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Addendum to Biological Resource Reconnaissance Survey Report Schramsberg Winery

Report Date: 08FEB23
Today's Date: 30JAN24

Addendum In Response to:

Napa County Planning, Building & Environmental Services
Application Completeness Determination – Schramsberg Vineyard
Agricultural Erosion Control Plan (ECPA) P23-00360-ECPA
Dated: 22JAN24
Addressing: Question 4 – Biological Resources Report

This Addendum was completed by Pamela Town, Consulting Wildlife Biologist with Forest Ecosystem Management, and Heather Morrison, Consulting Botanist with Salix Natural Resource Management. If further questions, please feel free to contact either:

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Questions 4a) Different project area acres within the 08FEB23 report and the proposed ECP. Please revise report, and specifically Table #2 to reflect the project as proposed.

Response: The mapped boundaries did not change within the scaled ranges of the biological report. The total gross acres is being corrected below:

VII-5: Table #2. Vegetation Classifications for Schramsberg Ownership Pre-Wildfire

	Douglas-fir	Coast Live Oak	Douglas-fir Ponderosa Pine	Redwood Douglas-fir CA Laurel	Agricultural	Ruderal (Urban)
Block 1	4.5	0	0	0	0	0
Block 1A (aka: Block 1B)	0	0	0	0	.7	0
Block 2	.3	0	0	0	0	0
Block 3	0	1	0	0	0	0
Block 4	0	.5	0	0	.1	0
Block 4B	0	0	0	0	.4	0
Block 5	4.3	0	0	0	0	0
Block 6	2.3	0	0	0	0	0
Project Area	11.4	1.5	0	0	1.2	0
Outside Project Area	111.32	22.23	10.2	15.0	51.3	4.85
TOTAL ACRES	122.72	23.73	10.2	15.0	52.5	4.85

General Project: The project proposes to convert 14.1 gross acres of the Schramsberg's property ownership into eight (8) vineyard blocks scattered throughout the ownership. Of the 14.1 acres, 12.9 acres were woodland or forest (pre-2020 Glass Wildfire), and 1.2 acres were non-forested vegetation (pre-2020 Glass Wildfire). The following describes each block:

- Block 1 (4.5 acres): This block is located along the edge of an existing vineyard. Before the Glass wildfire, the site had a mature overstory tree canopy cover of 80 to 90%, with a sparse shrub layer. Overstory trees included Douglas-fir, tanoak, black oak, live oak, and madrone. There were a few Douglas-fir and black oak trees that measured over 38" dbh. The area was impacted by the 2020 Glass Wildfire, with the CalFire Emergency Notice removing all the dead and dying trees. During the 2022 site visits, there were very few trees left alive within this block.
- Block 1b (.7 acres): This block is located along the edge of an existing vineyard. This block was unpermitted when established sometime between 1993 and 2003 (Google Earth shows 1993 open-fallow ground and vines in place in 2003 – there are no available photos for the period in between). This site has been cultivated in grapes going back potentially 29 years.
- Block 2 (.3 acres): This block is located along the eastern property boundary near an existing vineyard, and has houses close by. Before the Glass wildfire, the site had a mature overstory tree canopy cover of 80 – 90% with a sparse shrub layer. Overstory trees included mature madrone, Douglas-fir, black oak, and live oak. At the time, dbh for Douglas-fir were 8 – 20" dbh and oaks about 18" dbh. The area was impacted by the Glass Wildfire, with the CalFire Emergency Notice removing the dead and dying trees. During the 2022 site visits, no trees were standing within this block, and slash piles were being burned.

- Block 3 (1.0 acres): This block is located along the eastern property boundary on the south end of an existing vineyard. Before the Glass wildfire, the site was similar to pre-wildfire Block 2, but due to less overstory tree canopy cover, the shrub layer was denser and consisted of manzanita, ceanothus, and poison oak. The area was impacted by the Glass wildfire, with the CalFire Emergency Notice removing the dead and dying trees. During the 2022 site visits, no trees were standing within this block with slash piles that required burning.
- Block 4 (.6 acres): This block is located along the eastern property boundary and to the east of an existing vineyard. Before the Glass wildfire, the site contained primarily manzanita, chamise, and madrone with some scattered oaks and Douglas-fir. The area was impacted by the Glass wildfire, with the CalFire Emergency Notice removing the dead and dying trees. During the 2022 site visit, no trees were standing.
    - Block 4b (.4 acres): This block is located along the edge of an existing vineyard. This block was unpermitted when established in late 2003 according to Google Earth imagery. Before 2003, the site had a few trees and shrubs on the northern end and was open on the southern end. This site has been cultivated in grapes for almost 20 years. **Block 4 and 4b were consolidated and called Block 4 under the most current ECP, with a total impacted acres of 1.0 acres.**
- Block 5 (4.3 acres): This block is located along the western edge of an existing vineyard. Before the Glass wildfire, the site had a mature overstory canopy cover of 80 to 90%, with a sparse shrub layer. Overstory trees included Douglas-fir, tanoak, madrone, black oak, redwood, and live oak. The area was impacted by the Glass Wildfire, with the CalFire Emergency Notice removing all the dead and dying trees. During the 2022 site visits, there were no trees left standing within this block. Immediately to the west of this block is a Class III watercourse with proposed Block 6 to the west of the watercourse. Fire-killed dead trees were left standing within the watercourse.
- Block 6 (2.3 acres): This block is located just west of proposed Block 5. Before the Glass wildfire, the site had a mature overstory canopy cover of 80 to 90%, with a sparse shrub layer. Overstory trees included redwood, Douglas-fir, tanoak, madrone, black oak, and live oak. The area was impacted by the Glass Wildfire, with the CalFire Emergency Notice removing all the dead and dying trees. During the 2022 site visits, there were no trees left standing within this block.

Question 4b) The Report references a separate northern spotted owl report, please provide.

Response: See attached report dated 25JAN24. This report is written in such a way, that it can be submitted with the required Timber Harvest Plan (THP) for CalFire plan approval under the Northern Spotted Owl Take Avoidance Analysis and Guidance for California Interior District for timber operations proposed within the range of the northern spotted owl.

Question 4c) The Report requests clarification of recommendations regarding avoidance/mitigation of Coast range triplet lily removal.

Response: The Coast Range Triplet Lily (pictured on page 30 of the Biological Report) does not have a California State or Federal Listing but is listed by the California Native Plant Society. Approximately 200 plants were found along a 700-foot span along the ephemeral drainage north of Blocks 4 and 4b. Several individual plants were also noted within the Bothe-Napa Valley State Park. This plant is relatively common after fires with potential threats being the incidental introduction of non-native and invasive plants; primarily French Broom for this population (pictured on page 30 of Biological Report).

Approximately 5% of the population would be removed due to this Project. Allowing for the removal of a small portion of the population allows for mitigation incentives to protect the remaining population; which will be quickly outcompeted and destroyed due to the invasive French Broom if no management is completed.

Mitigation and Monitoring Plan for French Broom removal within Coast Range Triplet Lily population.

1. Issue: French Broom (*Genista monspessulana*) has established itself within a small, seasonal watercourse adjacent to proposed Block 4. Within this area, there is an established population of the rare monocot, Coast Range Triplet Lily (*Triteleia lugens*). The treatment area includes the immediate zone of Coast Range Triplet Lily plus twenty (25) feet.

   Plant communities and equipment exclusion area (treatment area) should be flagged before and during construction activities (see attached map).

2. Goal: Remove French Broom to prevent potential shading out of Coast Range Triplet Lily, as well as decrease the potential for over-nitrogenization of soils by French Broom which could be detrimental to native plants, including the Coast Range Triplet Lily.
3. Methods: French Broom can be removed mechanically or chemically. French Broom should be removed before blooming and releasing additional seeds.

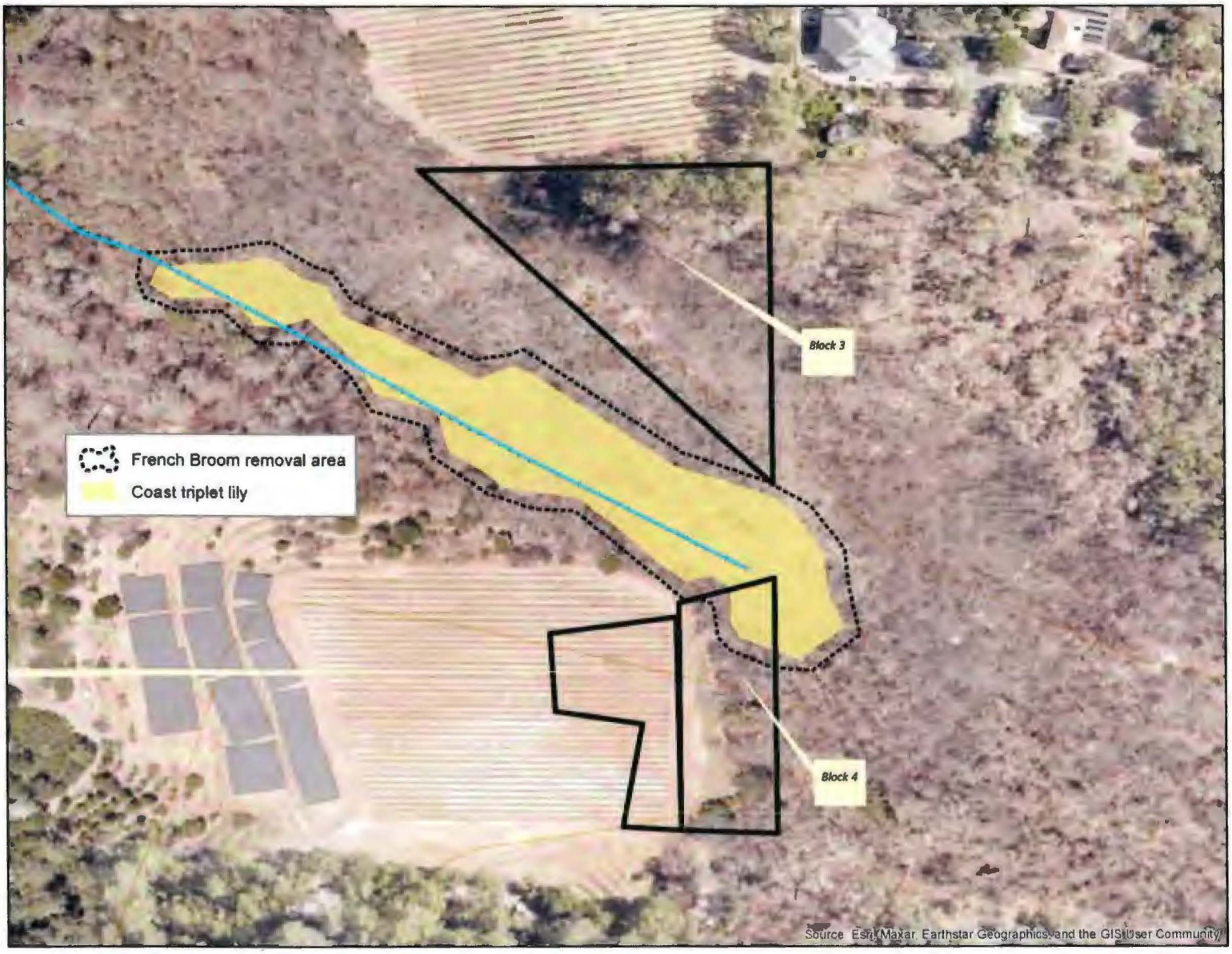
   If using chemical controls, seek the advice of a Pest Control Advisor (certified with the California Department of Pesticide Regulation) and ensure that the Coast Range Triplet Lily is not harmed. Ideally, with chemical methods, French Broom could be treated before the emergence of the lily, in early spring (February or March).

   If French Broom plants are removed manually, care should be taken to avoid trampling the lily. Removing French Broom plants in the winter will avoid trampling and be easier to do when the soil is wet. Manually removed French Bloom plants should be removed from the site and disposed of off-site. Do not pile plants within the zone.

