



**Humboldt
Redwood™**

Snowy Plover Annual Report

2015

Gravel Extraction Surveys

February 1, 2016



Cover photo: Sean McAllister

Project Description

Title: Snowy Plover Surveys for Gravel Extraction

Purpose: Habitat Conservation Plan (HCP) monitoring

Date Initiated: March 1999

Projected End Date: Ongoing

Manager: Sal Chinnici, Manager, Forest Sciences

Executive Summary:

The HRC HCP Section 6.6 (PALCO 1999), Snowy Plover Conservation Plan, requires reconnaissance-level surveys for the Federally threatened western snowy plover (*Charadrius nivosus nivosus*) for implementation of gravel extraction permits on Eel River gravel bars upriver from the Rio Dell Bridge. The HCP objective is to avoid impacts to western snowy plovers nesting on gravel bars. The breeding season is defined in the HCP as 24 March to 15 September. In 2015 HRC conducted gravel extraction operations on the Truck Shop and 3-Mile bars near Scotia from 5 October to 20 October. Therefore impacts were avoided because operations were conducted outside of the snowy plover breeding season, and did not require surveys for this species in 2015.

No change in monitoring strategies or intensity is recommended at this time.

Project Manager / Primary Author



Sal Chinnici

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INTRODUCTION

The HRC HCP Section 6.6, Snowy Plover Conservation Plan, requires reconnaissance-level surveys for the federally threatened western snowy plover (*Charadrius nivosus nivosus*) for implementation of gravel extraction permits on gravel bars upriver from the Rio Dell Bridge. In 2015 HRC conducted gravel extraction operations on the Truck Shop and 3-Mile gravel bars along the Eel River near Scotia, however the operations occurred outside of the breeding period for this species, and thus no surveys were conducted.

The HRC gravel bars upriver from the mouth of the Van Duzen River do not currently require western snowy plover surveys per the Army Corps of Engineers (ACOE) Letter of Permission (LOP 2009-1) for gravel mining in Humboldt County. However, the snowy plover is a covered species of the HRC HCP, and the U.S. Fish and Wildlife Service (USFWS) has recommended that surveys be completed prior to extraction, although at a less-intensive level than is required where plovers have previously been found nesting (e.g. near Fernbridge). The less-intensive level of survey effort is in recognition of the history of negative surveys for the area, in addition to the location of the HRC gravel bars several miles upriver from any known snowy plover nesting. Surveys have been conducted since 1996 for plovers and other avian species along the Eel River on gravel bars where extraction may take place, with no snowy plover detections recorded, including in 2014.

In 2003 the USFWS clarified that the HCP reconnaissance-level surveys are those surveys conducted within a two week period prior to operations on the gravel bars. In keeping with the HCP requirements, if the reconnaissance-level surveys detect snowy plovers, full protocol surveys are to be conducted on all gravel bars within one mile of the detection, and mitigation measures applied for any nests that are found.

METHODS

During the surveys a qualified biologist traverses the gravel bars searching for snowy plovers, and also records other avian species that are detected. Methods involve walking and scanning with binoculars the entire exposed, contiguous gravel habitat, utilizing a 'zig-zag' transect

approach, beginning at the upstream end and finishing at the downstream terminus of the bar (McAllister 2014).

The reconnaissance-level surveys require each gravel bar to be thoroughly searched twice for plovers prior to extraction, with searches six to seven days apart, and apply to gravel bars that are to be operated on between 1 March and 15 September.

RESULTS

The HCP objective is to avoid impacts to western snowy plovers nesting on gravel bars. The breeding season is defined in the HCP as 24 March to 15 September. In 2015 HRC conducted gravel extraction operations on the Truck Shop and 3-Mile bars near Scotia from 5 October to 20 October. Therefore, impacts were avoided by scheduling operations outside of the snowy plover breeding season, and did not require surveys for this species in 2015. A brief summary of operations follows:

On 5 October, HRC initiated gravel extraction activities at the Three-Mile and Upper Truck Shop Bars. Site activities concluded on October 20th, 2015. A summary of extraction volumes for both sites is provided below:

Upper Truck Shop Bar: This bar was proposed for a 29,000 cubic yards extraction. The actual extraction volume calculated was estimated at 24,638 cubic yards.

Three-Mile Bar: This bar was proposed for a 19,000 cubic yards extraction. The actual extraction volume calculated was estimated at 14,712 cubic yards.

