

Work Task E15: Backwater Site Selection

FY06 Estimates	FY06 Actual	Cumulative Accomplishment Through FY06	FY07 Approved Estimate	FY08 Proposed Estimate	FY09 Proposed Estimate	FY10 Proposed Estimate
\$200,000	\$265,497	\$265,497	\$430,000	\$387,000	\$285,000	\$460,000

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Start Date: FY06

Expected Duration: FY10

Long-term Goal: Habitat Creation

Conservation Measures: BONY2, RASU2, and FLSU1

Location: Reaches 3-6, CA and NV; river miles 22-276, AZ, CA, and NV

Purpose: To establish and validate a consistent standardized technique for evaluating and selecting backwaters with the highest probability of success, based on biological and physical attributes, as well as other program considerations (e.g., cost, land ownership, and feasibility). The technique will then be used to inventory backwaters in reaches 3-6. This inventory is expected to identify potential backwater creation sites, develop conceptual restoration approaches, estimate the relative cost of habitat creation, and estimate the habitat credit potential of the backwater. This would generate a list of potential sites to be developed as habitat, which would be sequenced into the Work Plan process based on habitat creation goals and budget constraints.

Connections with Other Work Tasks (past and future): E16 is used with this work task to identify projects for habitat creation.

Project Description: Reclamation has developed a standardized technique for evaluating and selecting backwaters for habitat creation, considering biological attributes and other program considerations (e.g., cost, land ownership, and feasibility).

The backwater inventory process is being completed in two phases. The first phase, which started in FY06 and is scheduled to be completed in FY08, is the inventory and evaluation of backwaters in reaches 5 and 6. The second phase, which began in FY07 and has been rescheduled to be completed in FY11, is the inventory and evaluation of backwaters in reaches 3 and 4. Upon completion of the inventory and evaluation, backwaters selected for restoration will be addressed under site-specific work tasks. An additional effort may be undertaken in the future, specific to flannelmouth suckers in Reach 3, as additional information becomes available on life history and habitat creation requirements.

For planning purposes, each phase of the backwater inventory process is divided into three steps. The first step is the inventory of existing backwaters. Basic information that can be obtained without visiting the sites will be used to make these determinations. This information includes backwater size and connectedness to the river, and willingness of the landowner/manager to participate in the program.

During the second step, approximately 30 backwaters will be visited during the summer, with one site visit to each backwater. Physical and biological data will be collected to generate biological ranking scores and habitat opportunity rankings as described in the *Draft Final Guidelines for the Screening and Evaluation of Potential Conservation Areas*. Trip reports will be completed for review by the LCR MSCP Program Manager and a technical work group. The estimated cost for the initial site visit, sampling effort, and bathymetry is \$10,000 per backwater.

In the third step, habitat assessments will be completed for the final highest priority four or five sites, which would include four quarterly monitoring trips. These sampling and assessment methodologies will be included in the updated *Final Guidelines for the Screening and Evaluation of Potential Conservation Areas*. At the conclusion of these assessments, final reports will be completed and reviewed by the technical work group. The estimated cost for 1 year of quarterly sampling is \$40,000 per backwater.

Previous Activities: None. This was a new start in FY06.

FY06 Accomplishments: The *Draft Final Guidelines for the Screening and Evaluation of Potential Conservation Areas* was completed, and will include guidelines specific to selecting backwaters. To validate the backwater model for accuracy and applicability, these guidelines were used at seven sites with known histories of razorback sucker introductions. All sites were visited in the summer. An integrated GPS-sonar system was procured to facilitate the data collection for this and future backwater site-selection efforts.

The backwater inventory data review (Step 1) of Reach 5 and Reach 6 backwaters was completed and generated a list of approximately 25 candidate backwater sites (with 5 alternate sites) for site visits to be conducted during summer FY07.

FY07 Activities: The Model Evaluation report has been completed and is posted on the LCR MSCP Web site. The final report updated the parameters and values for generating the biological rating for backwaters.

Reclamation conducted a helicopter survey of reaches 5 and 6 to determine the degree of permanence of the candidate backwater sites. During this survey, Reclamation performed a visual inspection of the permanence of open water, potential site access issues, approximate percentage of vegetation cover, qualitative assessment of water quality/water clarity, recreational use, and limited water quality profiling of several selected backwaters.

Right-of-entry permits are under development with the appropriate landowners to allow for the initial site visits (Step 2). Site visits will be conducted in the summer of FY07. A report detailing the initial inventory (Step 1) will be posted to the LCR MCSP Web site upon completion.

During the summer of FY07, Reclamation will conduct site visits (Step 2) at each of the 25 candidate backwater sites. Trip reports for these site visits will be completed during FY08.

Using in-house staff and data resources, Reclamation has initiated the initial backwater inventory data review (Step 1) of Reach 3 and Reach 4 backwaters. During FY07, Reclamation will complete the data review of Reach 3 and Reach 4 backwaters and generate the list of backwaters for site visits in summer of FY08, using in-house staff and data resources.

Proposed FY08 Activities: Reclamation will apply the updated biological and evaluation ratings criteria (Step 3) for the candidate backwater sites in reaches 5 and 6 and select four or five sites to initiate backwater site assessments (Step 4), which will include conceptual habitat creation plans and preliminary cost assessments. These assessment reports will be completed in FY10. The inventory process for reaches 3 and 4 has been postponed at this time until FY10.

Pertinent Reports: *Draft Guidelines for the Screening and Evaluation of Potential Conservation Areas* is posted on the LCR MSCP Web site. *Colorado River Backwaters Restoration Final Model Evaluation Report*, February 2007 is also posted. *Backwater Inventory: Reaches 5 & 6, Step 1: Identification of Backwaters for Screening and Evaluation* will be posted to the LCR MSCP Web site.