Stantec

Memo

To:	Humboldt County Planning & Building Department 3015 H Street Eureka, CA 95501	From:	Stantec Consulting Services Inc. 1383 North McDowell Boulevard Suite 250 Petaluma, CA 94954-7118
Date:	October 17, 2019		

Reference: Potential Sites for Off-Site Mitigation of Loss Of NSO Habitat

Implementation of the Humboldt Wind Project (project) will result in permanent impacts to nesting, roosting, and foraging habitat for Northern spotted owl (NSO). The impact area is dominated by redwood/hardwood forest and grassland habitats with minor occurrences of shrub/scrub, riparian, and wetland habitats. The impacts avoid known NSO activity centers. In addition, no direct take of NSO through mortality is anticipated either for construction or operation.

The NSO habitat proposed to be permanently disturbed is of low to moderate quality. All areas comprise actively managed timberlands where there are already high levels of disturbance. With or without the project, logging activities will likely continue to occur on these acres as guided by the timber harvest plans (for Humboldt Redwood Company [HRC] and other landowners) and long-term planning efforts to maximize the economic value of the timberland.

The areas to be permanently impacted are mainly associated with the construction of roads and turbine pads. These project features are located along ridgetops and in open areas. Ridgetops and open areas are predominantly used by NSO for foraging, and not for nesting and roosting as they typically don't provide sheltered microhabitat characteristics of high-quality habitat. Foraging habitat is a more abundant habitat type than nesting or roosting habitat and can withstand more disturbance while remaining functional for foraging purposes. Thus, the areas to be permanently impacted represent relatively low to moderate habitat quality for NSO.

To off-set permanent impact acreages associated with the project, the DEIR calls for off-site preservation of NSO habitat of equal or higher quality than the habitat to be disturbed. The DEIR requires the land to be acquired and protected from development with a suitable instrument within two years of the first delivery of power.

This memorandum documents that there exists potentially suitable off-site mitigation land located in the vicinity of the project area that, if acceptable to the County, could be managed or purchased by the applicant. These parcels are subject to potential future logging or other development and are potentially feasible to obtain or manage if the project is approved. Each of these five properties provides higher quality habitat for NSO and other special-status wildlife species than the habitat proposed to be disturbed. Various sensitive natural communities are also present within these potential mitigation sites, and the parcels have potential for creation of sensitive natural communities.

Neither the applicant nor the County have committed that these specific parcels or portions of them are suitable or will be purchased or managed for mitigation. The purpose of this memorandum is to demonstrate that protection of nearby, preliminarily suitable NSO habitat is feasible, which would also be suitable for other special-status wildlife species and sensitive natural communities.

The NSO habitat quality of the potential mitigation sites was determined by using the combination of variables that included:

1) habitat diversity,
2) proximity to NSO observation points,
3) disturbance,
4) presence of drainages, and
5) vegetation continuity.

For this discussion, NSO habitat diversity was considered to be the combination of nesting, roosting, and foraging habitat within or adjacent to a site that would afford NSO the ability to meet all biological requirements. Sites that contain or are in close proximity to NSO activity centers are considered to be of high quality, since they indicate the current or historical presence of NSO. Disturbance is correlated to the presence or absence of human activity on a site represented by residences, timber harvest activity, or high traffic roads. High quality NSO habitat has lower levels of disturbance. The presence of drainages, particularly deep V-shaped drainages, are considered to be a key component for NSO, as their nesting/roosting habitat is often associated with these features. High quality NSO habitat is also characterized by lands with continuity within vegetation types that do not have extensive fragmentation, therefore providing larger areas where NSO could establish a territory.

The five parcels mapped on Exhibit A and described below are under HRC ownership. Table 1 includes the amount of nesting, roosting, and foraging habitat for northern spotted owl available in each mitigation site under HRC ownership. A sixth potential site, the McKay Tract, is also described below.

- **Butte Creek:** This 702-acre site is located near Mad River, 10 miles north of the project area (Exhibits A). A total of 692 acres (99% of the site) support high- quality, contiguous nesting, roosting, and foraging NSO habitat. The majority of the habitat present is contiguous at this site. Extensive NSO activity has been documented throughout this area, including several positive NSO observations both within and adjacent to the Butte Creek site. Additionally, 3 historic activity centers are located within 1 mile of the site. The site has a low level of disturbance since no timber harvest activity has occurred on the site within the last 15 years. Two drainages occur on-site including one named drainage (Butte Creek) and one unnamed drainage, both bounded by steep-sloped V-shaped canyons. The vegetation community on-site is primarily mature Douglas fir (*Pseudotsuga menziesii*) and hardwood forest. There is potential for creation/enhancement of multiple sensitive natural communities at this site including, madrone forest, Oregon white oak woodland, tanoak forest, and California bay forest. The combination and quality of variables that are present on the landscape at this location define the Butte Creek site as very high quality NSO habitat.

- **McCann 4:** This 78-acre site located south of the Eel River is 13.5 miles southeast of the project area (Exhibits A). A total of 77 acres (99% of the site) supports high-quality nesting, roosting, and foraging NSO habitat that is contiguous throughout the site. Extensive NSO activity has been documented throughout this area, including multiple positive NSO observations both within and adjacent to the McCann 4 site. Additionally, there are 3 historic NSO activity centers located within 1 mile of the site. McCann 4 has a low level of disturbance since no timber harvest activities have occurred on the site in the last 13 years. One named drainage, Sequoia Creek (known to contain salmonids), occurs on-site along a steep-sloped v-shaped canyon. The site supports dense forest dominated by Douglas fir with secondary tree species

interspersed including, redwood (*Sequoia sempervirens*), California bay (*Umbellularia californica*), tanoak (*Notholithocarpus densiflorus*), and madrone (*Arbutus menziesii*). There is potential for creation of riparian wetland and creation/enhancement of multiple sensitive natural communities at this site including, madrone forest, tanoak forest, California bay forest, and red alder forest. The combination of variables present define the McCann 4 site as very high quality for NSO habitat.