4. Monitoring: The site should be monitored annually in the spring (during the bloom window but before the seeds are set) to determine the success of the French Broom removal and to provide follow-up removal of newly established seedlings. The survey and follow-up can be done simultaneously. Newly established seedlings will be an issue in the area due to a well-established seed bank caused by several years of input from full-grown plants. Seeds will remain viable for up to 100 years.
5. Success criteria: Five years after the onset of French Broom removal, the area should be free of French Broom during the spring survey (in other words, at year 4, the last follow-up treatment will have occurred, and the area has been free of French Broom for a full year). If unsuccessful, the area will be treated until the area is free of French Broom for one full year.

TREATMENT TIMELINE




French Broom removal area
Coast triplet lily
Block 3
Block 4
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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Northern Spotted Owl Assessment for Schramsberg Timber Harvest Plan & Timber Conversion Plan

Completed by: Pamela Town, Consulting Wildlife Biologist

January 25, 2024

Northern Spotted Owls (*Strix occidentalis caurina)*

Northern Spotted Owls (NSO) are listed as Threatened under both the Federal Endangered Species Act (ESA) and California State Endangered Species Act (CESA), as well as Sensitive under the California Department of Forestry and Fire Protection (CalFire). They are a common to uncommon owl in the coniferous forest of the Pacific Northwest (PNW), ranging from southern British Columbia south to Marin County in northwestern California.

The northern spotted owl is a subspecies of spotted owl (*Strix occidentalis)* found in western North America. They are medium-sized (16 to 20 inches) dark brown owls with a barred tail, white spots on their head and breast; and dark brown eyes surrounded by a prominent facial disk. The northern spotted owl is a permanent resident in suitable habitat residing in dense, old-growth, and multi-layered second-growth stands of mixed conifer, redwood, and Douglas-fir habitats.

Northern Spotted Owls are rodent specialists, primarily feeding on woodrats (*Neotoma fuscipes*), deer mice (*Peromyscus spp.*), Sonoma tree voles (*Arborimus pomo*), voles (*Microtus spp.)* and northern flying squirrels (*Glaucomys sabrimus*); but has been known to consume small birds, bats, amphibians, and large arthropods. Foraging is completed by searching for prey from a perch and swooping/pouncing on the prey. NSOs usually nest in stick nests (mistletoe clump, abandoned raptor or squirrel nest), in a cavity tree or snag, or in the broken top of a large tree. In the interior region of their range (as seen in Napa County), there appears to be a preference for well-shaded habitat in narrow, steep-sided canyons with north or east-facing slopes to assist in thermoregulatory needs, as they are intolerant of high temperatures.

Spotted owl life-history traits suggest coevolution with late-seral, old-growth forests, and second-growth forests with scattered late-seral characteristics. They are relatively long-lived and have high adult survival, low reproductive output, and high parental investment in offspring.

Threats to the northern spotted owl include increased competition, and perhaps predation, from the barred owl (*Strix varia).* In addition to the threats from the barred owls, spotted owl populations may also be negatively impacted by large-scale wildfires and unregulated activities that modify habitat and introduce toxic substances into the environment and food chain (i.e. illegal logging, development, marijuana cultivation, etc.).

General THP/TCP Information

Project Location: 1400 Schramsberg Road; Calistoga, California (Attachment #1)
Legal Description: Portions of Section 8, 9, 16 & 17, T08N, R06W MDB&M
County: Napa County
Proposed Project: Vineyard Expansion (on less than 30% slopes) adjacent to 4 existing vineyards (Attachment #2).

- Block #1 = 4.5 acres
- Block 1b = 0.7 acres
- Block #2 = 0.3 acres
- Block #3 = 1.0 acres
- Block #4 = 0.4 acres
- Block #4b = 0.6 acres
- Block #5 = 4.3 acres
- Block #6 = 2.3 acres
- TOTAL: 14.1 acres {Gross of 15 acres}

Total Property Ownership = 229 acres
USGS Quadrangle: Calistoga

Known Northern Spotted Owl Territories

There is one known northern spotted owl (NSO) territory (NAP001) within 1.3 miles of this Project (Attachment #3). According to the Spotted Owl Database, the territory is within Bothe Napa Valley State Park along Ritchey Creek and was first identified in 1978. The activity center for NAP001 is based on the last reported pair detection in 2012. Surveys for this Project included attempts to monitor NAP001, with the following results:

- 2019 = 6 surveys completed along Ritchey Creek, with no NSOs detected
- 2020 = 3 spot checks completed along Ritchy Creek, with no NSOs detected
- 2021 = 3 spot checks completed along Ritchy Creek, with no NSOs detected
- 2022 = monitoring area reduced (Attachment #4), with no NSOs detected
- 2023 = monitoring area reduced (Attachment #4), with no NSOs detected. Barred owl detected within Bothe Napa Valley State Park (13APR23).

Northern Spotted Owl Surveys

The property had four survey stations during the early planning stages (Attachment #4 – 2019 - 2021). Stations 3 and 4 were located within the Property Boundary. Two stations (1 and 2) were along a trail

within Bothe Napa Valley State Park. Starting near Station #1, the surveyor performs a continuous walking survey along a trail that follows Ritchey Creek. Due to the nature of the state park and the safety of the surveyor, the walking surveys were often completed while still daylight and continued after sunset. The surveyor walks along the trail playing the electronic caller and pausing at prominent points and at regular intervals throughout the area to conduct informal stations that are at least 3 minutes in duration. The surveyor would walk a little beyond station #2 in an attempt to detect NAP001.

In 2022, a Project footprint was more defined; therefore, the survey stations were adjusted (and station #5 added) due to habitat availability (landscaped burned during the 2020 Glass Wildfire) and to cover the proposed Project Area. Currently, there are 4 stations within the Schramsberg Property (1, 3, 4, & 5) that are being used for this Project. Station #2 was dropped due to distance from Project Area, wildfire altering the habitat, and access issues.

Different surveyors surveyed the Schramsberg Project including Scott Butler, RPF; Heather Morrison, RPF, and Pamela Town, Consulting Wildlife Biologist. No northern spotted owls were detected. Field survey forms are included below, with compliance to protocol addressed. ***Surveys are valid for the breeding season in which they were completed (01FEB – 31AUG), with protocol surveys required before all yearly harvest operations for the life of this THP.***

NORTHERN SPOTTED OWL SURVEY FORM – 2018 Breeding Season = 6 surveys – not provided
NORTHERN SPOTTED OWL SURVEYS – 2019 Breeding Season = 6 surveys

Project/General Location: Schramsberg Winery Visit #: 1 Date: 04MAR19
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler & Heather Morrison Survey Type: CC & NPS
Weather Description: Overcast & Calm Sunset: 1805

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
1 - 2	1720	1840	N/R	-	-	Walk and broadcast calling from STA #1 to STA #2 – Completed while light for safety. PYOW
4	1848	1900	N/R	-	-	Frogs – Heather Morrison Surveyor
3	1909	1919	N/R	-	-	Scott Butler Surveyor

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Project/General Location: Schramsberg Winery Visit #: 2 Date: 15MAR19
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Heather Morrison Survey Type: CC & NPS
Weather Description: Not Recorded Sunset: 1916

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
1 - 2	1845	1951	N/R	-	-	Walk and broadcast calling from STA #1 to STA #2 – Completed while light for safety. Creek noise, jet, distant traffic
4	2005	2016	N/R	-	-	Frogs, Generator, distant traffic
3	2029	2041	N/R	-	-	Crickets, Generator, traffic

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Project/General Location: Schramsberg Winery Visit #: 3 Date: 01APR19
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: CC & NPS
Weather Description: Clear & Calm Sunset: 1932

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
1 - 2	1830	2001	N/R	-	-	Walk and broadcast calling from STA #1 to STA #2 – Completed while light for safety reason. Creek & Bats
4	2005	2015	N/R	-	-	Frogs & Dogs
3	2023	2033	N/R	-	-	Frogs & Dogs

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile

Project/General Location: Schramsberg Winery Visit #: 4 Date: 21APR19
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: CC & NPS
Weather Description: Clear & Calm Sunset: 1951

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
1 - 2	1745	2055	N/R	-	-	Walk and broadcast calling from STA #1 to STA #2 – Completed while light for safety. Creek noise, GHOW, Frogs
4	2100	2110	N/R	-	-	
3	2116	2126	N/R	-	-	

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Project/General Location: Schramsberg Winery Visit #: 5 Date: 16MAY19
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: CC & NPS
Weather Description: Clear, Cool & light breeze Sunset: 2014

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
1 - 2	1951	2050	N/R	-	-	Walk and broadcast calling from STA #1 to STA #2 – Completed while light for safety.
4	2058	2108	N/R	-	-	
3	2120	2130	N/R	-	-	Frogs

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Project/General Location: Schramsberg Winery Visit #: 6 Date: 03JUN19
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Pam Town Survey Type: CC & NPS
Weather Description: Clear, Calm, Hot Day Sunset: 2028

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
1 - 2	1800	2000	N/R	-	-	Walk and broadcast calling from STA #1 to STA #2 – Completed while light for safety. STJA, CAQU, TUVU, Frogs, CORA
1	2136	2146	N/R	-	-	Bats
4	2155	2205	N/R	-	-	
3	2210	2220	N/R	-	-	Dogs

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

NORTHERN SPOTTED OWL SURVEY FORM – 2020 Breeding Season = 3 spot checks

Project/General Location: Schramsberg Winery Visit #: 1 Date: 01MAR20
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: CC & NPS
Weather Description: Clear w/breeze

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
1 - 2	1730	1840	N/R	-	-	Walk and broadcast calling from STA #1 to STA #2 – Completed while light for safety. Crows
3	1855	1905	N/R	-	-	
4	1917	1927	N/R	-	-	

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting

Project/General Location: Schramsberg Winery Visit #: 2 Date: 16MAR20
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: CC & NPS
Weather Description: Partly cloudy, cool and calm

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
1 - 2	1830	1955	N/R	-	-	Walk and broadcast calling from STA #1 to STA #2 – Completed while light for safety. Crows
3	2008	2018	N/R	-	-	Crickets
4	2031	2041	N/R	-	-	Crickets

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Project/General Location: Schramsberg Winery Visit #: 3 Date: 08APR20
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: CC & NPS
Weather Description: Cloudy w/breeze - cool

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
1 - 2	1832	2022	N/R	-	-	Walk and broadcast calling from STA #1 to STA #2 – Completed while light for safety reason. 4 bicyclists
3	2032	2042	N/R	-	-	
4	2050	2100	N/R	-	-	Frogs

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile

NORTHERN SPOTTED OWL SURVEY FORM – 2021 Breeding Season = 3 spot checks

Project/General Location: Schramsberg Winery Visit #: 1 Date: 17MAR21
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: CC & NPS
Weather Description: Clear, calm, cool

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
1 - 2	1750	1847	N/R	-	-	Walk and broadcast calling from STA #1 to STA #2 – Completed while light for safety.
3	1855	1907	N/R	-	-	
4	1915	1925	N/R	-	-	

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Project/General Location: Schramsberg Winery Visit #: 2 Date: 30MAR21
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Heather Morrison Survey Type: CC & NPS
Weather Description: Partly cloudy, cool and calm

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
1 - 2	1931	2000	N/R	-	-	Walk and broadcast calling from STA #1 to STA #2 – Completed while light for safety. MODO, WITU, frogs
3	2009	2019	N/R	-	-	Distant Traffic
4	2029	2039	N/R	-	-	Frogs, Crickets

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile

Project/General Location: Schramsberg Winery Visit #: 3 Date: 15APR21
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Heather Morrison Survey Type: CC & NPS
Weather Description: Clear & Calm

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
1 - 2	1945	2011	N/R	-	-	Walk and broadcast calling from STA #1 to STA #2 – Completed while light for safety. Creek, songbirds
3	2021	2032	N/R	-	-	Distant Traffic
4	2044	2054	N/R	-	-	Crickets & Distant Traffic

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Due to the Impact of the 2020 Glass Wildfire and More Accurate Proposed Project Boundary The Survey Stations were Adjusted to Provide More Suitable Coverage Of the Proposed Project Area
NORTHERN SPOTTED OWL SURVEY FORM – 2022 Breeding Season = 6 survey visits

Project/General Location: Schramsberg Winery Visit #: 1 Date: 17MAR22
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: NPS
Weather Description: Clear, calm, cool

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
5	2328	2338	N/R	-	-	Crickets
1	2252	2307	N/R	-	-	SWOW, Frogs
4	2313	2323	N/R	-	-	
3	2236	2246	N/R	-	-	SWOW, Dogs
2	Dropped	Station				

