

HACCP Step 1 – Activity Description

Activity Description	
Facility: Bubbling Ponds Hatchery	Site:
Project Coordinator: Roger Sorensen	Activity/Management Objective: Culture and, distribution of various cultured species to waters (lakes & streams) and production facilities
Site Manager: Frank Agyagos	
Address:	
Phone:	

Project Description		
i.e. Who; What; Where; When; How; Why		
<p>Who: Bubbling Pond Hatchery, Arizona Game & Fish Dept.</p>		
<p>What: Distribute specific cultured fish of various size and species to specific locations. The specific of size, species, and season for distribution is predicated on requests from Fish Program Managers and culture needs.</p>		
<p>Where: Locations are determined by Fish Program Managers production requests and assignments made by Hatchery Program Manager.</p>		
Francis short	LL Mary	Soldiers Annex
Garrett Tank	Long Lake	Stone Dam
Goldwater Lake	Presley Tank	Stubbs Tank
Harman Tank	Sante Fe	Swale Tank
Limestone Tank	Shucking Tank	Colorado River
Little Hell Can. Tank	Soldiers	Lakes throughout the state
<p>When: Typical distribution is seasonal and related to recreational needs (anglers) and management prescription (put and take, put, grow, and take, recovery).</p>		
<p>How: Prior to initiating the fish loading process hatchery staff will ensure that the target species and size have been selected for the specific destination. Specifically this requires that the staff select the appropriate rearing container for loading fish from. Once correct container has been designated the fish will be crowded, sample counted, appropriate number determined based on weight, and then loaded on distribution vehicle. Loading method may include the use of mechanical fish loader with segregator, use of digital scales, or displacement using a sight gauge.</p>		
<p>Why: Fish are cultured and distributed in support of recreational sportfishing programs, recovery efforts, and establishment of new fisheries.</p>		
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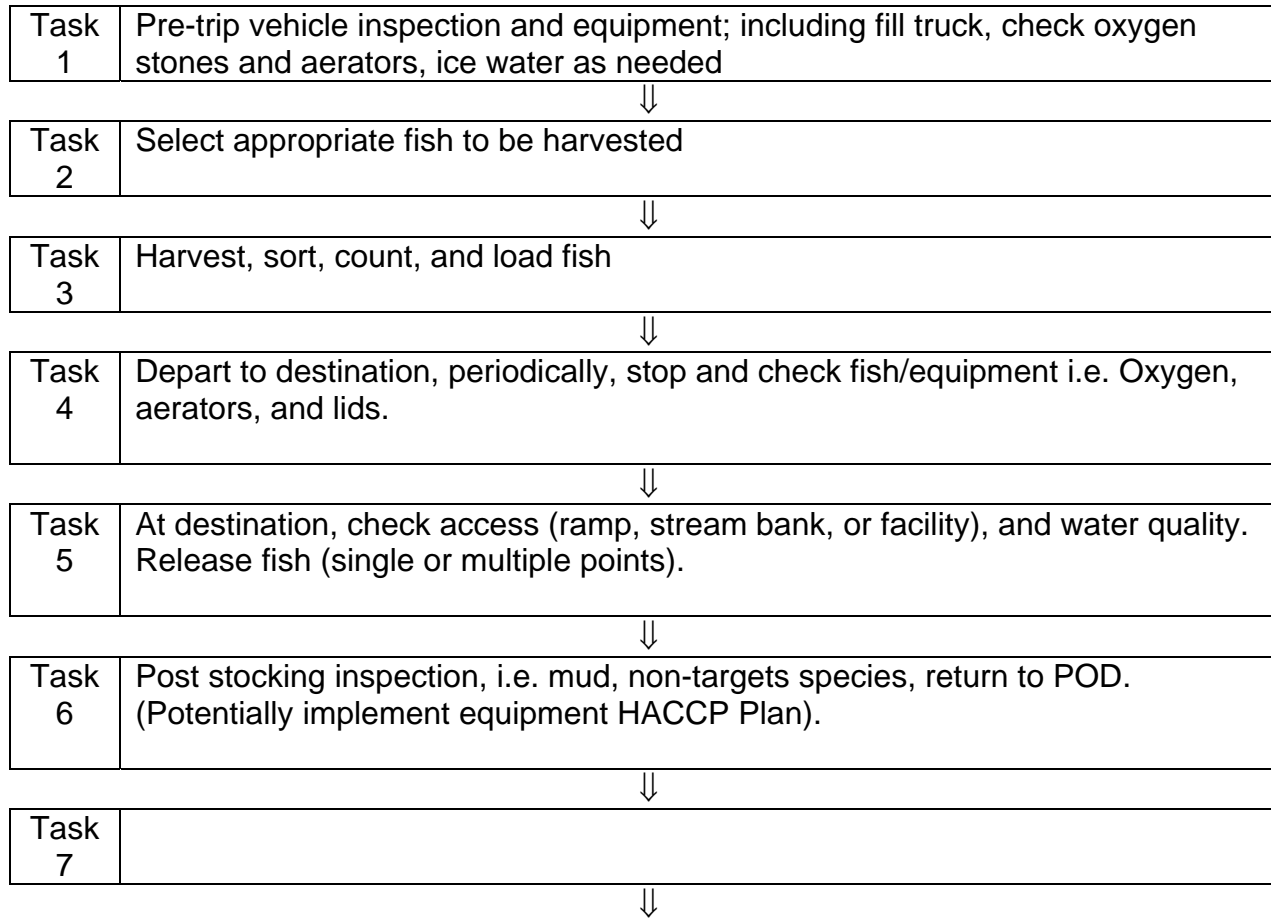
HACCP Step 2 – Identify Potential Hazards