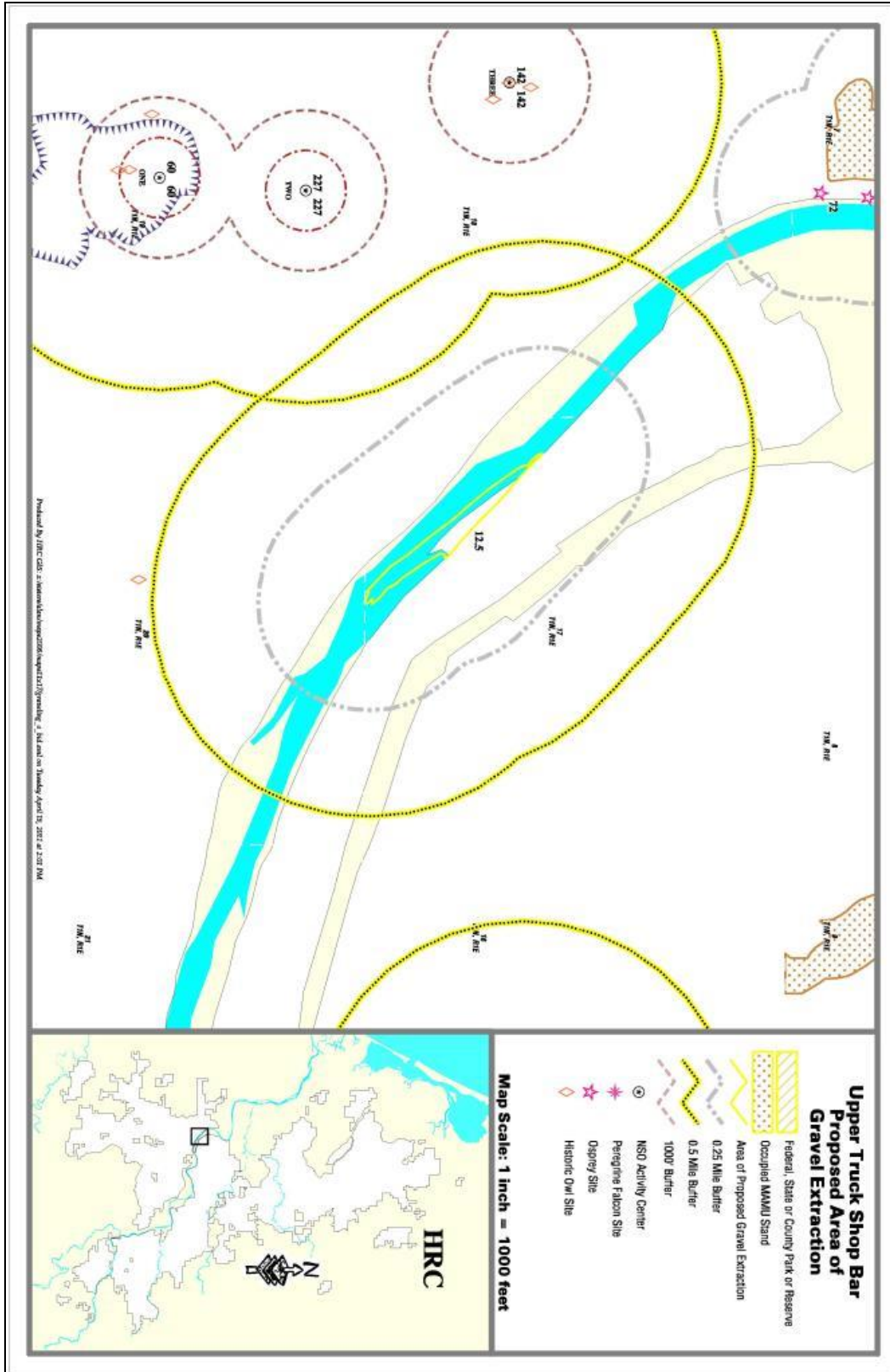


Figure 1. Upper Truck Shop Bar.