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile

Project/General Location: Schramsberg Winery Visit #: 2 Date: 04APR22
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Heather Morrison Survey Type: NPS
Weather Description: Partly cloudy, cool and calm

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
2	Dropped	Station				
4	1932	1943	N/R	-	-	STJA, Distant Traffic
5	1947	1957	N/R	-	-	STJA, Crow, pump
1	2002	2012	N/R	-	-	Crickets, Distant Traffic
3	2023	2035	N/R	-	-	Crickets

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Project/General Location: Schramsberg Winery Visit #: 3 Date: 16APR22
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: NPS
Weather Description: Clear & Calm & Cool

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
2	Dropped	Station				
5	2315	2325	N/R	-	-	
1	2329	2339	N/R	-	-	Grouse (chicken?)
4	2344	2354	N/R	-	-	
3	0002	0012	N/R	-	-	

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Project/General Location: Schramsberg Winery Visit #: 4 Date: 06MAY22
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: NPS
Weather Description: Overcast & Calm & Cool

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
2	Dropped	Station				
3	2204	2214	N/R	-	-	Dog
5	2222	2240	N/R	-	-	Clearing skies
4	2243	2253	N/R	-	-	Frogs
1	2258	2308	N/R	-	-	Frogs

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Project/General Location: Schramsberg Winery Visit #: 5 Date: 15MAY22
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: NPS
Weather Description: Clear & light breeze

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
2	Dropped	Station				
3	2152	2205	N/R	-	-	Tractor, Crickets
1	2214	2228	N/R	-	-	Quiet
4	2236	2246	N/R	-	-	Crickets
5	2250	2300	N/R	-	-	

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Project/General Location: Schramsberg Winery Visit #: 6 Date: 04JUN22
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: NPS
Weather Description: Overcast & Cool

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
2	Dropped	Station				
3	2254	2304	N/R	-	-	People and dog
4	2310	2320	N/R	-	-	Quiet
1	2323	2334	N/R	-	-	
5	2340	2350	N/R	-	-	

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

NORTHERN SPOTTED OWL SURVEY FORM – 2023 Breeding Season = 6 survey visits

Project/General Location: Schramsberg Winery Visit #: 1 Date: 17MAR22
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: NPS
Weather Description: Clear, calm, cool

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
3	2032	2042	N/R	-	-	Frogs, crickets
5	2049	2059	N/R	-	-	Crickets, Frogs
4	2103	2113	N/R	-	-	Quiet
1	2118	2128	N/R	-	-	Crickets
2	Dropped	Station				

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Project/General Location: Schramsberg Winery Visit #: 2 Date: 30MAR23
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: NPS
Weather Description: Clear and calm

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
2	Dropped	Station				
3	0025	0035	V – GHOW	-	-	Great Horned Owl
5	0042	0052	V – GHOW	-	-	Great Horned Owl
4	0057	0107	N/R	-	-	
1	0111	0121	N/R	-	-	

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Project/General Location: Schramsberg Winery Visit #: 3 Date: 13APR23
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: Yes
Surveyor: Scott Butler Survey Type: NPS
Weather Description: Clear & Calm

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
2	Dropped	Station				
3	2119	2129	N/R	-	-	
5	2139	2149	N/R	-	-	Frogs
4	2153	2203	N/R	-	-	
1	2208	2218	V – BARRED	-	-	Single Barred Owl within Bothe Napa Valley State Park

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Project/General Location: Schramsberg Winery Visit #: 4 Date: 27APR23
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: NPS
Weather Description: Clear & Calm

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
2	Dropped	Station				
3	0203	0213	N/R	-	-	Crickets
1	0222	0232	N/R	-	-	Crickets
4	0237	0247	N/R	-	-	Crickets
5	0251	0301	V – GHOW	-	-	Great Horned Owl

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Project/General Location: Schramsberg Winery Visit #: 5 Date: 11MAY23
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: NPS
Weather Description: Clear & light breeze

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
2	Dropped	Station				
3	0212	0222	N/R	-	-	Frogs
1	0231	0241	N/R	-	-	Frogs
4	0246	0256	N/R	-	-	Frogs
5	0300	0310	N/R	-	-	Frogs – ½ moon

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Project/General Location: Schramsberg Winery Visit #: 6 Date: 03JUN23
Legal: T08N, R06W, Sec(s) 8, 9, 16 & 17 MDB&M
County: Napa County **NSO Detected**: No **Barred Owl Detected**: No
Surveyor: Scott Butler Survey Type: NPS
Weather Description: Clear, Calm & Cool

Station #	Start Time	End Time	Owl Response	NSO Sex	Owl Location	Comments
2	Dropped	Station				
5	2306	2316	N/R	-	-	Crickets
4	2321	2331	N/R	-	-	Crickets
1	2336	2346	N/R	-	-	Crickets
3	2356	0006	N/R	-	-	Crickets

Survey Type: NPS = Nocturnal Protocol Survey, SCS = Spot Check Survey, DS = Disturbance Survey, ACS = Activity Stand Search, CC = Continuous Calling, SS = Stand Search, AV = Additional Visit, FV = Follow-Up Visit, RV = Reproductive Visit, OPP = Opportunistic Sighting
Owl Response: N/R = No Response from NSO, V = Vocal Response, O = Observed NSO, B = Both Vocal and Observed, BAR = Barred Owl
NSO Sex: M = Male, F = Female, U = Unknown Sex **NSO Age:** A = Adult, S = Subadult, J = Juvenile
Owl Location: Where is owl (bearing & distance) or brief description **Comments:** Other important information or owl species identified

Compliance to Protocol:

- Protocol Followed: 2011 Protocol for Surveying Proposed Management Activity that may impact NSOs (Revised 09JAN12).
  - 2018 6 Survey Visits
  - 2019 6 Survey Visits
  - 2020 3 Spot Checks
  - 2021 3 Spot Checks
  - 2022 6 Survey Visits (alter station location)
  - 2023 6 Survey Visits

- 10 – Minute Point Count Survey Used for Stations #1, #3, #4, & #5
- Continuous Walking Survey used between Station #1 and Station #2.
- Digital Recording Used
- Surveys Between 15MAR – 31AUG: In 2019 & 2020 a single survey was completed prior to 15MAR but after 01MAR (timing for surveys within coastal region). NSOs were responding within the area at this time.
- At least 7 Days between Surveys: Yes
- At least one Survey After 01JUN: Yes
- Surveys Between Sunset and Sunrise: Stationary 10-minute point count surveys completed after sunset and before sunrise. Continuous walking surveys were completed during the daytime and into dusk due to the state park and potentially hazardous conditions.

- Barred Owls Detected: In 2023 a barred owl was detected
- Northern Spotted Owls Detected: No

- Survey stations the same: Station #1 and #4 were moved in 2022, Station #5 was added and Station #2 was dropped due to the delineation of the Project footprint, impacts of the 2020 glass wildfire, and access issues.
- Survey Stations ¼ to ½ mile apart: Yes

- Daytime follow-up within 48 hours if NSO Detected: N/A
- Activity Center Survey (ACS) Completed for NAP001: Yes
- Survey Coverage to 1.3 miles of Harvest Boundary: No, besides the Bothe Napa Valley State Park, that was surveyed; there is private property outside the landowner's ownership with limited public access. Survey stations were placed on hilltops and along the property boundary edge where they would survey a portion of the habitat and area outside the THP/TCP boundary.

Northern Spotted Owl Habitat

The attributes for northern spotted owl habitat includes a forest with:

- Dense, multi-layered canopy of several tree species.
- Trees of varying sizes and ages.
- Abundant logs, snags/cavity trees, and trees with broken tops or platform-like substrates (i.e., broken tops, mistletoe, debris piles, or old raptor/squirrel nests).
- Open spaces among lower branches to allow flight under the canopy.

The specific definitions of NSO habitat from USFWS include:

- High Quality Nesting/Roosting Habitat: Mixed tree species with basal area of 210+ ft2 and ≥ 15" quadratic mean diameter, and ≥ 8 trees per acre of trees ≥ 26" in diameter at breast height, and ≥ 60% canopy closure.
- Suitable Nesting/Roosting Habitat: Mixed tree species with basal area ranging from 150 - 180+ ft2 and ≥ 15" quadratic mean diameter, and ≥ 8 trees per acre of trees ≥ 26" in diameter at breast height, and ≥ 60% canopy closure.
- Suitable Forging Habitat: Mixed tree species with basal area ranging from 120 - 180+ ft2 and ≥ 13" quadratic mean diameter, and ≥ 5 trees per acre of trees ≥ 26" in diameter at breast height, and a mix of ≥ 40% to 100% canopy closure.
- Low Quality Foraging Habitat: Mixed tree species with basal area ranging from 80 - 120+ ft2 and ≥ 11" quadratic mean diameter, and ≥ 40% canopy closure.

The pre-harvest NSO habitat within the THP/TCP included all NSO habitat types before the 2020 Glass Wildfire. Post-fire, there was no longer any suitable NSO habitat within the Project Area (Attachment #5). The following describes each block:

- Block 1 (4.5 acres): This block is located along the edge of an existing vineyard. Before the 2020 Glass wildfire, the site had a mature overstory tree canopy cover of 80 to 90%, with a sparse shrub layer. Overstory trees included Douglas-fir, tanoak, black oak, live oak, and madrone. There were a few Douglas-fir and black oak trees that measured over 38" dbh. The area was impacted by the 2020 Glass Wildfire, with the CalFire Emergency Notice removing all the dead and dying trees. During a 2022 site visit, there were very few trees left alive within this block. Currently, this area is unsuitable NSO habitat due to the lack of overstory canopy.
- Block 1b (.7 acres): This block is located along the edge of an existing vineyard. This block was unpermitted when established sometime between 1993 and 2003 (Google Earth shows 1993 open-fallow ground and vines in place in 2003 – there are no available photos for the time in between). This site has been cultivated in grapes going back potentially 29 years. The area is unsuitable NSO habitat due to the lack of overstory canopy.
- Block 2 (.3 acres): This block is located along the eastern property boundary near an existing vineyard, and has houses close by. Before the Glass wildfire, the site had a mature overstory tree canopy cover of 80 – 90% with a sparse shrub layer. Overstory trees included mature madrone, Douglas-fir, black oak, and live oak. At the time, dbh for Douglas-fir were 8 – 20" dbh and oaks about 18" dbh. The area was impacted by the Glass Wildfire, with the CalFire Emergency Notice removing the dead and dying trees. During the 2022 site visits, no trees were standing within this block with some slash piles that were being burned. Currently, this area is unsuitable NSO habitat due to the lack of overstory canopy.
- Block 3 (1.0 acres): This block is located along the eastern property boundary on the south end of an existing vineyard. Before the Glass wildfire, the site was similar to pre-wildfire Block 2, but due to less overstory tree canopy cover, the shrub layer was denser and consisted of manzanita, ceanothus, and poison oak. The area was impacted by the Glass wildfire, with the CalFire Emergency Notice removing the dead and dying trees. During the 2022 site visits, no trees were standing within this block with some slash piles that required burning. Currently, this area is unsuitable NSO habitat due to the lack of overstory canopy.
- Block 4 (.6 acres): This block is located along the eastern property boundary and to the east of an existing vineyard. Before the Glass wildfire, the site contained primarily manzanita, chamise, and madrone with some scattered oaks and Douglas-fir. The area was impacted by the Glass wildfire, with the CalFire Emergency Notice removing the dead and dying trees. Currently, this area is unsuitable NSO habitat due to the lack of overstory canopy.
- Block 4b (.4 acres): This block is located along the edge of an existing vineyard. This block was unpermitted when established in late 2003 according to Google Earth imagery. Before 2003, the site had a few trees and shrubs on the northern end and was open on the southern end. This site has been cultivated in grapes for almost 20 years. This area is unsuitable NSO habitat due to the lack of overstory canopy.
- Block 5 (4.3 acres): This block is located along the western edge of an existing vineyard. Before the Glass wildfire, the site had a mature overstory canopy cover of 80 to 90%, with a sparse shrub layer. Overstory trees included Douglas-fir, tanoak, madrone, black oak, redwood, and live oak. The area was impacted by the Glass Wildfire, with the CalFire Emergency Notice removing all the dead and dying trees. During the 2022 site visits, there were no trees left standing within this block. Immediately to the west of this block is a Class III watercourse with proposed Block 6 to the west of the watercourse. Fire-killed dead trees were left standing within the watercourse. Currently, this area is unsuitable NSO habitat due to the lack of overstory canopy.

