

MFMAONettingHACCP2006

HACCP Step 1 - Activity Description	
Facility: U.S. FWS - Montana Fish and Wildlife Service MAO	Site: Aquatic Habitats
Project Coordinator: Ron Skates	Project Description: Netting: nets (gill, trammel, hoop, seine, trap, etc)
Site Manager: Ron Skates	
Address: 4052 Bridger Canyon Road Bozeman, MT 59715	
Phone: 406-585-9010	

Project Description (Who, What, Where, When, How & Why)
<p>Sampling</p> <p>Equipment is loaded into vehicles and driven to sampling location, where the boat is loaded and launched. Boat is driven to sampling locations where nets are deployed with accompanying floats, weights, or trap boxes. According to sampling protocol, nets are either set for several hours or for a 24-hour period before being retrieved. Fish are removed and placed in holding container and nets are either re-deployed or stored in boat. Crew either moves to next sampling location or returns to launch area.</p> <p> Holding</p> <p>Captured fish are held in metal tubs or plastic buckets. 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 is completed, boat is either left for the day if nets are re-deployed or is re-trailerred and equipment loaded. Vehicle with boat and equipment is driven to another body of water or back to the office/storage area where the boat and equipment is either unloaded or if crew is in the field for several days equipment remains in the vehicle overnight until the next work day.</p>

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HACCP Step 2 - Potential Hazard Identification

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:

whirling disease

Others:

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HACCP Step 3 - Flow Diagram

Task # 1	Load boat with equipment and launch.
	
Task # 2	Attach appropriate floats, weights, hoops, or traps to nets.
	
Task # 3	Set nets with at least net weights and lead-line in contacts with substrate.
	
Task # 4	Either go to shore or load boat on trailer.
	
Task # 5	Re-launch boat and return to net sites.
	
Task # 6	Retrieve nets and remove fish.
	
Task # 7	Place fish in live well or bucket, weigh, measure, or tag fish, release fish back into water. Occasionally fish will be kept for scientific purposes.
	
Task # 8	Either re-deploy nets or return to boat launch with equipment.
	
Task # 9	Load boat on trailer and drive to another body of water or return to office/overnight accommodations.

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HACCP Step 4 - Hazard Analysis					
Task	Hazard	Probable?	Justification	Control Measures	CCP?
1. Load boat with equipment and launch.	Vertebrate: any fish species or other vertebrates (native or non-native) found in drainage basin	No			No
	Invertebrate: New Zealand Mud Snails, Zebra mussels.	No			No
	Plant: Native or non-native plants found in drainage basin.	No	equipment is clean and free of hazards		No
	Other Biologic: whirling disease	No	equipment is clean and free of hazards		No
2. Attach appropriate floats, weights, hoops, or traps to nets.	Vertebrate: any fish species or other vertebrates (native or non-native) found in drainage basin	No	equipment is clean and free of hazards		No
	Invertebrate: New Zealand Mud Snails, Zebra mussels.	No	equipment is clean and free of hazards		No
	Plant: Native or non-native plants found in drainage basin.	No	equipment is clean and free of hazards		No
	Other Biologic: whirling disease	No	equipment is clean and free of hazards		No
3. Set nets with at least net weights and	Vertebrate: any fish species or other vertebrates (native	Yes	Could be present	controlled at subsequent steps	No

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lead-line in contacts with substrate.	or non-native) found in drainage basin				
	Invertebrate: New Zealand Mud Snails, Zebra mussels.	Yes	Could be present	controlled at subsequent steps	No
	Plant: Native or non-native plants found in drainage basin.	Yes	Could be present	controlled at subsequent steps	No
	Other Biologic: whirling disease	Yes	Could be present	controlled at subsequent steps	No
4. Either go to shore or load boat on trailer.	Vertebrate: any fish species or other vertebrates (native or non-native) found in drainage basin	Yes	Could be present	controlled at subsequent step	No
	Invertebrate: New Zealand Mud Snails, Zebra mussels.	Yes	Could be present	controlled at subsequent step	No
	Plant: Native or non-native plants found in drainage basin.	Yes	Could be present	controlled at subsequent step	No
	Other Biologic: whirling disease	Yes	Could be present	controlled at subsequent step	No
5. Re-launch boat and return to net sites.	Vertebrate: any fish species or other vertebrates (native or non-native) found in drainage basin	Yes	Could be present	controlled at subsequent step	No
	Invertebrate: New Zealand Mud Snails, Zebra mussels.	Yes	Could be present	controlled at subsequent step	No
	Plant: Native or non-native	yes	Could be present	Hazard controlled at	No

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	plants found in drainage basin.			subsequent step	
	Other Biologic: whirling disease	yes	Could be present	Hazard controlled at subsequent step	No
6. Retrieve nets and remove fish.	Vertebrate: any fish species or other vertebrates (native or non-native) found in drainage basin	Yes	Could be present	Hazard controlled at subsequent step	No
	Invertebrate: New Zealand Mud Snails, Zebra mussels.	Yes	Could be present	Hazard controlled at subsequent step	No
	Plant: Native or non-native plants found in drainage basin.	Yes	Could be present	Hazard controlled at subsequent step	No
	Other Biologic: whirling disease	Yes	Could be present	Hazard controlled at subsequent step	No
7. Place fish in live well or bucket, weigh, measure, or tag fish, release fish back into water. Occasionally fish will be kept for scientific purposes.	Vertebrate: any fish species or other vertebrates (native or non-native) found in drainage basin	Yes	Could be present	Hazard controlled at subsequent step	No
	Invertebrate: New Zealand Mud Snails, Zebra mussels.	Yes	Could be present	Hazard controlled at subsequent step	No
	Plant: Native or non-native plants found in drainage basin.	Yes	Could be present	Hazard controlled at subsequent step	No
	Other Biologic: whirling disease	Yes	Could be present	Hazard controlled at subsequent step	No