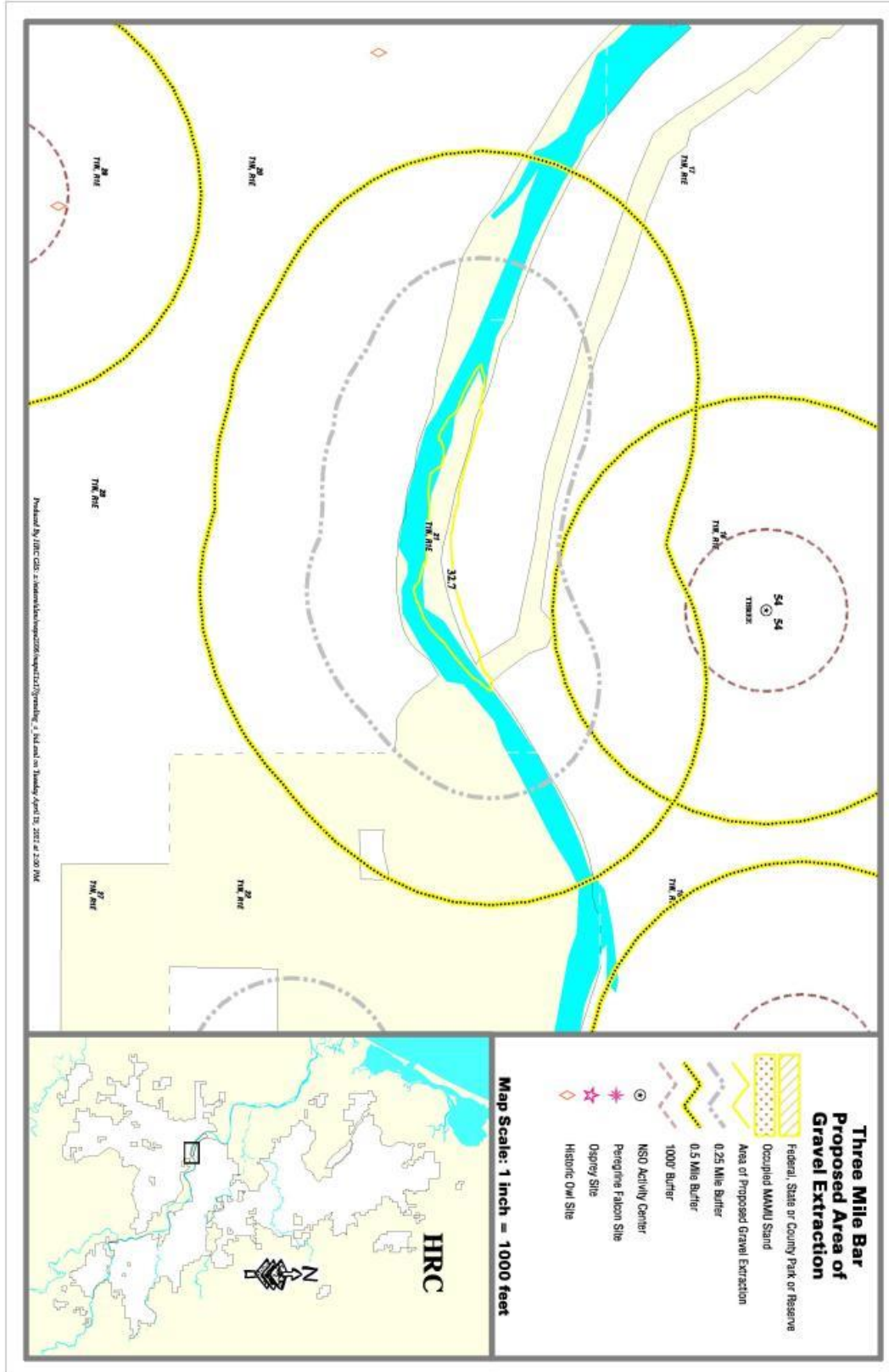


Figure 2. 3-Mile Bar.



Figure 3. Truck Shop Bar on the Eel River prior to operations in 2011 (conditions were similar in 2015).



Figure 4. Excavator on Truck Shop Bar during 2012 operations (for example of operations).



Figure 5. Excavator and trench on Truck Shop Bar during 2012 operations (for example of operations).

DISCUSSION

Since gravel extraction operations were conducted outside of the western snowy plover breeding season in 2015, no plover surveys were conducted. In 2014, four snowy plover surveys were conducted on both the Truck Shop and 3-Mile bars. No snowy plovers were detected on the 2014 surveys. Although methods have not been consistent over all years, the 2014 surveys marked more than 12 years of snowy plover surveys on the HRC gravel bars along the Eel River, all with negative results.

There may be several reasons why snowy plovers are not nesting further upriver than their current extent, for example on the HRC river bars. Some biologists have suggested a difference in nesting habitat; for example increasing confinement of the river channel and narrowing of the canyon, and differences in nesting substrate (for example, see previous HRC annual reports). Recent research indicates that snowy plovers nest on wider beaches compared to random locations (Patrick and Colwell 2014).

In the Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (USFWS 2007) HRC lands fall within Recovery Unit 2, including Del Norte, Humboldt, and Mendocino counties.

Colwell et al (2015) reported that for the sixth consecutive year, the breeding population grew (from 51 to 61 adults), primarily due to at least 26 immigrants breeding for the first time in this Recovery Unit. Snowy plovers bred at eight sites including Clam Beach, Eel River Wildlife Area, and Centerville Beach. Most young fledged from the Eel River Wildlife Area and Centerville Beach. Most nest failures stemmed directly or indirectly from predation, especially at Clam Beach. Reproductive success for Recovery Unit 2 remains below the estimated value needed to maintain the population. No plovers were detected on lower Eel River gravel bars for the fifth consecutive year (Colwell, et al 2015).

Predation of eggs and young by ravens, crows, gulls, and other species, as well as human disturbance of nesting habitat, continue to be significant problems for snowy plover reproduction in this recovery unit.

RECOMMENDATIONS

- Continue using reconnaissance-level surveys as currently required for gravel extraction operations.
- No changes in monitoring strategies or intensity are recommended at this time.

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