- Block 6 (2.3 acres): This block is located just west of proposed Block 5. Before the Glass wildfire, the site had a mature overstory canopy cover of 80 to 90%, with a sparse shrub layer. Overstory trees included redwood, Douglas-fir, tanoak, madrone, black oak, and live oak. The area was impacted by the Glass Wildfire, with the CalFire Emergency Notice removing all the dead and dying trees. During the 2022 site visits, there were no trees left standing within this block. Currently, this area is unsuitable NSO habitat due to the lack of overstory canopy.

Pre-2020 Glass wildfire, Blocks 1, 5, and 6 had the vegetation characteristic of nesting/roosting; however, they are currently considered unsuitable NSO habitats due to lack of overstory canopy.

Pre-2020 Glass wildfire, Block #2 had the vegetation characteristics that may meet the definition of nesting/roosting; however, after examining the landscape surrounding this block, the habitat was downgraded to foraging. There are numerous houses, existing vineyards, as well as the Napa Valley close to this block. This block is currently considered unsuitable NSO habitat due to a lack of overstory canopy.

Blocks 1b and 4b were unpermitted vineyards before the 2020 Glass wildfire and therefore unsuitable NSO habitat.

Pre-2020 Glass wildfire, Blocks #3 and #4 were considered primarily unsuitable habitats, due to the landscape surrounding them. Block #3 was a small forested patch surrounded by existing vineyards, shrubs, residential houses, and Napa Valley. Block #4 was mostly manzanita and madrone, with a few oaks and Douglas-fir scattered throughout; surrounded by existing vineyards, shrubs, grass boundaries around existing vineyards, and Napa Valley to the east. Both these blocks are currently still considered unsuitable NSO habitat.

Northern Spotted Owl Habitat for Schramsberg THP/TCP

NSO Habitat	Pre-Wildfire	Current Conditions	Post-Project
Nesting/Roosting Habitat	11.1 acres	0 acres	0 acres
Foraging Habitat	0.3 acres	0 acres	0 acres
Unsuitable Habitat	2.7 acres	14.1 acres	14.1 acres
TOTAL	14.1 acres	14.1 acres	14.1 acres

NOTE: This THP/TCP does not include the entire property ownership. The Schramsberg Property has a long history of vineyards and wineries. The vineyards date back to the 19th century, with the current family cultivating the vineyards, winery, and property since 1965.

The property is located along the edge of the highly developed Napa Valley. Much of the area within 1.3 miles of the THP/TCP boundary is commercial vineyards, wineries, commercial property, and residential houses. Immediately to the south is Bothe Napa Valley State Park which had forests along the streams and northern and eastern slopes, with shrubs along the southern and western slopes. There were patches of trees, primarily following watercourses that have historically supported northern spotted owls. The 2020 Glass wildfire severely impacted the Schramsberg Property and the surrounding landscape (Attachment #6).

Northern Spotted Owl Territory: There is one known NSO territory (NAP001) within 1.3 miles of the Project Boundary. Once an NSO territory is identified the following applies to each activity center:

- Within a 1000' of an Activity Center
  - Outside the breeding season (01SEP – 31JAN), no timber operations other than the use of existing roads.
  - During the breeding season (01FEB – 31AUG), no timber operations other than the use of existing, permanent, year-round roads.
- Within ½ mile radius (502 acres) centered on Activity Center
  - At least 250 acres of nesting/roosting habitat should be present, as follows:
    - 100 acres of high-quality nesting/roosting habitat, **and**
    - 150 acres of nesting/roosting habitat
  - At least 150 acres of foraging habitat must be present, as follows:
    - 100 acres of foraging habitat, **and**
    - 50 acres of low-quality foraging habitat
  - No more than 1/3 of the remaining suitable habitat may be harvested during the life of the THP.
- Between the ½ mile radius and 1.3-mile radius circles centered on an Activity Center
  - ≥ 935 acres of suitable habitat must be present, as follows:
    - At least 655 acres of foraging habitat, **and**
    - At least 280 acres of low-quality foraging
  - No more than 1/3 of the remaining suitable habitat may be harvested during the life of the THP.

NOTE: The above is listed as minimum habitat qualities to be met. A greater level of habitat (i.e.: nesting/roosting habitat is a higher level of NSO habitat) can be used as NSOs can forage within nesting/roosting habitat.

A priority ranking of NSO habitat to be retained includes:

- Mixed conifer stands are preferred over pine-dominated stands.
- Nesting/Roosting habitat and foraging habitat closest to an identified nest or roosting trees is preferred.
- Nesting/Roosting habitat within the ½ mile radius should be as contiguous as possible.
- Minimize fragmentation of foraging habitat as much as possible.
- Habitats located on the lower 1/3 of slopes provide optimal micro-climate conditions and an increased potential for intermittent or year-round water sources.
- Habitats located on northerly aspects provide optimal vegetation composition and cooler site conditions.
- Habitat should be at elevations of less than 6000 feet.

This THP/TCP is located over ½- mile from the activity center of NAP001 (Attachment #7). Historically, the NSO habitat in this region occurs primarily along the watercourses and northerly and easterly-facing slopes, often in steep-sided canyons.

Post-2020 Glass Wildfire, the NSO habitat within the landscape has changed drastically. Attachment #7 shows still living forested stands that could provide habitat for a northern spotted owl; however, these stands have been fragmented and reduced in size. Potential habitat does still exist within the steeper canyons, along watercourses which may assist in northern spotted owl survival. The habitat within the landscape surrounding NAP001 is primarily along the watercourses and northerly slopes. The NSO habitat within the ½ mile assessment area is below the required 250 acres of nesting/roosting habitat with only 149.5 +/- acres. This THP/TCP is outside this assessment area and, therefore, will have no impact on the habitat deficiency. The required habitat between the ½ mile and 1.3-mile assessment area of at least 935 acres of additional suitable habitat is also not met (only 452.7 +/- acres of habitat). The 2020 Glass wildfire downgraded and/or removed much of the northern spotted owl habitat in this region. This Project is not removing any northern spotted owl habitat nor will it increase fragmentation of the existing living forests left in the area.

Northern Spotted Owl Habitat Around NAP001

Description	Pre-Wildfire	Current Conditions	Post-Harvest
Within ½ Mile			
Nesting/Roosting Habitat	232 acres		
Foraging Habitat	153 acres		
NSO Habitat	*385 acres*	149.5 acres	149.5 acres
Unsuitable Habitat	117 acres	352.5 acres	352.5 acres
TOTAL	**502 Acres**	**502 Acres**	**502 Acres**
Within 1.3 Miles			
Nesting/Roosting Habitat	1066 acres		
Foraging Habitat	1061 acres		
NSO Habitat	*2127 acres*	452.7 acres	452.7 acres
Unsuitable Habitat	1271 acres	2945.3 acres	2945.3 acres
TOTAL	**3,398 Acres**	**3,398 Acres**	**3,398 Acres**

Northern Spotted Owl Protection Measures

Primarily due to the 2020 Glass wildfire, there is no northern spotted owl habitat within the Project Area. The amount of live trees potentially providing habitat within the landscape has been significantly decreased. As this THP/TCP is proposing converting forestland into vineyards, there are some living forests within ¼ mile of the Project area, and the northern spotted owl movement is unknown post-wildfire; the following recommendations are made to protect northern spotted owls.

- Protocol NSO surveys will be completed before timber operations in each year operations are anticipated. Surveys will be amended into the approved plan before the start of operations.
- Any active northern spotted owl activity centers will follow USFWS Attachment B – Take Avoidance Analysis – Interior (Attachment #8).
- There will be no harvest operations within 1,000' of an activity center. This THP/TCP is further than 1,000' from any known NSO Activity Center; therefore, at this time, there are no proposed harvest restrictions.

- Seasonal disturbance buffers (1/4 mile) will be observed for occupied sites during the breeding season (01FEB – 31AUG) or at least until protocol surveys support probable absence, non-nesting, nest failure, or fledgling flight can be determined. This THP/TCP is further than ¼ mile from any known NSO Activity Center; therefore, at this time, there are no proposed seasonal restrictions.
- If the known northern spotted owls (NAP001) move to a new location (> 1,000' from the historic activity center) and reproductive behavior is confirmed at the new site, a regulatory agency will be contacted to evaluate the status of the historic Activity Center.
- If a new NSO territory is identified within 1.3 miles of the THP/TCP, any ongoing operations will stop until a habitat assessment of the new territory can be completed and amended into the plan.

Attachments

Attachment #1 – Property Location Map & NSOs within 1.3 miles
Attachment #2 – Proposed Vineyard Blocks Aerial Photo
Attachment #3 – NSO Database
Attachment #4 – NSO Survey Station Map
Attachment #5 – Pre & Post-Harvest NSO Habitat Map for Project Area
Attachment #6 – Northern Spotted Owl Habitat in 1.3 miles of Schramsberg Property
Attachment #7 – Pre & Post-Harvest NSO Habitat Map for NAP001
Attachment #8 – USFWS Attachment B

Additional Information

Northern Spotted Owl Contact Information:

Questions or comments regarding this NSO information can be directed to:

Pamela Town
Consulting Wildlife Biologist & SOE
Forest Ecosystem Management, PLLC
(406) 490-7427
Pamtown30@gmail.com

Definitions:

- Activity Center: Area of concentrated activity of either a pair of NSOs or a single territorial NSO, represented by a mapped location (usually a nest tree) that occurs within, but not necessarily in the exact center of, the core area. Where clusters of site centers exist in a core area a geographic centroid or nearest neighbor calculation may be used as a designated activity center for habitat analysis purposes. A single territory may also have more than one designated activity center.
- Territory: A spatial area of landscape that is defended by a single resident or pair of northern spotted owls. Specific NSO territories generally refer to a fixed geographic area. Over time, individual spotted owls may occupy different territories (i.e. breeding dispersal, interference competition with barred owls, changes in habitat or prey availability, etc.).

- Territory Identification Number (NAP001): A number generated by the California Department of Fish & Wildlife assigned to a geographic area currently and/or historically occupied by northern spotted owls.
- High-Quality Nesting/Roosting Habitat: Mixed tree species with basal area of 210+ ft2 and ≥ 15" quadratic mean diameter, and ≥ 8 trees per acre of trees ≥ 26" in diameter at breast height, and ≥ 60% canopy closure.
- Suitable Nesting/Roosting Habitat: Mixed tree species with basal area ranging from 150 - 180+ ft2 and ≥ 15" quadratic mean diameter, and ≥ 8 trees per acre of trees ≥ 26" in diameter at breast height, and ≥ 60% canopy closure.
- Suitable Forging Habitat: Mixed tree species with basal area ranging from 120 - 180+ ft2 and ≥ 13" quadratic mean diameter, and ≥ 5 trees per acre of trees ≥ 26" in diameter at breast height, and a mix of ≥ 40% to 100% canopy closure.
- Low Quality Foraging Habitat: Mixed tree species with basal area ranging from 80 - 120+ ft2 and ≥ 11" quadratic mean diameter, and ≥ 40% canopy closure.
- Suitable Habitat: Areas meeting the criteria for nesting/roosting habitat and/or foraging habitat.
- Unsuitable Habitat: Areas not meeting the criteria for nesting/roosting habitat and/or foraging habitat.
- NSO Breeding Season: February 1 to August 31th within the Inland ecotype.
- NSO Survey Season: Defined as March 15th to August 31st. This is the period when NSO surveys are conducted and completed according to the NSO Survey Protocol within the Inland ecotype.

References:

Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls. Endorsed by the U.S. Fish & Wildlife Service. February 2, 2011 and Revised January 9, 2012.