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8. Either re-deploy nets or return to boat launch with equipment.	Vertebrate: any fish species or other vertebrates (native or non-native) found in drainage basin	Yes	Could be present	Hazard controlled at subsequent step	No
	Invertebrate: New Zealand Mud Snails, Zebra mussels.	Yes	Could be present	Hazard controlled at subsequent step	No
	Plant: Native or non-native plants found in drainage basin.	Yes	Could be present	Hazard controlled at subsequent step	No
	Other Biologic: whirling disease	Yes	Could be present	Hazard controlled at subsequent step	No

9. Load boat on trailer and drive to another body of water or return to office/overnight accommodations.	Vertebrate: any fish species or other vertebrates (native or non-native) found in drainage basin	Yes	some species are not present in all waters	wash gear and equipment with disinfectant, allow to dry before using again	Yes
	Invertebrate: New Zealand Mud Snails, Zebra mussels.	Yes	some species are not present in all waters	wash gear and equipment with disinfectant, allow to dry before using again	Yes
	Plant: Native or non-native plants found in drainage basin.	Yes	some species are not present in all waters	wash gear and equipment with disinfectant, allow to dry before using again	Yes

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	Other Biologic: whirling disease	Yes	some species are not present in all waters	wash gear and equipment with disinfectant, allow to dry before using again	Yes
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HACCP Step 5 - HACCP Plan

Critical Control Point #1:

Task # 9: Load boat on trailer and drive to another body of water or return to office/overnight accommodations

Significant Hazards:

Vertebrate: any fish species or other vertebrates (native or non-native) found in drainage basin, New Zealand Mud Snails, Zebra mussels, native or non-native plants living in the drainage and whirling disease

Control Measures:

empty all live wells and dispose of fish properly

Limits for Control Measures:

wash gear and equipment with disinfectant, allow to dry before using again

Monitoring: What?

equipment

Monitoring: How?

visually

Monitoring: Frequency?

each time equipment is used

Monitoring: Who?

Field supervisor

Evaluation & Corrective Actions:

re-wash equipment

Supporting Documentation:

Facility:

U.S. FWS - Montana Fish and Wildlife Service MAO

Activity:

Fish Trapping (permanent or portable weirs and trap boxes)

Address:

4052 Bridger Canyon Road
Bozeman, MT 59715

Signature:

Date:

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HACCP Checklist:

Netting: nets (gill, trammel, hoop, seine, trap, etc)

Facility U.S. FWS - Montana Fish and Wildlife Service MAO
Site Aquatic Habitats
Coordinator Ron Skates
Manager Ron Skates
Address 4052 Bridger Canyon Road, Bozeman, MT 59715

- Task # 1:** Load boat with equipment and launch.
- Task # 2:** Attach appropriate floats, weights, hoops, or traps to nets.
- Task # 3:** Set nets with at least net weights and lead-line in contacts with substrate.
- Task # 4:** Either go to shore or load boat on trailer.
- Task # 5:** Re-launch boat and return to net sites.
- Task # 6:** Retrieve nets and remove fish.
- Task # 7:** . Place fish in live well or bucket, weigh, measure, or tag fish, release fish back into water. Occasionally fish will be kept for scientific purposes.
- Task # 8:** Either re-deploy nets or return to boat launch with equipment.
- Task # 9:** Load boat on trailer and drive to another body of water or return to office/overnight accommodations.

CRITICAL CONTROL POINT

- Hazards were contained
Hazards: Vertebrate: any fish species or other vertebrates (native or non-native) found in drainage basin
- Control measures were implemented
Control Measures: wash gear and equipment with disinfectant, allow to dry before using again
- Control limits were maintained
Control Limits: wash gear and equipment with disinfectant, allow to dry before using again

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- Corrective actions were (performed if necessary)
Corrective Actions: re-wash equipment

- Hazards were contained
Hazards: Invertebrate: New Zealand Mud Snails, Zebra mussels.
- Control measures were implemented
Control Measures: wash gear and equipment with disinfectant, allow to dry before using again
- Control limits were maintained
Control Limits: wash gear and equipment with disinfectant, allow to dry before using again
- Corrective actions were (performed if necessary)
Corrective Actions: re-wash equipment

- Hazards were contained
Hazards: Plant: Native or non-native plants found in drainage basin.
- Control measures were implemented
Control Measures: wash gear and equipment with disinfectant, allow to dry before using again
- Control limits were maintained
Control Limits: wash gear and equipment with disinfectant, allow to dry before using again
- Corrective actions were (performed if necessary)
Corrective Actions: re-wash equipment

- Hazards were contained
Hazards: Other Biologic: whirling disease
- Control measures were implemented
Control Measures: wash gear and equipment with disinfectant, allow to dry before using again
- Control limits were maintained
Control Limits: wash gear and equipment with disinfectant, allow to dry before using again
- Corrective actions were (performed if necessary)
Corrective Actions: re-wash equipment

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