

I. Project Title: NASRF Operation and Maintenance - Colorado

II. Principal Investigator(s):

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III. Project Summary:

The J. W. Mumma Native Aquatic Species Restoration Facility (Mumma) located at Alamosa, Colorado currently rears Bonytail (BYT) for stocking in the Upper Basin of the Colorado River. In the past Colorado Pikeminnow (CPM) were produced for the San Juan, the Gunnison and the Colorado Rivers. However, since 2006 the recovery team has not requested CPM from the Mumma facility.

Mumma did receive small humpback chubs (HBC) mixed with Roundtail chubs (RTC) in 2007 and were held in two round tanks in building II. Because of space, the HBC and RTC were held in cooler water the first winter and conditioned for the spring spawning season with all our brood fish. As space became available during the summer of 2008 the HBC and RTC were moved outside into a 12 foot round tank and appeared to be doing great.

IV. Study Schedule:

On going

V. Relationship to RIPRAP:

General Recovery Program Support Action Plan

IV Manage genetic integrity and augment or restore populations

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- IV.A.4.
- IV.A.4.a
- IV.A.4
- IV.C. Operate and maintain facilities

VI. Accomplishment of FY 2009 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

In 2009 the Mumma facility received approximately 10,000 BYT fry year class 2009 and 7,500 (40/lb) BYT year class 2008 from Dexter National Fish Hatchery. During 2010 Mumma received approximately 10,000 fry from Dexter. During 2009 Mumma stocked 451 (3.81"), 199 (6.94"), 913 (10.91") BYT into Butch Craig Pond and 2707 (9.6") into Echo Park. On November 5, 2009 Colorado River #1 received 1,576 (10.64") BYT and Colorado River #2 received 1,000 (10.41") BYT making the grand total of 6,846 stocked by Mumma during calendar year 2009.

During 2010 Mumma stocked 1,017 (9.856") into Butch Craig Pond and 2,813 (10.578") into Echo Park. Colorado River #1 and #2 stocking will be placed on hold this calendar year pending the health inspection results. During 2009 Mumma received 7,500 BYT from the same lot of fish which were diagnosed positive for the LMB virus at Dexter in the fall 2010.

In 2009 BYT at Mumma tested positive for Asian Tapeworm (*Bothriocephalus acheilognathi*) Dr. Carolyn Gunn, DVM Colorado Division of Wildlife Fish Pathologist prescribed a new treatment regime based on work done in Utah using Praziquantel to flush the tapeworms from the BYT. This treatment appears to be effective as tapeworms flushed from the BYT's intestinal tract were observed in the treatment tank within four hours of the initial treatment. We continued this treatment regime during the 2010 stocking and are working toward eliminating the tapeworm from Mumma.

Mumma currently has no CPM on station as the last two display fish expired this year.

We received a mix of HBC and RTC fingerlings (209) in 2007. They appeared to be doing well and were separated this summer. Melissa Trammel with the National Park Service identified, PIT tagged and separated the 16 HBC and 108 RTC. We have not had visible mortality in this tank however we discovered that a very sneaky Kingfisher had been preying on that one particular tank for quite some time. We set-up trail cameras and caught him in the act and also discovered that a Great Horned owl was visiting on a regular basis. Once the perpetrators were discovered we placed some small mesh netting over the tank but during a wind storm the netting tore and fell into the tank killing 18 individuals. We promptly placed large mesh netting over the tank and experienced no further problems.

We likely also had some cannibalism as we did not have room to separate the largest RTC from the rest of the lot. Anyway we were surprised at the reduced number of survivors. The RTC and HBC were placed in separate round tanks. On Aug 5, 2010 the 16 HBC were moved out of the round tank into a raceway so the round tank could be pressure washed. The round tank was thoroughly cleaned and 4 PIT tags were recovered from the tank. On Aug 7 only 10 HBC remained and they were placed back into the original round tank. The raceway was covered and secured as normal during cleaning period. No fish or any signs of fish were found in the stand pipe sump, on the cover screens or on the ground around the tank. I do not know what happened. This is a total mystery! It seems as though “Murphy’s Law” has been a plague on the HBC. I cannot explain the disappearance of 6 HBC and the 10 remaining fish were very skittish but are now going back on feed.

Construction of the 20 small ponds was completed in May of 2009. A portion of these new ponds will be used for BYT production and the 20 new ponds did eliminate the need to lease the TSJC ponds near Hooper. The lease with TSJC was not renewed and we anticipate that the total production for BYT and any request for HBC will be met at Mumma.

Fish stocked from Mumma as of October 21, 2010

Species	Year Class 2006	Year Class 2008	Year Class 2009	Total	Destination
BYT	308(06/18/10)				Butch Craig Ponds
BYT		709(06/18/10)			Butch Craig Ponds
BYT		2813(09/23/10)			Green River
BYT	Pending Health Inspection				Colorado River #1
BYT	Pending Health Inspection				Colorado River#2

3830 Total for calendar year 2010

Fish remaining on station as of October 21, 2010

Species	YEAR CLASS	NUMBER	SIZE	POND/ TANK #
BYT	2010	10,000	220/lb	POND 2
BYT	2009	5,000	26/lb	POND 1
BYT	2008	3,500	2.8/lb	POND 3
BYT	2009	5,000	26/LB	POND 4
RBS	2001	10	0.4/LB	TANK 08
HBC	2007	10	147 mm	TANK 15
RTC (Yampa)	2007	108	87.5 mm	West 12' tank

VII. Recommendations:

Continue culturing Bonytail at Mumma to meet the stocking needs of Colorado. Move Humpback chubs to Ouray Hatchery and Roundtail Chubs back to the Yampa River. Continue treating for Asian Tapeworm, inspect for LMB virus and PIT tag Bonytail for spring and fall stocking.

VIII. Project Status:

On going fish culture.

