



**Humboldt
Redwood™**

Snowy Plover Annual Report

2016

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 2016 HRC conducted gravel extraction operations on the Truck Shop, Dinner Creek, and 3-Mile bars near Scotia from 1 September to 14 October. Potential impacts to snowy plovers were avoided by conducting pre-extraction HCP reconnaissance-level surveys for this species in 2016.

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

Project Manager / Primary Author



Sal Chinnici

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PROJECT DOCUMENT DISTRIBUTION LIST

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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 2016 HRC conducted gravel extraction operations on the Truck Shop, Dinner Creek, and 3-Mile gravel bars along the Eel River near Scotia. Pre-extraction, reconnaissance-level surveys were conducted by Sean McAllister. No snowy plovers were detected.

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 (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 2016.

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 involved 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).

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 2016 HRC again contracted with Sean McAllister to conduct the HCP-required surveys prior to the beginning of gravel extraction operations.

Surveys of the three adjacent gravel bars were conducted on 24 and 31 August. 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 trailii*) and Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*), which have rare occurrence records elsewhere along the lower Eel River. Neither of these species was detected. A complete list of all species detected during these surveys is included in the full report (McAllister 2016).

Following the snowy plover surveys, HRC began gravel extraction operations on the Truck Shop, Dinner Creek and 3-Mile bars on 1 September, and operations were completed on 14 October. A brief summary of operations follows:

Truck Shop Bar (Figure 1): This bar was proposed for a 29,864 cubic yards (cy) extraction. The actual extraction volume calculated by Kolstad Land Surveyors is estimated at 29,042 cy.

Dinner Creek Bar (Figure 2): This bar was proposed for a 29,593 cy extraction. The actual extraction volume calculated by Kolstad Land Surveyors is estimated at 28,766 cy.

3-Mile Bar: This bar was proposed for a 22,819 cy extraction. The actual extraction volume calculated by Kolstad Land Surveyors is estimated at 20,923 cy.

