

I. Project title: Operation of Old Charlie Wash to remove nonnative fishes and determine native fish use in floodplain wetlands of the middle Green River.

II Principal Investigator(s):

Tim Modde
U.S. Fish and Wildlife Service
266 W. 100 N. Suite 2
Vernal, UT 84078
Office (435) 789-0354 fax (435) 789-4805

III. Product Summary: Old Charlie Wash is a wetland on the Ouray National Wildlife Refuge. Since 1994, it has served as a pilot site for testing hypotheses on floodplain habitat and razorback sucker restoration. Water inlet and outlet control structures, fish screens, and a harvest kettle were installed. In 1995 and 1996, thousands of pounds of nonnative fish, primarily carp and black bullhead, were captured and removed from the Green River system. In addition, 12 adult razorback sucker, 73 juvenile razorback sucker, and 13 juvenile Colorado pikeminnow were captured from the site. The original goal for FY99 was to use Old Charlie Wash for trapping and removing nonnative fishes from the Green River and to return any native fishes, including Colorado pikeminnow and razorback sucker, to the river. The extended high flows from Flaming Gorge Dam in the spring of 1999 also allowed the opportunity to observe native fish use, particularly access of razorback sucker larvae to extended inundation. The results of this years draining were similar to 1998 when the much of the water from Old Charlie Wash was undrainable. Although it was easily observed that Old Charlie Wash contained high numbers of fish, filling of the drainage canal prevented draining of the wetland and collection of most fish in the wetland was not attainable. An alarming observation was made that many northern pike were present in Old Charlie Wash in the late summer. Fish appeared to be the result of spawning within the wetland (large number of northern pike not present in other wetlands sampled during the levee removal project).

IV. Study Schedule:

a: Initial year: FY98
b: Final year: Ongoing

V. Relationship to RIPRAP:

Green River Action Plan: Mainstem
Activity II. Restore Habitat
II.A.1.a. Old Charlie Wash
II.A.1.a.(3) Monitor and evaluate success
Activity III. Reduce impacts of nonnative fishes

VI. Accomplishment of FY 99 Tasks and Deliverables, Discussion of Initial Findings and shortcomings: The outlet structure at Old Charlie Wash was secured with a screen and draining commenced 7 September 1999. However, the same problems with the drainage canal in the wetland that prevented draining in 1998 again precluded effective draining in 1999. Sedimentation of the drainage canal leading into the outlet structure prevented draining of the wetland. During the initial draining on 16 September 1999, 349 northern pike, 12 adult bullhead and 4 adult channel catfish were collected. Following that time, little water was drained from the wetland. Subsequent collection efforts were made on September 21, 23 and 24 (see table 1 for complete list of fishes collected). Large numbers of northern pike and adult carp were visually observed in Old Charlie Wash, but were not collected due to the inability of the wetland to be drained effectively. Based on limited observations in 1999 and previous years data collections, thousands of nonnative fishes from the Green River were attracted to Old Charlie Wash and remained in the wetland following recession of flood waters. Fish collections in Old Charlie Wash will continue to be effective in removing nonnative fishes from the Green River and providing information on the life history needs of endangered fishes, in particularly razorback sucker, if maintenance of the drainage canal can be conducted on a periodic basis.

Table 1. Number and weight of fish collected from Old Charlie Wash in September 1999.

Species	Total number	Total weight (g)
Black bullhead -adult	28	4,076.0
Black bullhead - juveniles	6,867	18,565.1
Channel catfish - adult	5	350.0
Carp - juvenile	111	272.8
Fathead minnows	2,052	
Green sunfish - adult	9	1,209.0
Green sunfish - juveniles	2,327	864.2
Northern pike - juveniles	602	165,686.0
Red shiners	1,758	700.0
Total =	13,759	193,550.5

VII. Recommendations: In order for fish to be effectively removed and quantified from the fish collection kettle in Old Charlie Wash the drainage canal in the wetland needs to be periodically cleaned. The last time the drainage canal in Old Charlie Wash was cleaned was in the spring (prior to flooding) in 1995. Whereas fish were efficiently collected from Old Charlie Wash for the first two years following clearing of the drainage canal, efforts made four and five years following clearing have been largely ineffective (collection was not funded the third year following funding). Clearing of the drainage canal at Old Charlie Wash is scheduled for the fall of 1999 and should result in the effective collection of fish in the fall of 2000.

VIII. Project Status:

This project is on track

IX. FY 99 Budget Status:

		Service, <u>Vernal</u>	<u>Total</u>
A.	Funds Provided:	8.0 K	8.0 K
B.	Funds Expended:	8.0 K	8.0 K
C.	Difference:	0	0
D.	Recovery Program funds spent for publication charges: \$0.00		

X. Status of Data Submission:

Data has not been submitted to the database manger. Findings of the 1999 draining presented are preliminary. A comprehensive report of findings from 1999 will be issued to the wetland restoration coordinator. Data is being entered in dBASE files and will be submitted to the program data base manager upon completion of the study.

XI. Signed: Timothy Modde
Principal Investigator

December 7, 1999
Date