

## Work Task E25: Big Bend Conservation Area

FY15 Estimate	FY15 Actual Obligations	Cumulative Expenditures Through FY15	FY16 Approved Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate	FY19 Proposed Estimate
\$30,000	\$24,878.09	\$1,189,268.20	\$30,000	\$30,000	\$30,000	\$30,000

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**Start Date:** FY09

**Expected Duration:** FY55

**Long-Term Goal:** Habitat protection

**Conservation Measures:** BONY2, RASU2, and FLSU1

**Location:** Reach 3, Nevada, River Mile 266.5

**Purpose:** To protect an existing backwater from development

**Connections with Other Work Tasks (Past and Future):** Marsh bird surveys are conducted under Work Task D1, while fish surveys have been conducted under multiple work tasks in Species Research (Section C) and Work Task F5.

**Project Description:** The Boy Scout Camp purchased by the Southern Nevada Water Authority (SNWA), combined with the adjacent backwater managed by the State of Nevada, has collectively been identified as the Big Bend Conservation Area (BBCA). The conservation area includes approximately 15 acres of backwater within the Nevada portion of the Colorado River that will be protected and approximately 15 acres of upland area adjacent to the backwater. The dry upland area was enhanced for education and outreach purposes by the SNWA at minimal cost to the LCR MSCP and was completed in concert with protection of the backwater. The properties are adjacent to and buffered by Big Bend State Park.

Past native fish monitoring efforts have indicated the presence of native fishes in and adjacent to the existing backwater. Securing the site has resulted in 15 acres of backwater habitat credit that benefits flannelmouth suckers, razorback suckers, and bonytail in Reach 3 of the LCR MSCP planning area. Reach 3 maintains the only self-sustaining population of flannelmouth suckers and has very few undeveloped backwaters, which made protection of the existing backwater a LCR MSCP priority. The Colorado River and Reach 3, in particular, are experiencing extensive urban development. The BBCA maintains access to the

river via the adjacent backwater and would have been a likely candidate for development. Securing the property for the LCR MSCP ensures the commitment of adjacent landowners and controls future development in the surrounding areas. Long-term security of the property provides protection to the backwater and allows for future restoration activities as warranted.

**Previous Activities:** In FY10, the Nevada Department of Wildlife received approval from the Nevada Wildlife Commission to install two buoys, which have been placed at the entrance of the backwater. Installation of the buoys fulfilled a commitment to maintain wakeless conditions in the backwater. Prior to FY13, all fisheries activities were restricted to February through May as part of ongoing flannelmouth sucker activities associated with Work Task C15 (closed). Since FY13, routine monitoring of the BBCA has been conducted monthly from February through May and has included electrofishing, trammel netting, remote passive integrated transponder (PIT) scanning, and larval light trapping in areas where there have been historical contacts of native fishes and adequate water levels to permit access for sampling. Water quality profiles were conducted during each monitoring trip and at least quarterly the remainder of the year. Through monitoring, low numbers of razorback and flannelmouth suckers continued to be contacted, including larvae of both species and an occasional flannelmouth sucker subadult. The backwater has a direct surface connection to the lower Colorado River; consequently, water quality parameters mirror that of the river. Marsh bird and small mammal surveys were conducted annually.

### **FY15 Accomplishments:**

**Maintenance/restoration/management:** Conservation crews were used to clear and chip vegetation to be spread along the upland trails and were funded with outside dollars. Maintenance was conducted in March, 2015 including blading the roads to ensure access and removal of 200 feet of interior chain-link fencing that had been washed over from 2014 flood events. Removal of the section of fencing eliminates future damage to the area during storm events. Clark County cleared the culverts, disposing of the sediment on Big Bend State Park lands. The SNWA repaired the BBCA security fence along Needles Highway in May 2015 after sections of it were damaged in the 2014 storm event.

In August 2015, a large storm event swept debris over Needles Highway and into the BBCA, damaging the SNWA's security fence and refilling the culverts with sediment. This was the second storm event in 11 months. The State of Nevada Department of Transportation/Clark County cleared the highway of sediment and debris but left the culverts full of sediment. Clark County is responsible for clearing the culverts, and the SNWA is responsible for repairing the BBCA fence.

A bathymetric survey, using traditional land surveyors, was conducted in April 2015. The purpose of these surveys will be to provide elevation data, which will be used to monitor sediment deposition within the backwater.

**Monitoring:** Routine monitoring at the BBCA continued in FY15; native fish contacts included 12 razorback suckers and 3 flannelmouth suckers. All but one of the razorback suckers originated from localized stocking events from the past 3 years. Larval flannelmouth and razorback suckers were captured at rates similar to years past. Multiple telemetered juvenile flannelmouth suckers from Work Task C53 were again contacted in the dense bulrush stands near the center of the backwater. Water quality parameters remained within thresholds for all native fishes.

Vegetation data were collected in FY15 using light detection and ranging (LiDAR) remote sensing techniques.

Marsh bird surveys were conducted on three occasions at the wetland portions of the site. There was one detection of a Yuma clapper rail.

Small mammal trapping was conducted in fall and spring. Colorado River cotton rats and desert pocket mice were captured.

Surveys were conducted for MacNeill's sootywings in 2015. No individuals or eggs were detected.

### **FY16 Activities:**

**Maintenance/restoration/management:** Routine maintenance activities, including blading roads, will be conducted.

Two bathymetric surveys are scheduled to be conducted in 2016 to continue BBCA backwater management monitoring. The first survey will use traditional land surveying methods. The second bathymetric survey will be conducted using LiDAR remote sensing techniques. The purpose of these surveys is to provide elevation data, which will be used to monitor sediment deposition. The two survey methods will be compared for accuracy and cost.

**Monitoring:** The BBCA will be monitored at a level similar to that in FY15. Semipermanent remote PIT scanners will be deployed in an effort to increase scanning contacts for all species. Vegetation data will be collected in May 2016 using LiDAR remote sensing techniques. Marsh bird surveys will be conducted during March, April, and May at the four established survey points. Small mammal trapping will be conducted in fall and spring. Surveys for MacNeill's sootywings will also be conducted.

## **Proposed FY17 Activities:**

**Maintenance/restoration/management:** Youth conservation crews funded with non-cost share dollars may continue to be used to perform trail maintenance and vegetation removal. Routine maintenance activities, including blading roads, will be conducted.

**Monitoring:** Fisheries monitoring will be conducted at a level and interval similar to previous years. Monitoring trips will include larval light trapping, remote PIT scanning, and trammel netting. Water quality profiles will be performed during each monitoring event and quarterly outside of the monitoring period. Marsh bird surveys will be conducted during March, April, and May at the four established survey points. Small mammal trapping will be conducted in fall and spring. Surveys for MacNeill's sootywings will also be conducted.

Information from the LiDAR vegetation data collected during FY15 and/or FY16 will be used to determine the schedule for vegetation monitoring data collection for FY17 and beyond.

**Pertinent Reports:** The *2015 Big Bend Conservation Area Annual Report* will be posted on the LCR MSCP Web site once integration of the data collected throughout the calendar year is complete.