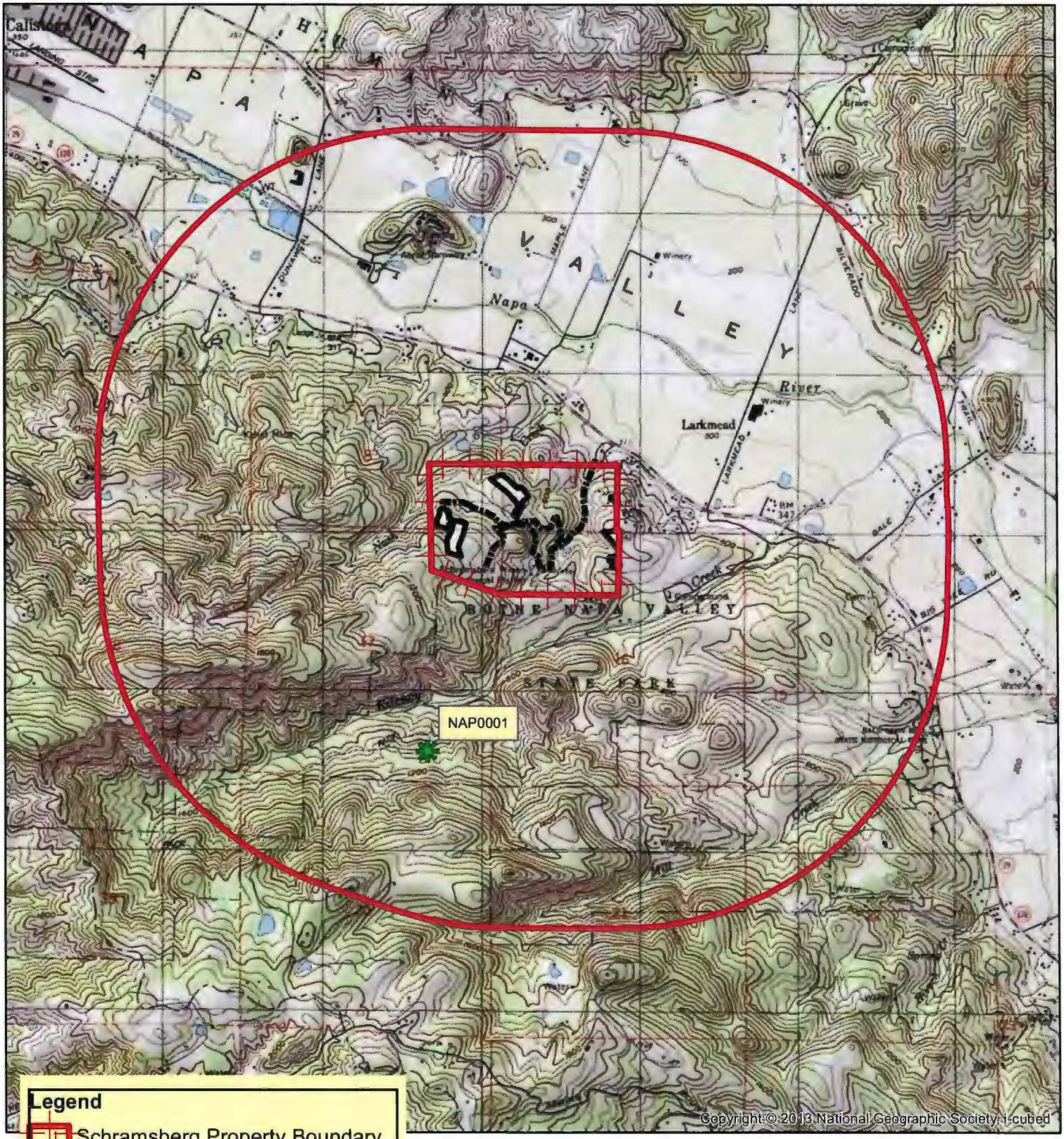
Important Information for Timber Operations Proposed within the Range of the Northern Spotted Owl. California Department of Forestry & Fire Protection. February 2008.

Northern Spotted Owl Viewer (BIOS CA Natural Diversity Database). Managed by California Department of Fish & Wildlife.

Zeiner, D.C., W.F. Laudenslayer, K.E. Mayer, and M. White, eds. 1988 – 1990. California's Wildlife. Vol. I – III. California Department of Fish & Game, Sacramento, CA.

Attachment #1

Schramsberg Property - Northern Spotted Owls within 1.3 Miles Property Boundary



Legend

- Schramsberg Property Boundary
- Property 1.3-mile Owl Assessment
- Proposed Vineyard Blocks
- NSO Activity Center
- Road System

Sec(s) 8, 9, 16 & 17 T08N, R06W MDB&M
Napa County

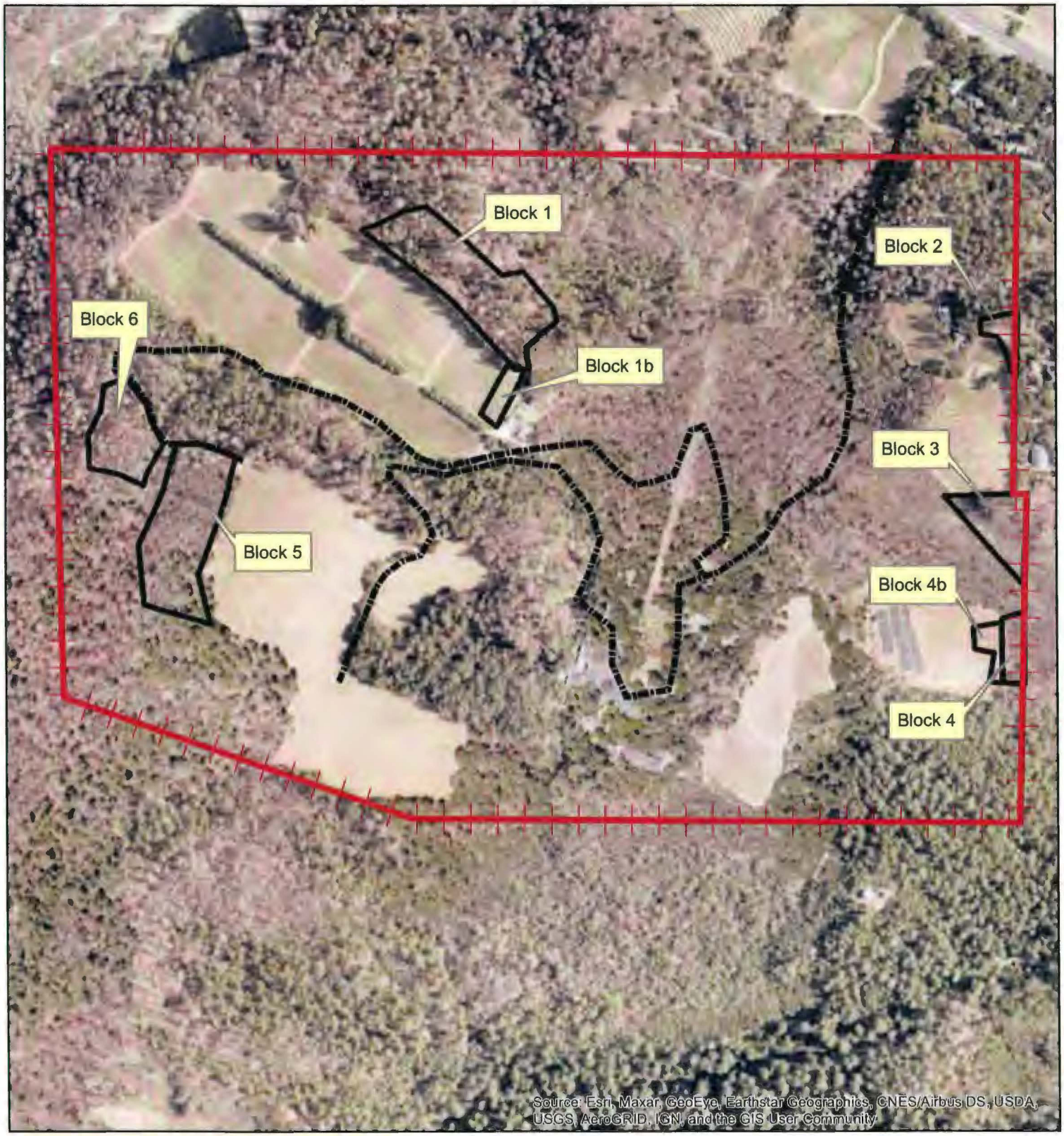
N

1 inch = 3,425 feet
Date: 1/25/2024

Forest Ecosystem Management

Attachment #2

Schramsberg Property - Project Area



Legend
- Schramsberg Property Boundary
- Proposed Vineyard Blocks
- Road System

Sec(s) 8, 9, 16 & 17 T08N, R06W MDB&M
Napa County

N

1 inch = 667 feet
Date: 1/25/2024

Forest Ecosystem Management

Data Version Date:
12/27/2023

Report Generation Date:
1/25/2024

Report #1 - Spotted Owl Sites Found
Known Spotted Owl sites having observations within the search area.

Meridian, Township, Range, Section (MTRS) searched:

M_09N_06W Sections(31,32,33,34);

M_08N_06W Sections(03,04,05,06,07,08,09,10,15,16,17,18,19,20,21,22);

M_08N_07W Sections(01,12,13,24);

M_09N_07W Sections(36);

NOTES:

Schramsberg

Masterowl	*Subspecies*	*LatDD NAD83*	*LonDD NAD83*	*MTRS*	*AC Coordinate Source*
NAP0001	NORTHERN	38.539867	-122.546050	M 08N 06W 17	Contributor
NAP0005	NORTHERN	38.532391	-122.521177	M 08N 06W 22	Contributor
NAP0007	NORTHERN	38.553044	-122.580998	M 08N 07W 12	Contributor
NAP0013	NORTHERN	38.569601	-122.604975	M 08N 07W 02	Contributor

1.7
1.9 Miles
4. Miles

Owls within
1.3 Miles

Data Version Date:
12/27/2023

Report Generation Date:
1/25/2024

Report #2 - Observations Reported
List of observations reported by site.

Meridian, Township, Range, Section (MTRS) searched:

M_09N_06W Sections(31,32,33,34);

M_08N_06W Sections(03,04,05,06,07,08,09,10,15,16,17,18,19,20,21,22);

M_08N_07W Sections(01,12,13,24);

M_09N_07W Sections(36);

NOTES:

Schramsberg

Only relevant Dogwood submitted

NAP0001

Barred owl in Bothe

Much of area burned in 2020 Glass wildfire.

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
Masterowl: NAP0001 Subspecies: NORTHERN											
POS	1978-04-12		1	UU				38.539691	-122.543733	M 08N 06W 17	Activity center
POS	1978-07-23		1	UU				38.534905	-122.555283	M 08N 06W 20	Quarter-section centroid
POS	1978-08-08		2	UUUU				38.539691	-122.543733	M 08N 06W 17	Activity center
POS	1979-04-07		2	UMUF	Y			38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1979-04-08		1	UF		Y		38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1979-05-02		1	UF		Y		38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1979-05-10		0			Y	2	38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1979-05-14		0			Y	1	38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1979-05-30		0			Y	1	38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1979-06-16		0			Y	1	38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1979-07-29		0			Y	1	38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1980-05-19		1	UU	Y	Y	1	38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1980-06-08		1	UF		Y		38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1980-06-10		1	UF		Y		38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1981		1	UU				38.545439	-122.550168	M 08N 06W 17	Section centroid
NEG	1981-04-09		0					38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	1981-04-30		0					38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
NEG	1981-05-25		0					38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1982		2	UMUF	Y		1	38.539691	-122.543733	M 08N 06W 17	Activity center
NEG	1982-05-07		0					38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
NEG	1982-05-24		0					38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1983		2	UMUF	Y		2	38.539691	-122.543733	M 08N 06W 17	Activity center
POS	1984-04-06		1	UF	Y	Y	1	38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1984-05-16		0			Y	1	38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1984-08-07		2	UMUF	Y		1	38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1984-08-07		2	UMUF	Y		1	38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1985-04-05		1	UF		Y		38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1985-05-28		0			Y	2	38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1985-06-09		1	UF		Y		38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1986-04-22		2	UMUF	Y	Y		38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1986-04-29		2	UMUF	Y	Y		38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1986-05-21		1	UF		Y		38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1986-06-15		1	UF		Y		38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	1987		2	UMUF	Y			38.539691	-122.543733	M 08N 06W 17	Activity center
POS	1987-05-13		2	UMUF	Y			38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1987-05-25		2	UMUF	Y			38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1987-05-30		2	UMUF	Y			38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1987-06-06		2	UMUF	Y			38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1988-05-04		1	UM				38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
NEG	1988-05-20	1200	0					38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1988-05-31		1	UM				38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1989-04-11		2	UMUF	Y			38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1989-04-22		1	UM				38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1989-05-13		1	UU				38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1989-05-20	1900	2	UMUF	Y			38.539691	-122.543733	M 08N 06W 17	Activity center
POS	1989-05-26		2	UMUF	Y	Y	1	38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1989-06-12	1900	2	UMUF		Y		38.539073	-122.546950	M 08N 06W 17	Contributor
POS	1989-07-30	0555	2	UMUF	Y		1	38.534418	-122.527692	M 08N 06W 21	Quarter-section centroid
NEG	1991		0					38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1991-04-14	1910	1	UM				38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid