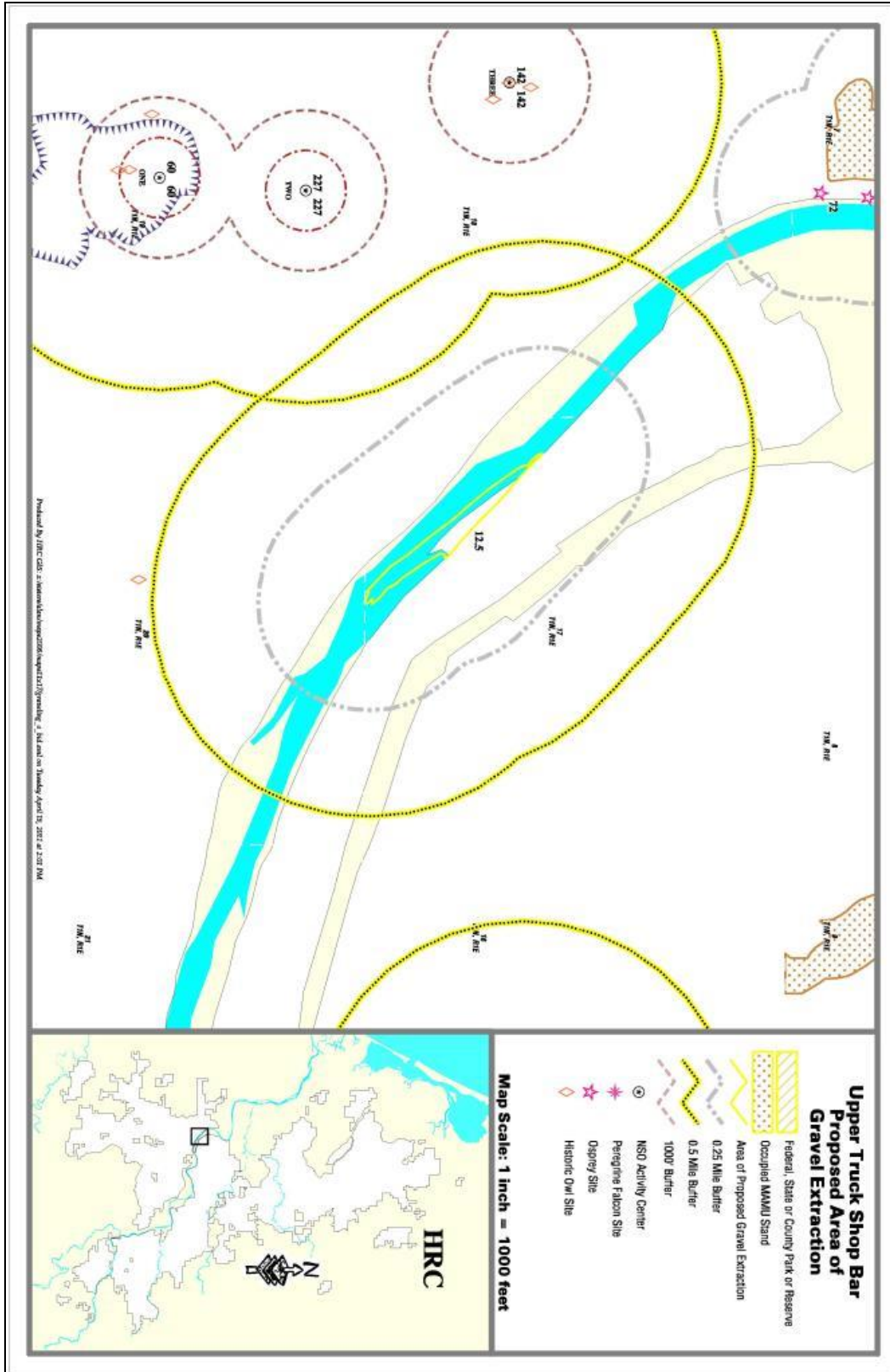


Figure 1. Truck Shop Bar.

