



**Humboldt
Redwood™**

Snowy Plover Annual Report

2018

Gravel Extraction Surveys

February 1, 2019



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 2018 HRC conducted gravel extraction operations on the 3-Mile bar near Scotia from 1 October to 17 October. Potential impacts to snowy plovers were avoided by conducting extraction operations outside of the snowy plover breeding season in 2018.

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 2018 HRC conducted gravel extraction operations on the 3-Mile gravel bar along the Eel River near Scotia. Gravel extraction operations occurred from 1 October to 17 October, outside of the snowy plover breeding period, and thus no pre-extraction surveys were required in 2018.

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 2015-1) 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 on river bars (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, including in 2016, with no snowy plover detections recorded.

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. Survey methods involve walking and stopping frequently to scan with binoculars the entire exposed, contiguous gravel habitat,

including areas separated by narrow river channels, as snowy plover chicks have been observed crossing such channels (McAllister 2016, see attached).

The reconnaissance-level surveys require each gravel bar to be thoroughly searched twice for adult plovers, young, and eggs 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 2018 HRC conducted gravel extraction operations on the 3-Mile gravel bar from 1 October to 17 October, outside of the snowy plover breeding period, and thus no pre-extraction surveys were required in 2018.

A brief summary of operations follows:

3-Mile Bar (Figure 1): This bar was proposed for a 27,855-cy extraction via skimming on two locations, totaling approximately 4.3 acres. The actual extraction volume calculated was 27,853-cy.

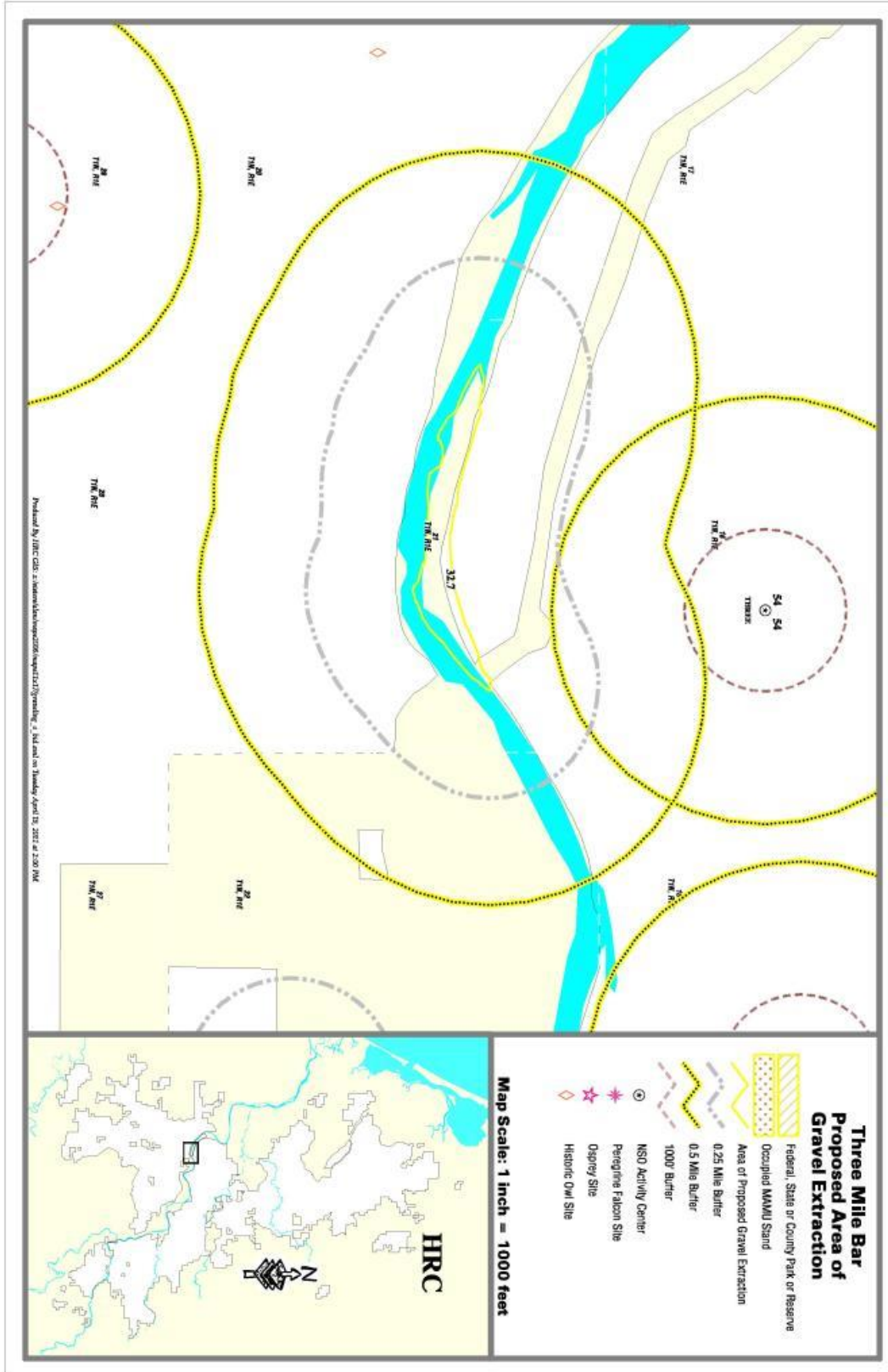


Figure 1. 3-Mile Bar.