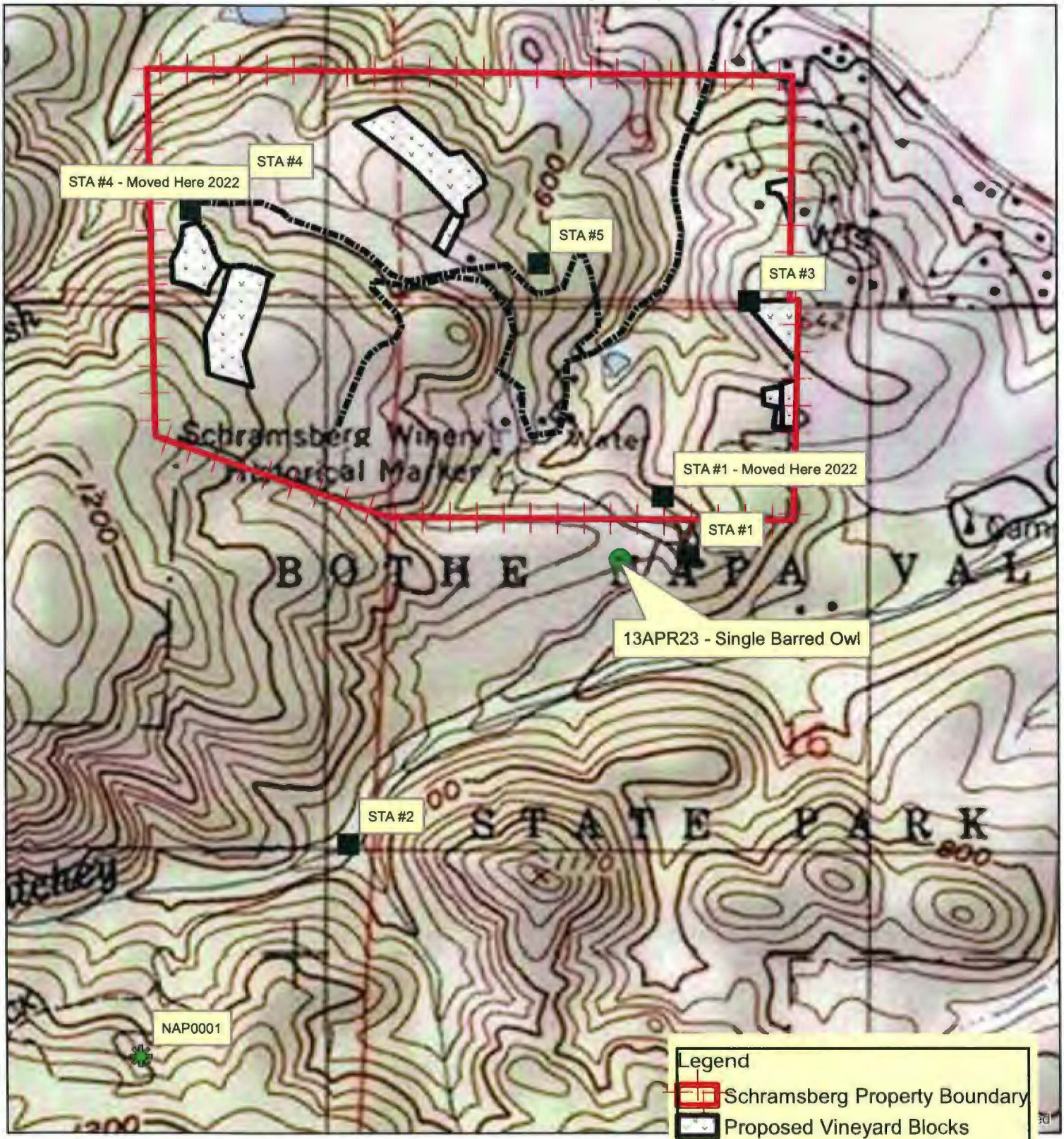
Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	1992		1	UM				38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	1993-05-01	0705	1	UU				38.545439	-122.550168	M 08N 06W 17	Section centroid
NEG	1993-08-04	0709	0					38.545439	-122.550168	M 08N 06W 17	Section centroid
NEG	1994-01-01	0230	0					38.545439	-122.550168	M 08N 06W 17	Section centroid
POS	1996-01-01	1803	1	UF	Y			38.542914	-122.542460	M 08N 06W 17	Contributor
POS	1996-01-01	1735	1	UM	Y			38.543151	-122.547059	M 08N 06W 17	Contributor
POS	1996-04-20	1920	1	UM				38.545439	-122.550168	M 08N 06W 17	Section centroid
POS	1997-08-04	1930	1	UM				38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
NEG	1997-08-10	2001	0					38.545439	-122.550168	M 08N 06W 17	Section centroid
NEG	2000-02-16	1037	0					38.545052	-122.532028	M 08N 06W 16	Section centroid
POS	2000-03-11	1730	2	UMUF				38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	2000-04-22	1859	2	UMUF	Y	Y		38.542015	-122.555067	M 08N 06W 17	Quarter-section centroid
POS	2000-06-11	0945	2	UMUF	Y	Y	1	38.539611	-122.558042	M 08N 06W 17	Contributor
POS	2000-06-29	1155	1	UF		Y	1	38.542015	-122.555067	M 08N 06W 17	Quarter-section centroid
POS	2002-04-13	1715	2	UMUF	Y	Y	1	38.539691	-122.543733	M 08N 06W 17	Contributor
NEG	2002-05-04	1951	0					38.545439	-122.550168	M 08N 06W 17	Section centroid
NEG	2002-05-10	2024	0					38.545439	-122.550168	M 08N 06W 17	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	2002-05-21	2034	1	UM				38.542015	-122.555067	M 08N 06W 17	Quarter-section centroid
POS	2002-05-25	2006	1	UM				38.545439	-122.550168	M 08N 06W 17	Section centroid
NEG	2002-05-30	2135	0					38.545439	-122.550168	M 08N 06W 17	Section centroid
POS	2002-06-12	2134	1	UF				38.545439	-122.550168	M 08N 06W 17	Section centroid
POS	2002-06-29	1922	1	UF		Y	1	38.542015	-122.555067	M 08N 06W 17	Quarter-section centroid
NEG	2002-07-02	2131	0					38.542242	-122.582552	M 08N 07W 13	Quarter-section centroid
NEG	2003-02-07	1806	0					38.545439	-122.550168	M 08N 06W 17	Section centroid
POS	2003-05-04	1125	1	UM				38.542015	-122.555067	M 08N 06W 17	Quarter-section centroid
NEG	2003-05-08	1052	0					38.545439	-122.550168	M 08N 06W 17	Section centroid
POS	2003-05-26	2046	1	UU				38.542015	-122.555067	M 08N 06W 17	Quarter-section centroid
POS	2004-02-05	1501	1	UU				38.542015	-122.555067	M 08N 06W 17	Quarter-section centroid
POS	2004-04-26	1138	2	UMUF	Y	Y		38.545439	-122.550168	M 08N 06W 17	Section centroid
NEG	2005-04-17	1419	0					38.545439	-122.550168	M 08N 06W 17	Section centroid
POS	2005-04-18	1543	1	UM				38.541700	-122.545854	M 08N 06W 17	Quarter-section centroid
POS	2010-03-21		2	UMUF	Y			38.543540	-122.536938	M 08N 06W 16	Contributor
AC	2012-05-28	1638	2	UMUF	Y	Y		38.539867	-122.546050	M 08N 06W 17	Contributor

