HACCP Step 1 – Activity Description

Activity Description	
Facility: New Mexico Fishery Resources Office	Site: Rio Grande
Project Coordinator: James E. Brooks	Activity: Rio Grande silvery minnow salvage and transport
Site Manager: W. Jason Remshardt	
Address: 3800 Commons Avenue NE Albuquerque, NM 87109	
Phone: 505-342-9900	

Project Description
i.e. Who; What; Where; When; How; Why

Who: New Mexico Fishery Resources Office

What: Rio Grande silvery minnow salvage and transport

Where: Rio Grande

When: During river intermittency, primarily during irrigation season (March 15-Nov 15)

How: Collect Rio Grande silvery minnow from isolated pools, transport, and release into flowing sections of river

Why: To lessen the impacts of intermittency on the Rio Grande silvery minnow population

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: Bigscale logperch (*Percina macrolepida*), bullhead minnow (*Pimephales vigilax*), any other non-target species of fish, reptile, amphibian
Invertebrates:
Plants:
Other Biologics (e.g. disease, pathogen, parasite): diseases, pathogens, parasites associated with compromised Rio Grande silvery minnow or hauling water.
Others (e.g. construction materials, etc.):

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	Load hauling tanks with source water
⇓	
Task 2	Identify isolated pools and observe for fish health, water quality
⇓	
Task 3	Seine isolated pools, remove Rio Grande silvery minnow for salvage
⇓	
Task 4	Identify, count, preserve other species of fish, and non-salvaged RGSM
⇓	
Task 5	Transport RGSM to flowing section of river and release
⇓	
Task 6	Clean hauling tanks
⇓	
Task 7	
⇓	
Task 8	
⇓	
Task 9	
⇓	
Task 10	

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 Load hauling tanks with source water	Vertebrates none	n/a			no
	Invertebrates none	n/a			no
	Plants none	n/a			no
	Others none	n/a			no
Task 2 Identify isolated pools and observe for fish health, water quality	Vertebrates none	n/a			no
	Invertebrates none	n/a			no
	Plants none	n/a			no
	Others none	n/a			no

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 3 Seine isolated pools, remove Rio Grande silvery minnow for salvage	Vertebrates bigscale logperch, bullhead minnow, any other non-target species	yes	Any current species may occupy isolated pools	Proper identification training for all field biologists	yes
	Invertebrates none	n/a			no
	Plants none	n/a			no
	Others diseases, pathogens, parasites associated with compromised Rio Grande silvery minnow or hauling water.	yes	Conditions in isolated pools are favorable for disease, pathogen, and parasite infections in fish	Only salvage RGSM that appear to be in good condition.	yes
Task 4 Identify, count, preserve other species of fish, and non-salvaged RGSM	Vertebrates bigscale logperch, bullhead minnow, any other non-target species	no	Non-target species will not be salvaged		no
	Invertebrates none	n/a			no
	Plants none	n/a			no
	Others diseases, pathogens, parasites associated with compromised Rio Grande silvery minnow or hauling water.	no	Non-salvaged RGSM will not be salvaged, they will be preserved		no

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 5 Transport RGSM to flowing section of river and release	Vertebrates none	n/a			no
	Invertebrates none	n/a			no
	Plants none	n/a			no
	Others diseases, pathogens, parasites associated with hauling water.	yes	Unknown pathogens may be present in associated hauling water	Only transport salvaged RGSM within same reach	yes
Task 6 Clean hauling tanks	Vertebrates none	n/a			no
	Invertebrates none	n/a			no
	Plants none	n/a			no
	Others diseases, pathogens, parasites associated with hauling water.	yes	Unknown pathogens may be present in associated hauling water	Clean tanks at end of each day salvage occurred	no

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)								
			Monitoring					
Critical Control Point (CCP)	**Significant Hazard(s)**	**Limits for each Control Measure**	**What**	**How**	**Frequency**	**Who**	**Evaluation & Corrective Action(s) (if needed)**	**Supporting Documentation (if any)**
Task 3 Seine isolated pools, remove Rio Grande silvery minnow for salvage	bigscale logperch, bullhead minnow, any other non-target species	(1) non-target individual	Seine haul	Visual inspection	Every seine haul	Crew leader	Do not transfer non-target species from isolated pool into hauling tank	Salvage field form, identification guide
Facility: **New Mexico Fishery Resources Office**							**Activity:** **Rio Grande silvery minnow salvage and transport**	
Address: **3800 Commons Avenue NE, Albuquerque, NM 87109**								
Signature: **HACCP Plan was followed.**							**Date:**	

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)								
			Monitoring					
Critical Control Point (CCP)	**Significant Hazard(s)**	**Limits for each Control Measure**	**What**	**How**	**Frequency**	**Who**	**Evaluation & Corrective Action(s) (if needed)**	**Supporting Documentation (if any)**
Task 3 Seine isolated pools, remove Rio Grande silvery minnow for salvage	diseases, pathogens, parasites associated with compromised Rio Grande silvery minnow or hauling water.	(1) observed unhealthy fish and/or limits exceeded for water quality	Fish and water quality	Visual inspection, measurement	Every isolated pool where salvage may occur	Crew leader	Do not conduct salvage from isolated pools where unhealthy fish are observed and/or water quality limits are exceeded.	Salvage protocol

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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)								
			Monitoring					
Critical Control Point (CCP)	**Significant Hazard(s)**	**Limits for each Control Measure**	**What**	**How**	**Frequency**	**Who**	**Evaluation & Corrective Action(s) (if needed)**	**Supporting Documentation (if any)**
Task 5 Transport RGSM to flowing section of river and release	diseases, pathogens, parasites associated with hauling water.	Presence of hazards	Hauling tanks/ water	Visual inspection	Every day	Crew leader	Do not use source water from isolated pools, use only flowing water from river, drain, or domestic source. Only release salvaged fish and water within same reach to minimize the potential transfer of hazards.	Salvage protocol

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