DISCUSSION

No snowy plover surveys were conducted prior to the 2018 extraction operations because the operations were conducted outside of the established plover breeding season. 2017 was also a year in which operations occurred outside the season and no surveys were conducted.

2016 was the most recent season in which pre-extraction reconnaissance-level surveys were conducted prior to the beginning of operations. No snowy plovers were detected. Although methods have not been consistent over all years, the 2016 surveys marked more than 13 years of snowy plover surveys on the HRC gravel bars along the Eel River, all with negative results for snowy plovers.

There may be several reasons why snowy plovers are not nesting further upriver than their current extent, including 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 (RU2), including Del Norte, Humboldt, and Mendocino counties.

Colwell et al (2017) reported that, from 2001 to 2016, the number of breeding adults in Recovery Unit 2 (RU2) varied between 19 and 74, and that there were two distinct time intervals of change: first, there was a decline from 2001 to 2009 of 74 to 19 breeding adults, which was followed by seven consecutive years of growth at an annual rate of 22%. During the seven-year period of growth, immigrants from other sites comprised an average of 62% of the breeding adults.

Based on their 2017 results, Feucht et al (2017) have reported that the RU2 population did not grow in 2017, which ended a trend of positive growth for seven consecutive years. Immigration continued to play a critical role in this population growth, as the arrival of 24 first-time breeders from outside RU2 were observed. Breeding occurred on 11 beaches, with the majority nesting

occurring on the South Spit of Humboldt Bay (26%), Clam Beach (26%), and Centerville Beach (17%). Breeding was documented at Freshwater Lagoon for the first time. The principal cause of nest failure was predation by corvids and other species. Reproductive success (fledglings per male) was greater than the recovery objective for RU2 for the second year in a row (Feucht et al 2017).

Feucht et al. (2018) reported that 63 adults (29 males, 34 females) bred in RU2 in 2018, representing a 12% decline from 2017, and the first decrease in nine years. Western snowy plovers nested on 13 beaches (12 in Humboldt Co. and one in Mendocino Co.), with chicks hatching at ten locations and juveniles fledging from eight. They found nests on two sites (Elk River Spit and McNutt Gulch) for the first time since regular monitoring began in 2001. In total, plovers initiated 75 nests, hatched 80 chicks, and fledged 48 juveniles. Plover reproductive success was 1.66 ± 1.42 fledglings per male, surpassing the recovery objective of 1.0 for the third year in a row (Feucht et al. 2018). There were no breeding activities recorded on Eel River gravel bars again in 2018, which makes eight consecutive years.

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 during the breeding season.
- No changes in monitoring strategies or intensity are recommended at this time.

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MEMORANDUM

To: Sal Chinnici, Forest Sciences Manager, Humboldt Redwood Company LLC

From: Sean E. McAllister

Date: September 9, 2016

Re: Snowy Plover Surveys – Upper Truck Shop, Dinner, and 3-Mile gravel bars

Dear Sal,

As per your request, I performed 2 consecutive weekly surveys for **Western Snowy Plover** (*Charadrius nivosus nivosus*) at the three sites, known as 'Upper Truck Shop', 'Dinner' and 'Three-Mile Bridge' gravel bars, along the Eel River just upstream from the town of Scotia. Surveys were performed August 24th and 30th, 2016.

I have nearly 20 years of experience with Snowy Plovers on the lower Eel River, where a population of up to 40 breeding adults have occurred.

Survey methods involved walking and stopping frequently to scan with binoculars the entire exposed, contiguous gravel habitat, including areas separated by narrow river channels, as we have observed Snowy Plover chicks successfully crossing such channels. A thorough search was made for Snowy Plover adults, young and eggs. Since the three survey areas are adjacent, I surveyed all of them as one. Maps depicting the actual survey routes are attached.

No Snowy Plovers were detected during either of the two surveys.

During each survey, a complete list of all bird species was kept, and particular attention was paid to the possible presence of special status species, **Willow Flycatcher** (*Empidonax traillii*) and Western **Yellow-billed Cuckoo** (*Coccyzus americanus occidentalis*), which have known, albeit rare, occurrences elsewhere along the lower Eel River. **Neither of these species was detected.**

A complete list of all species detected during these surveys is attached.

If there are any questions regarding the survey methods or results, please contact me.