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

Hazards: Species or Contaminants Which May Potentially Be Moved/Introduced
Vertebrates: Fish: rainbow trout, brown trout, Arctic grayling; Colorado river pikeminnow, razorback sucker, largemouth bass, bluegill, Roundtail chub, mosquito fish. Amphibians; frogs, toads, tadpoles Reptiles; various snakes
Invertebrates: Insects, various aquatic insects Crustaceans; crayfish Mollusks; snails and clams
Plants: Macrophytes; various species Plankton; various species Algae; various species
Other Biologics (e.g. genetics, disease, pathogen, parasite, or non-pathogens): Parasite Gyrodactylus, <i>Ichthyophtherius multifiliis</i> , Trichodina, Asian tapeworm (<i>Bothriocephalus opsarichthydis</i>) Bacteria: NA Virus: NA
Others (non-biological contaminants e.g. pesticide residue, oil products, etc. or harborage via packing or construction materials, etc.): None

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 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 Pre-trip vehicle inspection and equipment; including fill truck, check oxygen stones and aerators, ice water as needed	Vertebrates: Fish: rainbow trout, brown trout, Arctic grayling; Colorado river pikeminnow, razorback sucker, largemouth bass, bluegill, Roundtail chub, mosquito fish. Amphibians; frogs, toads, tadpoles Reptiles; various snakes	no	Process does not include handling of product.	NA	NA
	Invertebrates: Insects, various aquatic insects Crustaceans; crayfish Mollusks; snails and clams	no	Process does not include handling of product.	NA	NA
	Plants Macrophytes; various species Plankton; various species Algae; various species	no	Process does not include handling of product.	NA	NA
	Other Biologics (disease, pathogen, parasite, or non- pathogens): Parasite Gyrodactylus, <i>Ich</i> Trichodina, Asian tapeworm (<i>Bothriocephalus</i> <i>opsarichthydis</i>) Bacteria: NA Virus: NA	no	Process does not include handling of product.	NA	NA
	Others None	no			

Task 2 Select appropriate fish to be harvested	Vertebrates: Fish: rainbow trout, brown trout, Arctic grayling; Colorado river pikeminnow, razorback sucker, largemouth bass, bluegill, Roundtail chub, mosquito fish. Amphibians; frogs, toads, tadpoles Reptiles; various snakes	Yes, fish	Fish production is conducted where specific fish groups may be mixed. Prior to harvesting hatchery staff make all efforts to identify appropriate ponds to harvest from.	Hatchery staff will have selected the appropriate pond and raceways to hold the harvested fish.	No
	Invertebrates: Insects, various aquatic insects Crustaceans; crayfish Mollusks; snails and clams	no	Process does not include handling of product.	NA	NA
	Plants Macrophytes; various species Plankton; various species Algae; various species	no	Process does not include handling of product.	NA	NA
	Other Biologics (disease, pathogen, parasite, or non-pathogens): Parasite Gyrodactylus <i>Ich</i> , Trichodina, Asian tapeworm (<i>Bothriocephalus opsarichthydis</i>) Bacteria: NA Virus: NA	no	Process does not include handling of product.	NA	NA
	Others None	no			

