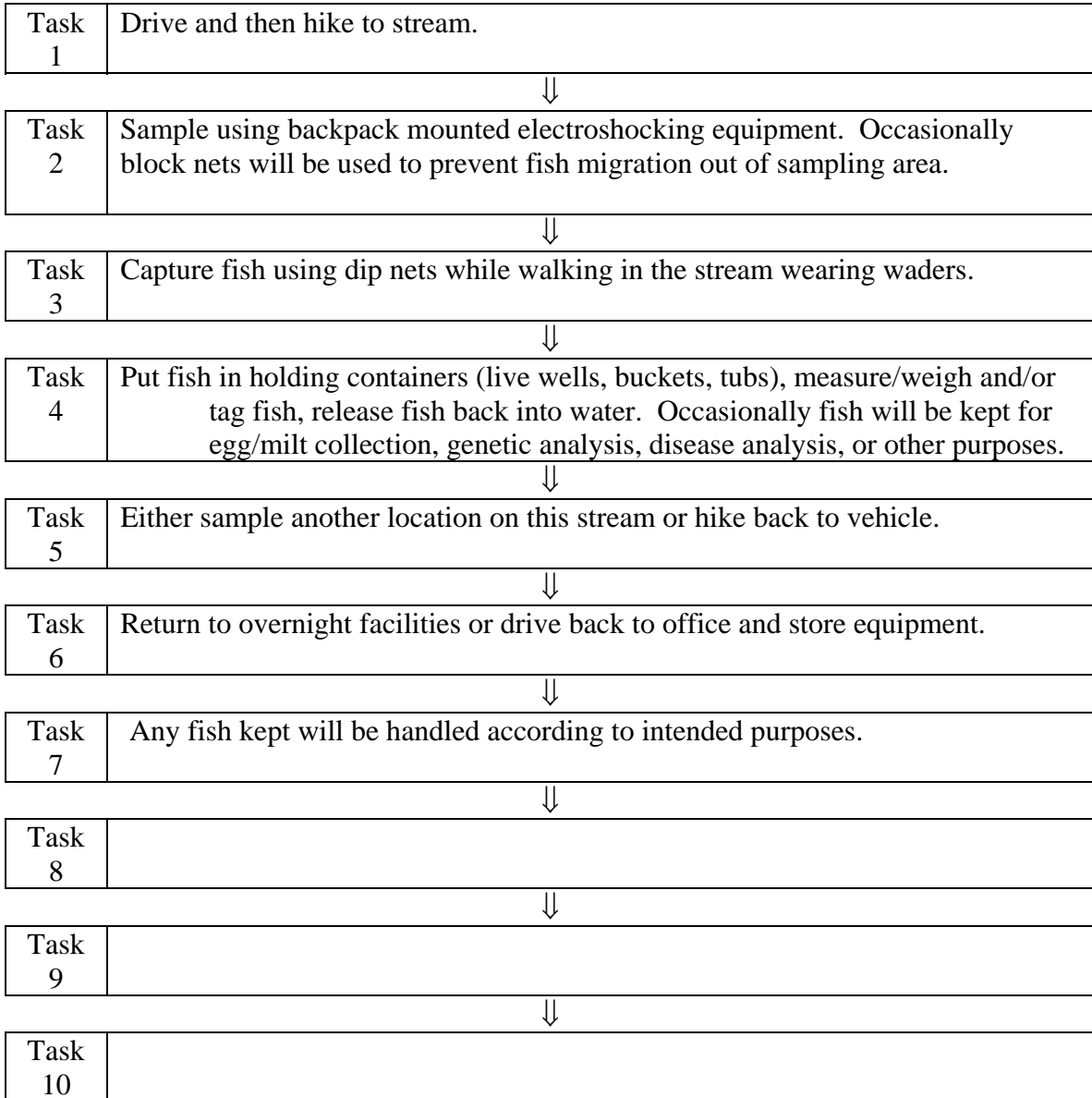
HACCP Step 2 – Identify Potential Hazards

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

Hazards: Species Which May Potentially Be Moved/Introduced
Vertebrates: any fish species or other vertebrates (native or non-native) found in drainage basin
Invertebrates: New Zealand Mud Snails, Zebra mussels.
Plants: Native or non-native plants found in drainage basin.
Other Biologics (e.g. disease, pathogen, parasite): Whirling Disease
Others (e.g. construction materials, etc.): n/a