- **McCann 2:** This 191-acre site is located adjacent to the west bank of the Eel River and is 14 miles southeast of the project area (Exhibits A). A total of 189 acres (98% of the site) supports high-quality contiguous nesting, roosting, and foraging NSO habitat. Extensive NSO activity has been documented in the site vicinity, including multiple positive NSO observations both within and adjacent to McCann 2. Additionally, there are 3 historic NSO activity centers located within 1 mile of the site. There is a low level of disturbance at McCann 2 since no timber harvest activities have occurred at the site in the last 13 years. One unnamed drainage occurs on-site originating at approximately 1,300 feet elevation and flowing down to the Eel River. Vegetative communities at McCann 2 consist of hardwood forest, open shrub-dominated scrub, and riparian habitats. There is potential for creation/enhancement of multiple sensitive natural communities at this site including, madrone forest, California bay forest, and red alder forest. The combination of variables present define the McCann2 site as high quality for NSO habitat.

- **McCann 1:** This 123-acre site located near the Eel River and the Avenue of the Giants is 13 miles southeast of the project area (Exhibits A). A total of 78 acres (64% of the site) of nesting, roosting, and foraging NSO habitat is present. NSO activity has been documented throughout the greater area, including multiple positive NSO observations both within and adjacent to McCann 1. Additionally, there is 1 historic NSO activity center within 1 mile of the site. McCann 1 has a moderate level of past disturbance and no timber harvest has occurred on the site since 2013. Topography is gently sloping toward a small named tributary, Elk Creek, that lies immediately adjacent to the northern boundary of the site and is tributary to the Eel River. Vegetative communities at McCann 1 are dominated by mixed Douglas fir and hardwood forest habitat interspersed with alder, bay and madrone trees and some open grassland habitats. There is potential for creation/enhancement of multiple sensitive natural communities at this site including, madrone forest, Oregon white oak woodland, California bay forest, and red alder forest. The combination of NSO habitat available and variables present on the landscape define the McCann1 site as higher quality habitat for NSO than the impacted project area.

- **Carlotta:** This 136-acre site is located along the Van Duzen River, less than 2 miles north of the project alignment (Exhibits A). The site contains a total of 83 acres (61% of the site) of nesting and roosting NSO habitat. Extensive NSO activity has been documented in the site vicinity, including several positive NSO observations both within and adjacent to the Carlotta site. The site has a moderate level of disturbance due to the presence of nearby communities and roadways, but no timber harvest activities have occurred at this site since 2000. Vegetation communities present on the Carlotta site are highly diverse and encompass riparian scrub/sandbar community along the river, adjacent mature redwood-hardwood forest, seasonal wetlands, and open grassland to the eastern end of the site (supporting known populations of Siskiyou checkerbloom). There is potential for wetland enhancement and creation/enhancement of multiple sensitive natural communities at the Carlotta site

including, blue wildrye meadows, California oatgrass prairie, spike bentgrass, tufted hairgrass meadow, red alder forest, and shining willow groves. The combination of NSO habitat available and variables that are present on the landscape define the Carlotta site as higher quality habitat than the impacted project area.

- **McKay Tract:** The McKay Tract encompasses 7,600 acres of land within the 9,400-acre Ryan Creek watershed. The McKay Community Forest is a 1,000-acre portion of the McKay Tract, located southeast of Eureka, that was sold to Humboldt County by Green Diamond Resource Company in collaboration with the Trust for Public Lands on August 21, 2014. The McKay Community Forest is currently being managed for multiple purposes, including timber harvesting. There are five known NSO activity centers located within 0.7-mile of the McKay Community Forest, two of which are located within the Community Forest boundaries (see *Northern Spotted Owl 2019 Monitoring Report* prepared by National Resources Management Corporation on September 6, 2019). Table 2, taken from the monitoring report, presents the NSO habitat available on McKay Community Forest (MCF in the table) associated with three of the five activity centers. The project could potentially either assist in funding management practices within the McKay Community Forest, thereby preventing timber harvest activities, or assist with the purchase a new portion of the McKay Tract for inclusion.

Table 1. NSO Habitat on Five of the Potential Mitigation Sites

Mitigation Site	Nesting	Roosting	Foraging	Total
Butte Creek	30.45	202.67	458.68	691.79
McCann 4	19.08	19.39	38.97	77.45
McCann 2	9.18	79.15	100.81	189.13
McCann 1	6.51	57.02	14.81	78.34
Carlotta	63.37	19.20	0	82.57

Table 2. Habitat Acreage Totals for Three Activity Centers within 0.7-mile of McKay Community Forest

NSO Activity Centers	Respective Distance to MCF from AC Center (ft)	Habitat Acreage within MCF Boundaries			Total Habitat Acreage within AC 0.7-mile Buffer	
		Core Area	*Nest/ Roost*	*Forage*	*Nest/ Roost*	*Forage*
HUM0063	0 (AC is within MCF boundaries)	78	431	0	759	89
HUM1091	41	60	323	128	589	358
HUM1018	592	19	162	0	712	259

Table taken from *Northern Spotted Owl 2019 Monitoring Report* prepared by National Resources Management Corporation for Humboldt County Public Works Department on September 6, 2019.

EXHIBIT A – MITIGATION SITES OVERVIEW