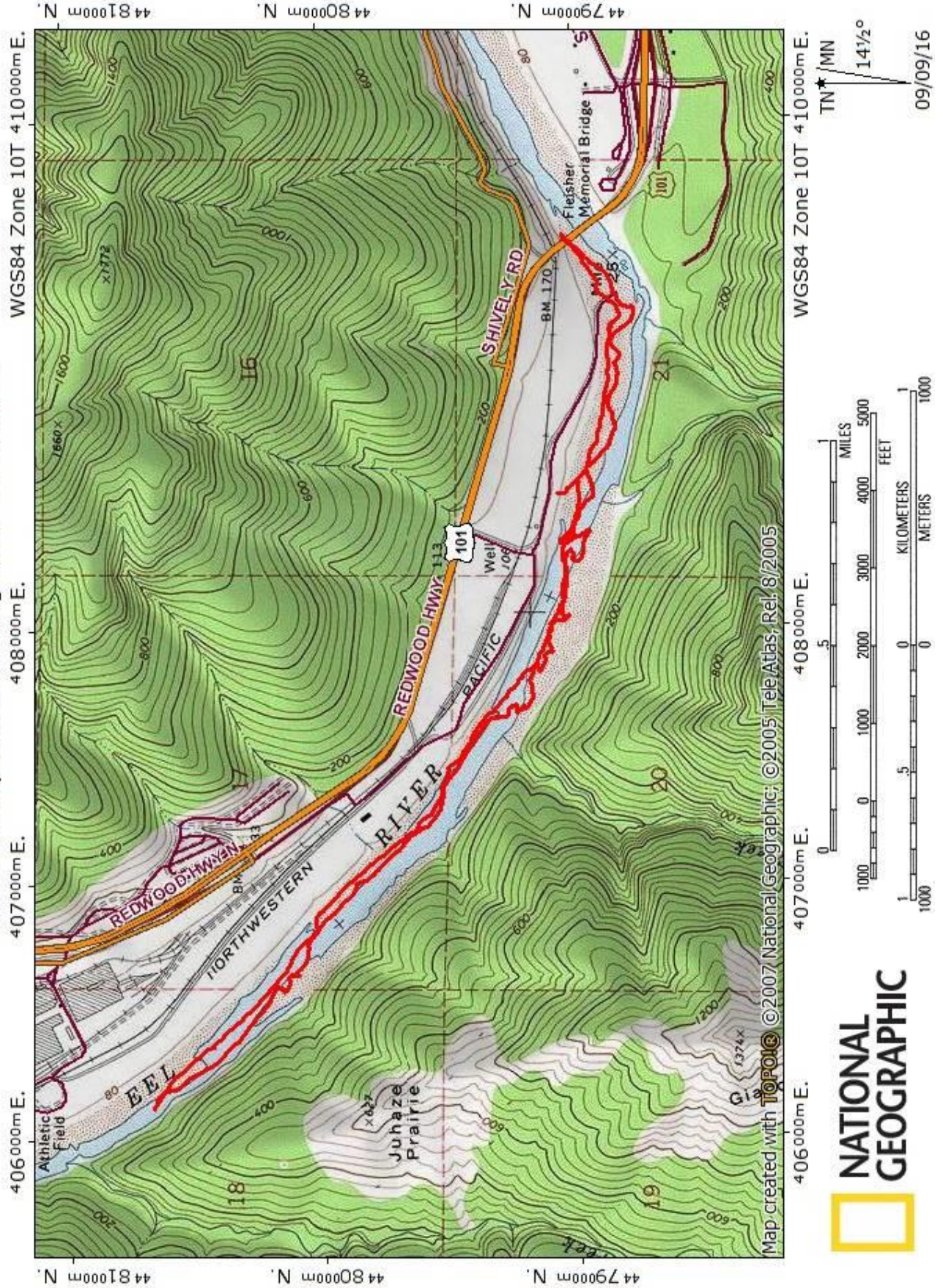
Sincerely,

Sean McAllister
(707) 496-8790
whiteouters@gmail.com

Attachment 1. Bird species list for Three-mile Bridge, Dinner, and Upper Truck Shop gravel bars, August 24 and 31, 2016.

Mallard	<i>Anas platyrhynchos</i>
Common Merganser	<i>Mergus merganser</i>
Great Blue Heron	<i>Ardea herodias</i>
Great Egret	<i>Ardea alba</i>
Turkey Vulture	<i>Cathartes aura</i>
Killdeer	<i>Charadrius vociferus</i>
Spotted Sandpiper	<i>Actitis macularius</i>
Least Sandpiper	<i>Calidris minutilla</i>
Baird's Sandpiper	<i>Calidris bairdii</i>
Band-tailed Pigeon	<i>Patagioenas fasciata</i>
Mourning Dove	<i>Zenaida macroura</i>
Belted Kingfisher	<i>Ceryle alcyon</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Western Wood-Pewee	<i>Contopus sordidulus</i>
Cassin's Vireo	<i>Vireo cassinii</i>
Steller's Jay	<i>Cyanocitta stelleri</i>
Barn Swallow	<i>Hirundo rustica</i>
Chestnut-backed Chickadee	<i>Poecile rufescens</i>
Bewick's Wren	<i>Thryomanes bewickii</i>
Orange-crowned Warbler	<i>Vermivora celata</i>
Wilson's Warbler	<i>Cardellina pusilla</i>
Song Sparrow	<i>Melospiza melodia</i>
Lesser Goldfinch	<i>Carduelis psaltria</i>

SNPL Survey Route_24 Aug 2016_S.McAllister



SNPL Survey Route_30 Aug 2016_S.McAllister