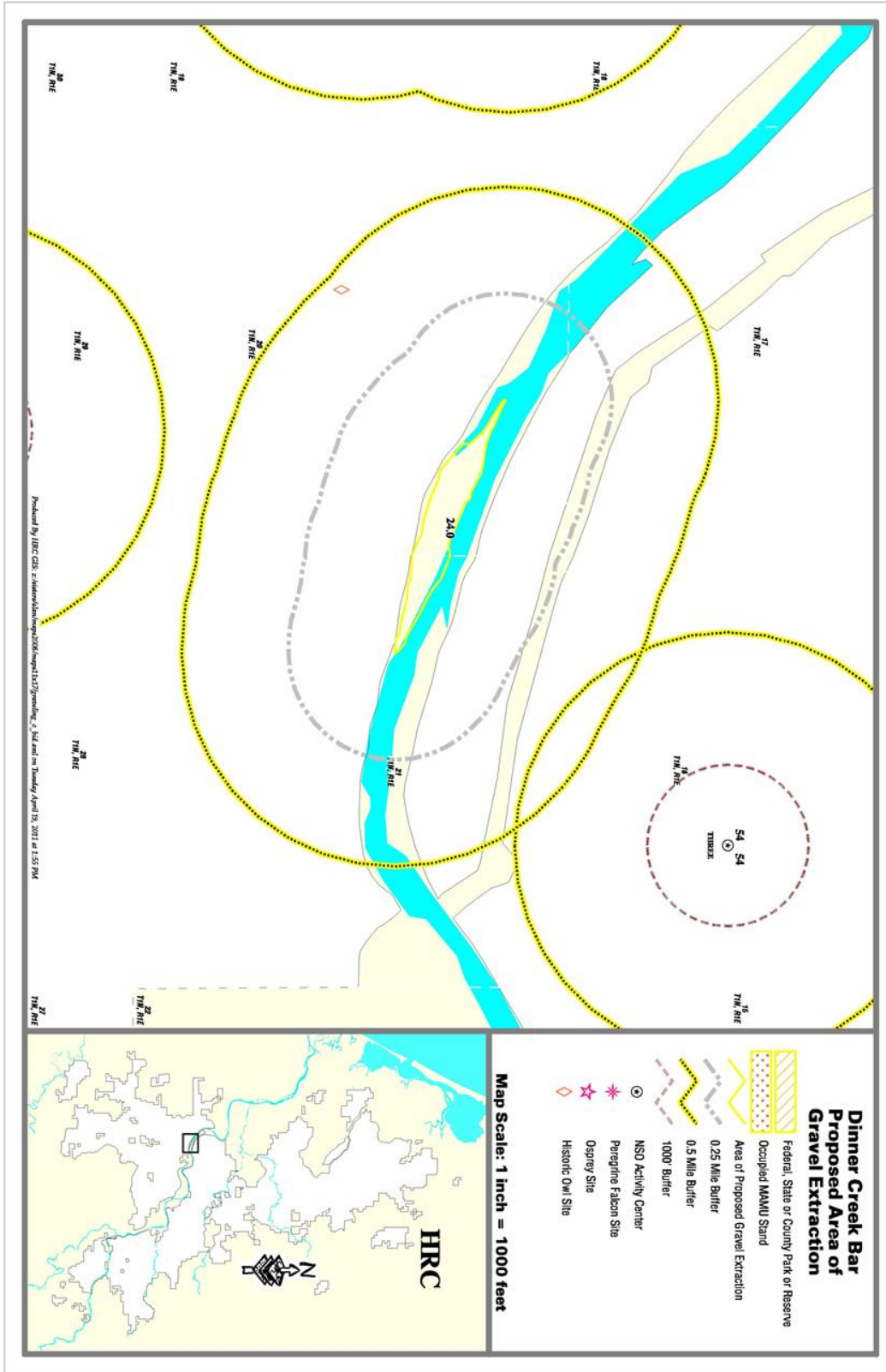


Figure 2. Dinner Creek Bar.

