Work Task C54: Techniques to Establish Native Grasses and Forbs

FY14 Estimate	FY14 Actual Obligations	Cumulative Expenditures Through FY14	FY15 Approved Estimate	FY16 Proposed Estimate	FY17 Proposed Estimate	FY18 Proposed Estimate
$200,000	$0	$9,110.44	$0	$0	$0	$0

Contact: Carrie Ronning, (702) 293-8106, cronning@usbr.gov

Start Date: FY13

Expected Duration: FY14

Long-Term Goal: Develop techniques to establish native grasses and herbaceous perennial forbs while suppressing the establishment of invasive species

Conservation Measures: MRM2, CRCR2, YHCR2, and CMM1

Location: Cibola NWR Unit #1

Purpose: The purpose of this work task is to develop successful planting techniques and research alternative methods of native grass and forb establishment while suppressing weed species establishment. Typically, grass and forb species can be difficult to establish when competition from weed species is high. Additionally, invasive plant species can modify riparian plant communities, degrade wildlife habitat, and increase the risk of fire.

Connections with Other Work Tasks (Past and Future): Post-development habitat monitoring will be conducted at habitat creation sites detailed in Work Tasks F1–F4.

Project Description: The HCP requires the creation of over 8,100 acres of various land cover types to provide habitat for targeted LCR MSCP covered species. Currently, ground cover being utilized includes non-natives such as alfalfa. Native herbaceous grass and forb species can be difficult to establish especially in areas with an abundance of weed species. Yet, once natives are established, they typically become effective competitors and may be able to keep weed presence down to a minimum. In this way, native grasses can be used in place of the non-native ground covers, which may provide better habitat for covered species such as cotton rats.

Effective planting techniques that may increase the survival of native plants will be determined while testing different methods of weed suppression and control.

Previous Activities: Seed bank samples were collected in February and May 2012 in both control and experimental fields. The experimental field was plowed and watered several times to encourage weed seed germination. Seed bank samples were grown at a University of Nevada, Las Vegas, greenhouse and identified to species. One additional seed bank sample was collected in FY13. It was also sent to the university, and samples were grown out and identified to species. The work plan for FY13 was canceled due to sequestration.

FY14 Accomplishments: The project was discontinued, and funds were distributed to higher-priority projects.

FY15 Activities: This work task was closed in FY14.

Proposed FY16 Activities: This work task was closed in FY14.

Pertinent Reports: A final report titled *Seed Bank Study at Cibola National Wildlife Refuge* describes the results of the greenhouse grow-out, and it is posted on the LCR MSCP Web site.