

HACCP Step 1 – Activity Description

Activity Description										
Facility: Silver Creek Hatchery	Site:									
Project Coordinator: Roger Sorensen	Activity/Management Objective: Culture and, distribution of various cultured species to waters (lakes & streams) and production facilities from raceways.									
Site Manager: Mark Severson										
Address: PO Box 90804 White Mountain Lake, AZ 85912 8800 Hatchery Way										
Phone: 928-537-7513,										
Project Description i.e. Who; What; Where; When; How; Why										
<p>Who: Silver Creek 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> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <tr> <td style="width: 33%; padding: 2px;">BECKER</td> <td style="width: 33%; padding: 2px;">L COL GREER</td> <td style="width: 33%; padding: 2px;">SILVER CREEK</td> </tr> <tr> <td style="padding: 2px;">BLACK R E FORK</td> <td style="padding: 2px;">L COL SH X" ING</td> <td></td> </tr> <tr> <td style="padding: 2px;">BLACK R W FORK</td> <td style="padding: 2px;">LEE VALLEY</td> <td></td> </tr> </table> <p>When: Typical distribution is seasonal and related to recreational needs (anglers) and management prescription (put and take, put, grow, and take, catch and release).</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>		BECKER	L COL GREER	SILVER CREEK	BLACK R E FORK	L COL SH X" ING		BLACK R W FORK	LEE VALLEY	
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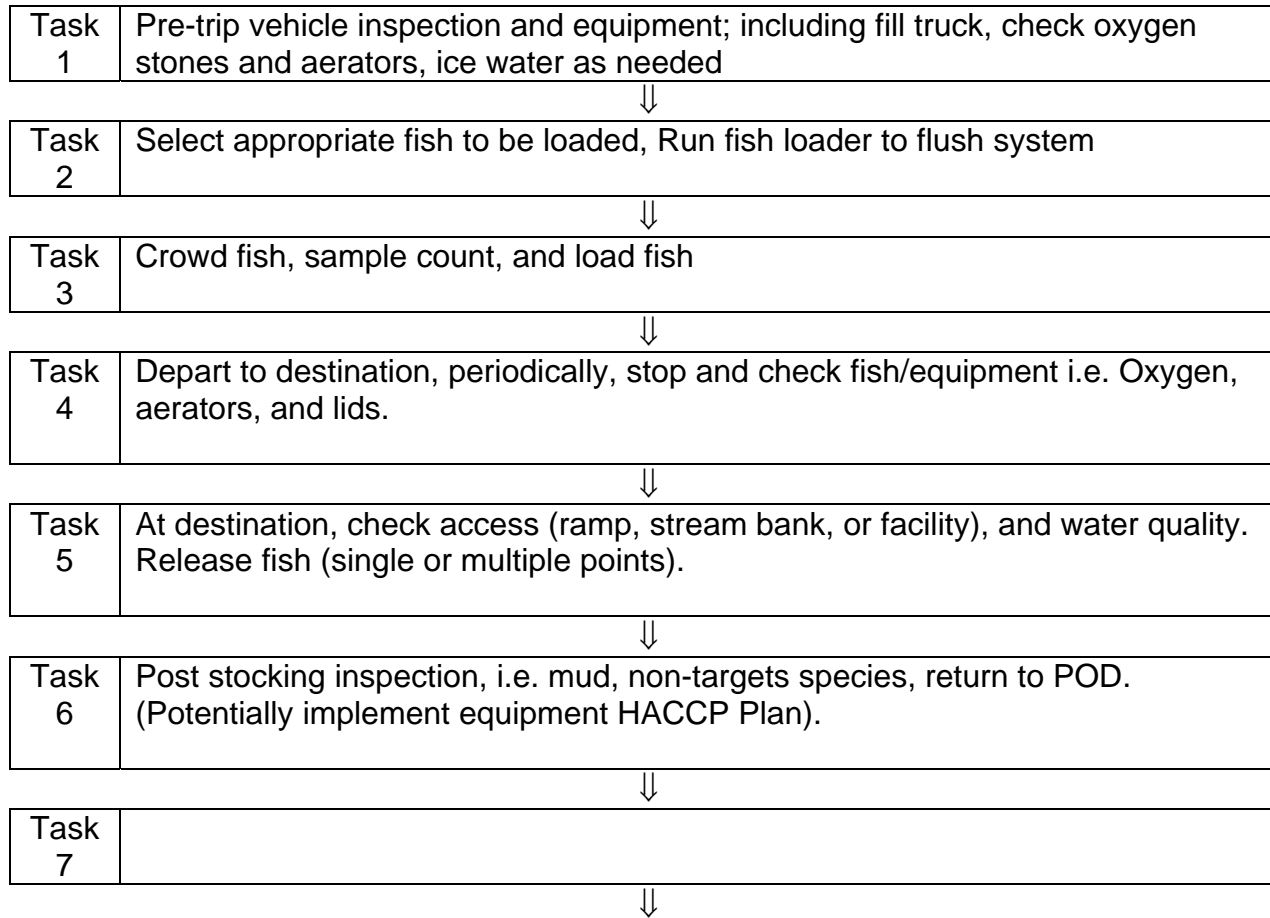
HACCP Step 2 – Identify Potential Hazards