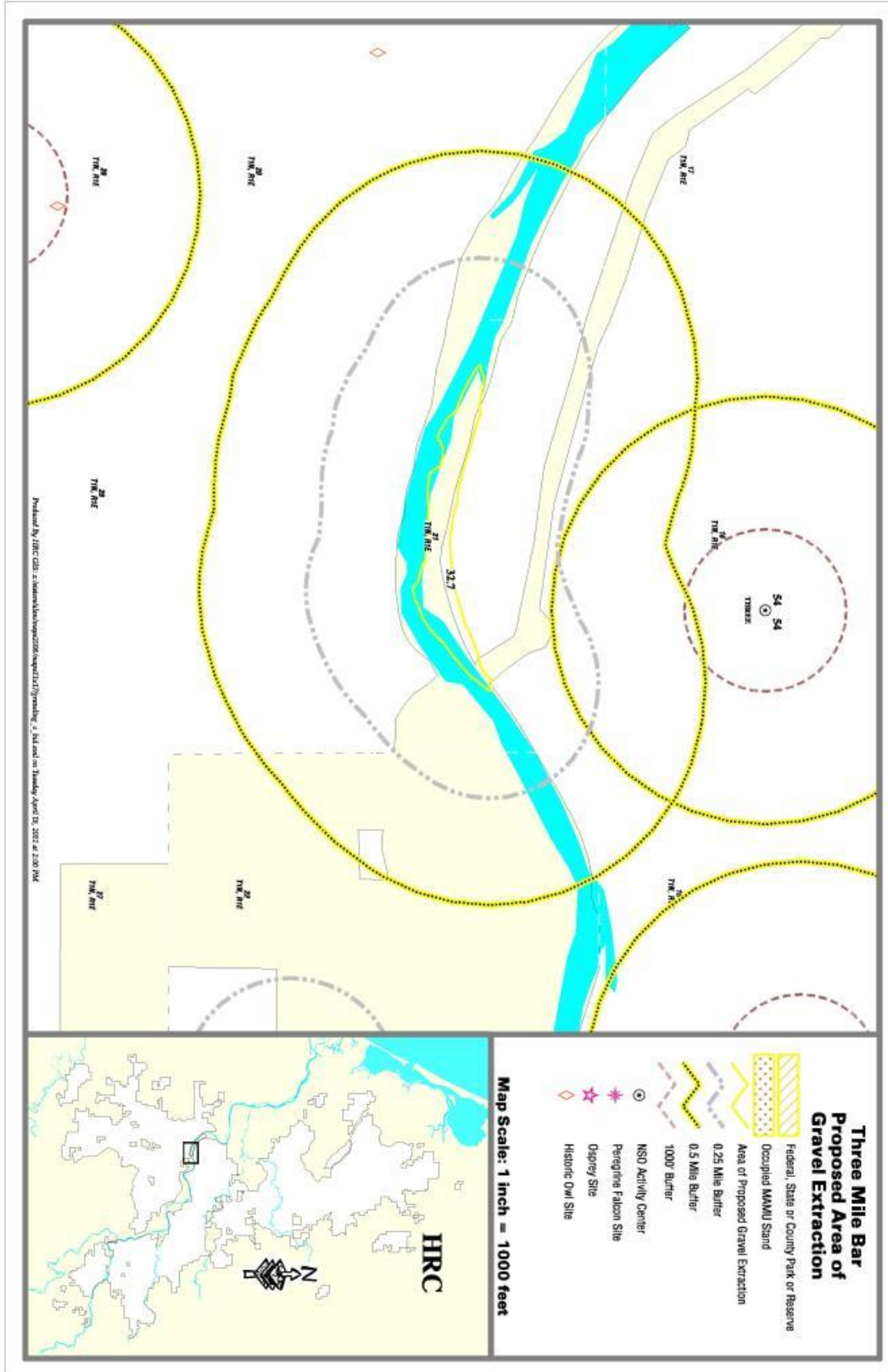


Figure 3. 3-Mile Bar.



Figure 4. Truck Shop Bar on the Eel River prior to operations in 2011 (conditions were similar in 2016).



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



Figure 6. Excavator and trench on Truck Shop Bar during 2012 operations (for example of operations).

DISCUSSION

Pre-extraction reconnaissance-level surveys were conducted prior to the beginning of operations in 2016. 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 (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 RU2.

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 RU2 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).

Feucht et al (2016) have reported that the Recovery Unit 2 (RU2) population grew by 18% over the previous year (from 61 to 72 adults), which continued a trend of positive growth for the seventh consecutive year. Immigration continues to play a critical role in population growth as the arrival of 25 first-time breeders from outside RU2 were observed.

Monitoring of the Eel River gravel bars was reduced to one visit during the breeding window survey, given that breeding plovers have not been detected on the bars for five consecutive years (Feucht et al. 2016). In 2016 nesting occurred on nine beaches, with most plovers breeding at Clam Beach, South Spit, and Stone Lagoon. Snowy plovers were not detected on the Eel River gravel bars during the annual breeding window survey.

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.

LIST OF REFERENCES

- Army Corps of Engineers. 2015. **Letter of Permission Procedure (LOP 2015-1) for Gravel Mining and Excavation Activities Within Humboldt County.** 53 pp.
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- McAllister, S. 2016. **Snowy Plover Surveys – Upper Truck Shop, Dinner, and 3-Mile Gravel Bars.** Memorandum to Sal Chinnici, Humboldt Redwood Co. September 9, 2016. 4 pp.
- PALCO 1999. **Habitat conservation plan for the properties of The Pacific Lumber Company, Scotia Pacific Company LLC, and Salmon Creek Corporation.** The Pacific Lumber Company, Scotia, California, USA.
- U.S. Fish and Wildlife Service. 2007. **Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (*Charadrius alexandrinus nivosus*).** In 2 volumes. Sacramento, California. Xiv + 751 pages.

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.

