

Work Task C34: Characterization of Zooplankton Communities in Off-channel Native Fish Habitats

FY08 Estimates	FY08 Actual	Cumulative Accomplishment Through FY08	FY09 Approved Estimate	FY10 Proposed Estimate	FY11 Proposed Estimate	FY12 Proposed Estimate
\$0	\$0	\$0	\$60,000	\$60,000	\$60,000	\$0

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Start Date: FY09

Expected Duration: FY11

Long-term Goal: To maintain effectiveness of restored fish habitats.

Conservation Measures: BONY5, RASU6.

Location: Various off-channel fish grow-out ponds and native fish refugia.

Purpose: To determine the relative abundance of zooplankton in off-channel ponds being used to support native fish communities within the Colorado River floodplain.

Connections with Other Work Tasks (past and future): This work is related to B7, B11, C25, F5, and G3.

Project Description: This study will characterize the existing zooplankton communities of the various flood-plain ponds being used within the LCR to hold and/or rear RASU and/or BONY. Off-channel habitats, including both man-made and natural flood-plain ponds are being used to support communities of RASU and BONY. In some ponds the fish are fed prepared feeds, in some cases the ponds are only fertilized with the assumption that this act boosts development of zooplankton for food, and in some cases neither feed nor fertilizer are added to the ponds and the fish must subsist on whatever food is naturally available.

To maximize management of these habitats, the amounts of zooplankton in these ponds must be determined. This study will collect and analyze zooplankton samples from such ponds quarterly over a 2-year period to characterize these zooplankton communities. Future investigations may be developed to evaluate ways to manipulate zooplankton communities to benefit native fishes.

Previous Activities: None.

FY08 Accomplishments: Preliminary samples were collected from Lake Mohave lakeside ponds (B7). This effort was used to refine sampling procedures and develop a study design for the 2-year study. A written protocol for sample collection, including necessary equipment and procedures, was developed.

FY09 Activities: Quarterly zooplankton samples from approximately 25 sites will be collected and analyzed. Sampling sites will include two Overton WMA ponds (B11, Reach 1), eight Lake Mohave lakeside ponds (B7, Reach 2), two Needles Golf Course ponds, Beal Lake, and Office Cove pond (Reach 3), six ponds at Achii Hanyo Fish Rearing Facility (B3) and Parker Dam Pond (Reach 4), and six ponds at Imperial NWR (C25, Reach 5). Additional sampling sites may be evaluated and included over the course of the study year. Sample analysis to identify and enumerate zooplankton will be conducted quarterly at Reclamation's fisheries laboratory.

Proposed FY10 Activities: Results from the previous sampling year will be evaluated and methods for sampling and/or analysis will be refined as necessary. Zooplankton sampling from various rearing ponds within the LCR will continue on a quarterly basis. Sample analysis for characterization of seasonal zooplankton communities will also continue quarterly. This study is being extended one year to conduct additional fertilization tests.

Pertinent Reports: A progress report will be developed at the conclusion of each sampling year.