Masterowl: NAP0005 Subspecies: NORTHERN

Attachment #4

Northern Spotted Owl Survey Stations
Schramsberg Property



N

1 inch = 1,000 feet

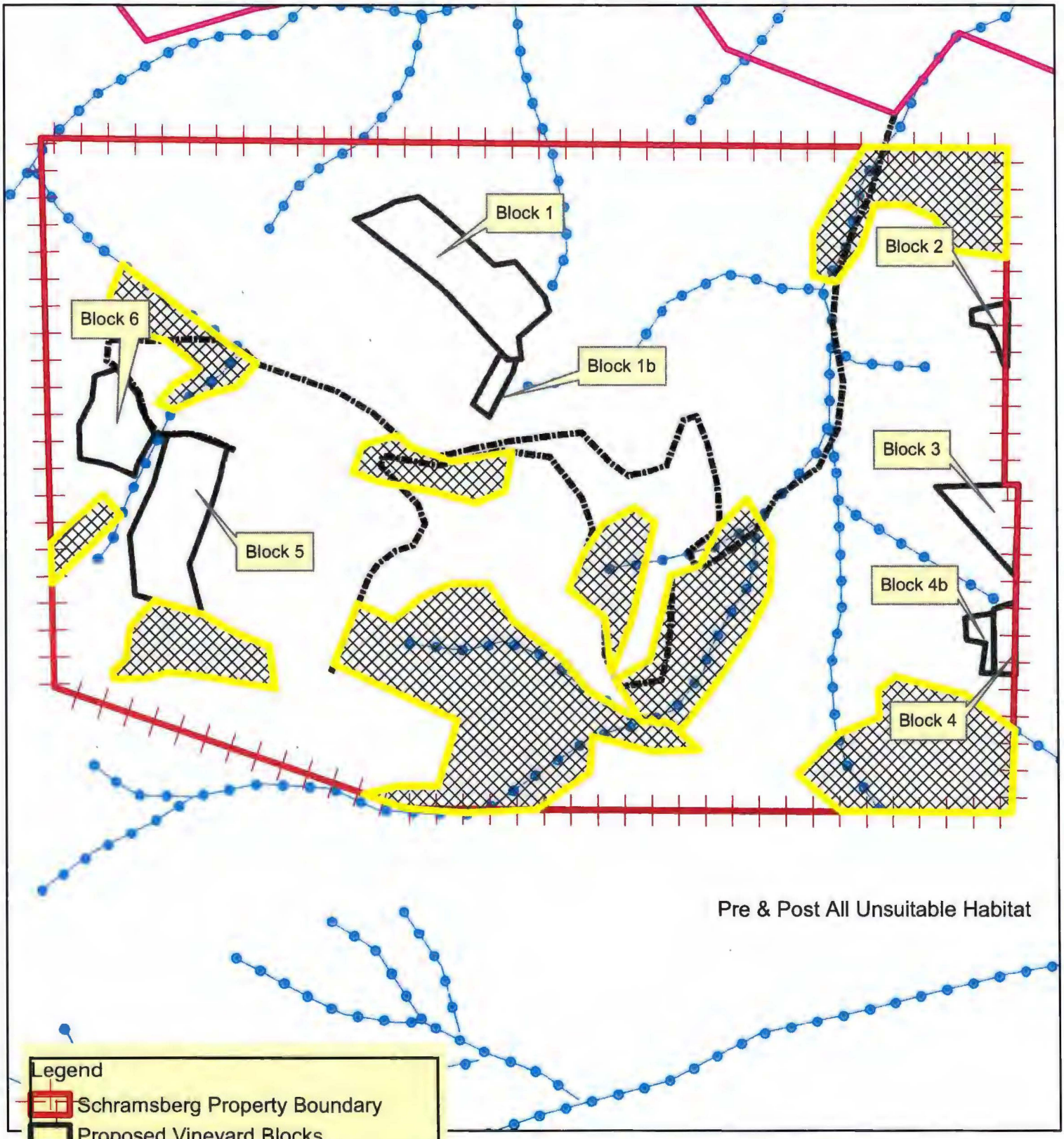
Date: 1/25/2024

Sec(s) 8, 9, 16 & 17 T08N, R06W MDB&M
Napa County

Forest Ecosystem Management

Attachment #5 - Pre & Post Harvest Map

Schramsberg Property - NSO Habitat within Property Ownership



Sec(s) 8, 9, 16 & 17 T08N, R06W MDB&M
Napa County

N

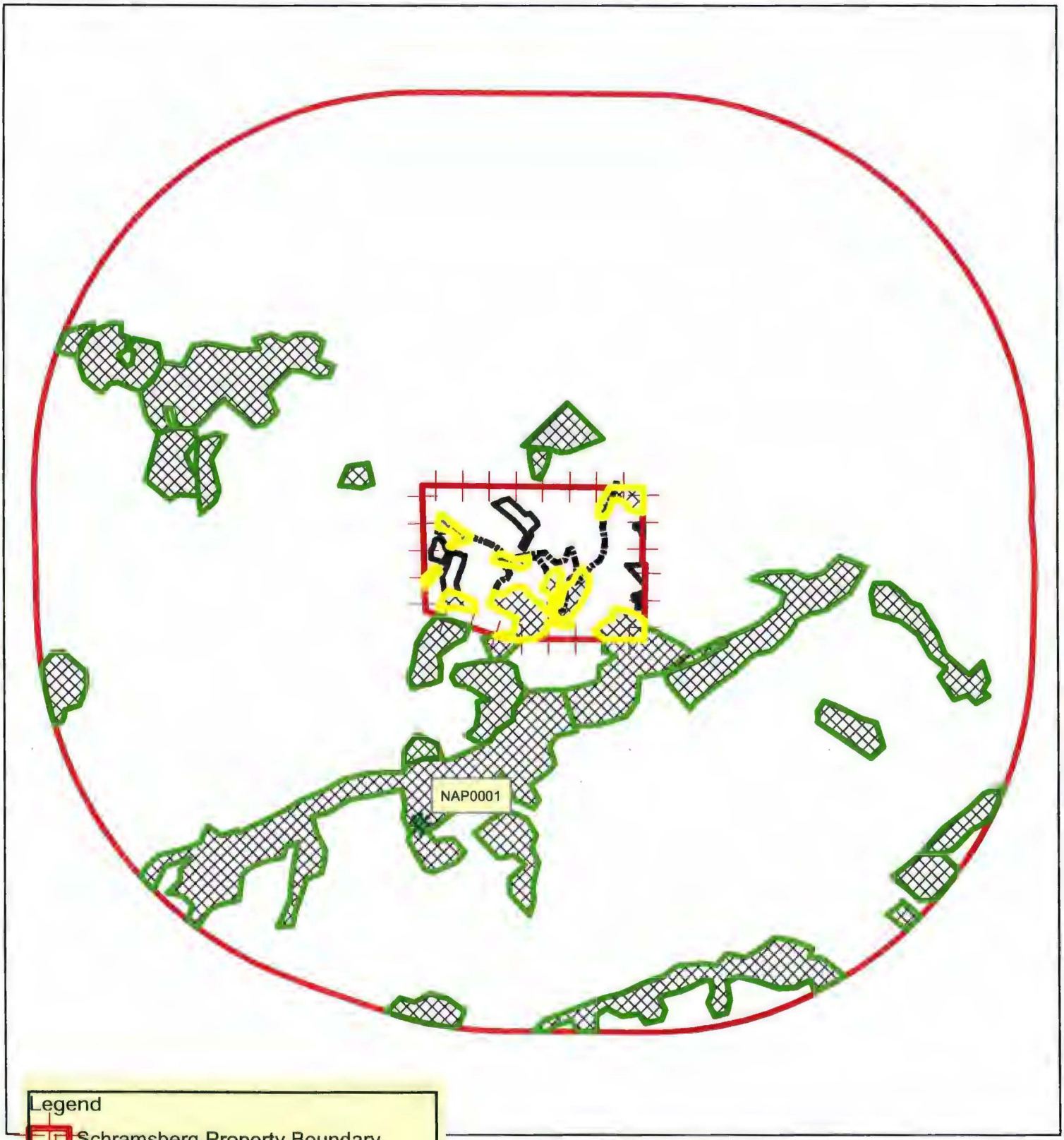
1 inch = 667 feet

Date: 1/25/2024

Forest Ecosystem Management

Attachment #6

Habitat within 1.3 Miles of Schramsberg Property



Legend

- Schramsberg Property Boundary
- Proposed Vineyard Blocks
- Property Live Forest - Potential Habitat
- Potential NSO Habitat (Green Forest)
- Unsuitable NSO Habitat

Sec(s) 8, 9, 16 & 17 T08N, R06W MDB&M
Napa County

N

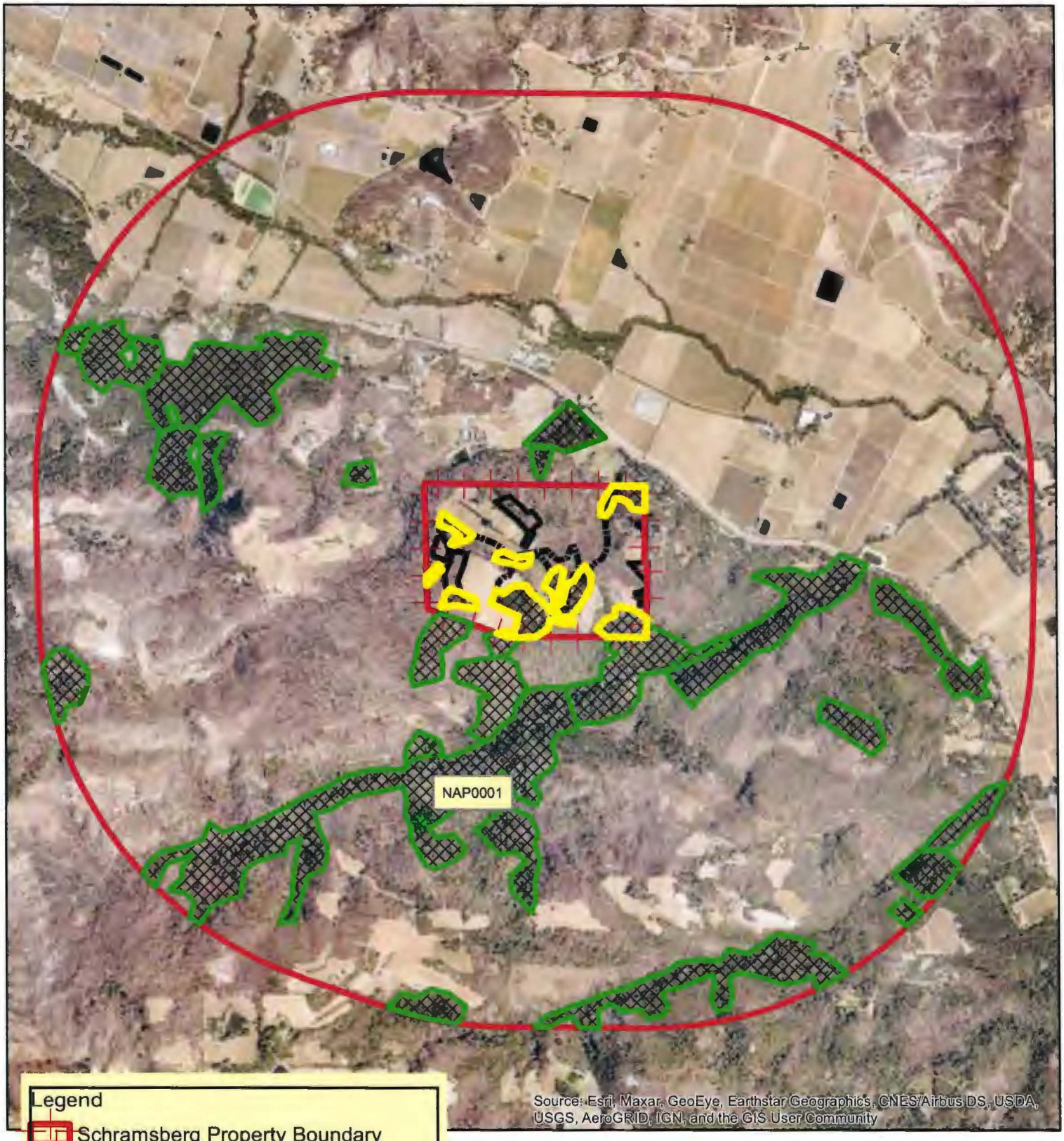
1 inch = 2,917 feet

Date: 1/25/2024

Forest Ecosystem Management

Attachment #6 - Aerial

Habitat within 1.3 Miles of Schramsberg Property



Legend
- Schramsberg Property Boundary
- Proposed Vineyard Blocks
- Property Live Forest - Potential Habitat
- Potential NSO Habitat (Green Forest)
- Unsuitable NSO Habitat

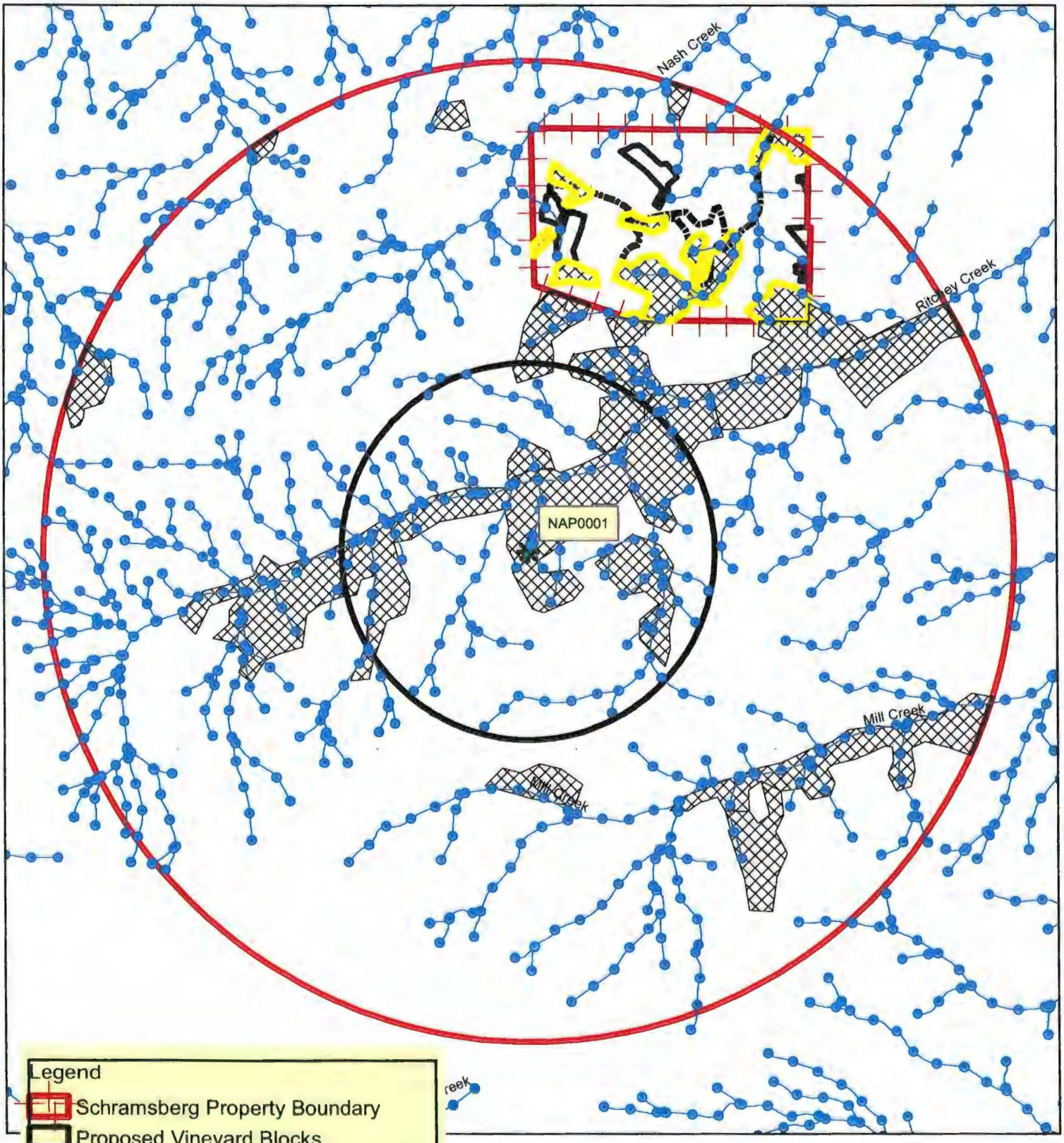
Sec(s) 8, 9, 16 & 17 T08N, R06W MDB&M
Napa County