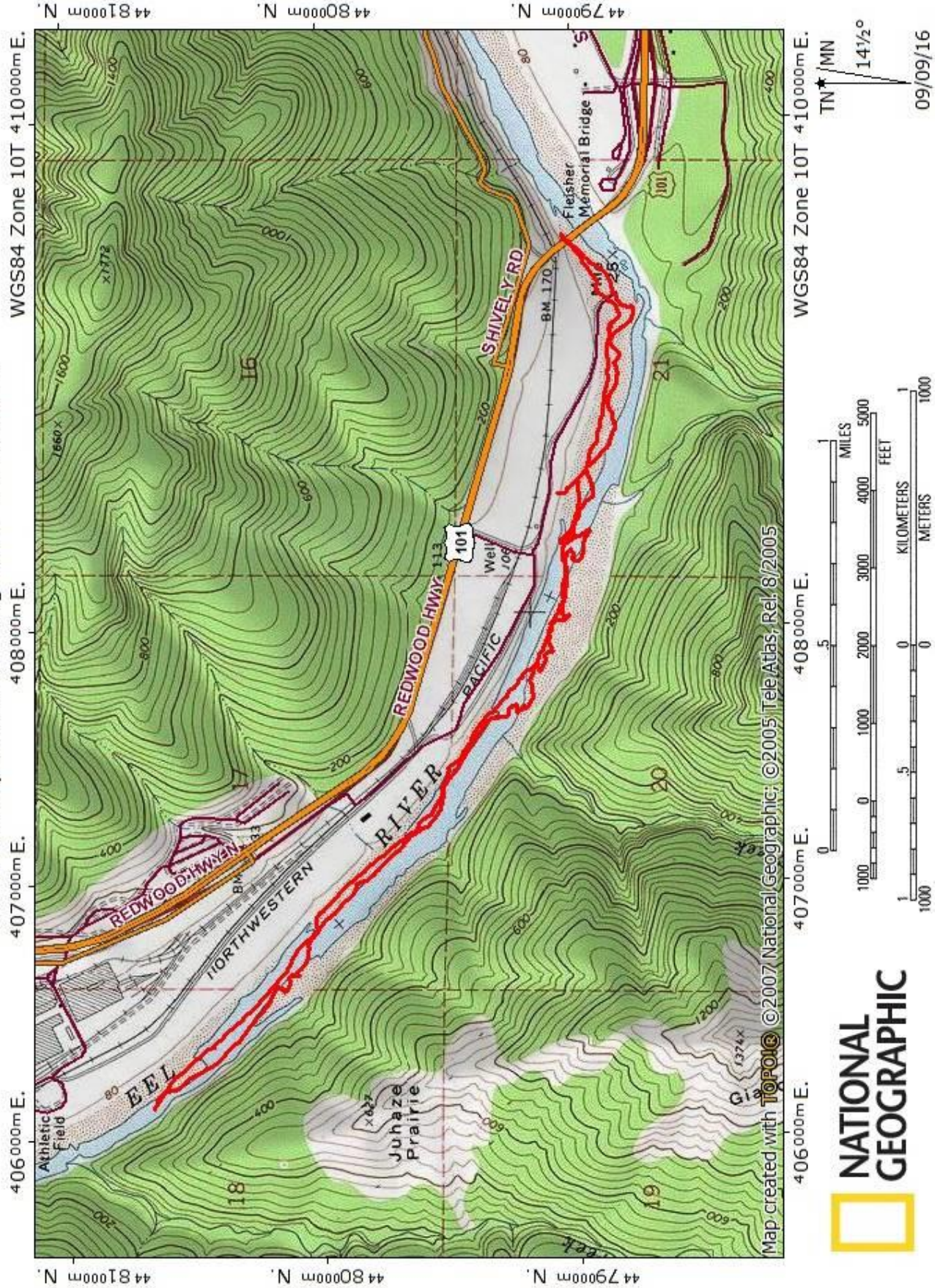
Sincerely,

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

