

HACCP Step 1 – Activity Description

Activity Description	
Facility: Saratoga NFH	Site: Wyoming Toad/Isolation building
Project Coordinator: Lee Bender	Activity: Wyoming Toad Refugia/breeding facility e.g. Stream Restoration, Fire Management, Aquatic Survey/Monitoring, Refuge Farming, Fish Production, T & E Recovery/Listing Survey
Site Manager: Lee Bender	
Address: P.O. BOX 665 Saratoga, WY 82331	
Phone: 307-326-5662	

Project Description i.e. Who; What; Where; When; How; Why
<p>Wyoming Toad population experienced rapid declines in the mid 1970's. Only one healthy population was located in 1987. Possible reasons for the decline in Wyoming Toad populations may be herbicide and pesticide use, Chitrid fungus, and habitat loss. The goal of this program is to downlist the Wyoming Toad by establishing five new secure populations of approximately 100 to 150 adults within the Laramie Basin by implementation of the Wyoming Toad Recovery Plan. Saratoga NFH provides a genetic refugia for the Wyoming Toad. Broodstock husbandry, breeding and release of offspring in native range. Saratoga National Fish Hatchery provides refugia to one of the largest populations of Wyoming toads in existence. Due to the efforts of the Hatchery's refugia and breeding 4964 Wyoming Toad tadpoles and 218 young of the year toadlets were reintroduced in the Laramie Plains of Wyoming. Partnerships continue to play an important role in the development of the Wyoming Toad Recovery Plan. Saratoga National Fish Hatchery works cooperatively with other Service offices. In FY 2006 10 of 13 pair bred producing 18646 eggs with 6710 hatching. For an overall hatch rate of 36%. Transferred 17 Yearling toads to Detroit Zoo for refugia, breeding and genetic diversity.</p>

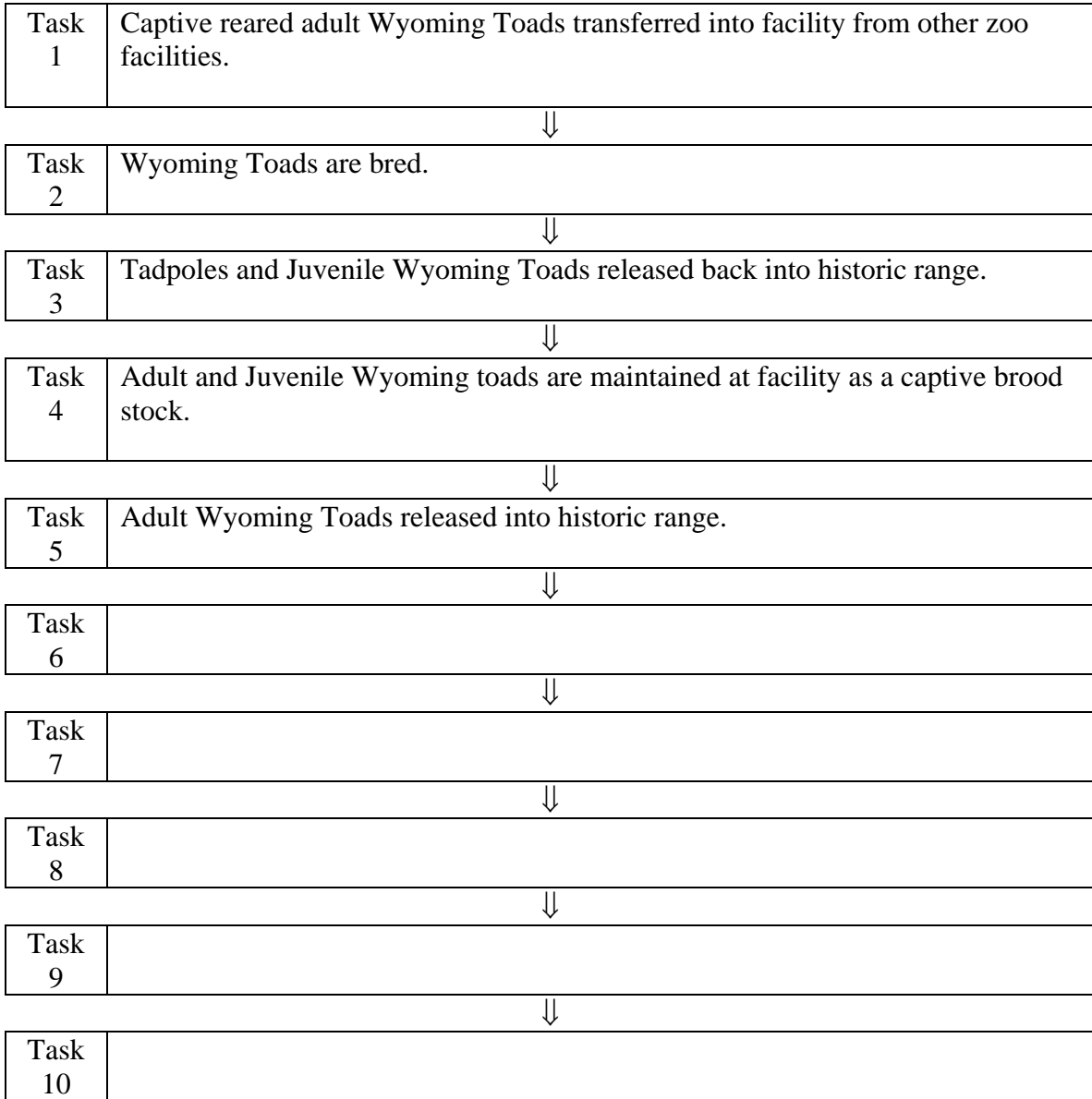
HACCP Step 2 – Identify Potential Hazards