(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 and speckled dace, bluehead suckers Amphibians: Bullfrogs Reptiles; various snakes
Invertebrates: Insects: various aquatic insects Crustaceans: crayfish Mollusks: NA
Plants: Macrophytes; various species Plankton; various species Algae; various species
Other Biologics (disease, pathogen, parasite, or non-pathogens): Parasite: Ich, Trichodina, Gyrodactylus Bacteria: bacterial gill disease 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 and speckled dace Amphibians: NA Reptiles; various snakes	no	Process does not include handling of product.	NA	NA
	Invertebrates: Insects: various aquatic insects Crustaceans: crayfish Mollusks: NA	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 : Parasite: Ich, Trichodina, Gyrodactylus Bacteria: NA Virus: NA	no	Process does not include handling of product.	NA	NA
	Others None	no			
Task 2 Select appropriate fish to be loaded, Run fish loader to flush system	Vertebrates: Fish: rainbow and speckled dace Amphibians: NA Reptiles; various snakes	no	Fish production is conducted where specific fish groups (lots) are not mixed. The only fish species approved for culture are Apache trout.	Hatchery staff will have containers labeled, and get second staff to verify that appropriate fish and container are used.	No

	Invertebrates: Insects: various aquatic insects Crustaceans: crayfish Mollusks: NA	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 : Parasite: Ich, Trichodina, Gyrodactylus 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 Crowd fish, sample count, and load fish	Vertebrates: Fish: rainbow and speckled dace Amphibians: NA 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 random sample count (60 individuals ensures 90% of occurrence) of fish to determine if non- targets present. Not a CCP but definitely a CP.	Yes
	Invertebrates: Insects: various aquatic insects Crustaceans: crayfish Mollusks: NA	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.	During sample count of fish ocular inspection presence of non-targets. Loading process will mechanical loader using the segregating bars separates the large target species and returns smaller non-targets to production container.	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	yes

	Other Biologics : Parasite: Ich, Trichodina, Gyrodactylus 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 and speckled dace Amphibians: NA Reptiles; various snakes	no	Control Points and critical control point exist in previous steps.	NA	NA
	Invertebrates: Insects: various aquatic insects Crustaceans: crayfish Mollusks: NA	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 : Parasite: Ich, Trichodina, Gyrodactylus 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 and speckled dace Amphibians: NA Reptiles; various snakes	No	Control Points and critical control point exist in previous steps.	NA	NA
	Invertebrates: Insects: various aquatic insects Crustaceans: crayfish Mollusks: NA	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 : Parasite: Ich, Trichodina, Gyrodactylus 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	Vertebrates: Fish: rainbow and speckled dace Amphibians: NA 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
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equipment HACCP Plan).	Invertebrates: Insects: various aquatic insects Crustaceans: crayfish Mollusks: NA	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 : Parasite: Ich, Trichodina, Gyrodactylus 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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