

Flagstaff Watershed Protection Project
Mexican Spotted Owl (*Strix occidentalis lucida*)
Monitoring Report

USDA Forest Service –Coconino NF, Flagstaff Ranger District

2017



Picture courtesy of C. Szydlo

Introduction

Over the last several years the Coconino National Forest has been coordinating with the City of Flagstaff and United States Fish and Wildlife Service personnel (USFWS) to move forward with the Flagstaff Watershed Protection Project (FWPP). FWPP is the result of the 2012 passage of a bond measure by the voters of the City of Flagstaff to fund work on Coconino National Forest and Arizona State lands. The project involves work in the Rio de Flag watershed above the city of Flagstaff to reduce the risk of post-wildfire flooding into the City, as well as work in the Mormon Mountain area to reduce the potential sedimentation of Lake Mary, an important water supply for the City of Flagstaff and State land parcels within the City. The work is expected to be ongoing for the next five to ten years. A complete description of the project can be found online at www.fs.usda.gov/goto/FWPP.

The project proposes landscape scale restoration that has the potential to affect up to 9 known Mexican Spotted Owl (MSO) protected activity centers (PACs). PACs are intended to sustain and enhance areas that are presently, recently or historically occupied by breeding MSOs, and must be at least 600 acres (USFWS 2012). A PAC is not intended to encompass the entire home range of an owl (USFWS 2012). For more information about the MSO, please refer to the 2012 Recovery plan for the Mexican Spotted Owl (*Strix occidentalis lucida*), First Revision, (USFWS 2012).

Included in this report are the results of the Flagstaff Ranger District 2017 MSO monitoring and inventory for the FWPP project area.

Methods

All surveys were conducted according to the USFWS Mexican Spotted Owl Protocol (2012). These surveys allow us to determine the presence or absence of MSO and to determine reproductive status. Known PACs received an initial daytime visit at the beginning of the season in an attempt to locate and mouse the owls without conducting nighttime calling surveys. Mousing was used to determine the reproductive status when an owl was located. If owls were not located in the PAC or there was an area of suitable habitat that needed to be surveyed, then nighttime surveys were conducted and any detections were followed up within 48 hours by a daytime follow-up survey. Nighttime surveys began by establishing calling points along roads and walking routes to ensure complete coverage of the PACs and survey areas. If calling points existed from previous years, they were retained for consistency. Call points were placed approximately 0.30 – 0.50 miles apart, and a minimum of 4 complete surveys were conducted at appropriate times during the breeding season (March 1 to August 31). Each call point takes a minimum of 15 minutes. For the complete protocol, please refer to the 2012 Recovery Plan (USFWS 2012).

2017 FWPP PAC Monitoring Results

During consultation with the USFWS and later resolutions, the Coconino NF agreed to a monitoring plan involving 15 MSO PACs. PACs were designated as treatment and reference. Through consultation with USFWS, it was decided that the treatment PACs; Mt. Elden, Schultz

Creek, Orion Spring, Mormon Mountain North, DeToros, and Weimer Spring, as well as the reference PACs; Little Springs, Snowbowl Road, East Bear Jaw, Dairy Spring, Red Raspberry and Moore Well-Rock Dike will be monitored one year prior to treatment, during treatment and one, three and five years post treatment, in an effort to help understand the effects of thinning and burning on Mexican spotted owls and their habitat. Through the resolution it was also agreed that (given acceptable weather and crew availability) the Lockwood, Mormon Mountain, and Weatherford 2 PACs will be monitored the year prior to treatment, the year of treatment, and one year post treatment. More information can be found in the FWPP Biological Opinion (USFWS 2015) and the FWPP Record of Decision (USFS 2015a). Due to the uncertainty of treatment year, some PACs may be monitored annually until treatment occurs.