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

Hazards: Species Which May Potentially Be Moved/Introduced
Vertebrates: Tadpoles accidental introduction into non-historic range
Invertebrates: none
Plants: algae
Other Biologics (e.g. disease, pathogen, parasite): Chitrid fungus
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)



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)
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Task 1 Adult Wyoming Toads received from other zoos	Vertebrates Tadpoles	No			
	Invertebrates	No			
	Plants Algae	No			
	Others Chitrid fungus	yes	Causes mortality and can be transferred from toad to toad	Isolated in isolation building for breeding for a month, test for fungus	yes
Task 2 Wyoming Toads are bred.	Vertebrates tadpoles	No			
	Invertebrates	No			
	Plants Algae	No			
	Others Chitrid	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 Tadpoles and Juvenile Wyoming Toads released back into historic range.	Vertebrates tadpoles	No			
	Invertebrates	No			
	Plants algae	No			
	Others Chitrid fungus	no			
Task 4 Wyoming Toads are maintained as captive refugia	Vertebrates tadpoles	Yes	Accidental introduction into non-historic range	Aquaria covered to prevent escape. Discharge water passes through 3 screens to prevent escape, during cleaning siphoned water poured out on grasS	Yes
	Invertebrates	No			
	Plants algae	No			
	Others Chitrid	yes	Causes mortality and can be transferred from toad to toad	Closely watch mortality	no

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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 Adult Wyoming Toads released into historic range.	Vertebrates tadpoles	No			
	Invertebrates	No			
	Plants algae	No			
	Others Chitrid	yes	Causes mortality and can be transferred from toad to toad	Test prior to release	yes
Task	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)

		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 1 Adult Wyoming Toads received from other zoos	Chitrid Fungus	testing of toads received, hold in isolation until the test results are in	Tadpoles and toads	Visual inspection	1-2 XDaily	staff	Visually inspect all tanks to make sure all toads are present and accounted for daily, record morts. If toads missing record loss and check screens, grass tanks for any morts so all toads are accounted for.	Individual toad markings are kept and are also pit tagged so they are easily recognized	
Task 4 Wyoming Toads are maintained as captive refugia		Tadpoles							Aquaria are covered to prevent escape. Discharge water passes through 3 screens to prevent escape, during cleaning siphoned water poured out on grass,
Task 5 Adult Wyoming Toads released into historic range.		Chitrid fungus							testing of toads hold in isolation until the test results are in
Facility: Saratoga NFH					Activity: Wyoming Toad Rearing				
Address: P.O. BOX 665 Saratoga, WY 82331									
Signature:					Date:				
HACCP Plan was followed.									