

I. Project Title: **Monitoring The Colorado Pikeminnow Population In The Mainstem Colorado River Via Periodic Population Estimates**

II. Principal Investigator(s):

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III. Project Summary:

The Interagency Standardized Monitoring Program (ISMP) was developed in 1986 to monitor population trends of Colorado pikeminnow and humpback chub in the Colorado River Basin using catch per effort (CPE) indices. ISMP was expanded in 1998 to include mark-recapture population estimates of the major Colorado pikeminnow and humpback chub populations. For Colorado pikeminnow in the upper Colorado River, population estimates were conducted annually during 1991-1994 and 1998-2000, and 2003-2005. A fourth such three-year field effort began in 2008.

In this first year of the fourth effort, four complete passes were made through the upper and lower reaches of the Colorado River study area (12-mile-long Westwater Canyon, separating the two reaches, was not sampled) using a combination of electrofishing and backwater trammel-netting. Crews had just enough time to squeeze in an extra, or fifth, pass through the upper reach. Sampling was conducted from April 3 through June 19. Although the field effort went very well, the number of Colorado pikeminnow captured was fairly low relative to previous years. In the upper reach, there was a mean of 17 fish captured per pass (total of 85) compared to 14 in 2003, 20 in 2004, and 31 in 2005. In the lower reach, there was a mean of 26 fish captured per pass (total of 102) compared to 28 in 2003, 30 in 2004, and 39 in 2005. The number of fish marked in the first passes that were subsequently recaptured in later passes was low compared to previous years, especially in the upper reach: there, only four within-year recaptures were made compared to three in 2003, 10 in 2004, and 22 in 2005. In the lower reach, the within-year recapture rate was somewhat better: there were eight in 2008 compared to two in 2003, three in 2004, and 27 in 2005. Unlike in 2004 and 2005, when pikeminnow handled in July during the subsequent bass removal effort (Project No. 126) were added to the third pass of the upper reach (2004) or provided a fifth upper-reach pass (2005), no such pikeminnow were captured during the bass removal project that might have been used here to supplement captures. Pikeminnow seen during bass electrofishing were allowed to escape without capture or handling in an effort to minimize stress during the spawning season.

In 2008, the duration of spring runoff was especially long and made for good electrofishing and backwater netting conditions. A total of 41 boat-days was expended on trammel-netting compared to 37 in 2003, three in 2004, and 41 in 2005. So lack of backwaters cannot account for lower capture rates than in 2005. Subtracting the number of captures attributable to the bass removal effort, the total number of pikeminnow captured in 2005 was 319 (four passes in upper reach; five passes in lower reach) compared to 187 in 2008 (five passes in upper reach; four passes in lower reach), or 71% higher than in 2008 (total captures in 2008 was 41% lower than in 2005).

Data were entered into Excel but are only now being checked for errors. Hence, no preliminary estimates of population abundance or other vital rates are available.

IV. Study Schedule: 2008-2011.

V. Relationship to RIPRAP:

Colorado River Action Plan: Colorado River Mainstem

V. Monitor populations and habitat and conduct research to support recovery actions.

V.A. Conduct research to acquire life history information and enhance scientific techniques required to complete recovery actions.

VI. Accomplishment of FY 08 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

Tasks

1. Capture and PIT tag Colorado pikeminnow (early April to late June).
2. Analyze data.
3. Write annual report.

In 2008, Task 1 was completed on schedule. Task 2 was not completed because most of the PI's time was devoted to working with Gary White of USGS at Colorado State University who agreed to perform analyses on the 2003-2005 data (as well as the 1991-1994 and 1998-2000 data) and completing the overdue draft report associated with these sampling years. Some analysis of the new data may be performed this winter as time allows. This annual report constitutes completion of Task 3.

VII. Recommendations: Continue analyzing new data and finalize report on earlier monitoring results. For future monitoring, the current schedule of three years of active sampling followed by a two-year rest period is recommended. Four passes per year continues to be the sampling goal contingent on runoff conditions.

VIII. Project Status: Somewhat behind schedule. The delays in obtaining analyses from Ken Burnham pushed completion of the earlier final report back considerably. Gary White's involvement in 2008 has allowed the PI to catch up on that assignment, but analysis of 2008 data (Task 2) has been pushed back as a result.

IX. FY 08 Budget

A.	Funds Provided:	167,519
B.	Funds Expended:	167,519
C.	Difference:	0
D.	N/A (BR projects)	0
E.	Publication Charges	0

X. Status of Data Submission: Capture data for Colorado pikeminnow, razorback sucker and bonytail encountered during this project will be submitted to the database manager as soon as they are checked for errors.

XI. Signed: *Doug Osmundson*, December 8, 2008.