

Work Task C46: Physiological Response in BONY and RASU to Transport Stress

FY12 Estimate	FY12 Actual Obligations	Cumulative Expenditures Through FY12	FY13 Approved Estimate	FY14 Proposed Estimate	FY15 Proposed Estimate	FY16 Proposed Estimate
\$120,000	\$117,603.73	\$168,804.14	\$70,000	\$0	\$0	\$0

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Start Date: FY11

Expected Duration: FY13

Long-term Goal: To maintain an effective fish augmentation program.

Conservation Measures: BONY3, BONY4, BONY5, RASU3, RASU4, and RASU6.

Location: SNARRC and Achii Hanyo Rearing Facility.

Purpose: Characterize the physiological stress response of BONY and RASU during pond harvest, tagging, and before, during, and after transport, and discern levels of recovery and post hauling mortality to develop an effective transport protocol.

Connections with Other Work Tasks (past and future): This work is related to Achii Hanyo Rearing Station (B3), SNARRC (B4), Razorback Sucker Rearing Studies (C10), and Bonytail Rearing Studies (C11).

Project Description: This three-year study will characterize the physiological stress response of BONY and RASU before, during, and after a 12-hour transport. Results will be used to develop and test revised hauling procedures to minimize such stress.

Previous Activities: Blood sample collection of BONY was completed during pond harvest, tagging, and before, during, and after transport. The detection of largemouth bass virus (LMBV) at SNARRC prohibited the transport of fish to Achii Hanyo Rearing Facility. The first group of BONY were transported for 12 hours simulating a stocking run before returning to Dexter. After testing negative twice for LMBV the second group of BONY were able to be transported to Achii Hanyo, exposing BONY to water quality conditions more representative of the Colorado River.

FY12 Accomplishments: Blood sampling was completed to discern levels of plasma cortisol, glucose, chloride, and osmolality in RASU before, during, and after a 12-hour transport from SNARRC to Achii Hanyo Rearing Facility.

FY13 Activities: Assays and analysis of plasma cortisol, glucose, lactate, chloride, and osmolality levels in BONY and RASU will be completed. Data are to be compiled into a final report including recommendations to improve handling and hauling protocols for BONY and RASU.

Proposed FY14 Activities: Closed in FY13.

Pertinent Reports: Annual progress reports are available upon request.