Table 1. FWPP- Mormon Mountain Treatment and Reference PACs to be monitored

Treatment	Reference	Requirement
Mormon Mountain North	Moore Well-Rock Dike	Meet BO requirements
DeToros	Dairy Springs	Meet BO requirements
Weimer Spring	Red Raspberry	Meet BO requirements
Lockwood Partial treatment		Meet resolution agreement
Mormon Mountain Part. Treat.		Meet resolution agreement

Table 2. FWPP- Dry Lake Hills Treatment and Reference PACs to be monitored

Treatment	Reference	Requirement
Mt. Elden	Little Spring	Meet BO requirements
Orion Spring	Snowbowl Road	Meet BO requirements
Schultz Creek	East Bear Jaw	Meet BO requirements
Weatherford 2-Partial treatment		Meet resolution agreement

Table 3. Survey results for PACs monitored in 2015, 2016 and 2017 for FWPP

Mormon Mountain PACs	2015 Survey Results Pre-Treatment	2016 Survey Results Pre-Treatment	2017 Survey Results Pre-Treatment
Dairy Spring	Male, Nesting-unk	Pair, Nesting-unknown	NI
DeToros	Not Surveyed	1 Unknown, Nesting-unk	NI
Lockwood	Pair , Non-nesting	Pair, 1 Fledgling	Pair, 2 Fledglings
Moore Well-Rock Dike	Pair, 1 Fledgling	Pair, Nesting-unknown	Pair, Nesting unknown
Mormon Mountain	Not Surveyed	Unknown Occupancy	Male, Nesting unknown
Mormon Mt. North	Pair, Nesting-unk	Pair, Nesting-unknown	Pair, 1 Fledgling
Red Raspberry	Pair, Non-nesting	Pair, Nesting-unknown	Pair, 1 Fledgling
Weimer Spring	Not Surveyed	Pair, Nesting-unknown	NI

Dry Lake Hills PACs	2015 Survey Results Pre-Treatment	2016 Survey Results Pre-Treatment	2017 Survey Results Pre-Treatment
East Bear Jaw	Unknown Occupancy	Pair, Nesting unknown	Pair, Nesting failed
Little Spring	Pair, Non-nesting	Pair, Non-nesting	Pair, 1 Fledgling
Mt. Elden	Pair, Nesting unk	Pair, Nesting unknown	Pair, 2 Fledglings
Orion Spring	Pair, Nesting unk	Pair, Nesting unknown	1 Unknown MSO
Schultz Creek	Pair, Nesting unk	Pair, Non-nesting	Pair, 2 Fledglings
Snowbowl Road	Pair, Non-nesting	Pair, Nesting unknown	Pair, Nesting unknown
Weatherford 2	Pair, Non-nesting	Pair, Non-nesting	Pair, Nesting failed

In 2017 we monitored 7 PACs (Dry Lake Hills) to protocol and made only one visit to the additional 8 PACs (Mormon Mountain) for the FWPP project. Of those, we had pairs in 10 PACs, 3 PACs with no detections, one PAC with only a male detection, and one additional PAC with a single unknown Mexican spotted owl detection. A total of 9 fledglings were detected this year in the FWPP PACs and two nests were determined to have failed. Based on protocol, nesting status for 7 of the pairs could not be determined (nesting-unknown). A non-nesting determination can only be made when a female is seen roosting for at least 60 minutes between April 1 and 30, or one or both members of the pair are offered a minimum of 2 mice, which they cache, sit with for 30-60 minutes, or refuse to take. The non-nesting determination must then be verified with one additional visit between May 15 and July 15. Often times this protocol can be very difficult to meet due to limited owl responses and daylight constraints. The non-nesting determination also includes owls that may have nested and failed prior to the first surveys.

2017 FWPP Project Inventory

As stated in the FWPP EIS (USFS 2015b), MSO surveys will be conducted in MSO habitat within implementation areas (Task Order (TO)/Timber Sale (TS) or prescribed burn (Rx burn)) plus a half mile beyond the perimeter the year of implementation or one year prior to determine occupancy in new areas. These are referred to as inventory areas and are surveyed according to the MSO Survey protocol (USFWS 2012). Detections of previously unknown breeding MSO will likely result in the establishment of a new PAC.

The Dry Lake Hills area has been surveyed since 2014, with slight yearly modifications to ensure all habitat is covered.

Table 4. Approximate acreage that was inventoried in 2017 for the FWPP project

Inventory Name	Acres
Dry Lake Hills	3,219

In 2016, there were several owl detections outside of established PACs. Those areas were surveyed again in 2017 with no detections.

Management Activities

MSO PACs have been marked for cutting and prescriptions and marking have been reviewed by USFWS personnel. No treatments have occurred in MSO PACs or habitat.

Literature Cited

- U.S. Department of Agriculture, Forest Service. 2015a. Record of Decision for the Flagstaff Watershed Protection Project. MB-R3-04-29. Coconino National Forests. October 2015. Available online at www.fs.usda.gov/goto/FWPP.
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