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)



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)
Task 1 Drive and then hike to stream.	Vertebrates any fish species or other vertebrates (native or non- native) found in drainage basin	no	Equipment clean and free of hazards		
	Invertebrates New Zealand Mud Snails, Zebra mussels.	no	“		
	Plants Native or non-native plants found in drainage basin.	no	“		
	Others Whirling Disease	no	“		
Task 2 Sample using backpack mounted electroshocking equipment. Occasionally block nets will be used to prevent fish migration out of sampling area.	Vertebrates any fish species or other vertebrates (native or non- native) found in drainage basin	yes	Could be present	Hazard controlled at subsequent step	No
	Invertebrates New Zealand Mud Snails, Zebra mussels.	yes	“	“	No
	Plants Native or non-native plants found in drainage basin.	yes	“	“	No
	Others Whirling Disease	yes	“	“	No

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 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)
Task 3 Capture fish using dip nets while walking in the stream wearing waders.	Vertebrates any fish species or other vertebrates (native or non-native) found in drainage basin	yes	Could be present	Hazard controlled at subsequent step	No
	Invertebrates New Zealand Mud Snails, Zebra mussels.	yes	“	“	No
	Plants Native or non-native plants found in drainage basin.	yes	“	“	No
	Others Whirling Disease	yes	“	“	No
Task 4 Put fish in holding containers (live wells, buckets, tubs), measure/weigh and/or tag fish, release fish back into water. Occasionally fish will be kept for egg/milt collection, genetic analysis, disease analysis, or other purposes.	Vertebrates any fish species or other vertebrates (native or non-native) found in drainage basin	yes	Could be present	Hazard controlled at subsequent step	No
	Invertebrates New Zealand Mud Snails, Zebra mussels.	yes	“	“	No
	Plants Native or non-native plants found in drainage basin.	yes	“	“	No
	Others Whirling Disease	yes	“	“	No

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 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)
Task 5 Either sample another location on this stream or hike back to vehicle.	Vertebrates any fish species or other vertebrates (native or non- native) found in drainage basin	yes	Some fish are not in all waters	empty all live wells and dispose of all animals properly, wash gear and equipment with disinfectant, allow to dry before using again	yes
	Invertebrates New Zealand Mud Snails, Zebra mussels.	Yes	Some inverts. are not in all waters	wash gear and equipment with disinfectant, allow to dry before using again	yes
	Plants Native or non-native plants found in drainage basin.	Yes	Some plants are not in all waters	wash gear and equipment with disinfectant, allow to dry before using again	yes
	Others Whirling Disease	Yes	Whirling disease is not in all waters	wash gear and equipment with disinfectant, allow to dry before using again	yes
Task 6 Return to overnight facilities or drive back to office and store equipment.	Vertebrates any fish species or other vertebrates (native or non- native) found in drainage basin	No			
	Invertebrates New Zealand Mud Snails, Zebra mussels.	No			
	Plants Native or non-native plants found in drainage basin.	No			
	Others Whirling Disease	No			

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 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)
Task 7 Any fish kept will be handled according to intended purposes	Vertebrates any fish species or other vertebrates (native or non- native) found in drainage basin	No			
	Invertebrates New Zealand Mud Snails, Zebra mussels.	No			
	Plants Native or non-native plants found in drainage basin.	No			
	Others Whirling Disease	No			
Task 8	Vertebrates				
	Invertebrates				
	Plants				
	Others				

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)								
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 5 Either sample another location on this stream or hike back to vehicle.	any fish species or other vertebrates (native or non-native) found in drainage basin	wash gear and equipment with disinfectant, allow to dry before using again	Equipment	Visually	Every use	Field supervisor	Re-wash gear, make sure all mud is thoroughly washed off	record presence/absence of animals or material on equipment. records reviewed by supervisor.
	New Zealand Mud Snails, Zebra mussels.	“	“	“	“	“		
	Native or non-native plants found in drainage basin.	“	“	“	“	“		
	Whirling Disease	“	“	“	“	“		
Facility: USFWS MFW MAO					Activity: Fishery survey data collection using backpack electroshocking gear			
Address: 4050 Bridger Canyon Road Bozeman, MT 59715								
Signature:					Date:			
HACCP Plan was followed.								