Work Task C59: Selenium Monitoring in Created Backwater and Marsh Habitat

FY13 Estimate	FY13 Actual Obligations	Cumulative Expenditures Through FY13	FY14 Approved Estimate	FY15 Proposed Estimate	FY16 Proposed Estimate	FY17 Proposed Estimate
$250,000	$21,530.67	$21,530.67	$250,000	$250,000	$250,000	$250,000

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Start Date: FY13

Expected Duration: FY25

Long-term Goal: To develop a long-term selenium monitoring plan for the LCR MSCP.

Conservation Measures: MRM2 MRM5 (BONY, RASU, CLRA, BLRA).

Location: Big Bend, Hart Mine Marsh, and Imperial Ponds conservation areas.

Purpose: This study will evaluate selenium levels within created backwater and marsh habitats and establish a selenium monitoring plan as required by the Habitat Conservation Plan.

Connections with Other Work Tasks (past and future): Monitoring for selenium will be conducted for habitat created through Section E work tasks (E1, E9, E14, E15, E16, E25, E27, and E28), and will be incorporated into post-development monitoring tasks listed in Section F (F1, F3, F5, and F7).

Project Description: As described in the conservation measures, the LCR MSCP is developing 512 acres of marsh and 360 acres of backwaters as part of its habitat creation goals. These created habitats will be monitored over the term of the LCR MSCP to ensure that they maintain their function for all associated covered species. Sampling efforts will be implemented or continued at designated project sites for the purpose of determining baseline or annual changes in selenium concentrations. The initial sampling phase is expected to be rigorous in order to provide a representative baseline sample and assessment of variability across each site. Subsequent years' sampling may be reduced as appropriate. Once this information is known, a long-term selenium monitoring plan can be recommended for each specific conservation area to be carried out under the appropriate F work task. Multi-year sampling can then be used to develop a larger data set on which management decisions can be based through the adaptive a management process. As new conservation areas are developed, this exploratory sampling phase will continue to be accomplished under this work task.

Previous Activities: N/A

FY13 Accomplishments: Limited funds were expended under this work task due to budget constraints, including budget reductions due to sequestration. Implementation of this project will be evaluated as funding becomes available.

FY14 Activities: Work in FY14 will include, preparing a study design for sampling at least three LCR MSCP conservation areas for baseline levels of Selenium. This will involve reviewing the current protocols that have been established for Selenium monitoring and adapting these appropriately for systematic sampling at LCR MSCP conservation areas. In addition, appropriate sample sizes, sampling methodologies, and sample handling procedures will be selected following the established protocols. Equipment and materials needed for this effort will be purchased in FY14. Laboratory analysis of samples will be a also required service and will be procured as well. If time and funds permit, a portion of this baseline sampling may occur in FY14. Funds expended in FY14 will reflect the work that is accomplished.

Proposed FY15 Activities: Proposed work to be conducted includes sampling at three LCR MSCP Conservation Areas containing backwater and/or marsh habitat with the goal of determining baseline selenium concentrations at each site. Conservation Areas designated for the first year of this study include the Big Bend Conservation Area (BBCA), Hart Mine Marsh (HMM), and the Imperial Ponds Conservation Area. Additional sites may be included in future years for pre and/or post development sampling and monitoring as sites and funding become available. Specific work proposed for FY15 includes conducting individual site evaluations to determine sampling locations, collecting water and sediment samples from each site, analyzing collected samples, comparing extant selenium levels to known thresholds for aquatic species, and providing an annual report detailing methods, results, and recommendations. Results from the first study year will be used to inform work conducted in subsequent years.

Pertinent Reports: N/A