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 Harvest, sort, count, and load fish	Vertebrates: Fish: rainbow trout, brown trout, Arctic grayling; Colorado river pikeminnow, razorback sucker, largemouth bass, bluegill, Roundtail chub, mosquito fish. Amphibians; frogs, toads, tadpoles Reptiles; various snakes	yes	This is the most appropriate task where fish are handled for inspection by staff. If any non-targets are mixed with target species this is point that they would be included with load.	Prior to loading all fish are hand sorted and non-targets are excluded from the load. Not a CCP but definitely a CP.	Yes
	Invertebrates: Insects, various aquatic insects Crustaceans; crayfish Mollusks; snails and clams	yes	This is the most appropriate task where fish are handled for inspection by staff. If any non-targets are mixed with target species this is point that they would be included with load. Impacts of these non-targets are not severe unless they are not present in receiving waters.	After sorting and during the loading process the fish is visually inspection for the presence of non-targets. Loading process is manual and allows for good visual observations.	yes
	Plants Macrophytes; various species Plankton; various species Algae; various species	NO	Although these non- targets may be present in the water of the production facility they are not considered to be invasive and potential impact is not considered significant	Fish loading occurs in raceways and macrophytes are flushed through the holding container and removed manually.	yes

	Other Biologics (disease, pathogen, parasite, or non-pathogens): Parasite Gyrodactylus <i>Ich</i> , Trichodina, Asian tapeworm (<i>Bothriocephalus opsarichthydis</i>) Bacteria: NA Virus: NA	no	None of the known species of this category are considered as prohibitive or restrictive as determined by Fish Health Policy.	Fish will not be distributed from the station if pathogens are considered prohibited.	yes
	Others None	no			

Task # 4 Depart to destination, periodically, stop and check fish/equipment i.e. Oxygen, aerators, and lids.	Vertebrates: Fish: rainbow trout, brown trout, Arctic grayling; Colorado river pikeminnow, razorback sucker, largemouth bass, bluegill, Roundtail chub, mosquito fish. Amphibians; frogs, toads, tadpoles Reptiles; various snakes	no	Control Points and critical control point exist in previous steps.	NA	NA
	Invertebrates: Insects, various aquatic insects Crustaceans; crayfish Mollusks; snails and clams	no	Control Points and critical control point exist in previous steps.	NA	NA
	Plants Macrophytes; various species Plankton; various species Algae; various species	no	Control Points and critical control point exist in previous steps.	NA	NA

	Other Biologics (disease, pathogen, parasite, or non-pathogens): Parasite Gyrodactylus <i>Ich</i> , Trichodinina, Asian tapeworm (<i>Bothriocephalus opsarichthydis</i>) Bacteria: NA Virus: NA	no	Control Points and critical control point exist in previous steps.	NA	NA
	Others None	no			

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)
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Task # 5 At destination, check access (ramp, stream bank, or facility), and water quality. Release fish (single or multiple points).	Vertebrates: Fish: rainbow trout, brown trout, Arctic grayling; Colorado river pikeminnow, razorback sucker, largemouth bass, bluegill, Roundtail chub, mosquito fish. Amphibians; frogs, toads, tadpoles Reptiles; various snakes	No	Control Points and critical control point exist in previous steps.	NA	NA
	Invertebrates: Insects, various aquatic insects Crustaceans; crayfish Mollusks; snails and clams	No	Control Points and critical control point exist in previous steps.	NA	NA
	Plants Macrophytes; various species Plankton; various species Algae; various species	No	Control Points and critical control point exist in previous steps.	NA	NA

	Other Biologics (disease, pathogen, parasite, or non-pathogens): Parasite Gyrodactylus, <i>Ich</i> , Trichodina, Asian tapeworm (<i>Bothriocephalus opsarichthydis</i>) Bacteria: NA Virus: NA	No	Control Points and critical control point exist in previous steps.	NA	NA
	Others None	no			

Task # 6 Post stocking inspection, i.e. mud, non-targets species, return to POD. (Potentially implement equipment HACCP Plan).	Vertebrates: Fish: rainbow trout, brown trout, Arctic grayling; Colorado river pikeminnow, razorback sucker, largemouth bass, bluegill, Roundtail chub, mosquito fish. Amphibians; frogs, toads, tadpoles Reptiles; various snakes	no	HACCP Plan is for control of non-target organisms being distributed from production facility and this task is addressed under HACCP plan for equipment movement.	NA	NA
	Invertebrates: Insects, various aquatic insects Crustaceans; crayfish Mollusks; snails and clams	no	HACCP Plan is for control of non-target organisms being distributed from production facility and this task is addressed under HACCP plan for equipment movement.	NA	NA
	Plants Macrophytes; various species Plankton; various species Algae; various species	no	HACCP Plan is for control of non-target organisms being distributed from production facility and this task is addressed under HACCP plan for equipment movement.	NA	NA

	Other Biologics (disease, pathogen, parasite, or non-pathogens): Parasite Gyrodactylus, <i>Ich</i> , Trichodina, Asian tapeworm (<i>Bothriocephalus opsarichthydis</i>) Bacteria: NA Virus: NA		HACCP Plan is for control of non-target organisms being distributed from production facility and this task is addressed under HACCP plan for equipment movement.	NA	NA
	Others None	no			

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