N

1 inch = 2,917 feet
Date: 1/25/2024

Forest Ecosystem Management

Attachment #7 NSO Habitat for NAP0001 - Schramsberg Project



Sec(s) 8, 9, 16 & 17 T08N, R06W MDB&M
Napa County

N

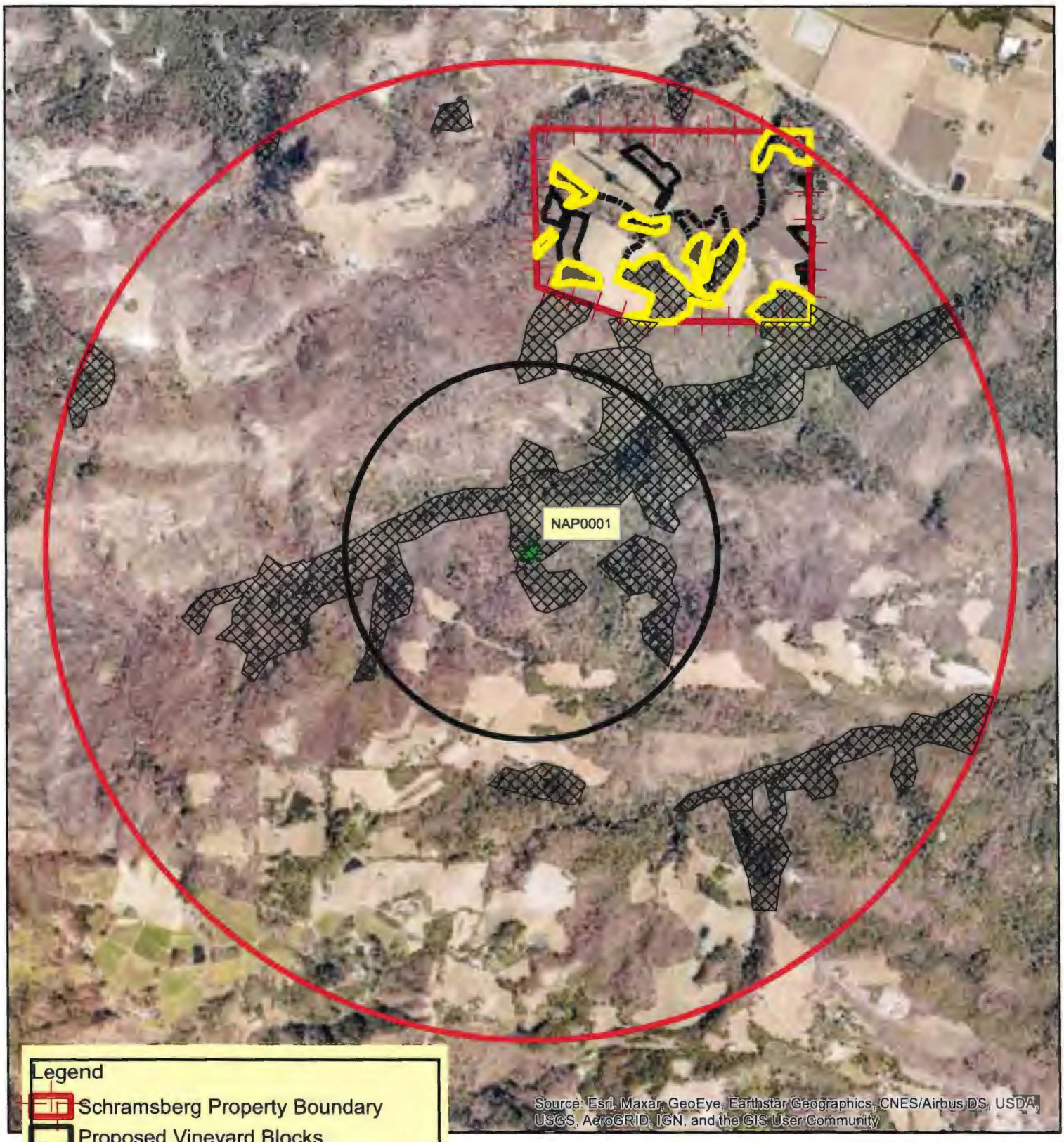
1 inch = 2,333 feet

Date: 1/25/2024

Forest Ecosystem Management

Attachment #7 - Aerial

NSO Habitat for NAP0001 - Schramsberg Project



Legend

- Schramsberg Property Boundary
- Proposed Vineyard Blocks
- NAP001 - 1/2 Mile Assessment Area
- NAP001 - 1.3 Mile Assessment Area
- Property Live Forest - Potential Habitat
- Habitat NAP001

Sec(s) 8, 9, 16 & 17 T08N, R06W MDB&M
Napa County

N

1 inch = 2,333 feet

Date: 1/25/2024

Forest Ecosystem Management

Northern Spotted Owl Take Avoidance and Guidance for Private Lands in California
Attachment B – Take Avoidance Analysis-Interior

This information provides the United States Fish and Wildlife Service's (USFWS) guidelines to avoid the incidental take, as defined in the Endangered Species Act of 1973 of Northern Spotted Owls (*Strix occidentalis caurina*, NSO), that may result from timber operations within the range of NSOs within California outside the coastal redwood zone. This is an overview of Attachment B, hi-lighting the primary requirements to protect NSOs. See the reference material listed below for the complete Take Avoidance Guidance.

Referenced from:

- Important Information for Timber Operations Proposed within the Range of the Northern Spotted Owl. California Department of Forestry and Fire Protection. February 2008. Sacramento, CA.

- Northern Spotted Owl Take Avoidance and Guidance for Private Lands in California. Attachment B – Take Avoidance Analysis-Interior. United States Fish and Wildlife Service. November 2019. Sacramento, CA

- Protocol For Surveying Proposed Management Activities That May Impact Northern Spotted Owls. Endorsed by the USFWS. February 2, 2011 and Revised January 9, 2012.

I. Accuracy of NSO Activity Center Location, Status, and Mapping

Accurately mapping the location of NSO activity centers is critical for avoiding take of NSO. Activity center locations are more accurate when plotted as a result of current surveys rather than solely relying on using the locations found in the California Department of Fish & Wildlife (CDFW) Spotted Owl Observation Database (SPOWDB). Multiple activity centers for an NSO pair are possible. If one core use area does not encompass all known activity centers, then multiple core use areas may need to be protected. When several years of survey records including positive and negative survey results are available, it may be possible to more precisely map a logical core use area and home range that captures important habitat available to NSOs. This is particularly true in the interior portion of the NSO range in California (as in Napa County) because NSOs tend to remain in the same areas over time. NSOs in these hotter and drier portions of their range rely on topographical features (canyons and lower slopes) to provide relatively stable micro-climates that are within NSO thermal tolerances. In addition, south facing slopes in the interior are often naturally devoid of dense forests.

Home ranges and core use areas for NSOs in the interior are often more accurately depicted by non-circular polygons that often follow drainages where higher quality habitat is present compared to upslope areas.

The analysis of take avoidance should apply to all activity centers listed in the SPOWDB and other available sources within 1.3 miles of the proposed project. If it can be demonstrated that the site does not qualify for protection (i.e., abandoned or non-valid site determination) then consulting with the appropriate regulatory agency is required. When a site can no longer support an NSO due to changes in habitat as the result of fire, timber harvesting, or other disturbances and there is interest to deem the site abandoned, then consultation with the appropriate regulatory agency is required. If an activity center is considered unoccupied for the year after adequate surveys and suitable habitat is present, alternatives to the full protection measures (i.e., harvesting within seasonal restrictions) may be allowed but requires consultation with the appropriate regulatory agency.

II. Flexibility in Survey Protocol

There are 3 areas where flexibility for landowners exists and where take can still be reasonable be avoided: 1) Spot Check Surveys; 2) Modifying the number of required survey visits, and 3) Modifying the survey area.

In most cases in Napa County, the surrounding landscape is privately owned and access is limited; therefore, deviations to the survey protocol are often required (i.e. cannot survey the entire 1.3-mile assessment area). To account for this, as the 2012 protocol was not followed completely, any attempts to use the 2019 flexibility to surveys should not be completed without prior approval from the appropriate regulatory agency.

III. Habitat Typing

Habitat definitions are intended for application at the scale of around 20 acres. This means that within any given 20 acres that serve as NSO habitat, the forest stand structure (QMD, basal area, canopy closure) may be variable, but the average values should meet the appropriate standards.

NSO habitat is described both in vegetative structure (tree size, density, canopy closure) and spatial extent and proximity to other habitat. Small patches (less than 100 acres) of forests with large trees and dense canopy are not likely to function as NSO habitat if they are less than 100 yards (300') wide or separated by more than ½ mile from other NSO habitat.

The highest quality NSO habitat available should be identified and retained over lesser-quality habitat. Prioritization includes:

- Tree Species composition and existing habitat quality
    - Highest quality existing habitat should be prioritized for retention
    - Mixed conifer stands should be selected over pure pine stands
    - Retained areas should feature multi-layered, multi-species stand structure with abundant large woody debris on the forest floor.
- Abiotic Considerations
    - Distance to nest – retain habitat as close as possible to nest or roost trees
    - Contiguity – retain habitat should be as contiguous as possible
    - Slope Position – retain habitat on the lower 1/3 of slopes

- Aspect – habitats on northerly or easterly aspects provide more optimal vegetation composition and cooler site conditions.

IV. Habitat Protection

In the absence of site-specific information, the follow requirements apply within the 1.3-mile radius of each activity enter:

- Within 1,000 feet of an Activity Center
  - Outside breeding season (01SEP – 31JAN), no timber operations other than the use of existing roads.
  - During the breeding season (01FEB – 31AUG), no timber operations other than the use of existing, permanent, year-round roads.

- Within ½ mile radius (502 acres) centered on an Activity Center – Core Use Area
  - Retention of habitat using Habitat Typing recommendations above
  - At least 250 acres nesting/roosting habitat present, as follows:
    - 100 acres of high-quality nesting/roosting habitat, and
    - 150 acres nesting/roosting habitat AND
  - At least 150 acres of foraging habitat, or better, must be present, as follows:
    - 100 acres foraging habitat, and
    - 50 acres of low-quality foraging habitat
  - No more than 1/3 of the remaining suitable habitat may be harvested during the life of the THP

- Between ½ mile and 1.3-mile radius circles (3,397 acres) centered on an Activity Center
  - Retention of habitat using Habitat Typing recommendations above
  - At least 935 acres of suitable habitat must be present, as follows:
    - At least 655 acres of foraging habitat or better, and
    - At least 280 acres of low-quality foraging habitat or better
  - No more than 1/3 of the remaining suitable habitat may be harvested during the life of the THP.

Non-circular delineations can be used using site-specific data, abiotic variables, NSO detections, barred owl detections, and habitat configurations using the best available NSO habitat. Project proponents are encouraged to work with adjacent landowners whose property may be affected and to pre-consult with regulatory agencies when proposing to use non-circular habitat assessment areas.

For unoccupied activity centers, the habitat retention standards above should be maintained. NSOs are known to reoccupy used sites eight or more years after they were last detected and modifications to previously occupied sites may preclude NSOs returning to these sites. If barred owls have been detected within 1.3 miles of an activity center, extra caution should be applied in determining occupancy.

V. Road Use

To avoid take of NSO from noise disturbance, no road maintenance or use within ¼ mile of an occupied NSO activity center during the breeding season should occur, unless:

- Protocol monitoring has determined that NSOs are not nesting or nesting has failed.
- The road receives year-round use and proposed operations will not exceed ambient noise conditions.
- Proposals to use or maintain roads within ¼ mile of an activity center during the breeding season require approval by the appropriate regulatory agency.

Deviations to the road use guidelines may be proposed depending on noise minimization measures (speed limits, compression braking restrictions), duration, extent, frequency, and distance of the noise source to the activity center. Additionally, topography, dense vegetation, or other factors may be considered and noise restrictions may be waived or minimized by regulatory agencies.